

COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION IN LESOTHO

By

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DECLARATION

"I, Redemption Chatanga, declare that the thesis (and the interrelated publishable manuscripts/publishable articles) that I hereby submit for the Degree: Doctor of Philosophy with specialisation in Public Administration and Management at the University of the Free State is my independent work, and that I have not previously submitted it for a qualification at another institution of higher education"



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SUMMARY

Orientation: Climate change is prioritised as one of the 2030 sustainable development goals of the United Nations (UN) due to its global impact. If not addressed through climate governance and the adoption of appropriate policies, climate change may drive more than 100 million people into poverty by 2030. The success of climate governance and the implementation of climate change policies do not only depend on institutions such as the UN and its signatories, governments and activists, but have equally become the responsibilities of communities. However, the state of community participation in climate change policy formulation and implementation seems to be a challenge in Africa. A case in this regard, which is also the focus of this study, is Lesotho, which is affected by climate change, yet community participation in climate governance, particularly in policy formulation and implementation, does not seem effective. In Lesotho, it is evident that the threat of climate change is exacerbated by poor agricultural practices, deforestation and wildfires. In light of this, the current study explored community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

Motivation for the study: Although Lesotho's National Climate Change Policy supports community participation in climate change policies, community participation in climate governance seems to be lacking in the country. The extent to which the country will achieve adaptation to climate change mainly depends on the level of community participation in climate governance. This necessitates a contextual strategy in which communities are part of policy governance in climate change of which the current research aims to fill this gap.

Research design, approach and methodology: The qualitative research approach was adopted in this study. A case study design was applied to explore community participation in climate change policies by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes. This design was executed in three stages (conceptual - Stage 1, theoretical - Stage 2 and empirical - Stage 3). Through qualitative methods of data collection (documents, focus group discussions and semi-structured interviews), multiple sources of data were used to address the research problem.

Contribution: The contribution of this study can be captured in respect of the discipline of Public Administration (PA), Lesotho's policy agenda and community participation in climate change policy. Pertaining to PA, this study aims to bridge the gap between theory and practice through empirical data that analyse the relationship of community participation, participation theories and the practical application of the New Public Governance components through public administration and climate governance. In addition, the study adds to the ongoing debate and stimulates the discourse in respect of new contemporary participation methodologies that could enhance community participation in climate change policy formulation and implementation. Regarding Lesotho's policy agenda, data were generated that could influence the policy agenda regarding community participation in future climate change policy formulation and implementation. This study contributes to a paradigm shift for increased legitimacy, acceptance and ownership of climate change policies, through community participation in future climate policy processes. This contextual research introduced novel insights regarding the use of indigenous knowledge systems in climate change policy formulation and implementation to facilitate community participation in climate governance. Concerning community participation in climate governance, this study contributed to the research agenda for future studies regarding

community participation in climate change policy formulation and implementation, which is fundamental to the success of climate governance.

Keywords: climate change, climate governance, community participation, Manonyane communities, new public governance theory, policy formulation and implementation, policy process

TABLE OF CONTENTS

DECLARATION	i
ACKNOWLEDGEMENTS.....	ii
SUMMARY	iii
TABLE OF CONTENTS	v
LIST OF ATTACHMENTS	xi
LIST OF ABBREVIATIONS AND ACRONYMS.....	xiv
LIST OF TABLES	xvi
LIST OF FIGURES	xviii
CHAPTER 1: INTRODUCTION AND OVERVIEW OF THE STUDY	1
1.1 INTRODUCTION	1
1.2 Rationale of the study.....	2
1.3 Research problem.....	4
1.4 Aim and objectives	6
1.5 Research questions	7
1.6 Definition of key terms.....	7
1.6.1 Climate change	7
1.6.2 Community participation	8
1.6.3 Governance.....	8
1.6.4 The policy process and its stages.....	9
1.7 Significance of the study	10
1.8 Chapter outline	11
1.9 CONCLUSION	13
CHAPTER 2: A CONCEPTUAL FRAMEWORK FOR COMMUNITY PARTICIPATION DURING THE STAGES OF THE POLICY PROCESS	15
2.1 INTRODUCTION	15
2.2 AN ANALYSIS OF THE SYSTEMS THEORY AND GOVERNANCE THEORY THAT INFLUENCE COMMUNITY PARTICIPATION DURING THE STAGES OF THE POLICY PROCESS	16
2.2.1 Systems theory	16
2.2.2 New public governance theory and the policy process.....	23
2.2.3 Theory of participation in environmental management	52
2.3 RELATIONSHIP BETWEEN (NEW) PUBLIC GOVERNANCE AND COMMUNITY PARTICIPATION IN THE STAGES OF THE POLICY PROCESS	60
2.3.1 Agenda setting.....	61
2.3.2 Policy Formulation.....	63

2.3.3 Policy Adoption	65
2.3.4 Policy implementation	67
2.3.5 Policy evaluation	69
2.4 POLICY NUDGING AND COMMUNITY PARTICIPATION: ENHANCING PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION	74
2.4.1 The concept of policy nudging.....	74
2.4.2 Features of nudging	74
2.4.3 Shortcomings of nudging.....	76
2.4.4 Nudging communities to participate during the policy process.....	77
2.4.5 A synthesis of policy nudging concept.....	78
2.5 A CONCEPTUAL FRAMEWORK FOR COMMUNITY PARTICIPATION IN THE STAGES OF THE POLICY PROCESS	79
2.5.1 Agenda setting.....	86
2.5.2 Policy formulation.....	88
2.5.3 Policy adoption	90
2.5.4 Policy Implementation	92
2.5.5 Policy evaluation	93
2.5.6 Main variables that enhance community participation in climate change policy process.....	95
2.6 CONCLUSION	97
CHAPTER 3: PERSPECTIVES REGARDING CLIMATE CHANGE AND INDIGENOUS KNOWLEDGE SYSTEMS	98
3.1 INTRODUCTION	98
3.2 INFLUENCE OF COMMUNITY AWARENESS AND UNDERSTANDING REGARDING CLIMATE CHANGE ON THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION	98
3.2.1. Influence of understanding climate change on community participation during climate change policy formulation and implementation	99
3.2.2 Influence of awareness of climate change on community participation during climate change policy processes	112
3.2.3 Shortcomings of community understanding and awareness of climate change in relation to their participation during climate change policy formulation and implementation	123
3.3 INDIGENOUS KNOWLEDGE SYSTEMS AND ITS INCORPORATION INTO CLIMATE CHANGE POLICY FOR FACILITATING COMMUNITY PARTICIPATION IN CLIMATE GOVERNANCE	129
3.3.1 Using indigenous knowledge systems in climate change policy formulation and implementation to facilitate community participation in climate governance	130
3.4 USE OF POLICY NUDGING BY SOCIO-POLITICAL, ADMINISTRATIVE AND PUBLIC POLICY GOVERNANCE	154

3.4.1 Use of policy nudging through socio-political governance.....	155
3.4.2 Use of policy nudging through administrative governance.....	156
3.4.3. Use of policy nudging during public policy governance	158
3.4.4. Shortcomings of using policy nudging	160
3.5 NATURE OF COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION	161
3.5.1 Co-production, collaboration, deliberation, democratisation and cross-sector collaboration within a plural and pluralist environment	162
3.5.2 The plural and pluralist nature of community participation in climate change policy formulation and implementation.....	197
3.6 CONCLUSION	217
4. CHAPTER 4: RESEARCH DESIGN AND METHODOLOGY	218
4.1 INTRODUCTION	218
4.2 PARADIGM AND RESEARCH APPROACH.....	218
4.2.1 Interpretivist paradigm	218
4.2.2 Qualitative research approach	218
4.3 CASE STUDY DESIGN	219
4.3.1 Stages of research design.....	220
4.4 POPULATION AND SAMPLE SIZE.....	225
4.4.1 Political perspective	226
4.4.2 Community representative perspective	228
4.4.3 Community perspective.....	229
4.4.4 Public administrators' perspective	229
4.4.5 Expert perspective.....	230
4.5 DATA COLLECTION.....	233
4.5.1 Documents.....	234
4.5.2 Semi-structured interviews	234
4.5.3 Focus group discussions	234
4.6 DATA ANALYSIS.....	235
4.6.1 Content analysis of qualitative data	235
4.7 RELIABILITY AND VALIDITY OF QUALITATIVE DATA COLLECTION INSTRUMENTS.....	239
4.8 ETHICAL CONSIDERATIONS.....	242
4.9 CONCLUSION	247
CHAPTER 5: CASE OF THE MANONYANE COMMUNITIES, MASERU DISTRICT, LESOTHO	248
5.1 INTRODUCTION	248

5.2 RESPONSE RESULTS	248
5.3 COMMUNITIES' PERSPECTIVE ON COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION.....	249
5.3.1 Determining the nature of participation in climate change policy formulation and implementation by the Manonyane communities.....	250
5.3.2 How community awareness regarding climate change and climate change policy influence the Manonyane community participation in policy formulation and implementation.....	251
5.3.3 How community understanding regarding climate change and climate change policy influence participation in policy formulation and implementation by the Manonyane Communities.....	253
5.3.4 How the use of indigenous knowledge systems in climate change policy formulation and implementation facilitates Manonyane community participation in climate governance.....	256
5.3.5 Exploring how policy nudging could be used to enhance Manonyane community participation in climate change policy formulation, implementation and governance	267
5.4 COMMUNITY REPRESENTATIVES' PERSPECTIVE ON COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION	268
5.4.1 Determining the nature of participation by the Manonyane communities in climate change policy formulation and implementation	269
5.4.2 How community awareness regarding climate change and climate change policy influence participation of the Manonyane communities in policy formulation and implementation.....	271
5.4.3 How community understanding regarding climate change and climate change policy influence participation of the Manonyane communities in policy formulation and implementation.....	272
5.4.4 How the use of indigenous knowledge systems in climate change policy formulation and implementation facilitate the participation of the Manonyane communities in climate governance.....	274
5.4.5 Exploring how policy nudging could be used in Manonyane Community Council to enhance community participation in climate change policy formulation, implementation, and governance.....	279
5.5 PUBLIC ADMINISTRATORS' PERSPECTIVE ON COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION	279
5.5.1 Determining the nature of community participation in climate change policy formulation and implementation facilitated by public administrators	280
5.5.2 How community awareness regarding climate change and climate change policy influence their participation in policy formulation and implementation	284
5.5.3 How community understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation facilitated by public administrators	286

5.5.4 How the use of indigenous knowledge systems in climate change policy formulation and implementation facilitate community participation in climate governance	287
5.5.5 Exploring how policy nudging could be used to enhance community participation in climate change policy formulation, implementation and governance	293
5.6 POLITICIANS' PERSPECTIVE ON COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION.....	295
5.6.1 Determining the nature of community participation in climate change policy formulation and implementation.....	296
5.6.2 How community awareness regarding climate change and climate change policy influence community participation in policy formulation and implementation	300
5.6.3 How community understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation	302
5.6.4 How the use of indigenous knowledge systems in climate change policy formulation and implementation facilitates community participation in climate governance	304
5.6.5 Exploring the views of politicians on how policy nudging could be used to enhance community participation in climate change policy formulation, implementation and governance.....	310
5.7 EXPERTS' PERSPECTIVE ON COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION.....	311
5.7.1 Determining the nature of community participation in climate change policy formulation and implementation.....	311
5.7.2 How community awareness regarding climate change and climate change policy influence their participation in policy formulation and implementation	318
5.7.3 Section C: How community understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation	321
5.7.4 Section D: How the use of indigenous knowledge systems in climate change policy formulation and implementation facilitate community participation in climate governance.....	323
5.7.5 Section E: Exploring how policy nudging could be used to enhance community participation in climate change policy formulation, implementation and governance	331
5.8 A CRITICAL ANALYSIS OF THE CASE OF THE MANONYANE COMMUNITIES.....	333
5.8.1 Determining the nature of community participation in climate change policy formulation and implementation.....	333
5.8.2 Community awareness of climate change and climate change policy and its influence on community participation	340
5.8.3 Enhancing community participation through community understanding of climate change and climate change policy	346

5.8.4 Using indigenous knowledge systems in climate change policy to enhance community participation	350
5.8.5 Using policy nudging to enhance community participation	358
5.9 CONCLUSION	360
CHAPTER 6: A CONTEXTUAL PARTICIPATORY STRATEGY FOR ENHANCING COMMUNITY PARTICIPATION IN FUTURE CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION	362
6.1 INTRODUCTION	362
6.2 PARTICIPANTS' PERSPECTIVES ON ENHANCING COMMUNITY PARTICIPATION IN FUTURE CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION	362
6.2.1 Manonyane communities	362
6.2.2 Community representatives' perspective	364
6.2.3 Public administrators' perspective	365
6.2.4 Politicians' perspectives	368
6.2.5 Experts' perspective	369
6.3 LESSONS LEARNT FOR PRACTICE AND FUTURE RESEARCH	371
6.3.1 Lessons learnt from the Manonyane Communities for Lesotho policy agenda.....	371
6.3.2 Lessons Learnt for climate governance.....	372
6.3.3 Lessons Learnt for practice.....	374
6.3.4 Lessons learnt for future research	376
6.4 THE ACHIEVEMENT OF THE AIM, AND THE OBJECTIVES AND RESEARCH QUESTIONS.....	378
6.5 A CONTEXTUAL PARTICIPATORY STRATEGY FOR ENHANCING COMMUNITY PARTICIPATION IN FUTURE CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION PROCESSES	379
6.5.1 A contextual participatory strategy.....	379
6.5.2 Seven pillars for enhancing community participation during climate change policy formulation and implementation.....	380
6.5.3 A contextual strategy-measuring indicator for enhancing community participation in Lesotho	394
6.5.4 The multiple actors' roles and the climate change policy formulation and implementation	395
6.6 CONTRIBUTION TO KNOWLEDGE	412
6.7 CONCLUSION	413
REFERENCES.....	417
ATTACHMENTS	459

LIST OF ATTACHMENTS

Attachment 1: Request for permission to conduct research – Manonyane Councillors	459
Attachment 2: Response from the Manonyane Councillors	462
Attachment 3: Request for permission to conduct research – Ministry of Local Government and Chieftainship.....	463
Attachment 4: Response from the Ministry of Local Government and Chieftainship.....	466
Attachment 5: Request for permission to conduct research – Manonyane Chiefs.....	467
Attachment 6: Response from the Manonyane Principal Chief's office	470
Attachment 7: Request for permission to conduct research – Department of Meteorology and Climate	471
Attachment 8: Response from the Department of Meteorology and Climate.....	474
Attachment 9: Request for permission to conduct research – Ministry of Tourism, Environment and Culture for the Department of Environment	475
Attachment 10: Response from the Ministry of Tourism, Environment and Culture for the Department of Environmet	478
Attachment 11: Request for permission to conduct research – Maseru District Office.....	479
Attachment 12: Response from the Maseru district office	482
Attachment 13: Request for permission to conduct research – Department of Decentralisation	483
Attachment 14: Response from the Decentralisation Depratment	486
Attachment 15: Request for permission to conduct research –Chieftainship Department	487
Attachment 16: Response from the Chieftainship Department.....	490
Attachment 17: Request for permission to conduct research – National Climate Change Committee and the Parliament and Natural Resources Committee	491
Attachment 18: Response from the National Climate Change Committee and the Parliament Natural Resources, Tourism, Land and Portfolio Committee	494
Attachment 19: Request for permission to conduct research – National University of Lesotho Geography and Environmental Science and Political and Administrative Studies Departments.....	495
Attachment 20: Response from the National University of Lesotho Geography and Environmental Science and Political and Administrative Studies Departments	498
Attachment 21: Request for permission to conduct research – United Nations Development Programme	499
Attachment 22: Response from the UNDP	502
Attachment 23: POPIA compliant consent form – Focus group question schedule for the Manonyane councillors	503
Attachment 24: POPIA compliant consent form – Semi-structured interview schedule for the Manonyane councillors	509
Attachment 25: POPIA compliant consent form – Focus group question schedule for Manonyane chiefs.....	516
Attachment 26: POPIA compliant consent form – Semi-structured interview schedule for Manonyane chiefs.....	524
Attachment 27: POPIA compliant consent form – Focus group interview schedule for Manonyane communities...	531
Attachment 28: POPIA compliant consent form – Meteorology and Climate Department.....	539

Attachment 29: POPIA compliant consent form – Environment Department.....	543
Attachment 30: POPIA compliant consent form – Maseru District Office	547
Attachment 31: POPIA compliant consent form – Decentralisation Department.....	551
Attachment 32: POPIA compliant consent form – Chieftainship Department.....	555
Attachment 33: POPIA compliant consent form – National Climate Change Committee	559
Attachment 34: POPIA compliant consent form – Parliament Natural Resources, Tourism, Land and Portfolio Committee	563
Attachment 35: POPIA compliant consent form – National University of Lesotho, Geography and Environmental Science department.....	567
Attachment 36: POPIA compliant consent form – National University of Lesotho Political and Administrative Studies Department	571
Attachment 37: POPIA compliant consent form – United Nations Development Programme- Unit Head	575
Attachment 38: POPIA compliant consent form – United Nations Development Programme- Project Manager	579
Attachment 39: Focus group question schedule for the Manonyane councillors	583
Attachment 40: Semi-structured interview schedule for the Manonyane councillors	589
Attachment 41: Focus group question schedule –Manonyane chiefs	597
Attachment 42: Semi-structured interview schedule – Manonyane chiefs	603
Attachment 43: Focus group question schedule – Manonyane communities	611
Attachment 44: Semi-structured interview schedule – Parliament and Natural Resources, Tourism and Land Portfolio Committee Members and National Climate Change Committee.....	620
Attachment 45: Semi-structured interview schedule – Meteorology and Climate department, Ministry of Energy and Meteorology.....	627
Attachment 46: Semi-structured interview schedule – Environment Department, Ministry of Environment, Tourism and Culture	636
Attachment 47: Semi-structured interview schedule – Maseru District Office, Ministry of Local Government and Chieftainship	644
Attachment 48: Semi-structured interview schedule –Decentralisation Department, Ministry of Local Government and Chieftainship	652
Attachment 49: Semi-structured interview schedule – Chieftainship Department, Ministry of Local Government and Chieftainship	660
Attachment 50: Semi-structured interview schedule – Geography and Environmental Science department, National University of Lesotho.	668
Attachment 51: Semi-structured interview schedule – Political Science and Public Administration department, National University of Lesotho.....	676
Attachment 52: Semi-structured interview schedule – United Nations Development Programme, Climate Change.	684

Attachment 53: Language editing letter	692
Attachment 54: Turnitin report	693

LIST OF ABBREVIATIONS AND ACRONYMS

ACE	Action for Climate Empowerment
AU	African Union
COP	Conference of Parties
DCCC	District Climate Change Committees
DMA	Disaster Management Authority
DWP	Doha Work Programme
ELA	Environmental Impact Assessments
IAPA2	International Association for Public Participation
IPCC	Inter-Governmental Panel on Climate Change
KOL	Kingdom of Lesotho
LCD	Least Developed Countries
LVAC	Lesotho Vulnerability Authority Assessment Committee
MCC	Manonyane Community Council
MDGs	Millennium Development Goals
MLGC	Ministry of Local Government and Chieftainship
MFRSC	Ministry of Forestry, Range and Soil Conservation
MAFS	Ministry of Agriculture and Food Security
MTEC	Ministry of Tourism, Environment and Culture
NAPA	National Adaptation Programme of Action
NCCC	National Climate Change Committee
NCCP	National Climate Change Policy
NDWP	New Dehli Work Programme
NGO	Non-Governmental Organisation
NPG	New Public Governance
NPM	New Public Management
NSDP	National Strategic Development Plan
PA	Public Administration
PRA	Participatory Rural Appraisal
RVCC	Reducing Vulnerability from Climate Change
SDGs	Sustainable Development Goals
UFS	University of the Free State
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification
UNCED	United Nations Conference on Environment and Development

UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNFCCC	United Nations Framework Convention on Climate Change
VDMTs	Village Disaster Management Teams

LIST OF TABLES

Table 1.1: Significance of the study.....	10
Table 2.1: Enhancing community participation through the Systems theory	22
Table 2.2: Enhancing community participation in policy formulation and implementation through socio-political governance.....	31
Table 2.3: Public Administrators enhancing community participation in the policy process through administrative governance.....	40
Table 2.4: Actors enhancing community participation in the policy process through public policy governance	49
Table 2.5: Theory of participation in environmental management and its relevance to community participation in climate change policy formulation and implementation.....	59
Table 2.6: Enhancing community participation through public governance	72
Table 2.7: Enhancing community participation in the policy process by using nudges	79
Table 2.8: Enhancing community participation during the policy process.....	83
Table 2.9: Main variables that underpin community participation in the climate change policy process.....	96
Table 3.1: Analysis of community understanding of climate change using Avant and Walker's (2005) concept analysis method	111
Table 3.2: Community awareness of climate change using Walker and Avant's concept analysis method (2005) ...	122
Table 3.3: Influence of community understanding and awareness of climate change on their participation during the climate change policy process	126
Table 3.4: Using indigenous knowledge systems in climate change policy formulation and implementation to motivate community participation in climate governance.....	147
Table 3.5: Socio-political, administrative and public policy governance using policy-nudging	159
Table 3.6: Co-production, collaboration, deliberation, democratisation and cross-sector collaboration within a plural and pluralist climate change policy formulation and implementation	194
Table 3.7: Nature of community participation during climate change policy formulation and implementation within plural and pluralist environment.....	214
Table 4.1: Population and projected sample size	232
Table 4.2: Data collection instruments used in the study	235
Table 4.3: Content analysis of qualitative data, according to Bengtsson's (2016)	239
Table 4.4: Summarising reliability and validity of data collection instruments	242
Table 4.5: A Summary of ethical considerations and how they were achieved in the study.....	245
Table 5.1: Projected sample size for Manonyane Communities, Community representatives, Politicians, Public administrators and Experts.....	249
Table 5.2: Question 5 Responses by village	260
Table 5.3: Responses to Question 6, Section B.....	264
Table 6.1: Indigenous knowledge systems chart.....	387

Table 6:2 : Roles of actors when enhancing community participation during the agenda setting stage.....	399
Table 6.3: Roles of actors when enhancing community participation during the policy formulation stage	402
Table 6.4: Roles of actors when enhancing community participation during the policy adoption stage	405
Table 6.5: Roles of actors when enhancing community participation during the policy implementation stage	408
Table 6.6: Roles of actors when enhancing community participation during the policy evaluation stage	412

LIST OF FIGURES

Figure 2.1: New Public Governance components (Source: adapted from Osborne, 2010a:6-8).....	24
Figure 2.2: Four approaches and variables that affect the outcome of engagement (Source: Adapted from Reed et al., 2018).....	54
Figure 3.1: Pluralist processes influencing the nature of community participation among plural actors in climate change policy processes	217
Figure 4.1: Stages of the case study design (Source: Author).....	221
Figure 4.2: Map of Lesotho showing the location of the 10 administrative districts, agro-ecological zones and the Manonyane communities in Maseru District (Source: Author).....	226
Figure 4.3: Map of Manonyane Community Council Area showing the location of the Manonyane communities (Source: Author).....	227
Figure 4.4: Reporting structure of Manonyane Community Council and chiefs to the Lesotho central Government (Source: Author).....	228
Figure 6.1: The interrelationships among administrative, public policy and socio-political governance	383
Figure 6.2 New participatory methodologies for enhancing community participation during climate change policy formulation and implementation	393
Figure 6.3: Seven pillars for enhancing community participation.....	394
Figure 6.4: A contextual strategy-measuring indicator	395
Figure 6. 5: The New Public Governance components applicable during each policy stage	396

CHAPTER 1: INTRODUCTION AND OVERVIEW OF THE STUDY

1.1 INTRODUCTION

Climate change is regarded as a global problem because of its negative impact on the environment and human beings. According to the United Nations Framework Convention on Climate Change (UNFCCC), climate change occurs when human activity indirectly or directly alters the composition of the global atmosphere (UNFCCC, 1992:7). Such activity would be in addition to natural climate variations “observed over comparable time periods” (UNFCCC, 1992:7). Due to its global impact, climate change is prioritised as one of the 2030 sustainable development goals (SDGs) of the UN (United Nations, 2015:23). It is also this global impact that has led to it being prioritised as a policy problem that receives attention from institutions such as the UNFCCC. The UNFCCC is the world’s primary intergovernmental treaty with the aim of addressing climate change at an international level, collectively (UNFCCC, 1992). The UNFCCC and its recent protocol, the Paris Agreement 2015, mandate member states such as the Kingdom of Lesotho (KOL) to involve communities in climate change policy formulation and implementation to respond to this global problem of climate change (Paris Agreement, 2015).

Of note to community participation in climate change issues, is Article 6 of the UNFCCC. The objective of Article 6 is to oblige parties to the UNFCCC to engage communities in decision-making and implementation, as well as all stakeholders in debate in order to collectively respond to climate change (United Nations Educational, Scientific and Cultural Organisation (UNESCO) and UNFCCC, 2016:2-3). Article 6 prompted subsequent relevant agreements meant to strengthen its implementation. These agreements include the Kyoto protocol 1997, New Dehli Work Programme (2002-2012), the Doha Work Programme (DWP) (2012-2020) (UNESCO and UNFCCC, 2016:2-3) and the Paris Agreement (2015). Of relevance to climate change implementation is the ongoing Action for Climate Empowerment (ACE), which provides a guideline approach on the systematic implementation of climate change policies at the national level as per the country’s circumstances. A review of the ACE was conducted in 2016 and the final review was in 2020 (UNESCO and UNFCCC, 2016:2-3).

The call for commitment to climate governance by the UNFCCC is likewise prioritised by the African Union (AU), to which Lesotho is a signatory (Ministry of Energy and Meteorology, 2017:3). Climate governance entails coordinated efforts, mechanisms and response measures with the purpose of mobilising stakeholder support to mitigate and adapt to risks posed by climate change (Jagers and Stripple, 2003:388). In light of this, the AU has thus adopted a climate change policy that will span the period 2015-2035, subject to review every five years (AU, 2014:16). In this policy, the AU calls for the assessment of the implementation of climate change programmes to go beyond the mainstreaming of adaptation to development processes. According to the AU, climate change should be addressed in a coherent manner as directed by UNFCCC (AU, 2014:21). Climate change adaptation occurs when natural or human systems adjust in response to expected actual climatic factors or their effects, which reduces harm or exploits beneficial opportunities (Intergovernmental Panel on Climate Change (IPCC), 2001:982). Thus, adaptation measures should reduce the risk of damage from present climate change variability and future climate change (IPCC, 2001). As a signatory to both the AU and the UNFCCC (Department of Environment, 2014:49), Lesotho is required to implement adaptation policies to meet the requirements of these two international bodies.

The ability of governments and communities to adapt to and mitigate climate change requires the participation of all stakeholders in climate governance in order to ensure the successful implementation of climate change policies (Sprain, 2016). In the case of Lesotho, the National Climate Change Policy (NCCP) supports community participation in climate change policies, although the participation of communities in climate governance is still lacking. The factors, such as lack of community understanding and awareness of climate change, that have a potential to contribute to this lack of community participation in climate change policy formulation are not clearly understood in the country, although there may be a number of possible reasons (Ministry of Energy and Meteorology, 2017; KOL. Government and WFP, 2019:35). In this regard, the problems are not only inherent in climate change, but also in environmental governance in general, which seems to lack coordination and communication at the government level, as well as community participation, particularly in climate change issues (Machepha, 2010:18; Miller, 2014:79; Ministry of Energy and Meteorology, 2017:24). Environmental governance refers to interventions aimed at a change in environment-related decision-making, incentives, knowledge, education, institutions and behaviours, as well as regulatory processes, mechanisms and organisations through which political actors influence environmental decisions (Lemos and Agrawal, 2006:288).

Despite Lesotho's approach to community participation during NCCP formulation reflecting a consultative process (Stakeholder Consultations Report, 2017), the NCCP does not explicitly specify the extent to which the communities should make their contribution in policy formulation and implementation but keeps the description of governance methodologies and participation techniques vague and ambiguous (Ministry of Energy and Meteorology, 2017:7;37). As a result, in its current form, community participation in climate governance, particularly in climate change policy formulation and implementation in the country seems not to have the desired impact as noted in this recently adopted NCCP (Ministry of Energy and Meteorology, 2017:24). Instead of only using conventional techniques, governance should be embraced as it serves as an effective method of enhancing community participation (Reed, 2008:2417). The governance processes (socio-political, administrative and public policy) and activities (e.g. co-production, nudging, democratisation and collaboration) should be clarified if future climate change policy formulation and implementation are to be a success. Therefore, the need for the country to achieve adaptation to climate change necessitates a contextual strategy in which communities are part of policy governance in climate change. Policy governance is defined by the World Bank as the capacity of governments to design, formulate and implement policies (World Bank, 1994:xiv). Thus, this research aims to fill this gap by exploring community participation in climate change policy through presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

1.2 RATIONALE OF THE STUDY

Three statements support the rationale for this study: (i) the evident threat of climate change globally and in Lesotho calls for community participation in climate governance; (ii) the exacerbation of climate change by Lesotho communities' poor agricultural practices, deforestation and wildfires; and (iii) a comprehensive understanding of using indigenous knowledge

systems in climate change mitigation and adaptation is deemed important to inform a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes.

(i) The evident threat of climate change globally and in Lesotho calls for community participation in climate governance

The evident threat of climate change undermines the ability of countries to attain the 2030 SDGs (United Nations Environment Programme and INTERPOL, 2016:6-7), and places climate change on the global agenda with emphasis on community participation in climate governance. In May 2018, the UNFCCC parties were given an opportunity to discuss the enhancement of communities' participation in climate governance. This was through promoting the contribution of indigenous people in climate change mitigation and adaptation, by specifying in the Paris Agreement how community participation and access to information may be reflected in the implementation guidelines (Climate Governance Note, 2018). The effort is attributed to climate change being one of the greatest challenges because its adverse impacts exacerbate the already existing problems faced by humanity, such as poverty, gender inequalities, natural disasters and unemployment (United Nations, 2015:8). Lesotho's adopted NCCP acknowledges inadequate awareness of climate change issues amongst its communities at all levels (Ministry of Energy and Meteorology, 2017:35). In order to increase awareness, the policy aims at raising awareness and building capacities to mitigate and adapt to climate change at all levels; however, it is not clear which levels are referred to regarding community participation (Ministry of Energy and Meteorology, 2017:35; KOL Government and Food World Programme, 2019). This inadequate knowledge of climate change issues is attributed to a lack of information dissemination mechanisms concerning climate change, inadequate integration of climate change into education curricula and climate change material being in a language (English) not understood by the majority of the citizens (Ministry of Energy and Meteorology, 2017:35).

(ii) The exacerbation of climate change by Lesotho's communities' poor agricultural practices, deforestation and wildfires warrants the nudging of community participation in climate governance

Communities tend to damage the environment more compared to official companies, which are compelled to carry out Environmental Impact Assessments (EIAs) before undertaking any project (KOL. Department of Environment, 2008). Although the Lesotho government has adopted measures to combat soil erosion such as terracing, water diversion furrows and contour ploughing, they are inconsistently applied and poorly maintained by about half of the households in the country's mountain areas (Ministry of National Resources, 2000:7; Miller, 2014:73). This inconsistent application and poor maintenance are exacerbated by the burning of grasslands and the use of biomass as a source of energy, especially wood, animal dung, agricultural residues and shrubs by about 60% of the community households (Ministry of National Resources, 2000:7). Given the fact that Lesotho is one of the least forested nations (LMS, 2013:99), adverse community practices that are due to a lack of their participation in climate governance in turn cause more damage to the environment and worsen climate change (LMS, 2013:99; Reichel and Frömming, 2014; Ministry of Energy and Meteorology, 2017:24). This lack of community participation in climate governance (Ministry of Energy and Meteorology, 2017:24) justifies the need to explore the nudging of community participation in climate change policy formulation and implementation in order to develop a contextual participatory strategy

from the communities' perspectives for future use in climate governance. Lesotho's adopted NCCP acknowledges inadequate awareness of climate change issues amongst its communities at all levels (Ministry of Energy and Meteorology, 2017:35).

(iii) A comprehensive understanding of using indigenous knowledge systems in climate change is deemed important to inform a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes.

The systems theory postulates that every society has a culture that shapes ongoing general goals, procedures and specific objectives that the members of the society feel they ought to use within a recognised framework. In practising culture, the emphasis is on one or more aspects of behaviour, followed by a particular culture and this differentiates a society from other cultures with respect to the demands they make to the political system (Easton, 1957:388). While culture and identity are difficult to incorporate into public policy (Adger, Barnett, Brown, Marshall and O'Brien, 2012:5), they remain important in the processes undertaken during climate change policy formulation and implementation, as well as climate governance. Adger et al. (2012:5) argue that if ignored, cultural dimensions (beliefs e.g. physical things are given meanings, rituals, identity, art, stories that create outlooks and behaviour) in relation to climate change, are likely to hamper adaptation and mitigation responses undertaken by government due to differences in what matters to specific communities. Without assessing the extent to which the levels of understanding climate change and indigenous knowledge can influence participation, the success of proposed interventions that encourage community participation in future climate change policy formulation and implementation might be hampered. Against this background, it becomes apparent that assessing the influence of community understanding and awareness of climate change, as well as establishing the uses of indigenous knowledge systems in climate change are useful in developing a contextual participatory strategy, which might be an appropriate way to nudge communities' participation in climate change policy formulation and implementation. Given the Lesotho's unique local context and indigenous knowledge systems, and that conventional participatory methodologies might not suit every community and its political system, it becomes prudent to explore the role of indigenous knowledge systems in nudging communities' participation in climate change policy decisions, formulation and implementation in the context of Lesotho's Manonyane communities.

1.3 RESEARCH PROBLEM

Inadequate understanding and awareness of climate change issues amongst communities contribute to a lack of participation in climate governance and hinder the implementation of climate change policies in Lesotho (Machepha, 2010:26; Miller, 2014:79; KOL. Government and WFP, 2019). This could potentially hamper the mitigation and adaption strategies (Ministry of Energy and Meteorology, 2017:24). If this is not addressed by enhancing community participation in climate governance, communities' poor agricultural practices and activities, deforestation and anthropogenic wildfires could persist (LMS, 2013:42; Miller, 2014:73). It is therefore evident that community understanding and awareness of climate change, as well as governance, play a major role in respect of the success of the Lesotho's NCCP implementation. In this regard, secondary research problems can be outlined in respect of (i) relevant participation methodologies to enhance community participation in climate change policy formulation and implementation, and (ii) Lesotho's vulnerability to climate change and environmental issues.

Concerning relevant participation methodologies in contributing to climate change policy formulation and implementation, conventional community participatory methodologies might not suit every political system. In this regard, embracing governance as a method to enhance community participation in climate change policy formulation and implementation rather than merely using relevant techniques could yield better results (Reed, 2008:2417; Osborne, 2010a; Samaddar, Ayaribilla, Oteng-Ababio, Dayour and Yokomatsu, 2019; Uittenbroek, Mees, Hegger and Driessen, 2019). Through the governance method, variables such as socio-political, administrative and public policy governance (described in Section 2.2.2.3) are important in determining the appropriate approach for community participation, as well as for designing participatory processes (Beierle, 2002; Burton, Malone and Huq, 2004; Reed, 2008:2425; Osborne, 2010a:8; Smiley, de Loë and Kreutzwiser, 2010:1043; Friis-Hansen, 2017b; Reed, Vella, Challies, De Vente, Frewer et al., 2018:7). Moreover, participation in climate change needs to be based on the idea that better working strategies to address climate change are those that are guided by the perspectives and values of communities (Steurer, Berger and Hametner, 2010; Australia. ACT Government, 2014:5). During the formulation of Lesotho's NCCP, community participation was coordinated by a consultant, using face to face interviews, district workshops and household surveys (Stakeholder Consultations Report, 2017:2). From this background, it is apparent that the communities' indigenous knowledge systems may not have been considered during the design of the participation methodologies for the NCCP process. This raises questions as to whether the applied participation methodologies and techniques (face-to-face interviews, workshops and surveys) could have contributed to a lack of participation. Related reasons for this could also be a lack of research concerning (i) community participation in climate change policy processes, (ii) assessing communities' capacity and comprehension (understanding) of climate change, and (iii) community willingness to participate in climate governance.

Despite community participation processes during the formulation of Lesotho's NCCP being consultative, the relevant government ministries, sectors and departments also lack co-ordination and communication (Machepha, 2010:18; Miller, 2014:79; Ministry of Energy and Meteorology, 2017:24). The NCCP does not explicitly explain the extent to which communities could contribute. Further, the lack of participation by communities could even be exacerbated by lack of well described governance processes and activities, as well as a lack of explicitly stated participatory techniques (Ministry of Energy and Meteorology, 2017:7;37). This lack of community participation may persist and continue if Lesotho's unique context, comprising its political system (systems theory), its inherent indigenous knowledge systems, the socio-economic factors of communities (theory of participation) and governance (socio-political, administrative and public policy governance) are not considered during public governance. More importantly, the New Public Governance (NPG) components (socio-political, administrative and public policy) should be inherent in a contextual participatory strategy for future community participation in climate change policy formulation and implementation.

As for Lesotho's vulnerability to climate change and other environmental problems, the country is highly vulnerable and prone to land degradation, loss of biodiversity, wetland degradation and loss, food insecurity and extreme weather events such as droughts, floods, strong winds and sudden snowfalls, which often bring human suffering (Ministry of National Resources,

2000:viii-ix; Lesotho Meteorological Services, 2001; LMS, 2013; Department of Environment, 2014:41). Biomass, including woody plants (e.g. shrubs), is the main source of energy for rural households and obtaining it causes severe deforestation (Ministry of Natural Resources, 2000:7). The Manonyane communities (rural), located in the Lowlands and Foothills of the Lesotho, are no exception to these climate change risks. Gwimbi (2013) highlights that Manonyane communities are vulnerable to and are being affected adversely by climate change. It is not clear to what extent Manonyane is being affected by climate change. However, agricultural production has been reported to have declined in the Foothills and Lowlands, mainly because of unpredictable rainfall (UNDP, 2013:8). The decline in agricultural production has negatively affected the households that depend on agriculture as a primary source of livelihood. Further, the increased frequency of storms in winter exacerbates the already severe soil erosion in the Foothills and Lowlands (UNDP, 2013). Consequently, crops and property are damaged, while human and livestock life gets lost.

The Department of Environment acknowledges that the impact of climate change on people and ecosystems depends on how the country adapts to climate change (Sechaba Consultancy, 1995:39-40; Department of Environment, 2014:34), and Manonyane communities are no exception, just like other communities in Lesotho. Adaptation requires the participation of all stakeholders in climate governance in order to effect the successful implementation of a climate change policy (Sprain, 2016). Consideration of how such adaptation could be facilitated through socio-political governance, administrative governance, public policy governance and policy nudging is prudent in the case of Manonyane.

1.4 AIM AND OBJECTIVES

The aim of the study is to explore community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes. Through a case study design, the following objectives were developed to achieve this aim:

- (i) To analyse systems, governance and participatory theories influencing community participation in climate change policy formulation, implementation and governance. This objective is addressed in chapter 2.
- (ii) To explore how policy nudging could be used to enhance community participation in climate change policy formulation and implementation, and governance. This objective is addressed in chapters 2, 3, 5 and 6.
- (iii) To assess how community awareness and understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation. This objective is addressed in chapters 3, 5 and 6.
- (iv) To explore how the use of indigenous knowledge systems in climate change policy formulation and implementation facilitates community participation in climate governance. This objective is addressed in chapters 3, 5 and 6.
- (v) To determine the nature of community participation in climate change policy processes. This objective is addressed in chapters 3, 5 and 6.
- (vi) To present a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes. This objective is addressed in chapter 6.

1.5 RESEARCH QUESTIONS

- (i) How could public governance influence community participation during climate change policy formulation and implementation? This research question is addressed in chapters 2, 5 and 6.
- (ii) How do community awareness and understanding regarding climate change influence their participation in climate change policy formulation and implementation? This research question is addressed in chapters 3, 5 and 6.
- (iii) How could the use of indigenous knowledge systems in climate change policy formulation and implementation facilitate community participation in climate governance? This research question is addressed in chapters 3, 5 and 6.
- (iv) How does community participation underpin climate change policy processes and climate governance? This research question is addressed in chapters 3, 5 and 6.
- (v) How could social-political governance, administrative governance, and the public policy governance use policy nudging to enhance community participation in climate change policy formulation, implementation, and governance? This research question is addressed in chapters 2, 3, 5 and 6.

1.6 DEFINITION OF KEY TERMS

1.6.1 Climate change

Climate change is a global problem caused by direct or indirect human activities, which disturb the global atmosphere, in addition to changes in natural weather patterns observed over a long period of time (UNFCCC, 1992:3). Changes in climatic factors over an extended period of a decade or longer cause climate change. However, the primary driver of climate change is the increased greenhouse gases, for example, carbon dioxide, nitrous oxide and methane in the Earth's atmosphere (IPCC, 1990:xiv). The gases trap heat from the sun, thus, causing the greenhouse effect. Further, human activities such as poor agricultural practices, deforestation, industrial processes, burning fossil fuels and wildfires have significantly exacerbate the greenhouse effect, thereby causing climate change (IPCC, 1990:xiv; 2014b:9). This process affects the communities, environment and ecosystems.

The changes that happen because of climate change poses different challenges relating to sustainable development, and existing social, economic and environmental problems (IPCC, 2007). Such vulnerabilities include natural disasters, agriculture reduction, loss of biodiversity and health impacts. Climate change also affects sea levels to rise because of warmer water and the melting of polar ice (IPCC, 2007).

Thus, efforts to address climate change involve mitigation and adaptation. Policymakers and other actors at a higher level than a community mainly do mitigation (Smit, Burton, Klein and Wandel, 2000:224). This is when measures are taken to reduce greenhouse gas emissions and to promote of sustainable practices. One common practice by policymakers of late is the use of renewable energy sources and formulating policies to limit emissions (Gunnarsdottir, Davidsdottir, Worrell and Sigurgeirsdottir, 2020). Regarding adaptation, it involves measures that directly affect communities in order for them to prepare for disasters, and develop resilience and adaptive measures (Smit et al., 2000:245; IPCC, 2007:747).

1.6.2 Community participation

Participation is a process by which people are enabled to become actively and genuinely involved in defining the issues of concern to them, in making decisions about factors that affect their lives, in formulating and implementing policies, in planning, developing and delivering services and in taking action to achieve change (World Health Organisation, 2002; Cornwall, 2008:10-11). Participation can be described in various forms, inter alia, public participation, individual participation, citizen participation and community participation. Hanekom (1987:30) defines the word public as a Latin word '*publicus*' which means public or common. However, the Oxford English Dictionary (2017) definition seems to describe the term better in relation to the problem under study; public means open to a people as a whole. A citizen is a legally recognised national of a state while an individual is a single human being (Oxford English Dictionary, 2017).

The International Association for Public Participation (IAPA2) defines public participation as a process that involves the public in decision-making. The process of participation includes identifying problems and opportunities, developing alternatives and making decisions (Ross, Baldwin and Carter, 2016a:2). Participation can be direct or indirect (representatives), paying taxes and voting, among many (Hanekom, 1987:33-34). Despite the variation in preferred names to describe participation, in this study, the public shall refer to non-state actors as a whole (non-state formal or informal organisations, communities, citizens, individuals) in the policy-making. However, citizens or individuals are considered as part of a community. This highlights a wide variation in the preferred terminology used to describe 'participation'. On the other hand, a community is a group of people living in a particular area, usually defined by common culture, language and beliefs (World Health Organisation, 2002:9; Fraser, 2005). Thus, the term community participation in climate change policy formulation and implementation in this context will refer to the direct or indirect involvement in making decisions regarding climate change, as well as in putting the decisions into practice.

It is noteworthy that community engagement is a term that is also used by other researchers to refer to, in a more general way, longer term arrangements (Ross et al., 2016:126). The term community engagement is also associated with stakeholder engagements (Reed et al., 2018). However, the term community engagement is criticised for focusing more on maintaining specific relationships, rather than on the broader questions of what those relationships need to be about in the interests of sustainable future (Ross et al., 2016:126). Ross et al. (2016:126) argue that the public should be alert and be engaged in formal initiatives.

1.6.3 Governance

Governance is a concept of debate in Social Sciences, particularly in the discipline of Public Administration and Management (Katsamunsk, 2016:133). It is also deemed important in this study to explain governance because the term shall be used throughout the study. The meaning and use of the term governance differ and vary depending on the context. To begin with, governance in English refers to the state of being governed or a group of people who make up an administrative body (Oxford English Dictionary, 2017). On one hand, in practice, governance can be good or bad, global or local, new or old. On the other

hand, the definitions of governance are numerous. However, in general, governance can be defined as the process of decision-making and the process by which decisions are implemented (UN Economic for Social Commission for Asia and the Pacific, 2004). Governance is also the manner in which governments operate (Klijn, 2010:303). Klijn (2010:303) further describe these operations of government in various functions. First, cooperate governance (the principles of a properly functional public administration adhering to the rule of law for the benefit of the citizens). Second, new public management (policy implementation is delegated to public or private agencies where accountability is enforced with performance indicators and market mechanism). Third, multilevel governance or inter-organisational relations (networking in a multi-actor setting is regarded important to address all aspects of governance). Last, governance as a network (interaction between public and non-public organisations). Thus, deriving an understanding from Klijn's (2010:303) long definition of governance, it can be argued that governance is the interaction of multiple actors (government and non-state actors) to address a 'complex' and 'wicked' policy problem in a pluralist environment.

Governance is also defined on the one hand as empirical manifestations of state adapting to the external environment, while on the other hand it denotes concepts or theories representing the co-ordination of social systems by specifying the role of the state in the process (Pierre cited in Katsamunskaja, 2016:134). Governance is also about interaction at various levels (Keping, 2018:3). It is when policy co-ordination goes beyond state actors to non-state actors, such as communities, to deliver policy outcomes (Acevedo and Common, 2010:394). It is also the capacity of government to formulate and implement policies (Kjar cited in Katsamunskaja, 2016:133). Another model of governance is what Katsamunskaja (2016:135) termed 'communitarian governance' where it is believed that communities can and should be involved in finding solutions for their problems. This approach calls for governance without government (Katsamunskaja, 2016:136). Some scholars argue that government and governance do not mean the same thing. Government steers governance (Hughes, 2010:89). In this research, governance on the one hand refers to empirical manifestations of a state adapting to the external environment through interaction and collaboration, while on the other hand it refers to the concepts or theories supporting the co-ordination of socio-political, administrative, network, contract and public policy systems (NPG) by specifying the role of the state in the process. Also, it is maintained that government steers governance.

1.6.4 The policy process and its stages

It is important to clarify the meaning of key terms that are used most often in this study. Policy process/policy-making/policy formation refers to the whole process in totality of creating, adopting and implementing a policy (Anderson, 2003:80). To Dunn (2004:43), the policy process entails a series of interdependent activities, namely agenda setting, policy formulation, policy adoption, policy implementation, policy assessment, policy adaptation, policy succession and policy termination. However, Anderson (2003:80) argues that defining a problem, setting an agenda, formulating proposals and adopting the best proposals are interrelated and can be blurred together.

Policy-making determines how communities can participate in public policy. Public policy is an authoritatively processed decision and the implementation thereof (Easton, 1957; Colebatch, 2002:49; Hughes, 2003:114; Anderson, 2010:6). Following Harold Laswell's idea, many authors' approach to public policy-making considers involving its explicit phases or stages (Parsons, 1995:77; Hughes, 2003:119-121; Dunn, 2004:45; Dye, 2005:31-55; Anderson, 2006:83). Despite the variations in the naming of the policy process stages, authors agree on the following stages: (i) problem definition or agenda setting, (ii) formulation, (iii) adoption or legitimisation, (iv) implementation, (iv) evaluation and/ termination (Parsons, 1995:77; Hughes, 2003:119-121; Dunn, 2004:45; Dye, 2005:31-55; Anderson, 2006:83). These stages will together be referred to as the policy process in this current research.

In brief, problem definition or agenda setting is when problems are defined, while the formulation stage is the crafting of alternative courses of action to address the problem (Anderson, 2003:80). Adopting or legitimising a policy is choosing the best alternative course of action. The policy implementation definition is to carry out, fulfil and complete the achievement of objectives set forth in prior policy decisions (Brynard, 2006:166). Finally, in the evaluation stage, policymakers assess the importance of a policy for redirection to another new problem or may terminate it, thus concluding the policy process (Parsons, 1995:77; Hughes, 2003:119-121; Dunn, 2004:45; Dye, 2005:31-55; Anderson, 2006:83). Owing to Anderson's (2003:80) argument that problem definition, agenda setting, formulation of proposals, and adoption are interrelated, this study blurs these stages and refers to them as policy formulation. Accordingly, policy implementation in the current study is putting into practice the formulated policy set forth in prior policy decisions.

1.7 SIGNIFICANCE OF THE STUDY

The significance of this study is captured in respect of its contribution to the discipline of Public Administration (PA) and associated theories, LESOTHO's policy agenda, and community participation in climate change policy formulation and implementation as outlined in Table 1.1.

Table 1.1: Significance of the study

Sector	Contribution
Discipline/ Theory	▪ Bridging the gap between theory and practice through empirical data that analyse how systems, governance, and participatory theories influence community participation in climate change policy formulation and implementation/governance. ▪ Contributing empirical data that analyse the relevance of community participation, systems theory, NPG theory and the concept of nudging in public administration and climate governance. ▪ Presenting novel insights regarding the use of policy nudging to enhance community participation in climate change policy formulation, implementation and governance. ▪ Adding to the debate and stimulate the discourse in respect of new contemporary participation methodologies to enhance community participation in climate change policy formulation and implementation.

Kingdom of Lesotho's policy agenda	▪ Generating research that could contribute to the policy agenda regarding community participation in future climate change policy formulation and implementation. ▪ Providing a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness, for effective participation in future climate change policy formulation and implementation. ▪ Contributing to a paradigm shift for increased legitimacy, acceptance and ownership of climate change policies through community participation in future climate change policy formulation and implementation. ▪ Introducing novel insights into how the use of indigenous knowledge systems in climate change policy formulation and implementation could facilitate community participation in climate governance.
Community participation in climate change	▪ Contributing to the research agenda for future studies regarding community participation in climate change policy formulation and implementation. ▪ Presenting empirical data on how community awareness and understanding regarding climate change and climate change policy influence their participation in climate change policy formulation and implementation. ▪ Presenting a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes.

Source: Author

1.8 CHAPTER OUTLINE

This thesis comprises six chapters.

Chapter 1: Overview and Demarcation of the study

Chapter 1 presents an overview and demarcation of the study and consists of an introduction (Section 1.1), the rationale for the study (Section 1.2), research problem (Section 1.3), the aim and objectives of the study (Section 1.4), research questions (Section 1.5), definition of key terms (Section 1.6), significance of the research (Section 1.7), the chapter outline (Section 1.8) and concluding remarks (Section 1.9).

Chapter 2: A conceptual framework for community participation during the stages of the policy processes

A conceptual framework is presented for community participation during the stages of the policy process. The outline for this chapter includes introductory remarks (Section 2.1), an analysis of the systems theory and governance theory that influence community participation during the stages of the policy process (Section 2.2). In Section 2.2, the systems theory (Section 2.2.1), the New Public Governance (NPG) theory (Section 2.2.2) and the theory of participation in environmental management (Section 2.2.3) are critically discussed. This is followed by examining the relationship between public governance and community participation in the stages of the policy process (Section 2.3). Subsequently, Section 2.4 explores how policy nudging could be used to enhance community participation in climate change policy formulation, implementation and governance. In Section 2.5, a conceptual framework is presented for community participation in the stages of the policy process. The chapter is concluded in Section 2.6.

Chapter 3: Climate change, public policy governance and indigenous knowledge systems

In chapter 3, perspectives regarding climate change and indigenous knowledge systems are discussed. In Section 3.1, the introductory remarks to this chapter are presented. Subsequently, Section 3.2 investigates how community awareness and understanding regarding climate change policy influence their participation in policy formulation. Section 3.3 explores the extent to which indigenous knowledge systems could be incorporated into the climate change policy. Section 3.4 discusses the use of policy nudging by socio-political, administrative and public policy governance. The nature of community participation in climate change policy formulation and implementation is explored in Section 3.5. The chapter ends with concluding remarks (Section 3.6).

Chapter 4: Methodology

Chapter 4 explains the details of the research design, instruments of data collection and data analysis. Section 4.1 presents the introductory remarks to the chapter. Next, the research approach (Section 4.2) and research design (Section 4.3) are respectively discussed. In Section 4.4, the population and sample size are outlined and the data collection instruments are presented in Section 4.5. This is followed by an explanation of the data analysis in Section 4.6. In Section 4.7, the reliability and validity of data collection instruments are substantiated. This is followed by ethical considerations to the study (Section 4.8) and the chapter is concluded in Section 4.9.

Chapter 5: The Case of Manonyane Communities, Maseru District, Kingdom of Lesotho

This chapter discusses responses from the Manonyane communities, community representatives, public administrators, politicians and experts. The outline of this chapter includes introductory remarks (Section 5.1) and responses indicating the projected as well as the actual samples (Section 5.2). In Section 5.3, the community's perspective concerning their participation in climate change policy formulation and implementation is presented. This is followed by the public administrators' (Section 5.4), the political office bearers' (Section 5.5) and experts' (Section 5.6) perspectives of community participation in climate change policy formulation and implementation. In Section 5.7, a critical evaluation of the findings is presented. The chapter is concluded in Section 5.8.

Chapter 6: A community participatory strategy for climate change policy formulation and implementation

The chapter presents a contextual community participatory strategy for future climate change policy formulation and implementation. In Section 6.1, introductory remarks are presented. This section is followed by the respondents' perspectives on enhancing community participation in future climate change policy formulation and implementation (Section 6.2). Subsequently, lessons learnt for practice and future research are discussed in Section 6.3, and the achievement of the aim, and the objectives and research questions are reflected on in Section 6.4. In Section 6.5, a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation is presented. This is followed by Section 6.6, which presents the concluding remarks to the chapter and the thesis.

1.9 CONCLUSION

Climate change is regarded as a global problem that is prioritised as one of the 2030 SDGs of the UN because of its negative impact on the environment and human beings. The global impact of climate change has led to it becoming a policy problem that receives attention from institutions such as the UNFCCC and the AU. The UNFCCC and its recent protocol, the Paris Agreement 2015, mandate member states such as Lesotho to involve communities in climate change policy formulation and implementation to respond to this global problem of climate change (Paris Agreement, 2015). Globally, the UNFCCC provides general guidance on how to involve communities and other stakeholders in decision-making and implementation of climate change policies. Currently, several relevant supplementary agreements meant to strengthen the implementation of the UNFCCC Article 6 were made. These agreements include the Kyoto Protocol 1997, the New Dehli Work Programme (NDWP) (2002-2012), the Doha Work Programme (DWP) (2012-2020) and the Action for Climate Empowerment (ACE). Likewise, the AU has thus adopted a climate change policy that spans the period 2015-2035, subject to review every five years (AU, 2014:16). As a signatory to both the AU and UNFCCC, Lesotho is required to implement adaptation policies to meet the requirements of these two international bodies.

In the case of Lesotho, there is lack of community participation in climate governance, although her NCCP supports community participation in climate change policies. It is reported that climate governance lacks coordinated efforts, mechanisms and response measures to mobilise stakeholder support to mitigate and adapt to risks posed by climate change. Consequently, the extent to which Lesotho will achieve adaptation to climate change mainly depends on a number of factors, such as co-ordination and communication through governance, community understanding and awareness of climate change, and the participatory methodologies and techniques used (Ministry of Energy and Meteorology, 2017; Stakeholder Consultations Report, 2017; KOL. Government and WFP, 2019:35). Resultantly, the level of community participation in climate change policy formulation and implementation could be enhanced. The need to enhance community participation in climate change policy formulation and implementation stems from: i) the evident threat of climate change globally and Lesotho's call for community participation in climate governance; ii) Exacerbation of climate change by the Lesotho communities' poor agricultural practices, deforestation and wildfires. Thus, a comprehensive understanding of policy formulation and implementation processes in climate change is deemed important to inform a contextual participatory strategy for enhancing community participation in future. This research aims to fill this gap by exploring community participation in climate change policy through presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

The study contributed to the discipline or theory of Public Administration by adding to the debate and stimulating the discourse in respect of new contemporary participation methodologies to enhance community participation in climate change policy formulation and implementation. Regarding the Lesotho's policy agenda, the study provided a contextual understanding of indigenous knowledge systems, and communities' level of knowledge and understanding of climate change for effective participation in future climate change policies. Concerning community participation, the study will present empirical data on

how community awareness and understanding regarding climate change and climate change policies influence communities' participation in climate change policy formulation and implementation processes.

CHAPTER 2: A CONCEPTUAL FRAMEWORK FOR COMMUNITY PARTICIPATION DURING THE STAGES OF THE POLICY PROCESS

2.1 INTRODUCTION

Policy process, policy-making and policy formation refer to the whole process, in totality, of creating, adopting, and implementing a policy (Anderson, 2003:80). However, in this study, policy process will be used and the following stages shall be considered as the policy process: (i) agenda setting, (ii) policy formulation, (iii) policy adoption, (iv) policy implementation, and (iv) policy evaluation. Unless specified, defining a problem, setting an agenda, formulating proposals and adopting the best proposals will be considered as interrelated and are blurred together as policy formulation (Anderson, 2003:80). Regarding policy implementation, unless specified, it refers to the two stages (policy implementation and policy evaluation) blurred together. This is because policy implementation and policy evaluation are interactive in practice but necessarily remain distinctive stages of the policy process (DeLeon and DeLeon, 2002:2). Policy formulation and policy implementation are two distinguishable stages of the policy process but are so closely interrelated that separating them is difficult (Hanekom, 1987:55; Hill, 2005:21). The relationship between policy formulation and policy implementation arises from the fact that each stage is embedded in the other because public policies are formed as being implemented and likewise implemented as being formed (Hill, 2005:21; Howlett and Giest, 2013:22). Those calling for community participation in climate change policy formulation and implementation agree that the two stages are interrelated (UNECE, 2015). Owing to governance's emphasis on enhancing community participation in the policy process, particularly climate change policy, the two stages are closely related in terms of the interaction of the actors (policymakers, policy networks and communities). Policy networks are non-state actors that link formal and informal institutions with government and other actors because of shared negotiated beliefs and interests in public policy formulation and implementation with a goal to steer participation (Rhodes, 2017:38). This interaction of the actors is necessary for increased legitimacy, acceptance and ownership of the final authoritative policy. The understanding of community participation in the climate change policy process begins with conceptualisation in this chapter, which is limited in the literature. Thus, the chapter aims to conceptualise community participation during the stages of the policy process to fill this gap.

This chapter has five sections and begins with introductory remarks (Section 2.1). An analysis of systems, governance and participatory theories influencing community participation in climate change policy formulation, implementation and governance is presented in Section 2.2. In this section, the systems theory (Section 2.2.1), NPG theory (Section 2.2.2) and the theory of participation in environmental management (Section 2.2.3) are critically discussed. This is followed by Section 2.3, which examines the relationship between public governance and community participation in the stages of the policy process. Section 2.4 explores how policy nudging could be used to enhance community participation in climate change policy formulation, implementation and governance. Section 2.5 then presents a conceptual framework for community participation in the stages of the policy process. The chapter is concluded in Section 2.6.

2.2 AN ANALYSIS OF THE SYSTEMS THEORY AND GOVERNANCE THEORY THAT INFLUENCE COMMUNITY PARTICIPATION DURING THE STAGES OF THE POLICY PROCESS

2.2.1 Systems theory

In this section, it is asserted that the systems theory, depending on the context, provides a potentially useful way of conceptualising the internal and external environment actors involved in governance interaction. The internal environment in this study will refer to formal actors, factors, institutions, structures and processes within government that steer participation. External environment will refer to non-state actors, factors, structures, processes and institutions that influence the policy process from outside the government formal processes. The systems theory is used on one hand to understand the policy process, which is termed 'systems analysis of policy' by Stewart and Ayres (2001:82). On the other hand, the systems theory will generate ideas in the form of concepts (Stewart and Ayres, 2001:82) to contribute to a conceptual framework in this chapter. Generating concepts is termed systems analysis for policy (Stewart and Ayres, 2001:82). Accordingly, in this section, a number of points will be discussed: first, background to the systems theory; second, systems theory and the policy process; third, shortcomings of the systems theory in relation to the policy process; and fourth, its focus on the internal and external environment. In conclusion, a synthesis or analysis will contribute to the conceptual framework.

2.2.1.1 Background to the systems theory

The systems theory dates back to the 1920s. A system is a set of things working together as a mechanism or interconnected network (Oxford English Dictionary, 2017). The debate about the systems theory as a field of study began when Ludwig von Bertalanffy, a biologist, developed the general systems theory around 1925-26 (Bertalanffy, 1968:11-12; 1972; Fisher, 2010b:71; Pouvreau, 2014:172). The development of the general systems theory was prior to the emergence of other systems theories in various fields of study, for instance, the cybernetics and systems engineering (Bertalanffy, 1968:11). Afterwards, it is believed that the systems approach by Easton was adopted because of a move towards having a theory of politics (Fisher, 2010b:71). Nevertheless, Easton's theory was developed much later in 1957 (Easton, 1957). Politics, by definition, is about people's social and material relationships involving power, rule and authority, expressed in various ways and in different places. However, the dynamics of these relationships change with time (Dahl, 1991:3; Ponton and Gill, 1993:6). For this reason, Easton adapted the communication or cybernetic model which describes the principles of an open system that applies to systems in general to study politics (Bertalanffy, 1968:149).

The systems theory, by Easton, explains how systems work in a political system. Based on the systems theory as initially proposed by Easton (1957), a political system's operation can be studied as occurring within a process. Easton's systems theory illustrates and explains the process which a public policy should undergo. Public policy, as defined by various authors, is an authoritatively processed decision and implementation thereof (Easton, 1957; Colebatch, 2002:49; Hughes, 2003:114; Anderson, 2010:6). Thus, for the political system to adapt to its environment, it should be sensitive to the external environment (Easton, 1957:386) regarding how it handles the policy process. The political systems model or approach refers to the same idea of a policy process that occurs within a bigger environment (internal and external). The decisions or policies made are the

outcomes from the political system, which are fed back into the external environment. The process will begin anew. To Easton, the political system is likened to the body which constantly gets stressed by its surroundings, to which it has to adapt so that it does not get destroyed. The political system operates in a large environment where it receives inputs in the form of demands and support. The demands encompass actions by communities and individuals or groups seeking to influence how decisions are made by authorities. The demands can originate from both the external and internal environment or 'withinputs', to use Easton's (1957:389) language. Support, as defined by Easton, consists of actions that promote the interests of another person. Once the political system receives the inputs (demands and support) from the external environment, policy processes are made in the black box (De Coning and Cloete, 2006:40) into outputs as policies or decisions. Black box here simply means that the policy process is exclusive to the political system and does not involve the external actors. In an illustration to show the cycling nature of policy process, the outputs are fed back into the external environment, facilitating the beginning of the same process again (Easton, 1957:384).

Easton proposes that the political system should seek to know when and how to address the demands of the people, which they intend to meet (Easton, 1957:396). The systems theory postulates that an infinite variety of means could be used to induce support for a system, while in practice well-established classes of mechanisms are applied. The theory proposes that, in conducting a research on this matter, effort should be directed towards refining the understanding of the precise way in which these mechanisms contribute to making an authoritative policy (Easton, 1957:395). To put it differently, it is apparent from the literature that the political system cannot produce authoritative outputs without the support of the environment. Regarding understanding the precise way in which communities contribute to authoritative policies, it is doubtless that conceptualising community participation during each stage of the policy process would influence and change how community participation is viewed (Fisher, 2010b:72).

2.2.1.2 Systems theory and the policy process

The policy process is a series of interdependent activities, namely, agenda setting, policy formulation, policy adoption, policy implementation, policy assessment, policy adaptation, policy succession and policy termination (Dunn, 2004:43). Despite the variations in the naming of the policy process stages, authors agree on the following stages: (i) problem definition or agenda setting, (ii) formulation, (iii) adoption or legitimisation, (iv) implementation, (iv) evaluation and/ termination (Parsons, 1995:77; Hughes, 2003:119-121; Dunn, 2004:45; Dye, 2005:31-55; Anderson, 2006:83). Problem definition or agenda setting is when problems are defined, while the formulation stage is the crafting of alternative courses of action to address the problem (Anderson, 2003:80). Adopting or legitimising a policy is choosing the best alternative course of action, while policy implementation is to carry out, fulfil and complete the achievement of objectives set forth in prior policy decisions (Brynard, 2005:166). Policy evaluation is a stage where policymakers assess the importance of a policy for redirection to another new problem or may terminate it, thus concluding the policy process (Parsons, 1995:77; Hughes, 2003:119-121; Dunn, 2004:45; Dye, 2005:31-55; Anderson, 2006:83).

- **Systems theory and agenda setting**

The concept of an open or closed system seems to apply well during agenda setting where communities can participate as co-producers of the agenda. Inclusive in the features of the systems theory is the idea of open/closed systems. The systems theory believes that each part of the political system does not exist in isolation. The operation of the parts can be fully understood with reference to the way in which the whole political system operates (Easton, 1957:383). However, a completely closed government system is one of the features of a political system that is discouraged by the systems theory (Kooiman, 2010:75). A closed system is a system that operates in isolation from the environment (Bertalanffy, 1968:39); the operations of the system are in isolation such that no inputs and outputs come in and out of the system. Some scholars describe such closed government systems as having the characteristics of merely incorporating a technical system, and administrative hegemony (retaining exclusive decision-making), and excluding or limiting citizen participation (Biljohn and Lues, 2018:159). A government system that is open has characteristics of citizen-centric service delivery, understanding social networks and their interactions, citizen participation (social innovation), and incorporating social and technical service delivery systems (Biljohn and Lues, 2018:158).

- **Systems theory and policy formulation**

The systems theory puts emphasis on inclusive policy formulation. Because of emphasising inclusive policy formulation, the systems theory clearly outlines what should happen to get inputs from the external environment and the consequences of the internal environment deciding to close its systems for inputs that should originate from the external environment during policy formulation (Easton, 1957; Osborne, 2010a; Reed et al., 2018). It is not clear how communities are expected to add their voice during policy formulation. However, it is indicated that participation of the external actors is indispensable to the political system (Osborne, Radnor and Nasi, 2013; Robinson, 2015:10).

- **Systems theory and policy adoption**

Communities can participate through consenting to the policy procedures during policy adoption. To show support for community participation during policy adoption process, the systems theory argues that in a stable political system, it is wrong for a system to function exclusively by producing policies in the form of sanctions, manipulation, force or rewards (Easton, 1957:398). Similarly, in the theory of participation, some authors agree that manipulating lower levels to participate leads to undesirable outcomes (Arnstein, 1969:218; Reed et al., 2018:3). To Easton, support of policies through persuasion and consent is a need for any government to continue functioning. Accordingly, Easton (1957:398) warns that a political system that uses force and manipulation alone may not be sustainable as this can lead to non-conformity by communities. Similarly, the theory of participation also argues that there must be a net balance of support, government supporting the perspectives of the communities and the communities supporting policies made by the government (Reed et al., 2018:6). Consequently, the above arguments by the systems theory justify the need for using the idea of policy nudging to get communities to legitimise the adoption process without necessarily using force and manipulation.

- **Systems theory and policy implementation**

Applying systems theory during policy implementation requires individual community members to participate in policy implementation as a community that plays the implementing role equal to that of public administrators. Owing to the role that a community plays in the life of an individual, the systems theory explains well how politicisation shapes an individual's way of participation in the system. Politicisation is when a member of a community is required to accept various orientations towards political matters as expected in that society (Easton, 1957:398). In fact, Easton argues that the behaviour in specific political situations in some communities should be uniform; if there is divergence beyond a certain range, it would be impossible to make binding decisions regarding certain actions. Further, politicisation can bring rewards, for example, wealth, influence and improved opportunities when one conforms to the generally accepted interpretation of the political goals. In contrast, deviating beyond the prescribed permissible range can make one to naturally feel punished, unworthy, rejected and dishonoured. Also, in the language of Easton (Easton, 1957); Easton (1957:398), these 'political myths, doctrines and philosophies' are transmitted from one generation to the next. Nevertheless, seductive punishments and severe punishments may not prevent some members of the system from pursuing their interests and seeking to change the goals and norms of the system. It can be argued that politicisation is an important variable that influences how an individual can support policy implementation. For this reason, what Easton termed politicisation will be likened to the process of indigenous knowledge systems in a community which will be discussed in detail in Chapter 3 of this thesis.

- **Systems theory and policy evaluation**

During policy evaluation, communities can participate through consultation being facilitated by policymakers. Feedback is also a notable feature of the systems theory. Understanding the role of top-down and bottom-up feedback may mean acknowledging the methods of communication in policy formulation and implementation. Easton's systems theory only shows one directional way of communication where inputs and demands are forwarded to the political system. The systems theory portrays that feedback only comes as a finished product. In other words, the process shown by the systems theory is unidirectional in the sense of showing only the bottom-up approach where the external environment is expected to give inputs to the internal environment in the form of support and demands. The systems theory seems to be consistent with the well-known policy cycle or the policy phases/stages (Parsons, 1995:77; Hughes, 2003:119-121; Dunn, 2004:45; Dye, 2005:31-55; Anderson, 2006:83).

2.2.1.3 Shortcomings of the systems theory in relation to the policy process

The unidirectional way of feedback portrayed by the systems theory presents a shortcoming in relation to encouraging the participation of actors from the external environment in the policy process. By understanding what Fisher (2010b:71) termed the "feedback loop", the political system utilises top-down approaches to communicate feedback in the form of policies. Easton's systems theory only shows one directional way of communication where inputs and demands are forwarded to the political system. The systems theory portrays that feedback only comes as a finished product. Using the systems theory, it may be difficult to understand when, why and how the actors from the external environment are expected to participate, apart from giving inputs in the form of demands and support (Easton, 1957; Osborne, 2010a; Reed et al., 2018).

What is known about the black box and its activities seems to explain the absence of communities' perspectives during policy adoption. Considering the view point of the systems theory, inclusive agenda setting seems to be the main concern and whatever happens afterwards is regarded as the business of the political system. The direct mandate given to the political system / the black box (De Coning and Cloete, 2006:40) after receiving inputs from the external environment is a shortcoming of the systems theory in relation to promoting community participation in policy formulation and implementation. The limitation concerning the direct mandate reveals the systems theory's less support for the participation of the external environment in every stage of the policy process.

The policymakers are solely responsible for ensuring leadership in the whole policy process, which is a shortcoming of the systems theory. There is lack of consideration of how the communities can add a voice at each stage of the policy process. Although the systems theory supports the idea that the external environment should give inputs to the political system throughout the policy process, actors are not directly involved as equal participants from planning to the actual implementation of the decision (Kooiman and Jentoft, 2009:826). Under such circumstances, some scholars advocate for representative democracy (Wengert, 1976:34). This is clearly portrayed in the process where the feedback is the outcome of finished policies, which the political system expects to be supported so that the policy process can start again. One may then argue that the systems theory only supports participation of the communities in the policy process during agenda setting.

In applying the systems theory, lack of immediate feedback to the communities is a shortcoming. No immediate feedback will be given to the communities by the policymakers. Results will only come at a later stage as finished policies in the form of feedback. There is lack of mechanisms regarding how communities from their perspectives can participate in the policy process as equal decision makers, apart from making demands and support. The call for inputs from the external environment is to get inputs for agenda setting. In calling for inputs, the systems theory emphasises bottom-up one-way method of obtaining inputs from the external environment. The external environment, which consists of communities, amongst other actors, are supposed to contribute to policy formulation in the form of demands and support without receiving immediate feedback. Moreover, the theory is silent about the role of the communities in the development of the actual policies or decisions to be produced as outcomes.

The other shortcoming of the systems theory is that it emphasises participation of multiple actors (non-state actors) only during the agenda setting, policy implementation and policy evaluation. The systems theory thus elucidates how the system of government should function which is a combination of the two - closed (linear) and open (non-linear) (Biljohn and Lues, 2018:158). A comprehensive understanding of enhancing and even nudging community participation in policy formulation and implementation thus necessitates understanding how the system of government, whether open or closed, incorporates community participation in the policy process. Thus, the systems theory becomes an appropriate framework for analysing the extent to which communities participate in policy processes.

2.2.1.4 Focus on the internal and external environment

About the internal and external environment, the systems theory contributes significantly to encouraging the interaction between the internal environment and external environment (Bertalanffy, 1968:91; Fisher, 2010b:71-72). The interaction of the internal environment with its external environment is necessary for, amongst others, obtaining inputs for policy formulation and implementation, demands and the identification of service delivery needs to deliver public services (Easton, 1957:384). The systems theory, according to Easton (1957:383), is when the operation of a political system can be fully understood in relation to how the whole system (government and its environment) operates. Based on this theory, a government system has an internal and external environment, with interacting parts or subsystems (Easton, 1957:385). The internal environment consists of policymakers (public administrators and politicians), whilst the external environment consists of non-state actors and is influenced by the factors such as economy, culture, personality, ecology, social structure and demography. Both external and internal environmental factors constitute variables that help to shape the kind of demands entering a political system (Easton, 1957:388).

The idea of applying the systems theory in decision making is not new but what may be new is how the political system chooses to apply the theory in practice. A government may use the systems theory approach as a framework to enhance community participation in climate change policy formulation and implementation. Consequently, understanding the process, features, shortcomings, relevance to community participation, and the meaning of the internal and external environment of the systems theory can assist any political system to be able to identify significant contributory factors that enhance community participation in climate change policy formulation and implementation. Thus, the systems theory approach generates distinctive policy formulation and implementation strategies from which policymakers can draw lessons to enhance community participation (Stewart and Ayres, 2001:84). In addition, the systems theory provides direction to policymakers to build relationships using existing structures and institutions rather than starting something new altogether. According to the systems theory, the effectiveness of any policy intervention, for example, community participation in climate change policy formulation and implementation, can be largely determined by the capacity of government to understand and influence its internal and external environment (Stewart and Ayres, 2001:92). In summary, Table 2.1 gives an overview of the features, shortcomings and application of the systems theory during the policy process.

Table 2.1: Enhancing community participation through the Systems theory

SYSTEMS THEORY DURING THE POLICY PROCESS						
FEATURES OF THE SYSTEMS THEORY	SHORTCOMINGS OF THE SYSTEMS THEORY	STAGE 1: AGENDA SETTING	STAGE 2: POLICY FORMULATION	STAGE 3: POLICY ADOPTION	STAGE 4: POLICY IMPLEMENTATION	STAGE 5: POLICY EVALUATION
▪ The policy process should be open to the communities. ▪ It is an obligation of the community to give inputs for the policy process. ▪ Acknowledges that the policy process requires multiple actors for it to be a success. ▪ Encourages interaction and interdependence of the communities and the policymakers during agenda setting, policy implementation and policy evaluation.	▪ The openness of the policy process is limited because of one-way communication. ▪ Excludes community participation during policy formulation and adoption. ▪ Lack of immediate feedback from the policymakers to the communities. ▪ Method of participation is mainly top-down – policymakers are solely responsible for facilitating participation during the policy process. ▪ Lacks communities' perspectives at every stage of the policy process.	▪ Communities only give inputs in the form of demands and support.	▪ Black box – excludes communities.	❖ Black box – excludes communities.	▪ Communities are expected to support the policy programmes, depending on the type of policy adopted. ▪ If the policy is a law then the communities are only expected to abide by it. ▪ Communities participate as beneficiaries of the implemented policy programmes.	▪ Communities are given feedback through top-down consultation.

Source: Easton (1957)

2.2.2 New public governance theory and the policy process

2.2.2.1 Background to New Public Governance theory

In this study, it is supported that New Public Governance (NPG) is an aspect within the overall field of policy formulation and implementation of public policy and delivery of public services (Osborne, 2010a). The NPG, as a theory, will aid in understanding the complexities of community participation in policy formulation and implementation (Osborne, 2010a:6). Policy implementation is an entirely administrative process, which is inseparably linked or integrated to policy formulation (Hanekom, 1987:55). Thus, community participation in policy formulation and implementation is when communities have an opportunity to directly contribute ideas in the policy process decisions. The NPG, as introduced by Osborne (2006), describes the plural nature of a contemporary state where multiple different actors contribute to the delivery of public services and seeks to understand the formulation and implementation of public policy in the context of public administration (Osborne, 2006:381; Dickinson, 2016:2). Plural means involvement of multiple actors, while pluralist is the involvement of multiple processes in policy formulation and implementation (Osborne, McLaughlin and Chew, 2010:191). The emergence of NPG was a result of the bureaucratic tape in governments that partly contributes to the lagging of community participation in governance (Nabatchi, 2010:2), and therefore not offering a comprehensive approach to problems of public service efficiency and effectiveness, particularly in developing countries with bloated and inefficient bureaucracies (Robinson, 2015:14-15). Thus, the purpose of NPG is to challenge public administrators to bear a responsibility of structuring community participation in a way that will enable citizen input into public decisions (Moynihan, 2003:164-165).

2.2.2.2 Focus of the theory and focus in respect of policy

In the 21st century, the NPG is a modern managerial approach to public administration (Gaus, 1950; Noordhoek and Saner, 2005), of which, its relevance for the study stems from the need to encourage community participation in public sector decision-making (Hughes, 2003). In this regard, NPG aids the study and practice of public administration and management through combining the strengths of Public Administration (PA) and the New Public Management (NPM) by acknowledging the interrelationship between policy formulation and implementation, as well as public service delivery in a plural nature and in a pluralist environment (Osborne, 2006:384). It is noteworthy that Public Administration, written with capital letters P and A, refers to the discipline, while public administration, written with lowercase letters p and a, refers to its practice (Waldo, 1968:443). Public administration in practice involves maintaining professional standards but having respect for political control (subordination) with a commitment to shaping public policy in ways that promote public interest (Appleby, 1947:93; Svara, 2001:179). The PA as a discipline refers to social sciences but with roots in political science (Waldo, 1956:107-108). In practice, Osborne's (2010c:413-414) concept model to understand and evaluate public policy implementation and service delivery argues that public policy implementation, public service delivery and managerial practices invariably coexist and interact rather than serially replace each other. In other words, being in the era of NPG does not necessarily do away with NPM, PA and public service delivery. Instead, fundamental to PA when applying NPG is the role that citizens play when directly participating in policy formulation and implementation, as well as public service delivery.

2.2.2.3 The New Public Governance components

The NPG theory, introduced in 2010 (Osborne, 2010a), comprises five components, namely, socio-political governance, public policy governance, administrative governance, contract governance and network governance (Figure 2.1). Socio-political governance occurs when the government relies on other societal actors, for example, the communities, for its legitimacy and impact (Osborne, 2010a:6). The concept of public policy governance is concerned with how policy elites and their networks interact in order to govern the public policy process. Administrative governance aims to effectively apply public administration (Osborne, 2010a:7) through prioritising citizens in public service, while also making it a priority to change the mindset of public officials through changing values and behaviour (nudging), as well as administrative capacity (Robinson, 2015:15). Further, the public service dominant approach should complement operations management for effective and efficient public services (Osborne et al., 2013:149). While contract governance includes the outsourcing of public services, network governance is concerned with how inter-organisational networks implement public policy and deliver public services (Osborne, 2010a:6-7). The specific / unique focus of each of the mentioned five components contributes to the complex nature of NPG. For the purpose of this study, three of these five components (illustrated in Figure 2.1) are considered, namely socio-political governance, administrative governance and public policy governance. The focus on the aforementioned NPG components is attributed to the specific role of each component in either enhancing or hampering community participation in climate change policy formulation and implementation.

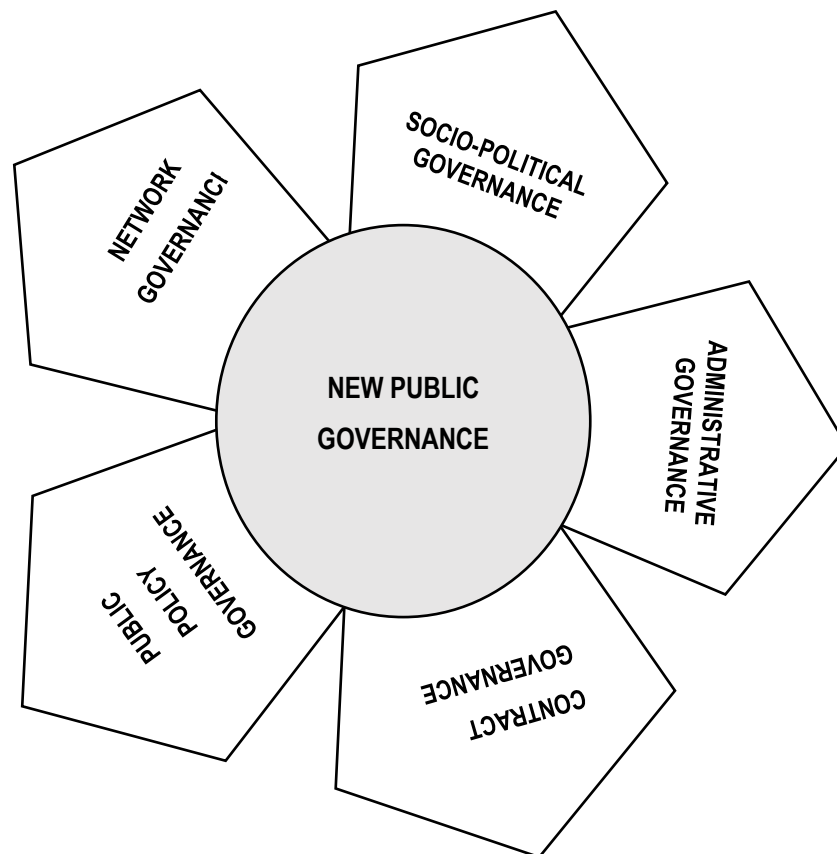


Figure 2.1: New Public Governance components (Source: adapted from Osborne, 2010a:6-8)

2.2.2.3.1 Socio-political governance

Socio-political governance entails the combination and integration of the social and political systems (Kooiman, 2008:173) to enhance policy formulation and implementation. The social system includes indigenous knowledge systems, shared aims and objectives, the physical environment and interconnected individuals with a role to play within the system. Social systems' definition can be derived from Parsons (1951) as referring to the interconnectedness and interaction of individuals with the physical environment and the political environment based on their shared beliefs about indigenous knowledge systems (Martin, Lee and Wright, 2015:714). In these interrelationships, every individual has a role to play and exists as part of the whole system and not as an independent individual. The political system comprises government actors and its formal or informal networks. The political system functions as an interconnected and interdependent whole to authoritatively draft and enforce legislation as a tool to allocate resources, and instill social and political values. The socio-political governance system therefore concurs that actors are continuously shaped by their interactions within their social and political system, which brings together actors to relate to each other regarding shared policy problems and societal challenges (Kennet, 2010:24). As such, socio-political governance highlights the relationship among public administrators (bureaucracies), society (communities and other stakeholders) and politicians (legislature and executive) during policy formulation and implementation. Hence, it is important to know how forms of collective action through societal actors such as community groups, organisations or individuals influence policy formulation and implementation during these interactions and interrelationships (Kooiman, 2008; Kooiman and Jentoft, 2009:834).

Social and political factors could be considered variables that hinder or advance community participation during policy formulation and implementation. Socio-political governance thus occurs with consideration of the political and social factors of societal actors (communities and other stakeholders) who participate in policy formulation and implementation. Social factors are indigenous knowledge systems, which include culture, for example, beliefs (physical things are given meaning, religion, rituals, identity, art, stories that create outlooks and behaviour), norms (e.g. agricultural practices), values (e.g. family and wealth) and indigenous knowledge (local knowledge and local experiences) (Adger et al., 2012:5). These aforementioned social factors shall all be referred to as the indigenous knowledge systems, unless specified. Norms and values, on the other hand, are a pattern of behaviour in a particular community, which is accepted as normal and that an individual is expected to follow (Business dictionary Online, 2019). Thus, the consideration and clarification of the values and norms of those who participate in policy formulation and implementation can be deemed necessary to enhance their participation (Kooiman and Jentoft, 2009:834). It is therefore important to recognise communities' indigenous people and their indigenous knowledge systems as an important link to their participation in climate change policy formulation and implementation (Eden, 1996:197). Moreover, indigenous knowledge should likewise be considered during policy processes. Whilst these social factors focus more on external societal actors, the political factors seem to have an internal focus, on government institutional processes and systems that can enhance community participation during policy formulation and implementation processes.

Political factors include new legislation, institutions and regulation that play a role in motivating communities to participate in policy formulation and implementation. During policy implementation, the legislation that spells out how communities can be

involved should have been agreed upon during policy formulation. Legislation has the advantage of enforcing compliance for both public administrators and the communities (Hanekom, 1987:60). It becomes difficult if the exact details of policy implementation are not spelt out, thus left to policy implementers (public administrators) (Hanekom, 1987:61). In applying socio-political governance, policies should reflect specific indigenous knowledge systems. Incorporation of indigenous knowledge systems influence community participation in the policy processes as individuals would relate their participation to what they believe in. The policy aims that align with indigenous knowledge systems are likely to be considered and accepted by the majority of community members in that community. The shared understanding of the indigenous knowledge systems determines how people interact amongst themselves and with the external factors. Because of beliefs inherent to their indigenous knowledge systems, communities may positively or negatively be influenced to participate in policy processes, especially if the participation process disagrees or agrees with the communities' shared understanding (Dang, 2018).

- **Socio-political governance during the policy process**

As alluded to earlier, policy formulation entails setting an agenda, adopting alternative courses of action and developing an acceptable course of action by communities and policymakers to solve a public problem. A public problem should substantially affect a number of people for it to be considered a problem (Anderson, 2003:81). In light of the socio-political governance, if policy formulation is interactive and collaborative, policy implementation is likely to be agreed upon by all actors (communities, public administrators, politicians) involved. It is at this stage that a determination can be made by policymakers to know how multiple actors (different community members, groups, organisations, individuals) in respect of their indigenous knowledge systems are willing to participate in governing interactions. During policy formulation, socio-political governance is applicable to problem definition/agenda setting, formulation of proposals and policy adoption (Parsons, 1995:77; Hughes, 2003:119-121; Dunn, 2004:45; Dye, 2005:31-55; Anderson, 2006:83) and in all the stages, policy problems should be defined in the context of social and political factors. Socio-political governance benefits the communities when the policy problem is addressed in a way that conforms to the norms, values and culture of the society in general (Hanekom, 1987:32). Problem definition of the public policy problem is embedded in the interdependence between the plural (multiple actors e.g. communities, public administrators, politicians, non-state actors) and the pluralist (multiple processes e.g. network, administrative, contract, public policy and socio-political governance) to formulate and implement policy. The interdependence and interrelationships for resources of the external environment (non-state actors such as community members within communities) and the government (public administrators, politicians and their networks) (Osborne, 2010a:8) would assist in clear problem definition. In these interdependences and interrelationships, certain socio-political governance factors would therefore lead to a community agreeing with the government (public administrators and politicians) that there is a problem that needs to be solved. For example, a problem of lack of community participation in climate change policy actions needs both the external and internal environment to agree on ways that would increase the former's participation in climate change policy processes.

In relation to social factors, problem definition would include consideration of indigenous knowledge systems. The consideration of indigenous knowledge systems as social factors during problem definition may influence how the communities understand the process as they would have to relate to what they do and believe in. Problem definition, which culminates into

agenda setting, should specify the actors, actors' location, actors' attitude, norms, values, cultural beliefs and indigenous knowledge towards the problem to be defined. Further, it can be argued that the consideration of indigenous knowledge systems may improve community participation methodologies during policy-making by clearly specifying the target group of people who should participate. Actors that have traditionally been involved in policy formulation include civil society, NGOs, the market and the government (Anderson, 2003:102-105; Bauer, Feichtinger and Steurer, 2012). Little attention has been paid to community participation regarding how exactly communities can be part of defining the policy problem and whose participation during agenda setting can be influenced by social factors (Katsamunski, 2016).

The socio-political governance is applicable to problem definition or agenda setting, which is the first stage of the policy process (Parsons, 1995:77; Hughes, 2003:119-121; Dunn, 2004:45; Dye, 2005:31-55; Anderson, 2006:83). If problem definition is inclusive of the indigenous knowledge systems, it may imply that the other stages of the policy process (policy adoption, policy implementation and policy evaluation) will follow suit because all the stages are built upon problem definition. Thus, collaborative definition of the problem by the communities and policymakers will assist the latter to understand the community's socio-political view of the problem throughout all the other policy process stages in an attempt to influence the communities' participation.

Political factors that would influence problem definition include legislation, facilitative institutions and politicisation. The legislation should spell out how communities can be involved during policy formulation. To ensure proper problem definition, the exact details of policy formulation and implementation should be spelt out and not to be left to the institutions that are managed by policy implementers (public administrators) to interpret for themselves (Hanekom, 1987:61). Politicisation is when a member of a community learns political patterns as expected according to norms, values and beliefs of that community and this may affect problem definition (Easton, 1957:397-398). Legislation influences problem definition because defining a problem should be a political process for its outcome to become a policy appropriate to offer a meaningful solution for the communities. Institutions influence problem definition through their role in facilitating community participation to make decisions concerning climate change policies.

Problem definition culminates into agenda setting. Agenda setting is where policy problems compete for attention from legislators because of little resources available to implement policies (Anderson, 2003:85). The problems compete for attention because policymakers do what is termed by Anderson (2003:86) policy prioritising. Policy prioritising is when agenda items are ranked and some are considered more urgent than others (Anderson, 2003:86). At times, a problem may be labelled a crisis, for instance, national disasters. Of course, national disasters will also depend on how the government defines them. Climate change seems to be a governmental agenda because public officials feel obliged not only to pay serious attention, but also to be seen acting. At this stage, it becomes apparent that climate change is a matter that should attract attention from both the communities and the officials (Anderson, 2003:88).

Socio-political governance fits in the policy formulation stage due to the fact that it can be considered in respect of three phases, which are: i) problem definition or agenda setting characterised by collaboration, ii) policy formulation, characterised by interaction, and iii) policy adoption, which requires technical legislation expertise. Top-down and bottom-up collaboration and interaction between communities and policymakers would maintain trust as a pillar of the collaborative process during policy formulation and ultimately, implementation (Crosby, Bryson and Stone, 2010:203; Huys and Koppenjan, 2010:366; Reed et al., 2018). Trust should be enough to allow collaborators (public administrators) to take the risk of getting involved into working together to achieve the set aims (Vangen and Huxham, 2010:166). Building trust contributes to ensuring the change of attitude of communities towards active participation over time as communities may later develop interest in participation (Vangen and Huxham, 2010:170). The technical process would be when the legislation process (policy adoption) takes place because communities may lack expertise (e.g. technical and scientific) to put decisions in writing from the policymakers' point of view.

The use of social agendas or advocacy approaches suggested by Stufflebeam (2001:62) seems to be relevant during policy evaluation when applying socio-political governance. Communities will be empowered to have authority not only over policy evaluation, but also over the policy process (Crabb and Leroy, 2012:153-154). Therefore, socio-political governance during policy evaluation will aim to empower stakeholders who were previously disadvantaged in policy formulation through acknowledging their social and political values in obtaining and interpreting the findings of the policy outcome. Thus, the social agenda approach empowers the communities to have authority over key evaluation decisions in relation to the interpretation and release of the findings (Stufflebeam, 2001:62). However, policy evaluation findings may be dependent upon social values, which some scholars argue as a disadvantage of an objective evaluation (Schoenefeld and Jordan, 2017:279).

It is here argued that the quality of evaluation could be strongly dependent on the nature of the whole policy process that leads to policy evaluation. Although writing in the context of educational policy, Wergin's (1976) study provides useful insights into participation in the policy process. Wergin (1976:77) notes that participation in policy evaluation should be throughout the policy process to avoid dilemma to participants when called in to evaluate decisions already made. Considering that policy evaluation can give birth to new agendas, the application of the CIPP (context, input, process, product evaluation) model when using the social agenda approach is likely to enrich conclusions reached during the policy process and ultimately guarantee the legitimacy of every decision in the policy process (Wergin, 1976:105; Hendriks, 2012:444). Context evaluation is making considerations regarding the appropriateness of the policy intentions with reference to the context in which the policy will be implemented (Crabb and Leroy, 2012:132). Context evaluation can be done during agenda setting. Input evaluation is exploring policy alternatives to determine the policy formulation (Crabb and Leroy, 2012:132). Process evaluation is considering the pros and cons of policy implementation (Crabb and Leroy, 2012:132). Lastly, product evaluation is noting down and interpreting the success and failures of the policy (Crabb and Leroy, 2012). Consequently, the NPG theory, through the component of socio-political governance, will not only assume that evaluation could change the policy formulation process by simply creating an opportunity for communities to judge on the impacts of the policy programmes, but will also pursue social agenda approaches to enhance community participation during all the stages of the policy process.

- **Shortcomings of socio-political governance**

Shortcomings regarding applying socio-political governance in the policy process can be outlined in respect of the complexity that manifests in the existence of interdependence and interrelationships of socio-political structures, processes and actors within the communities and political structures and amongst other actors (Kooiman, 2008:176). The complexity of socio-political governance manifests in the way potential conflicts can be dealt with, power dynamics and synergies because of direct involvement of multiple actors (networks, politicians, community members). Because of interrelationships and interdependence, new social actors emerge, some are excluded, others lose power and in some instances some groups such as women and children may continuously be excluded from and may never be included in the policy processes (Swyngedouw, 2005:2003). Swyngedouw (2005:1992; 2003) argues that because the state has to respond to the changing socio-political relationships using a new set of 'technologies of governing', while simultaneously there are no generally accepted rules and norms to guide community participation in policy processes, it could imply that the chances of socio-political governance being a success may be low.

Because of the complexity of the socio-political system, interaction, actors and the environment (external and internal) cannot be easily and fully understood as suggested by socio-political governance. The interrelationships are dynamic, change and shift more often than expected. Various individuals within a community are expected to interact with policymakers through deliberation, co-production, consultation and communication of policy ideas in a non-linear way. Consequently, the interactions that are non-linear exacerbate the already complex interactions between the communities and the policymakers. Hence, some scholars suggest that the influence that happens during the interaction cannot be guaranteed to be only positive because it can be altered, suppressed or enhanced (Cilliers, 1998:4). Resultantly, the complexity during policy formulation and implementation is not only difficult to manage, but also to minimise (Kooiman, 2010:73).

Although diversity due to various actors in climate change policy formulation and implementation (Kooiman, 2010:73) allows co-production, it may be difficult to reach a consensus under such circumstances. Nevertheless, non-decision by the policymakers regarding policies that consider socio-political views because of diversity can be a barrier to a problem competing to get the agenda status. Non-decision is when the demand for change is prevented before gaining access to the relevant authorities that decide (Bachrach and Baratz cited in Anderson, 2003:94). A problem may disappear on the agenda status when the policymakers take action or decide not to (Anderson, 2003:95). Attention will be given to other issues with the assumption that the problem has been taken care of (Anderson, 2003:95). Therefore, the problem of action or inaction should be in the public interest to ensure maintenance of trust because the policy process at this point is just at the beginning.

- **Synthesis of socio-political governance**

The socio-political governance approach inherently appears to be sensitive and acknowledging the disadvantage of excluding indigenous knowledge systems views in climate change policies. However, the incorporation of indigenous knowledge systems in climate change policies does not necessarily curb difficulties in understanding the communities' behaviour and attitude towards participation in climate change policy processes. Therefore, this may demand new participatory methods and

methodologies as a means to extract knowledge from the communities and to encourage their participation in policy formulation and implementation. Ultimately, socio-political governance seems to require not only new participatory methodologies, but also more resources because of the pluralist nature of the relationships between diverse multiple actors. In light of this discussion, Table 2.2 shows how community participation during policy formulation and implementation could be enhanced through the application of socio-political governance.

Table 2.2: Enhancing community participation in policy formulation and implementation through socio-political governance

VARIABLE(S) FOR SOCIAL FACTORS	SOCIAL FACTORS				
	▪ Cultural beliefs (including physical things given meanings, religion, rituals, identity, art, stories that create outlooks and behaviour). ▪ Norms (e.g. agricultural practices). ▪ Values (e.g. family and wealth) and indigenous knowledge (local knowledge and local experiences).				
ACTORS	AGENDA SETTING	POLICY FORMULATION	POLICY ADOPTION	POLICY IMPLEMENTATION	POLICY EVALUATION
COMMUNITY MEMBERS	▪ Coproduce/deliberate based on social factors to build support for policy implementation. ▪ Collaborate until there is an agreement concerning the problem that needs to be solved. ▪ Interact and interdepend to develop the needed shared understanding and commitment at all levels of the community.	▪ Coproduce/deliberate – a lot of interaction should be happening. ▪ Maintain trust and build more trust by adhering to agreed cultural beliefs, norms, values and indigenous knowledge.	▪ Trust the policymakers to legislate adopted course of action that would have been agreed upon during policy agenda and policy formulation.	▪ Should practically be involved in the implementation of the projects and programmes that aim to achieve policy goals.	▪ Coproduce evaluation outcomes through participatory methods. ▪ Maintain trust. ▪ Collaborate – support participatory processes. ▪ Interact. ▪ Communicate (through usual means) - communities should be key informants of the evaluation process.

VARIABLE(S) FOR ADMINISTRATIVE FACTORS	ADMINISTRATIVE FACTORS ▪ Bring communities and politicians together. ❖ Steer participation through implementing legislation.				
ACTORS	AGENDA SETTING	POLICY FORMULATION	POLICY ADOPTION	POLICY IMPLEMENTATION	POLICY EVALUATION
PUBLIC ADMINISTRATORS	▪ Coproduce/deliberate indigenous knowledge systems to build support for policy implementation. ▪ Build trust that will lead to desired results. ▪ Manage conflicts and power dynamics. ▪ Interact with the communities to develop needed shared understanding and commitment at all levels i) community grassroots, ii) executive, and iii) administrative).	▪ Collaborate – interrelationships and interdependence should be key. ▪ Plan for implementation - implementation planning should be a part of policy formulation. ▪ Coproduce/deliberate – a lot of interaction should be happening. ▪ Adopt new participatory methodologies that incorporate the communities' indigenous knowledge systems into the policy. ▪ Maintain trust and build more trust through letting communities to participate using different participatory methods. ▪ Apply nudges.	▪ Coproduce/deliberate – government to persuade communities and bargain to reach a consensus. ▪ Maintain minimal trust – agreements should be explicit. ▪ Collaborate with politicians to adopt policies in the interest of communities (inclusive of indigenous knowledge systems) to move forward a joint agenda into policy implementation. ▪ Increase legitimacy – ensure the presence of buy-in during implementation by incorporating indigenous knowledge systems. ▪ Policymakers are made to understand nudging.	▪ Maintain trust with communities to achieve the set aims. ▪ Adhere to a clearly spelt out legislation regarding implementation (inclusive of defined actors, time frames, costs). ▪ Collaborate via the usual established means of communication. ▪ Interact. ▪ Manage expectations and power dynamics through trust. ▪ Manage cross-sector collaboration for successful policy implementation.	▪ Coproduce/deliberate the policy outcomes. ▪ Maintain trust. ▪ Collaborate for support of participatory evaluation processes. ▪ Interact – public administrators to undertake to bring the various goals and interests together for a mutual agreement to proposed solutions. ▪ Communicate (through usual means).

VARIABLE(S) FOR POLITICAL FACTORS	POLITICAL FACTORS				
	- Form new institutions that promote community participation. - Form new legislation that promotes community participation. - Understand and apply the principles of governance, particularly community participation in policy processes.				
ACTORS	AGENDA SETTING	POLICY FORMULATION	POLICY ADOPTION	POLICY IMPLEMENTATION	POLICY EVALUATION
POLITICIANS	Interact with public administrators to develop the needed shared understanding and commitment at all government levels (cross-sector collaboration), as well as communities from grassroots level.	Enhance support through supportive structures and processes.	Understand the importance of crafting legislation that is guided by the communities' indigenous knowledge systems as would have been agreed upon during agenda setting / problem definition and policy formulation.	Increase support through supportive structures and processes.	- Coproduce/deliberate by reporting the policy outcomes. - Maintain trust. - Interact with communities and public administrators to undertake to bring the various goals and interests together for a mutual agreement to proposed solutions.

Source: Parsons (1951); and Swyngedouw (2005:2003); Anderson (2006); Kooiman (2008); Kooiman and Jentoft (2009); Osborne (2010a); Martin et al. (2015); Katsamunska (2016:135).

2.2.2.3.2 Administrative governance

Administrative governance can enhance or hinder community participation in climate governance. Administrative governance is defined as aiming at effectively applying public administration (Osborne, 2010a:7) through prioritising citizens in public service, as well as changing the mindset of public administrators through their values and behaviour and increasing administrative capacity (Robinson, 2015:15) for enhancing community participation. For the purpose of this study, administrative governance will be defined as the public administrators' capacity, values and behaviour towards prioritising communities' participation in policy formulation and implementation. The duties of public administrators in formulating and implementing climate change policies in relation to promoting community participation include (i) building support for policy implementation among concerned communities, (ii) facilitating collaboration among concerned communities, (iii) co-ordinating policy co-production with communities (O'Toole Jr and Meier, 2010:326), and (iv) assisting communities to make commitments with regard to participating in policy programmes (Crosby and Bryton cited in Osborne et al., 2010:200). This is because administrators help diverse stakeholders to develop a shared understanding of a public problem and its potential solutions.

In applying the interaction school of thought, public administrators enhance community participation by facilitating collaboration between the citizens and politicians during policy formulation and implementation, while maintaining each one's expected roles and unique perspectives. Public administrators and politicians through their relationship can promote interactions with the communities or stop the interactions at will. The on-going collaboration between politicians and public administrators is required because of the complexity and dynamism in the social, political and economic environment where policy processes take place (Swyngedouw, 2005; Kooiman, 2008; Katsamunskas, 2016:138). Ultimately, the collaboration should result in the successful participation of communities in policy formulation and implementation. However, in as much as public administrators play a facilitative role in this collaboration, politicians are a senior partner. Thus, public administrators remain accountable and responsive to elected officials (Hanekom, 1987:55; 1987b:55; Demir, 1993:6-7; Roman, 2015). Consequently, intensive interaction poses the risk of leading to corruption and administrative tyranny (Demir, 1993:6), which will affect the participation processes with the communities. Due to the imbalances between the public administrators and politicians, the senior partner may override the less powerful one (Demir, 1993:12).

Administrative governance that promotes community participation is when the public administrators build support for policy implementation among concerned communities. In applying the politics-administration dichotomy, the role of public administrators in policy processes is to provide expert ideas on how to formulate policies, as well as ensuring successful policy implementation as stipulated by the legislation (Demir, 1993). Politicians provide political guidance through overseeing the policy process and associated legislation. After the policy is legislated by politicians, it is the duty of the public administrators to bring together diverse groups of people for policy implementation under the guidance of the adopted legislation.

Apart from ensuring policy implementation (O'Toole Jr and Meier, 2010:322), the role of public administrators includes policy advocacy and formulation, that is, co-ordination of policy co-production. Therefore, the public administrator should have skills

in communication, bargaining and persuasion (Wu, Ramesh and Howlett, 2018:7) to ensure the inclusion of the communities in the policy processes. Further, public administrators critically examine the moral implications (public interest) of policies prior to figuring out the best possible ways of effecting implementation (Fredrickson cited in Hanekom, 1987:55; Demir, 1993:4-5). However, unless the moral implications are clearly defined, this remains a difficult assumption to hold to (Demir, 1993:11).

- **Administrative governance during the policy process**

During problem definition/agenda setting, administrators help diverse stakeholders (e.g. communities, politicians and other stakeholders) to develop a shared understanding of a public problem and potential solution. In cases of new policies, administrators help stakeholders to make commitments (Crosby and Bryton cited in Osborne et al., 2010:200). Public administrators should be fully aware of the intended policies that need to be implemented for them to be able to communicate the policy agenda to the communities (Hanekom, 1987). Owing to their being part of the political system, public administrators should seek to understand the political system to find means of influencing the system for the benefit of the communities (Stewart and Ayres, 2001:80). Administrative governance, as part of the governance system, carries out governing interactions within communities. Administrative governance deals with the day to day activities to solve community problems.

Administrative governance can be applied well during policy formulation and policy implementation. In applying administrative governance as defined by Osborne (2010:7), policy formulation and policy implementation are clearly two distinguishable but very closely interrelated stages of the policy process such that separating them may be difficult (Hanekom, 1987:55; Hill, 2005:21). Consequently, politicians duly authorise (policy adoption stage) public policies, which are formulated by public administrators who also happen to be the implementers of public policies (Hanekom, 1987). In Lesotho, for instance, the Ministry of Energy and Meteorology (administrators) develops climate change policies and associated strategies, and overall, coordinate climate change issues in the country (Ministry of Energy and Meteorology, 2017:31). On the other hand, the National Climate Change Committee (NCCC) (experts) provides guidance on climate change issues (Ministry of Energy and Meteorology, 2017:31). Above the Ministry of Energy and Meteorology and the NCCC is the Parliamentary Standing Committee on Natural Resources (legislators) that advises the Government on climate change policy issues (Ministry of Energy and Meteorology, 2017:31). This implies that public administration is not only restricted to policy implementation, but also involves policy formulation (Hanekom, 1987:55). The way policies are formulated could have important implications on their implementation.

During policy adoption, community participation can be enhanced through administrative governance by: i) the openness and accessibility (open/closed system) of the policy process, ii) the interrelationships between communities and public administrators, iii) the quality of deliberation (using both top-down and bottom-up deliberation approaches), iv) the effectiveness of public administration to steer the process of governance in the stages of the policy formulation (problem definition, agenda setting, formulation of alternatives) (see also Heinelt, 2010:9). The openness of the political system is measured by the opportunities the legislation offers to community members to influence the policy process as a collective (Heinelt, 2010:11).

In applying administrative governance during policy implementation, the legislation that spells out how communities can be involved should have been agreed between communities and public administrators during policy formulation. This is because inclusive policy implementation may fail if the public administrators delay action or change implementation procedures without agreeing with the targeted actors such as communities. Implementation may also fail if community expectations are always growing (Hanekom, 1987). The unwillingness of the communities to compromise may complicate the ultimate decision as the policymakers will likely wish to make all groups happy at the expense of the overall public interest (Moynihan, 2003:173; Neshkova and Guo, 2012:271).

During the policy process, the policy evaluation stage seems to echo the characteristics of administrative governance. Policy evaluation/termination is usually regarded as the final stage of the policy process (Parsons, 1995:77; Hughes, 2003:119-121; Dunn, 2004:45; Dye, 2005:31-55; Anderson, 2006:83). The policy evaluation stage gives the policymakers, public administrators in particular, an opportunity to get feedback pertaining to the implementation of a policy (Anderson, 2003:245). In the context of a policy cycle, this stage allows communities to give feedback to policymakers (the successes, strengths and weaknesses of a policy), thereby causing the recycling of the policy process (Anderson, 2003:245). Anderson (2003:25) claims that policy evaluation can focus on the process of the administration of a policy. The process of evaluation assists public administrators who implement policy to improve the practice of public administration, which has the ultimate goal of ensuring community participation in the policy process to reduce political criticism (Anderson, 2003). The question is how can the communities be involved?

During policy evaluation, the impact of the policy is assessed through policy outputs and policy outcomes. Anderson (2003:249) defines policy outputs as things that can be readily counted. On the other hand, policy outcomes are the consequences for society, both intended and unintended (Anderson, 2003). Deliberate government action or inaction is a policy outcome (Anderson, 2003). It is at the evaluation stage where Easton's systems theory portrays that the feedback to the environment only comes as a finished product, whereas in applying administrative governance as a component of NPG, the public administrators should collaborate, interdepend and interact with communities to co-produce policy outcomes and outputs.

▪ **Shortcomings of administrative governance**

The complexity of administrative governance during the four policy stages (agenda setting, policy formulation, policy implementation and policy evaluation) as a shortcoming may hamper effective community participation in climate change policy formulation and implementation. The complexity emanates from the way administrative governance proposes to deal with potential conflicts, power dynamics and synergies that result in the direct involvement of multiple actors (networks, politicians, communities, etc.). Consequently, bureaucracy is viewed as a practical means through which actors can be brought together for networking, interdependence, collaboration and interaction. The problem of synergising emanates from administrative governance being expected to manage all forms of the NPG, yet the governance forms are broad and combine five broad components which function as one theory (Meuleman, 2008; Peters, 2010). However, it is noteworthy that the policymakers

are overburdened because of their role of steering and controlling the participation process with diverse multiple actors, both local and international (Kooiman, 2010:73). Challenges emanate from within the system (political-administrative interface) and the external environment where the communities are expected to increase direct interaction with policymakers during policy formulation and implementation (Meuleman, 2008:73; Measham, Preston, Smith, Brooke, Gorrdard et al., 2011). The political-administrative interface is used in this study as shared responsibility, shared leadership, interdependence, relationship and interaction between public administrators and politicians as they carry out their day-to-day duties (Demir, 1993; Hughes, 1998:225-241; Thornhill, 2005; Audette-Chapdelaine, 2016; Peters, 2018a). The public administrator should bring together diverse groups of people to interdepend, interact and collaborate in an already complex bureaucracy. Because of the diversity that is plural, pluralistic and dynamic, the interdependence and interrelationships cause complexity in that communities will be competing for attention from the public administrators, just like the other stakeholders.

Diversity in respect of plural and pluralist is a shortcoming of administrative governance. The plural nature and pluralistic state is a requirement for the NPG, although this constraints public administrators. Public administrators' role when applying NPG is to manage all the devolved processes of governance (the market, networks, social issues, public policy) (Peters, 2010). Administrative governance is entrusted to the public administrators (managers of devolved governance processes) who already work in a complex bureaucratic system, whereas complex systems such as the bureaucracy's operations create opportunities for additional complexity (Jessop, 2008).

The political administrative-interface is another shortcoming of administrative governance at every stage of the policy process. Coordination of the participation processes between community members and other stakeholders involved can be a mammoth task that may be uncontrollable for the public administrators because of the political-administrative interface. The public administrators takes direction from the legislation to steer the devolved governance processes, while the politicians control and provide central direction. Using Peters' (2010:37) term 'governance of governance' (the process of steering devolved governance processes) seems to suitably describe one of the challenges of administrative governance. The idea of having spelt out legislation affects how administrative governance can be innovative to improve community participation in the policy process if need arises. The duty of public administrators is only to implement the legislation without being able to make any changes to it. Such restriction of the legislation provides no room for being creative to suit the current environment.

The dynamic nature of interactions, behaviour, processes, networks, structure and relationships amongst many diverse actors is also a shortcoming of administrative governance that can hinder community participation during the policy process. The non-linear interactions could influence the methods, direction and results of the interaction (Cilliers, 1998:4). Various individuals within a community are expected to interact with policymakers through deliberation, co-production, consultation and communication, competing their attention with non-governmental formal / informal organisations. In applying administrative governance, the interactions are very dynamic because they happen among different actors and can change oftentimes. Thus, considering that community members are ordinary people whose priorities may differ from one family to another, administrative

governance seems to require not only new participatory methodologies, but also more resources to enhance community participation.

- **A synthesis of administrative governance**

Overall, administrative governance is applicable to all the stages of the policy process. In fact, through the critical role public administrators play, administrative governance exists in all the stages of the policy process. Whilst it is true that politicians usually dominate the policy process and provide the central guidance, public administrators play a role in shaping policy initiatives through the policy processes by bringing the diverse actors together and in some instances by taking the lead in drafting the policy. Public administration is responsible for bringing diverse groups of people together, while working out sustainable solutions for the people's problems (Crosby et al., 2010:200). Further, besides coordinating external stakeholders, public administration governs initiatives within the political system (Meuleman, 2008) such as cross-sector collaboration in government ministries and departments for the success of implementing a policy (Crosby et al., 2010:201). Administrative governance seems to focus on improving both the relationships within the internal environment (state actors) and the interrelationships in the external environment (non-state actors). The reason for putting emphasis on the internal environment is the political-administrative interface. Still, public administrators have a duty to bring diverse groups of actors together to develop a shared understanding of a public problem and its solution. When formulating new policies, administrators ensure that stakeholders make commitments concerning their willingness to be part of the policy process (Crosby and Bryton cited in Osborne et al., 2010:200).

Availability of resources such as human, money and time might be an indicator of good administrative governance towards enhancing community participation in the policy process (Heinelt, 2010:12). Some scholars advocate for a specific budget plan for community participation to increase the level of involvement in the policy process. Moynihan (2003:173) argues that, if participation is to be successful, the policymakers should determine and consider the costs of informing the citizens and costs of educating the communities about the policy process.

Administrative governance during policy implementation essentially empowers public administrators to have the capacity to facilitate community members' direct involvement in the policy programmes. Policy implementation goes beyond merely fulfilling the legislation to facilitate bottom-up and top-down communication during policy evaluation. During policy implementation, the public administrators should be aware of the direction that the policy implementation intends to take (Hanekom, 1987:60), and this should have been discussed during policy formulation. It can be argued that the implementation stage should be for modification, elaboration or termination, as communities will be aware of the intended objectives of the policy (Hanekom, 1987). Accordingly, the public administrators should be fully aware of what needs to be implemented for them to be able to communicate to the communities (Hanekom, 1987). Again, the issue of trust, interrelationship and interdependence for resources should be followed even during the implementation (Reed et al., 2018:2) to ensure the implementation of what was agreed upon during the formulation of the policy. This will promote an open system of government.

In this regard, Table 2.3 summarises administrative governance and how it can enhance community participation during the policy process.

Table 2.3: Public Administrators enhancing community participation in the policy process through administrative governance

APPLICABLE VARIABLE(S) FOR ADMINISTRATIVE FACTORS		ADMINISTRATIVE FACTORS Effectiveness of public administration is enhanced by: ▪ bringing community members and politicians together for negotiations. ▪ Effective steering of the participation process that includes diverse actors through implementing legislation. ▪ Bringing actors together. ▪ bottom-up and top-down engagement to improve the quality of deliberation.			
ACTORS	AGENDA SETTING/ PROBLEM DEFINITION	POLICY FORMULATION	POLICY ADOPTION	POLICY IMPLEMENTATION	POLICY EVALUATION
PUBLIC ADMINISTRATORS	▪ Coproduce/deliberate the policy agenda based on legislation to build support for policy implementation. ▪ Bring diverse groups of actors together. ▪ Build trust that will lead to desired results. ▪ Manage conflicts and power dynamics not only for communities, but also for other stakeholders. ▪ Interact with politicians, informal/ formal networks and community members to develop needed shared understanding and commitment at all levels: i) community grassroots, ii) executive, and iii) administrative).	▪ Collaborate – interrelationships and interdependence among public administrators, politicians and communities should be key to maintain trust and build more trust. ▪ Plan for implementation – legislation that guides implementation should be well spelt out during policy formulation. ▪ Coproduce/deliberate – a lot of interaction should be happening among the public administrators, politicians and communities to select the best possible alternative. ▪ Adopt new participatory methodologies depending on the context of the actors, for example the use of nudges.	▪ Coproduce/deliberate – public administrators to persuade communities and bargain to reach a consensus. ▪ Maintain minimal trust – agreements between politicians and public administrators on legislation concerning communities' participation should be explicit. ▪ Collaborate with politicians to adopt policies in the interest of communities to move forward a joint agenda into policy implementation. ▪ Increase legitimacy – ensure the presence of buy-in during implementation.	▪ Maintain trust with communities to achieve the set aims. ▪ Adhere to clearly spelt out legislation regarding implementation (inclusive of defined actors, time frames, costs, etc.). ▪ Collaborate (top-down and bottom-up communication) – via the usual established means of communication. ▪ Interact with community members. ▪ Manage expectations of diverse community members and power dynamics by keeping minimal trust present. ▪ Understand policy nudging. ▪ Manage cross-sector collaboration within government ministries and departments to ensure communities' interests are implemented in the policy.	▪ Coproduce/deliberate the policy outcomes with communities. ▪ Maintain trust. ▪ Collaborate for support of participatory evaluation processes. ▪ Interact – public administrators to undertake to bring the various goals and interests together for a mutual agreement to proposed solutions. ▪ Facilitate op-down and bottom-up communication.

Source: Anderson (2003); O'Toole Jr and Meier (2010); and Osborne (2010a)

2.2.2.3.3 Public policy governance

The concept of public policy governance, as indicated under the features of NPG, is concerned with how policy elites and their networks interact in order to govern the public policy process (Osborne, 2010a:6). Public policy governance is an undertaking to bring the various goals and interests together from different actors for a mutual agreement to proposed solutions (Klijn and Koppenjan, 2000:143). In addition, public policy governance assumes that the improvement of policy outcomes is based on policymakers being able to assess mutual dependences and possibilities, among policy networks, of cooperation to reduce the risks of costs and benefits involved in failed policy implementation (Klijn and Koppenjan, 2000:144). In this context, public policy governance is the interaction and interrelationship of public administrators, politicians and policy networks with communities during the policy process to increase the interaction among the actors, ensure the legitimacy of the policy and its process, build trust of communities in participation processes, and facilitate collaboration processes for community participation in the climate change policy processes. Public policy governance is selected because it provides a theoretical perspective for analysing and improving interaction among multiple actors during the formulation and implementation of climate change policies. The public policy governance elements put emphasis on issues of interaction, legitimacy and trust, and encourages collaboration in the formulation and implementation of policies (Huys and Koppenjan, 2010:366).

First, the idea of increased interaction among multiple actors is a notable element of public policy governance. Interaction in this context refers to direct involvement of communities, policy networks and public administrators in the participation process aiming to influence the decision-making of the climate change policy process. The idea of increased interaction was a reaction to the NPM, which emphasises more of the market than citizens (Boedeltje and Cornips, 2004:3). The increased interaction ways may assist policymakers to get ideas of the communities' preferences to improve the success of policy implementation. The more policymakers use the information provided by community members, the higher the chances that policy implementation will be a success (Boedeltje and Cornips, 2004:7). During interaction, structures such as community representative committees or boards of actors and processes such as legislation regarding participation should be in a manner that gives an equal opportunity to all citizens to influence policy processes (Boedeltje and Cornips, 2004:12). Interaction between the policymakers and communities is necessary to effectively solve societal problems by formulating policies that reflect communities' preferences (Boedeltje and Cornips, 2004:13).

Second, public policy governance emphasises the need for legitimate policies as an element that plays a big role to ensure that every community's contribution matters. Legitimacy in participation processes is referred to in terms of policy inputs or policy outcomes and the procedures of the policy process (Karlsson-Vinkhuyzen, 2016:198; Quick and Bryson, 2016:4). The legitimate process of a policy is when deliberations happen through logical arguments and acceptable criteria to evaluate policy outcomes. Regarding the outcomes of the policy, legitimacy would be related to equity and effectiveness (addressing and meeting the needs of the public) (Quick and Bryson, 2016:4). A policy process that is legitimate requires policymakers to open the policy formulation and implementation to public input and use the collected information in formulating a policy to ensure the concerned actors' support of the final policy document (Quick and Bryson, 2016:4). A legitimate public policy is when

communities believe the policy is implemented in their interest, hence feeling obliged to support and obey it (Fung, 2006:70; Keping, 2018:5). Public policies may not be legitimate if policymakers operate from a distance to the beneficiaries of the policy (Fung, 2006:70). Public policy governance therefore requires policymakers and communities to increase the level of interaction for policies to get approval or consent from the community members (Keping, 2018:5), consequently addressing the issue of effective policy implementation.

Third, public policy governance serves to suggest ways that generate higher levels of trust between communities and the policymakers. Trust as an element of public policy governance can be defined as having subjective confidence and holding positive perceptions or set of beliefs based on actual experiences or expectations about the actions of an individual or an organisation (Bovaird, 2005:224; Organisation for Economic Co-operation and Development, 2017:15). Trust is the good will of the communities to have confidence in the policies to be implemented. By emphasising trust, public policy governance seeks to provide a framework upon which the policymakers and their policy networks should strive to ensure the expectations of the communities are met. In an effort to build trust, public policy governance emphasises trust that is built through sharing with communities the relevant information in an accessible manner about the policy processes, having clearly outlined actions and plans, and a comprehensive approach to interaction. It is noteworthy that in public policy governance interactions, the major facilitators are policymakers, experts and NGOs (Karlsson-Vinkhuyzen, 2016:197). More so, among them, the only players directly accountable to communities are the policymakers (Karlsson-Vinkhuyzen, 2016:197). Resultantly, more community members would be expected to get involved only if the policy process is transparent. Ultimately, the final policy should reflect the communities' desires, enhance the government's feedback, and increase the communities' trust in the policy process (OECD, 2017:109). These guidelines on trust provide a framework to policymakers in their efforts to increase community participation in climate change public policy formulation and the ultimate successful implementation (Sidney, 2007; OECD, 2017:109).

In policy-making, trust is also when the values of the policymakers such as integrity, openness and fairness directly influence the level of trust the communities can have. Integrity is when good behaviour of the policymakers facilitates policy inclusion (OECD, 2017:25). Resultantly, the way the process of policy formulation and implementation is conducted plays a big role in shaping the communities' attitudes towards the effectiveness of the government policies (OECD, 2017:107). This brings in the idea of openness. Openness, as a dimension of trust, is when the policymakers ensure that communities become part of the formulation and implementation of policies to increase trust in the whole policy process (OECD, 2017:25). The communities trust the policymakers if they have i) the ability to coordinate and implement ideas suggested by the community members (OECD, 2017) ii) the public institutions have the capacity to do what is right, for example, increasing the opportunities for communities to participate in the policy process (OECD, 2017:109). However, what is right may be debatable.

Trust in public policy governance contributes to the quality of decision makers who qualify to steer participation in the policy process. This is because public policy governance evolves in the discipline of PA, of which the latter is concerned with

effectiveness of policy formulation and the things that would make policy implementation a success (Osborne, 2010a:415). Public policy governance establishes some lens through which policymakers' role in managing participation in the policy process is outlined for effective steering of community participation. Steering is when the government sets priorities, defines goals and defines means to achieve the set goals (Peters and Pierre, 1998:231). Government's commitment to the open and inclusive policy process is manifested by clearly having policies/laws regarding how communities can participate, visa vis the role of policymakers and policy networks. Therefore, policymakers could be trained, guided and imparted with appropriate skills necessary to manage and coordinate the participation process (Katsonis, 2019)

Lastly, another significant element of public policy governance in community participation is the advocacy of collaboration, not only with the state and private non-state institutions, but also with members of the communities. Collaboration can involve cooperation to achieve a defined goal, bargaining, coordination and collective future planning (Wanna, 2008:3). Public policy governance is citizen centred because it teaches policymakers to encourage participation in a diverse manner and to avoid the dominance of only powerful groups or organisations. Inclusiveness, as a dimension of collaboration, focuses more on the expected results that are obtained because of an all-inclusive policy process. Community participation in the policy process through collaboration enhances accountability, encourages debates and later promotes support for government policy programmes (OECD, 2017:115). Thus, public policy governance is instrumental in making policymakers to understand the importance of collaboration with all actors, especially the communities, during the policy process to come up with legitimate policies, resulting in community buy-in and overall trust in the government and its policies (OECD, 2017:115).

▪ **Public policy governance during the policy process**

The application of public policy governance into the policy process could be applied during all stages of the policy process (policy agenda, policy formulation, policy adoption, policy implementation and policy evaluation). Reference would be made to the four key elements of public policy governance, which are interaction, legitimacy, trust and collaboration at every stage of the policy process. As previously mentioned during socio-political governance, whatever policy decision taken should be in the public interest to ensure maintenance of trust. Community participation when applying public policy governance is when communities understand the policy process and its contents to dialoguing together as equal partners in setting the agenda, proposing alternative courses of action, implementation and evaluation. The public policy governance, through the principle of interaction, legitimacy, trust and collaboration, provides guidelines on how the policymakers should engage communities in the policy process to avoid ritual consultation that may result in unwillingness to participate. To show a high level of increased interaction, the public administrators are encouraged to inform actors of the results and impacts of their input throughout the policy process (OECD, 2017:119).

During agenda setting, the role of public administrators and policy networks is to facilitate interaction between communities and other actors. Resultantly, policy networks, communities and public administrators should coproduce or deliberate, collaborate and interact to choose the policy alternatives that assist to build support, legitimacy and trust, not only for policy

implementation, but also for the entire policy process (Easton, 1957; Reed et al., 2018). Enhancing legitimacy and trustworthiness during agenda setting seems to require a common problem definition and negotiating in good faith (Ansell and Gash, 2007:550). Collaboration, as two-way communication, influences public administrators and policy networks (Ansell and Gash, 2007:546) to enable interaction and interdependence for resources to benefit community participation. Simultaneously, public administrators manage power dynamics between the policy networks and communities during collaboration. It is against this background that it can be argued that agenda setting should involve bargaining with public administrators overseeing the bargaining process. Bargaining is a compromise and 'give-and take' by two or more people in positions of authority to formulate a course of action that is agreed upon. In this context, the public administrators, politicians and the policy networks should bargain to agree on the approaches, which can be used to enhance the previously excluded communities in the policy process to have decision-making powers. However, agreements may not be ideal for all participants during bargaining because actors are many and interdependent (Anderson, 2003:137).

During policy formulation, interaction, legitimacy, trust and collaboration as elements of public policy governance should be key to maintain trust (Reed et al., 2018), interrelationships and interdependence for ideas among public administrators, policy networks and the communities (O'Toole Jr and Meier, 2010:322; Vangen and Huxham, 2010:166; Ross et al., 2016:126). The implementation plan should be part of policy formulation (Hill, 2005:21) through putting in place supportive structures and processes to enhance interaction, legitimacy, trustworthiness and collaboration in the whole policy process (Crosby et al., 2010:203). Regarding trust during policy formulation, public policy governance encourages maintenance and building of more trust to enhance the trust of communities in the policy process. Trust recognises responsiveness as a dimension with a major focus on how citizens receive public services vis-a-vis government listening to the communities to give them feedback (OECD, 2017:22; Keping, 2018:6). Trust in the context of enhancing community participation (Grant and Osanloo, 2016) would ensure that the following are considered: availability of an opportunity to participate, accessible policy process, timely response during communication, and the ability to involve all willing people (OECD, 2017). Finally, collaboration during policy formulation should focus on interrelationships and interdependences for resources and ideas amongst actors. A participation strategy noting clearly the objectives and goals of the policy, as well as the means of achieving them should be designed as part of policy formulation.

During policy adoption, public policy governance requires interaction and interrelationships that exist between politicians and their policy networks with the aim to co-produce the policy using the input from the communities (Hanekom, 1987:60) to increase legitimacy of the policy process (Renée and Stansbury, 2004; Reed, 2008; Huys and Koppenjan, 2010:366; Reed et al., 2018). Policy adoption is defined as the process of adopting, modifying or rejecting a preferred policy alternative by the politicians (Anderson, 2003:119). Although communities and policy networks can participate in the policy process, the formal authority to make decisions rests with the politicians (Anderson, 2003:119). Therefore, the burden to ensure community interests are considered during policy adoption rests with the politicians. Again, concerning increased interaction during all the stages of the policy process, participatory supportive structures, techniques and processes should be put in place through

policies. The legislation and regulation should be done in the public interest. However, what constitutes public interest can be debatable. In some cases, the politicians can mislead or sometimes lie in the media or foreign affairs regarding what they say constitutes public interest (Anderson, 2003:131). Likewise, as emphasised in agenda setting and policy formulation stages, power dynamics should also be managed. Power dynamics during policy adoption refers to the influence of party loyalty, personal values, public interest, among other factors, which should be managed to ensure that community interests determine how a politician supports the policy for adoption (Anderson, 2003:129). Regarding legitimacy and trust, explicit agreed alternative courses of action regarding participation and suggested contribution by the communities during agenda setting and policy formulation should be adopted in writing for communities to maintain trust in the policy adoption process and in the politicians. Lastly, collaboration during policy implementation could be done through co-producing the policy.

During policy implementation, interaction, legitimacy, trust and collaboration emerge as pillars of public policy governance that seek to enhance community participation. The main actors at this stage are the public administrators and the policy networks. However, to manage power dynamics, high managerial skills for public administrators may be necessary, considering that policy networks are an integral feature of public policy governance (Fawcett and Daugbjerg, 2012:197). Power dynamics during policy implementation is about managing who does what, when and how to ensure equal participation of all groups of actors involved. Again, public policy governance through interaction can be enhanced through adhering to the adopted supportive structures and processes (Crosby et al., 2010:203; Crosby et al., 2010:203). Effective interaction that increases the legitimacy of the policy process requires mechanisms to link the policy programmes with communities' preferences (Boedeltje and Cornips, 2004:2). In these interactions, public administrators and policy networks are expected to create synergies between communities and relevant government departments that facilitate climate change issues and participation. The policy networks will act as a linking factor between public administrators and the communities through awareness campaigns about the policy process, piloting participatory techniques, while the public administrators coordinate administrative measures for the experimentation of those new participation approaches and techniques in the policy process. The emphasis of interaction would be to focus more on community participation as a process rather than only on the relevant techniques used for participation in the policy process (Reed, 2008:2417).

Above all, trust should be promoted during policy implementation to ensure that actors involved are willing to take the risk of getting involved in working together. Concerning ensuring legitimacy, communities, policy networks and cross-sectors' (with government departments) expectations should be managed, for instance, by achieving set aims and joint funding initiatives to promote output legitimacy. Output legitimacy is producing the policy outcomes that are acceptable by the actors, while input legitimacy is achieved when the policy process is all-inclusive (Boedeltje and Cornips, 2004:1; Scharpf, 2009; Fawcett and Daugbjerg, 2012:202). On one hand, the public policy governance requires a lot of communication through the usual established means of communication when applying the element of collaboration. On the other hand, clear and consistently applied legislation may reassure all actors that the process is equitable and fair (Ansell and Gash, 2007:557). The success or failure of policy implementation is dependent on the extent to which co-operation (during collaboration) between actors can be

achieved (Klijn and Koppenjan, 2000:141). Cooperation of public administrators and policy networks with the approval of politicians to joint fund initiatives that aim to enhance community participation in climate change policies is a significant contribution of public policy governance.

Lastly, during policy evaluation, the public policy governance approach that aims to enhance community participation should ensure public administrators adhere to the principles of interaction, legitimacy, trust and collaboration as already noted in other policy stages (agenda setting, formulation, adoption and implementation). Similarly, as indicated during agenda setting, policy formulation, policy adoption and policy implementation, increased interaction among actors requires all-inclusive supportive structures and processes. During interaction, public administrators should manage power dynamics to ensure equal participation of all actors. Concerning legitimacy of a policy during policy evaluation, it can be perceived legitimate depending on the extent to which the policy outcomes effectively solve social problems and the openness of the policy evaluation process to exploration of considered mutual outcomes (Boedeltje and Cornips, 2004:6). Nevertheless, lack of legitimacy during policy evaluation may have severe implications for agenda setting, thereby affecting how communities would wish to participate again in future policy processes (Boedeltje and Cornips, 2004:15). Trust among actors is also key during policy evaluation (Peters, 2010). Thus, trust can be gained through: i) direct consultation with the beneficiaries of the policy to compile policy outcomes, ii) public reporting of the policy outcomes, and iii) the collection and use of data representative of the whole population from the beneficiaries of the policy programme. The process of collaboration during policy evaluation should produce positive feedback to the agenda setting in the sense of promoting voluntary community participation during future policy processes (Ansell and Gash, 2007:557). Successful collaboration requires commitment by public administrators and policy networks to explore outcomes considered by all actors involved.

Overall, the public policy governance focuses on capacitating the internal actors (policy networks and policymakers) to benefit the external actors (communities). The internal actors are expected to lead the collaboration processes because policy networks and policymakers are believed to have the capacity to facilitate interaction among various and multiple actors (Crosby et al., 2010). The internal actors (politicians, public administrators and policy networks) should collaborate amongst themselves and with communities in good faith to ensure communities legitimise the final authoritative decisions. In conducting the policy process, the internal actors should seek to be trusted so as to encourage collaboration in the ultimate implementation of the legislated policies (Huys and Koppenjan, 2010:366). Consequently, the focus is on the internal structures and strategies which should be developed to encourage collaborations (Crosby et al., 2010:203) that benefit not only policy networks and policymakers, but also the communities.

▪ **Shortcomings of public policy governance**

Despite being a good form of governance that seeks to include all actors in the policy process, public policy governance has a number of shortcomings. The first shortcoming relates to the multiple actors (at local, national and global scale), processes and inputs required to shape public policy, alongside government (as just one actor) which could result in compromised policy

deliberations with the communities. Power dynamics due to multiple actors in public policy governance may hinder community participation in the policy process. The compromise happens when the government seeks to please all the actors out of this complex set of deliberation(s) and that is not always possible (Robinson, 2015:9). In public policy governance, government is expected to manage all the policy networks during the policy process and this may create institutional constraints and concomitantly limit the government's capacity to initiate participation activities to shape policy from below (bottom-up approach) (Börzel, 1998:260; Newman, Barnes, Sullivan and Knops, 2004:218; Measham et al., 2011). There might be no guarantee for equal control over collective decisions because private and public institutions are well organised and can exclude communities from the policy process anytime if the rules of participation are not well stipulated.

Second, sometimes policy networks may hinder community participation when the invited networks for partnership ultimately dominate and influence the policy process (Meuleman, 2008:33). Admittedly, supporters of public policy governance argue that in order to realise legitimate policy outcomes, actors should not impose their proposed solutions on other actors. Unlike communities, the policy networks can have the capacity (e.g. having money, other private resources, special relationships with policymakers, etc.) to self organise and evade the control of the government (Peters and Pierre, 1998:225; Fung, 2006:70). However, the less powerful actors can use veto power to block decision making, thus, creating stagnation and blockade (Klijn and Koppenjan, 2000:147), implying more costs to the implementation of a policy. Consequently, the dominance of policy networks over communities may reduce the trust of communities in government's capacity to steer the policy process.

Third, the complexity of the nature of relationship for each policy network to policymakers is a shortcoming of public policy governance in an attempt to manage the policy process for the benefit of community participation (Börzel, 1998:253; Meuleman, 2008:36). Public policy governance in the context of complexity is an undertaking by policymakers and policy networks to bring the various goals and interests together for a mutual agreement to proposed solutions for the benefit of the communities (Klijn and Koppenjan, 2000:143). Public policy governance assumes that the improvement of policy outcomes is based on official actors being able to assess mutual dependencies and possibilities of cooperation to reduce the risks of costs involved in failed policy implementation (Klijn and Koppenjan, 2000:144). However, the types of relationships that occur when governing all the policy networks may undermine community participation. The types of relationships (power dynamics) would affect the level of interaction, legitimacy, trust and collaboration. For example, network governance exhibits an inter-dependent relationship, market governance exhibit an autonomous relationship, public policy governance an inter-dependent relationship, while socio-political governance is dependent upon the kind of environment that would have been created by the government (Meuleman, 2008:51). Given this scenario, public policy governance is complex because of the numerous actors involved (Stewart and Ayres, 2001:82). The interrelationships amongst these multiple actors (Stewart and Ayres, 2001:82) present another challenge to the policy process. In these interrelationships of numerous actors, some actors may function as senior partners. Due to the imbalances among the actors, the senior partner may override the less powerful partner (Demir, 1993:12; Audette-Chapdelaine, 2016).

- **Synthesis of public policy governance**

In summary, the public policy governance approach describes and explains the interactions in complex network settings and the outcomes of these interactions because of power dynamics (Huys and Koppenjan, 2010:368). To manage these power dynamics, the normative assumption of public policy governance encourages groups of actors involved to consider a win-win approach as a success (Huys and Koppenjan, 2010:368). However, due to the diversity of participants, participation is fragmented and populated. Furthermore, because of the diversity of actors, it can be difficult to know who should participate because of different backgrounds of individuals and career profiles (Atkinson and Coleman, 1992:158-158).

In concluding the discussion on public policy governance, it is apparent that interaction, legitimacy, trust and collaboration should be adhered to at all stages of the policy process for the benefit of communities. Consequently, the communities will influence decisions, actively get involved in participation processes, experience social learning during the agenda setting, policy formulation, policy adoption, policy implementation and policy evaluation (Glucker, Driessen, Kolhoff and Runhaar, 2013:2532; Newig, Challies, Jager, Kochskaemper and Adzersen, 2018; Uittenbroek et al., 2019). Hence, such interactions between the communities, the policymakers and policy networks will enhance the quality of policies by gaining relevant information, resolving conflicts and generating legitimacy for the intended policy (Glucker et al., 2013; Uittenbroek et al., 2019:2532). Above all, trust should be built. Frequent feedback to the communities at every policy stage may be important for communities to participate again in future policy processes. However, it should be noted that, instead of disseminating information to the communities about the policy outcomes, the policymakers may restrict access to the information (Anderson, 2003). Finally, Table 2.4 gives an overview of the public policy governance during the policy process to enhance community participation.

Table 2.4: Actors enhancing community participation in the policy process through public policy governance

	VARIABLE(S)	INTERACTION			
	AGENDA SETTING	POLICY FORMULATION	POLICY ADOPTION	POLICY IMPLEMENTATION	POLICY EVALUATION
PUBLIC ADMINISTRATORS AND POLICY NETWORKS	- Public administrators and policy networks should interact and interdepend for resources for the benefit of community participation. - Public administrators should ensure active involvement and empowerment of marginalised communities. - Public administrators should manage power dynamics amongst multiple actors (state actors and non-state actors).	- Interact and interrelate for ideas among communities, public administrators, and policy networks. - Implementation planning should be a part of policy formulation. - Public administrators to manage power dynamics amongst multiple actors (state actors and non-state actors) to avoid dominance of ideas from one group of actors but to incorporate ideas equally.	Policy networks and public administrators each in own capacity should lobby politicians and safeguard the communities' contribution through ensuring that the communities' ideas contributed are part of the legislation.	- Public administrators manage power dynamics between multiple actors by adhering to participation objectives. - Cooperation – public administrators and policy networks with the approval of politicians form joint fund initiatives. - High management skills - Public administrators require high managerial skills to manage communities, policy networks and cross-sector expectations. - Public administrators to increase interaction and support through using established supportive structures and processes. - Policy networks and public administrators to create synergies between communities and relevant government departments.	- Increase interaction through the use of all-inclusive supportive structures and processes. - Public administrators manage power dynamics between policy networks and communities to avoid dominance of a group of actors over another.

	VARIABLE (S)	COLLABORATION			
	AGENDA SETTING	POLICY FORMULATION	POLICY ADOPTION	POLICY IMPLEMENTATION	POLICY EVALUATION
PUBLIC ADMINISTRATORS AND POLICY NETWORKS	Public administrators and policy networks as facilitators of community collaborations facilitate collaboration processes during participation of communities to define a common policy problem.	- Public administrators and policy networks continue to interrelate and interdepend for resources. - Public administrators and policy networks should adhere to a participation strategy with clear participation goals and objectives.	- Coproduce/deliberate – politicians to persuade communities and other policy networks to bargain to reach a consensus. - Politicians should ensure that communities together with all concerned actors believe in shared ownership of the policy adoption process.	- Public administrators to lead collaboration processes among policy networks and communities using the usual established means of communication. - Public administrators to ensure the availability of spelt out legislation – every actor to adhere to the rule of law.	- Public administrators' duty is to ensure the policy evaluation process is open to communities for exploration – to mutually agree on the policy outcomes and the evaluation criteria. - Public administrators choose the approaches that enable communities to directly give their input, communicate regularly of the evaluation process, collect and use data from all the concerned community actors.

VARIABLE (S)		- LEGITIMACY - TRUST			
AGENDA SETTING		POLICY FORMULATION	POLICY ADOPTION	POLICY IMPLEMENTATION	POLICY EVALUATION
POLITICIANS	Politicians to ensure that negotiations with communities regarding agenda setting are in good faith – outcomes of the negotiations should be considered.	Incorporate the communities' contribution during the drafting of the technical legislation.	- Politicians to increase legitimacy through ensuring the presence of buy-in by adopting agreed alternative courses of action. - Politicians to coproduce a policy –politicians to persuade communities and other policy networks to bargain to reach a consensus. - Inter-actor consensus – politicians should ensure that communities together with all concerned actors believe they share and own the policy adoption process by adopting the suggested contribution from the communities during agenda setting and policy formulation. - Maintain minimal trust with all actors especially communities – agreements should be explicit.	Ensure that the legislation is clear for easy implementation by public administrators.	Provide central guidance regarding evaluation processes.

Source: Author

2.2.3 Theory of participation in environmental management

This section will discuss the theory of participation in environmental management, mainly climate change. The theory of participation in environmental management is referred to in this study as the theory of participation. In the literature, because climate change management forms part of environmental management (Reed et al., 2018:1), it is often discussed as an aspect under environmental governance (Wengert, 1976; Brundtland, Khalid, Agnelli, Al-Athel, Chidzero et al., 1987; The Rio Declaration on Environment and Development, 1992; Lemos and Agrawal, 2006; Drexhage, 2008:3; Reed, 2008; Pinkse and Kolk, 2012; UNECE, 2015; Reed et al., 2018:1). Therefore, community participation in climate change policy formulation and implementation seems not to have a specific theory independent of the environment (Reed et al., 2018). This section first traces the development of the theory of participation in environmental governance in general, then discusses the general features of the theory of participation in environmental management, particularly climate change and land degradation by Reed et al. (2018). In this study, more attention will be given to climate change and not land degradation. The discussion of general features is followed by the focus of the theory of participation in respect of stakeholder participation in the policy process, then, the shortcomings of the theory of participation and its applicability to enhance community participation in the policy process, and later its focus on the internal compared to external processes of governance. Summarily, a synthesis or analysis of various discussed features of the theory of participation is provided. It is noteworthy that community participation in the context of the theory of participation by Reed et al. (2018:2) is included in the word used and defined as stakeholders (people who are affected by or can affect decision) and engagement. Engagement is associated with the community in dealing with environmental issues, which results in the term community engagement. The term engagement, as used by other researchers, would thus refer to longer term arrangements regarding participation (Ross et al., 2016:126).

2.2.3.1 Background of the theory of participation in environmental management

Arnstein's (1969) ladder of participation is credited for having introduced the debate about citizen participation during the policy process (Reed, 2008:2420; Collins and Ison, 2009). Following Arnstein's ladder of participation and the history of climate change debates (climate change as mainly caused by human activities), Reed et al. (2018) introduced the theory of participation in environmental management, particularly climate change and land degradation. Generally, the theory of participation by communities in climate change policies dates back to 1972 when a conference was held in Stockholm, Sweden. The conference raised awareness concerning the global environment and led to the establishment of the United Nations Environment Programme (UNEP) (Meakin, 1992). The conference was followed by the 1987 Brundtland report, published as *Our Common Future* by the Brundtland Commission (World Commission on Environment and Development), which was set up in 1983. Brundtland is the name of the then Norwegian Prime Minister Gro Harlem Brundtland who was appointed by the UN general secretary to chair the Commission (Brundtland et al., 1987). The Brundtland report clearly explains the link within environmental 'stresses'. In this context, 'stresses' refer to the acts by human beings that damage the environment (Brundtland et al., 1987:36). Thus, the report recommended the use of new approaches to promote local participation in environmental decision-making. Explicit climate change discussion regarding citizen participation in climate change policy process began in 1992 when representatives from 172 nations held the first United Nations Conference on Environment and Development

(UNCED) or the Earth Summit Conference in Rio de Janeiro, Brazil to discuss global environmental issues that had become central to policy implementation (Meakin, 1992:6). The aim of the conference was to seek to agree on concrete measures to ensure sustainable future for present and future generations. After the UNCED, the UNFCCC (1992) was born. Article 6 of the UNFCCC emphasises the involvement of the public in climate change programmes (UNFCCC, 1992). Likewise, paragraph 10 of the Rio agreement encourages governments to develop policies that consider, among other things, population changes, local people's interests, appropriate indigenous and traditional land use (for example, terracing in agriculture, pastoralism), and active participation in decision making of the affected groups (The Rio Declaration on Environment and Development, 1992; Eden, 1996:184). Since then, several 'theories' of participation in environmental decision making, particularly climate change have been proposed (Bulkeley and Mol, 2003; Lemos and Agrawal, 2006; Reed, 2008; Friis-Hansen and Aben, 2017; Reed et al., 2018; Uittenbroek et al., 2019).

2.2.3.2 Features of the theory of participation

The proposed theory of participation by Reed et al. (2018:7) provides guidance for designing engagement processes to improve the outcomes of an inclusive environmental decision-making process, particularly on climate change and land degradation (Reed et al., 2018:1). This theory of participation by Reed et al. (2018:7) considers types of legitimate engagement and a theory to explain variation in outcomes as a result of different types of stakeholder engagement. According to this theory of participation, the policy process is predicated on a net balance of support, the latter consisting of government supporting the perspectives of the communities and the communities supporting government policies on climate change (Reed et al., 2018:1-2). To this effect, this research considers the theory of participation by Reed et al. (2018), which deals with four approaches and assumptions of engaging stakeholders as illustrated in Figure 2.2.

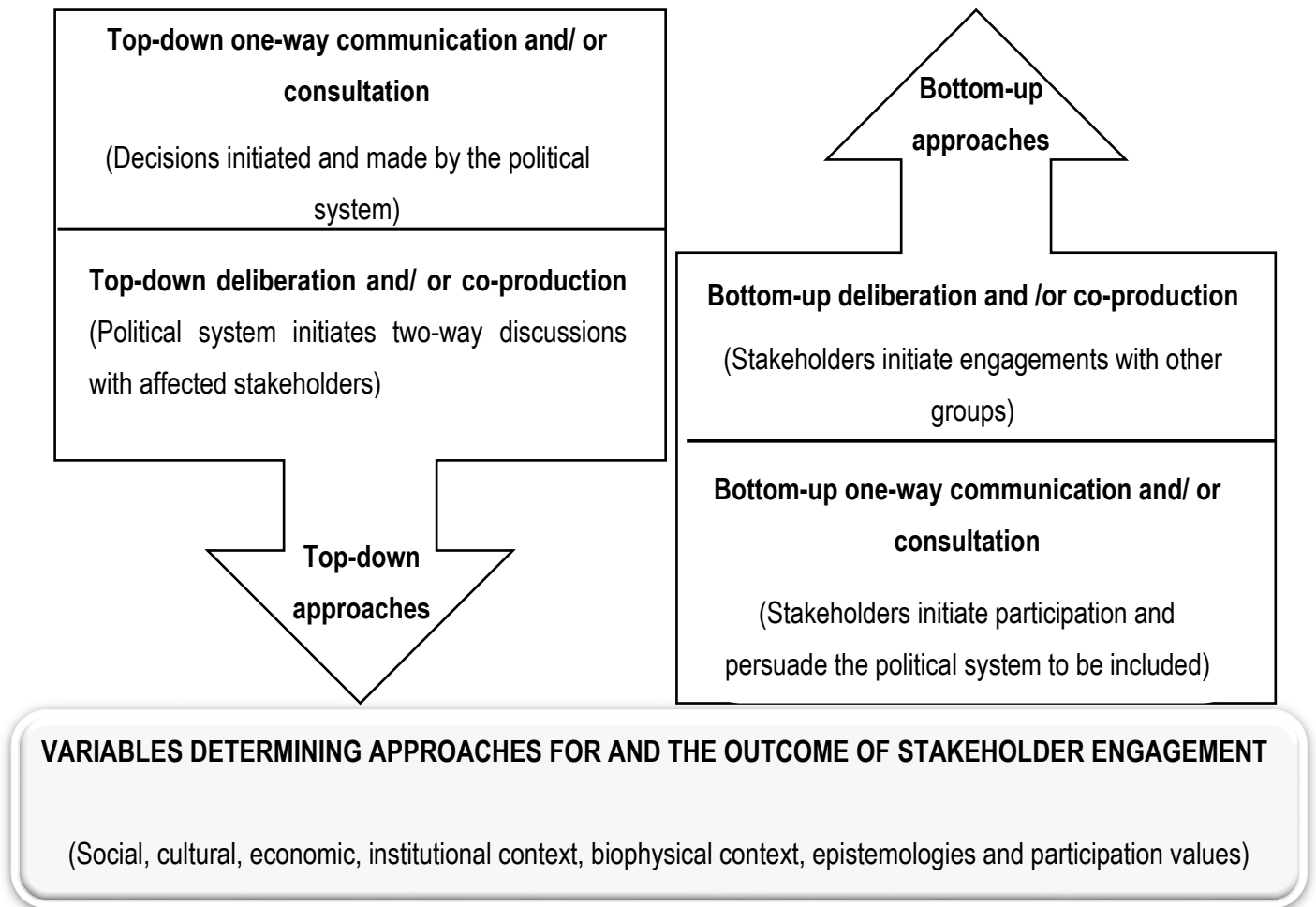


Figure 2.2: Four approaches and variables that affect the outcome of engagement (Source: Adapted from Reed et al., 2018)

First, the theory assumes that participation can involve top-down one-way communication (Figure 2.2). This implies that decisions are initiated and made through a top-down approach by the political system to affected stakeholders, whilst the political system also retains the power of decision-making (Reed et al., 2018:9). Second, participation in environmental issues can also take the form of a top-down deliberation or co-production approach (Figure 2.2) (Reed et al., 2018:9). This occurs when an organisation with vested decision-making powers initiates two-way discussions with affected stakeholders about a decision, prior to decision-making. In this type of approach, the formulation and implementation of an environmental policy are planned together with affected stakeholders but the decision-maker maintains the responsibility of implementation (Reed et al., 2018:9).

This theory also highlights a third approach during which participation in environmental policy can assume bottom-up one-way communication or consultation, which is contrary to the first two approaches. This occurs when stakeholders via grassroots networks and social media, initiate participation by persuading decision-makers to include the communities in decision-making

processes (Reed et al., 2018:9). Through this type of participation, mass mobilisation of stakeholders are used to overrule already made top-down decisions (Reed et al., 2018:9). However, decision-makers should demonstrate the buy-in and support of the initiated decisions by stakeholders by increasing the latter's capacity in decision-making (Reed et al., 2018:9). Similar to the third approach, the fourth approach (Figure 2.2) is also grounded in stakeholder participation through bottom-up deliberation or co-production. During the application of this approach, stakeholders initiate engagements with other stakeholders (Reed et al., 2018:10). Although there is consensus amongst all stakeholders concerning decisions, these decisions would be implemented by a small stakeholder group, whose knowledge is gained through consulting other stakeholders (Reed et al., 2018:10).

Apart from the four approaches to participation that underpin the theory of participation, the theory postulates various assumptions regarding variables, design, power dynamics, spatial and temporary scales that influence the outcome of stakeholder engagement in environmental management (Reed et al., 2018). Variables which include socio-economic, cultural, and contextual institutional factors are important in determining the appropriate approach to engage communities regarding climate change policy formulation and implementation, which form part of environmental management (Reed et al., 2018:1). Of importance is the extent to which variables that include socio-economic, cultural and contextual institutional factors should be considered in determining the appropriate approach to enhance stakeholder engagement in climate change policy governance (Reed et al., 2018:2). The same variables enable the design of any stakeholder engagement strategy to be effectively adapted to the context (Reed et al., 2018:7). The argument by Reed et al. (2018:2) of variables that determine the appropriate approach to enhance community participation, agrees with Wengert (1976:23). It is noteworthy that the variables are considered during data collection in the current study.

The theory of participation postulates that scalar determines outcomes in engagements with stakeholders (Newig, Schulz and Jager, 2016). Scalar is highly dependent on space and time. Scalar fit is described by Reed et al. (2018:7) as an explanatory factor that implicitly links literature that discusses two-way dialogue between small numbers at interpersonal level and two-way dialogue at national levels over long time frames. Preference for an option may change over a short time scale but the extent to which engagement through deliberation occurs shapes the values of participants depending on the temporal scales (time frames e.g. hourly basis, daily basis, yearly, etc). Desired outcomes may also depend upon matching engagement to spatial (how big the place is) scales at which decisions are made.

Lastly, another notable feature of the theory of participation is its encouragement to consider context (socio-economic, cultural and institutional). The theory argues that consideration of perceptions, depending on culture, can determine the success of engagement between policymakers and communities during the climate change policy process (Reed et al., 2018:6). Due to participation culture, previous experiences and available resources context are important in determining the type of appropriate engagement approach and enabling the design of any process to be effectively adapted to the context (Reed et al., 2018:7). Whilst participation is being encouraged and guided at the international level (UNFCCC, 1992), meaning, role and importance

of participation vary from culture to culture, nature of the problem and perspectives from which communities view (social, political, cultural, economic, personal interests, etc.). In addition, meaning can also be different depending on the situation to which it is applied, motivation, ideology and practical orientation of users (Wengert, 1976:2; Olsen, 2004:2; UNECE, 2015; UNESCO and UNFCCC, 2016:6).

2.2.3.3 Focus of the theory in respect of community participation in the policy process

In view of the four approaches, stakeholder engagement in policy formulation and implementation seems to be consistent with two of the four approaches, as evidenced by the emergence of NPG (Osborne, 2010a). Governance evolved from the shortcomings of NPM (Acevedo and Common, 2010:397). Due to the shortcomings of NPM, governance shifted from giving responsibility of service delivery to non-state actors towards networks which is inclusive of multiple actors to improve accountability, legitimacy, transparency, participation, rule of law, responsiveness, equity, inclusiveness, efficiency and effectiveness (Katsamunskas, 2016:139). The nature of NPG requires an increase in engagement not only in terms of public service delivery, but also with the processes of public policy. Thus, two-way engagement/co-production in this context is meant to be a permanent feature of the NPG to come up with solutions for the society and environment (Osborne, 2010c:413).

The theory of participation supports communities as initiators of participation in the climate change policy formulation and implementation. Similar to the bottom-up one-way communication/ consultation, the bottom-up deliberation/ co-production approach strongly supports stakeholder participation. The two approaches (Reed et al., 2018) support grassroots participation in environmental policy, particularly climate change, by proposing initiation of ideas from the grassroots. In respect of stakeholder engagement, this occurs when the stakeholders through their grassroots networks and social media initiate participation by persuading decision-makers for them to be included in decision-making processes (Reed et al., 2018:9). Through the bottom-up one-way communication/ consultation and bottom-up deliberation or co-production, stakeholders not only influence decisions, but can also overrule already made top-down decisions (Reed et al., 2018:9). Nevertheless, the overriding of already made decisions can be so if the decision makers buy-in and support the initiated decisions by stakeholders (Reed et al., 2018:9).

The theory of participation emphasises participation of communities as co-producers, not only during the actual climate change policy process but also during the designing of a participation strategy prior to their involvement. Ideally, the theory proposes that during the design of a participation strategy, all affected parties should be represented to develop shared goals and to co-produce outcomes based on the most relevant sources of knowledge (Reed et al., 2018:8). Inclusiveness in designing a participatory strategy increases the likelihood of successful policy formulation and implementation because of the systematic representation of relevant communities in their wide range of socio-cultural, political, economic and biophysical factors, as well as their epistemologies and participation values.

The theory of participation supports the idea that communities should legitimise the participation strategy before the policymakers facilitate community participation in the climate change policy process. Arguments for supporting stakeholder engagement defend the idea of having a participation strategy agreed upon by stakeholders. The proponents of community participation postulates that the nature and scope of participation should be inclusively coordinated and spelt out, differentiating between authority and responsibility, leadership and capacity (Wengert, 1976:29-30). Process design of the participation strategy is necessary for the enablement of stakeholders to provide comprehensive information that can underpin robust climate change policy decisions (Newig cited in Reed et al., 2018:6). Poorly designed and poorly facilitated engagement may lead to biases in decision making (Reed et al., 2018:6). However, the theory acknowledges that meeting all actors may not always be feasible (Reed et al., 2018:8).

The theory of participation fills the gap in terms of balancing the application of representative democracy and deliberative democracy through proposing the use of both bottom-up and top-down approaches to enhance community participation in climate change policy formulation and implementation. The theory of participation in environmental management supports the internal (policymakers) and external environmental actors (stakeholders) (Reed et al., 2018:9). The theory suggests claims that all approaches to engagement should be available for use, depending on the desired outcomes (Reed et al., 2018:9). The theory of participation equally values the internal actors (decision makers) and external actors (stakeholders and the public) (Reed et al., 2018). However, sometimes representative deliberation may save time and money and allow for the timeous completion of policy formulation and implementation. The American Behavioural scientists known as the “Elite-Mass Behaviour and Interaction” opposed community participation and argued that ‘the few govern the many’ (Wengert, 1976:34). Professor Thomas R. Dye heavily criticised community participation as impossible to achieve in a modern industrial society. The basis for criticising community participation being the question “How can a whole nation be engaged in participation?” To Dye, the masses pose a great threat to democracy, while the elite are the only ones capable of acting decisively to preserve individual freedom, human dignity and the values of life, liberty and property.

Proponents of the theory of participation believe that the consideration of communities’ culture during the policy process may be key to motivate communities to participate. Cultural diversity is no doubt argued as a strong contributor to collaborative advantage (Vangen and Huxham, 2010:171; Adger et al., 2012:171; Etchart, 2017). The people’s perceptions on participation and climate change, depending on culture, can determine the success of participation (Reed et al., 2018:6). As alluded to earlier, participation culture and previous experiences, meaning, role and importance vary from culture to culture. In addition, meaning can also be different, depending on the situation to which it is applied, motivation, ideology and practical orientation of the users (Wengert, 1976:2; Olsen, 2004:2; UNECE, 2015; UNESCO and UNFCCC, 2016:6). In practice, it may be necessary to investigate how far this kind of diversity can be of use or of no use.

2.2.3.4 Shortcomings of the theory of participation

Despite having good intentions to hear the voice of everyone during the climate change policy process, the theory of participation has some limitations. One of the limitations relates to the redistribution of power between communities and the government, as well as within communities when making policy decisions (Collins and Ison, 2009:2421). Influential people in society who have varying interests (Wengert, 1976:34) may dominate the participation process. This domination of the participation processes could ultimately influence policy outcomes that may benefit a few stakeholders who influenced the policy process (Hanekom, 1987). It could be argued that this limitation concerning influence and distribution of power during public policy participatory processes could be influenced by who participated in policy governance and how such governance was managed by administrative and public policy governance. To this effect, the international governance is predominantly consisting of international organisations. The role of international organisations, international treaties and transnational arrangements is to signal guidance to governments to pursue a certain policy trajectory that assists to synchronise and stimulate development across levels of governance (Klijn and Koppenjan, 2000:7; Oberthür, Hermwille, Khandekar and Obergassel, 2017:2). In Lesotho, an example in this regard is the NCCP, which is based on the guidance of the UNFCCC, SDGs, the Paris Agreement, National Strategic Development Plan (NSDP), African Union (AU) Agenda 2063 (Ministry of Energy and Meteorology, 2017:5). From this reasoning, it is apparent that community participation in the policy process, particularly climate change policy, could be affected by the nature of international and local policy governance in an attempt to advance or hinder community participation.

Another limitation of the theory of participation is that community members may not necessarily be interested in policy issues (Hanekom, 1987:35). The lack of interest may be due to various reasons: (i) the policy formulation can be technical, especially the drafting of the actual legislation, (ii) the level of education, for example, researchers may wish to only participate after exploration of the whole issue, while the less educated do not believe they can make a meaningful contribution, (iii) lack of trust by the people, whereby they do not trust the government in handling the policy process (Crosby et al., 2010). Some people may be suspicious of the decision makers, claiming that the decision has already been made; therefore, to them the process is fake (Collins and Ison, 2009:2421). (iv) There are people who are ever busy who may claim not to have time to participate, while others may claim that they have no interest in government business. Under such circumstances, community participation could lead to the slowing down of policy formulation (Hanekom, 1987:44). To ensure community participation in climate change policy process under these circumstance, it is therefore the responsibility of the government to provide human resources, infrastructure and other types of resources required in the process of community participation (Katsamunsk, 2016) because government is the practical means through which resources can be accessed.

▪ A synthesis of the theory of Participation in Environmental Management

In summary, of importance to community participation in the policy process are the approaches to be used in conducting and designing the whole process of participation (Reed et al., 2018). Approaches to the participation process during policy formulation is a key feature that underpins the success of community participation during climate change policy implementation.

An appropriate approach to involve communities during the policy process can be determined by variables such as power dynamics and spatial and temporary scales (Reed et al., 2018). These are top-down deliberation/co-production, top-down one-way communication/consultation, bottom-up deliberation/co-production and bottom-up one-way communication/consultation (Reed et al., 2018:3-4). Ideally, the theory of participation suggests that during design, all affected parties should be represented to develop shared goals and to co-produce outcomes (Katsamunskas, 2016; Reed et al., 2018:9). However, the theory acknowledges that meeting of all parties may be impossible as this may not always be feasible (Reed et al., 2018:8). To conclude the discussion on the theory of participation and its relevance to community participation in climate change policy formulation and implementation, an overview is provided (Table 2.5).

Table 2.5: Theory of participation in environmental management and its relevance to community participation in climate change policy formulation and implementation

ACTORS	VARIABLE(S)	CONTRIBUTION OF THE THEORY OF PARTICIPATION TO POLICY FORMULATION AND IMPLEMENTATION	SHORTCOMINGS
COMMUNITIES	▪ Collaboration. ▪ Legitimacy. ▪ Initiate bottom-up one way and two way communication approaches.	▪ Communities to initiate participation during the climate change policy process. ▪ Communities to legitimise the participation strategy meant to enhance participation during the climate change policy process.	▪ Influential people may dominate the participation process during the policy process. ▪ Lack of interest to participate in climate change policy process by the communities due to lack of trust, technical expertise and different priorities.
POLICYMAKERS (ADMINISTRATORS AND POLITICIANS)	▪ Use top-down one-way and two-way approaches to communication ▪ Context. ▪ Management of power dynamics. ▪ Consideration of space and time.	▪ Promote immediate feedback to both communities and policymakers. ▪ Fully consider context – social, cultural, economic, institutional context, biophysical context, epistemologies and participation values. ▪ Policymakers to manage power dynamics between themselves and other actors. ▪ Policymakers to define the target participants and the expected frequency the participation will be conducted.	▪ International organisations may dominate the participation process.

Source: Adapted from Reed, Vella, Challies, de Vente, Frewer et al. (2018)

2.3 RELATIONSHIP BETWEEN (NEW) PUBLIC GOVERNANCE AND COMMUNITY PARTICIPATION IN THE STAGES OF THE POLICY PROCESS

The relationship of community participation with public governance focuses on how policymakers and communities regard and behave towards each other to enhance community participation during the policy process. Overall, public governance through policymakers facilitates community participation during policy formulation and implementation (Sullivan, Knops, Barnes and Newman, 2004). Osborne refers to public governance as a broad category that includes issues of public service delivery, embracing policy formulation, as well as a range of inter-organisational and network-based modes for public service delivery (Osborne, 2010c:413). Public governance meaning differs from context to context as chronicled in public administration historical debates and development (Katsamunskas, 2016:138-139). The term public governance in some cases is used synonymously with network governance (Meuleman, 2008:24). Katsamunskas (2016:139) theoretically defines public governance as responding to dynamic social environmental demands through applying new governance models to cope with emerging crises and most complex issues, for instance, climate change (Sprain, 2016). Thus, public governance is the same as NPG (Osborne, 2010a:7). The latter, is a modification of the former. The reason being that the NPG sums together administrative functions of government together with its changing roles, depending on the context. Thus, using Lenn Jr's (2010:119) language, 'whatever maybe new is rooted in the soil that is very old', meaning NPG is not necessarily new but it is simply an evolution of public governance. Therefore, the dynamism of public administration theories with time reveals the complexity of public governance when new models of governance respond to emerging crises. These theories include the historical debates and developments (Oyedele, 2015:6) about PA as an academic field of study and public administration in practice (Waldo, 1968; Hill, 2005; Katsamunskas, 2016). Public governance in the context of community participation in climate change policy process is when policymakers solve societal problems through clear formal inclusive participatory approaches (e.g. collaboration, co-production, co-operation, consultation) that embrace the top-down and bottom-up decision making process to bring sustainable solutions.

The nature of responsibilities and participatory approaches determine the relationship of public governance with community participation in the policy process. In relation to responsibilities and participatory approaches in the climate change policy process, four questions are to be considered in all the policy stages: i) Who should participate? ii) How should the participants be involved? iii) When to involve the participants. iv) What are the objectives of participation? (Creighton, 2005:62; Driessen, Dieperink, van Laerhoven, Runhaar and Vermeulen, 2012:20; Burton and Mustelin, 2013:402; Glucker et al., 2013; Sprain, 2016; Katsonis, 2019; Uittenbroek et al., 2019). The reason being that responsibilities and participatory approaches determine the relationship of public governance with community participation as they vary across the stages of the policy process (Innes and Booher, 1999:307). Responsibilities in this sense concentrate on the roles of actors in different stages of the policy process (Mees, Driessen and Runhaar, 2012:307). The how, when and why questions emphasise the need for commitment to demonstrate how community participation can be put into practice during public governance. Putting community participation into practice requires new explicit and formal participatory methodologies that seek to include each actor in a multilateral and

inter-consensus policy process (agenda setting, policy formulation, policy adoption, policy implementation and policy evaluation).

2.3.1 Agenda setting

2.3.1.1 Policymakers' participation objectives during agenda setting

The objectives of public governance in enhancing community participation during agenda setting stage includes: i) to enhance democratic capacity, ii) to enhance social learning, and iii) to empower marginalised actors. Quick and Bryson (2016:1) define democratic capacity in relation to enhancing community participation during the policy process as direct or indirect involvement in policy decision-making that is of their interest. Regarding democratic capacity, several scholars note that the participatory methods chosen, for instance, consultation and co-production or deliberation, determine the level of democratic capacity being offered by the policymakers (Reed et al., 2018:3-4). Social learning focuses on an individual's learning that occurs through situated (within context) and collective interaction with others (Collins and Ison, 2009:364). Social learning considers the following to enhance community participation: i) non-hierarchical relations, ii) non-linear relations, iii) changes in responsibilities and roles of actors, iv) consideration of context, and v) participation as a collective process (Collins and Ison, 2009). Marginalised actors (previously excluded actors in policy formulation and implementation) and sometimes underrepresented groups' views can be empowered when power dynamics among actors are well managed at all stages of the policy process to safeguard their interests (Karlsson-Vinkhuyzen and McGee, 2013:70; Karlsson-Vinkhuyzen, 2016:201; Quick and Bryson, 2016:5).

During agenda setting, policymakers are required to collaborate not only with the formal organisations, but also with communities. The actual process of collaboration as defined by Wanna (2008:3) means working together with individuals, organisations or groups on their different terms and conditions, that is, cooperation to achieve a defined goal, bargaining, monitoring and evaluation, coordination and future planning. Collaboration during this kind of participation as suggested by other authors should emphasise more on involving actors who were traditionally left out (marginalised) in the policy process (Newig et al., 2018:272). Traditionally, the communities' participation during policy formulation and implementation has been through top-down consultative approaches. The consultative approaches would focus on getting information to and from the communities through using conventional methods such as i) public hearings, media, community presentations which aim to inform, ii) surveys, focus groups which aim to extract knowledge, iii) workshops, surveys which aim to get feedback (Creighton, 2005; Uittenbroek et al., 2019:2534). However, according to the theory of community participation in environmental management, consultation has been highly criticised for not affording communities a meaningful role in the policy process because the top-down approach is one way communication where there is a high possibility that communities' participation would be ceremonial (having no influence and authority) (Reed et al., 2018:3). Hence, public governance should ensure that top-down and bottom-up collaboration approaches are used to enhance the democratic capacity of the communities regarding their participation during climate change policies. The method chosen as a means to collaborate determines the extent and level of democratic capacity being availed to communities by policymakers.

2.3.1.2 Communities' objectives during agenda setting

During agenda setting, applying public governance necessitates communities' objectives to include the desire to significantly influence decisions and to learn socially through participation in the collaboration processes. To address the shortcomings of NPM, the NPG is required to guarantee the consideration of communities' suggestions as part of the policy agenda by including communities as authentic actors with required influence (Creighton, 2005:17) just like other organised policy networks (Rhodes, 2017:38). Ensuring that communities are authentic actors could be achieved by the use of an equitable and fair regulatory framework for communities, policymakers and policy networks. Therefore, policymakers should have a strategy to invite and introduce actors into participation. The agenda setting stage in a policy process explains the relationship of public administration to politics, which seeks to work hand in hand with politicians for the common good of the communities. It is at the agenda setting stage that problems compete for attention from legislators because of little resources (Birkland and DeYoung, 2013:175; Howlett and Giest, 2013:18). A good administrator is sensitive to people in particular and in general by knowing how ordinary people think, feel and when and within what limits they may be moved (Appleby, 1947:96; Wu et al., 2018:7). The idea of citizen participation is not a new phenomenon. It is a subject that was born at the same time that the discipline of PA was evolving (Wengert, 1976:12; Frederickson, 1991; Edwards, 2013). However, it can be argued that knowing how ordinary people think and feel may be difficult, unless the people vote or embark on protests, among other actions that can be seen.

2.3.1.3 Communities as influencers of the agenda during agenda setting

Community participation during the agenda setting stage requires policymakers to allow communities to participate through significantly influencing the agenda, exercising democratic rights, collaborating and giving their voices early enough, just at the beginning of the policy process (Katsonis, 2019:215). Thus, in an attempt to increase community participation, NPG calls for the development of two-way consultation or communication and co-production or collaboration to avoid policymakers' monopoly of the policy process and seeks to understand the in-depth perspectives of the communities rather than their opinions (Friis-Hansen and Aben, 2017; Reed et al., 2018). Giving a voice by the citizens involves a collective action or individual contribution at platforms that allow community members to hear each other's input (Biljohn, 2018:42; Uittenbroek et al., 2019:2534). By hearing each other's voice, community members understand the complexity of the problem and policy process for them to accept the policy outcome (policy implementation) (Uittenbroek et al., 2019:2534). Although required, the use of deliberation methods such as workshops and public meetings limits participants' understanding of the policy process because of the limited time. Further, sometimes due to limited resources (e.g. refreshments, venue and money), not all citizens are able to attend the meetings. Currently, social media platforms such as Facebook, WhatsApp, Twitter, Instagram, Zoom, Google Meet, among others, may also serve as democratic platforms to aid meetings where citizens join to be informed, be organised and give their voice to the policy process (Katsonis, 2019:215; Uittenbroek et al., 2019:2534). However, such methods assume that every community member has access to internet, which in some cases may not be true (Creighton, 2005:120).

Lastly, public governance has a role to play in relation to the techniques that could be used to ensure that communities are involved during agenda setting. In attempting to ensure communities' influence in the climate change policy process, the following techniques suggested by Creighton (2005:102) could be applied by policymakers: brief, use of community presentations and use of the media. Briefings are small group meetings or a telephone call to inform people of the progress being made or action to be taken (Creighton, 2005:90). For instance Wright, Vermeulen, Laganda, Olupot, Ampaire and Jat's, (2014:321) research recommended the use of policy briefs to bridge the gap of communication between policymakers and the communities to support a large scale programme that promote community-led adaptation initiatives to climate change for smallholder farmers. Resultantly, valuable information can be received as feedback to the briefing (Creighton, 2005:90). Briefings keep the targeted communities updated to avoid negative reaction as communities feel included in the policy adoption (Wright et al., 2014:321). Regarding community presentations, they assist presenters to communicate with concerned people (Wright et al., 2014:324). The presentation could be visual depending on the needs of the communities (Kabir, Rahman, Smith, Lusha, Azim et al., 2016). Lastly, about the media, it could be used for multi-purpose, for example, to release news, make an announcement, to conduct talk shows and so forth (Narayanasamy, 2009:98; Australia. ACT Government, 2014; Adenle, Ford, Morton, Twomlow, Alverson et al., 2017). The advantage of the media is that information is released directly to communities (Narayanasamy, 2009:98). Despite writing in the context of urban planning, Ertio and Bhagwatwar (2017:111) provides useful insights regarding what policymakers can do regarding encouraging active participation during the climate change policy process. Policymakers can setup online media, for example, WhatsApp, and Facebook platforms and traditional media platforms such as news papers and radios (Uittenbroek et al., 2019:2534).

2.3.2 Policy Formulation

2.3.2.1 Policymakers' objectives during policy formulation

Glucker et al. (2013:106) observed through reviewing literature that public governance's role during policy formulation is to develop the communities' skills such as giving them insights into the governance system regarding communication, cooperation and voicing their social agendas. By promoting community participation at the policy formulation stage, the policymakers aim to gain relevant social information and knowledge from the community members (Glucker et al., 2013; Uittenbroek et al., 2019:2535). At this stage, as argued by Glucker et al. (2013:106), community members require capacity building or developed deliberation skills to articulate their social interests. Building capacities will empower communities to participate as deliberators, co-producers of policy input, communicators and bargainers (Glucker et al., 2013; Uittenbroek et al., 2019:2535). Some scholars in support of community collaborations facilitated by policymakers encourage not only reaching agreements but also to experiment, learn, embrace innovation, and above all to build a shared meaning of the policy problem (Innes and Booher, 1999:412). Hence, Reed's (2008:2428) recommendation seems to be realistic where the policymakers are encouraged to achieve these goals by creating innovative ways such as relevant participatory approaches that match the participatory techniques to facilitate knowledge gaining. Through public governance, clear mechanisms should be provided to ensure that communities' input find its way in to the formulation of the policy. Thus, some scholars are justified to argue that the information

and knowledge can be gained through co-production, extraction, consultation, deliberation and collaboration (Glucker et al., 2013; Uittenbroek et al., 2019:2535).

2.3.2.2 Policymakers as managers of deliberation democracy during policy formulation

At present, the application of public governance implies that community participation and deliberative democracy are complementary, if not intertwined. Although supporting representative democracy, admittedly, Nabatchi (2010:4) argues that community participation during policy formulation and implementation remains important. Nabatchi (2010:4) cautions that to elect a political representative does not necessarily imply that citizens prefer the official's policies. Thus, enhancing community participation in policy formulation could be contradictory if communities are left completely dependent on official government policymakers for access to information and a conducive environment for taking action. This argument by Nabatchi (2010:10) supports the idea that community participation should be complemented by deliberative democracy (Wengert, 1976:33; Ansell and Gash, 2007; Katsonis, 2019). Deliberative democracy is defined as infusing government decision making with reasoned discussion and collective judgement of citizens (Nabatchi, 2010:9). Consequently, because of the less involvement of communities in policy formulation, a policy decision will poorly reflect communities' interests, thereby affecting the legitimacy of government (Nabatchi, 2010:4; Armeni, 2016:437). Therefore, deliberation must take place in public, be accessible to affected community members (if not all) and ultimately produce a binding decision (Gutman and Thompson cited in Moynihan, 2003:6; Nabatchi, 2010:9).

2.3.2.3 Communities' participation objectives during policy formulation

According to Glucker et al. (2013:106), although reasons for involving communities during policy formulation differ, it is widely agreed by many authors that communities' indigenous knowledge (local information and knowledge) is inevitable (Collins and Ison, 2009; Adger et al., 2012; Taylor, Dessai and Bruine de Bruin, 2014; Pyhälä, Fernández-Llamazares, Lehvävirta, Byg, Ruiz-Mallén et al., 2016; Dang, 2018). During the policy formulation stage, citizens should be involved to fulfil the substantive rationale (adding local information and knowledge) objective (Glucker et al., 2013; Uittenbroek et al., 2019:5). Politicians and public administrators are obligated to work together to search for effective solutions for policy problems, in pursuit of community participation as the ultimate goal of public administration that manages a successful policy process (Appleby, 1947; Demir, 1993:4-5).

2.3.2.4 Communities as co-producers and social learners during policy formulation

The term co-production has been mainly used in the context of service delivery where citizens participate as co-planners, co-designers, co-delivers and co-evaluators of service delivery programmes (Osborne and Brown, 2011; Biljohn and Lues, 2018:155). In the context of community participation in climate change policy formulation and implementation, co-production has been indicated as when policymakers give an opportunity to communities to participate as equal actors in decision-making. Despite policymakers taking the responsibility to facilitate the implementation of the final agreed decisions, communities jointly discuss the policy's preferred problems and how to implement the agreed policy solutions (Reed et al., 2018:3). In climate

change policy formulation and implementation, co-production is interrelated to deliberation in the sense that co-production encourages two-way discussions (Reed et al., 2018:3). Thus, co-production is believed by other authors to promote social learning because of incorporating indigenous knowledge and bargaining skills because of deliberation (Glucker et al., 2013:106; Uittenbroek et al., 2019:2532).

Regarding co-production and social learning, some empirical studies use participatory techniques to enhance communities' deliberation, bargaining and communication skills. In these studies, they confirm that during climate change policy formulation, the same techniques (PRA techniques) (Chambers, 1983; Chambers, 1994; van Aalst, Cannon and Burton, 2008; Narayanasamy, 2009; Green and Raygorodetsky, 2010; Piccolella, 2013), participatory technology (Uittenbroek et al., 2019:2534), consensus building (Innes and Booher, 1999), facilitation c focus groups , interviews, meetings (public hearings and public meetings) and workshops (Stakeholder Consultations Report, 2017; Uittenbroek et al., 2019:2534) suggested during agenda setting could be used to ensure that both policymakers and communities meaningfully participate in the policy process. These participatory techniques enable policymakers to directly learn from the communities (Chambers, 1994:1437) while communities gain in-depth information and understanding of the policy process (Reed et al., 2018:3). Different actors during policy formulation are able to hear the responses of other actors and promote more contributions (Katsonis, 2019:215).

2.3.3 Policy Adoption

2.3.3.1 Policymakers' participation objectives during policy adoption

During policy adoption, public governance should aim to i) harness information, ii) generate legitimacy of the policy, and inform the communities about the final decision. Communities should be allowed to co-produce policies. As described by other scholars, co-production at this stage is when communities' provided information, knowledge, resources, skills and expertise, among others, during agenda setting and policy formulation are incorporated into the legislated policy to ensure communities have authority over the policy adoption process in an open system of governance (Davies and Simon, 2013:7; Reed et al., 2018:3-4; Biljohn and Lues, 2019:145). Quick and Bryson (2016:4) state that incorporation of harnessed information from the communities generate legitimacy of the policy. This is because whatever legislation passed by policymakers, the intended beneficiaries will get affected. Despite proponents of public governance advocating for communities participation in the policy process, the formal authority to make decisions rests with the public officials (Anderson, 2003:119). The process that takes place during the policy adoption stage shows well the indispensability of representative democracy (Anderson, 2003:3; Reed et al., 2018). However, because policymakers are representatives of the communities, the information gained from the communities should be put together to prepare a final policy document. Legitimacy in participation processes is referred to, here, in terms of the results of the policy outcomes and the procedural processes of the policy process (Karlsson-Vinkhuyzen, 2016:198; Quick and Bryson, 2016:4). A legitimate policy process is when deliberations happens through logical arguments and acceptable criteria to evaluate policy outcomes.

2.3.3.2 Policymakers as collaborators during policy adoption

Community participation during policy adoption should have a huge effect on the final policy. Consequently, when interacting (reciprocal influence) during policy adoption, public administrators collaborate with politicians and community representatives in the policy process while maintaining each one's expected roles and unique perspectives during the policy adoption stage. The on-going collaboration between politicians and public administrators is required because of the complexity and dynamism in the social, political and economic environment where the policy process takes place (Swyngedouw, 2005; Kooiman, 2008; Katsamunskaja, 2016:138). Ultimately, the collaboration is expected to result in the successful inclusive implementation of the policy (Hanekom, 1987:57; Demir, 1993:6-7). Conversely, in this collaboration, politicians are a senior partner. Thus, public administrators remain accountable and responsive to politicians (Hanekom, 1987:55; 1987b:55; Demir, 1993:6-7; Roman, 2015). Consequently, the political-administrative interface may hamper community participation in climate change policies (Vedeld, Coly, Ndour and Hellevik, 2016:182). Moreover, intensive interaction poses the risk of leading to corruption and administrative tyranny (Demir, 1993:6). As suggested by Vedeld, Kombe, Kweka-Msale, Ndour, Coly et al. (2015:287), the political – administrative interface enables or constraints the ability of public administrators to enhance collaborations that include citizens. Due to the imbalances between the public administrators and politicians, the senior partner may override the less powerful partner (Demir, 1993:12). Resultantly, the imbalance between the public administrators and politicians may negatively affect the level of community input that could be considered for policy adoption.

2.3.3.3 Communities' participation objectives during policy adoption

During policy adoption, community participation do not substitute representative democracy but supplement it by way of agreeing to communities' representatives being observers of the adoption process (Creighton, 2005:17; Taylor, 2007:312). Communities should equally have authority over the policy process as co-decision makers by incorporating the communities' input in the legislation. Including communities as co-decision makers empowers them to equally have veto power to decide on the final policy. However, the policymakers should make several commitments. Katsonis (2019:225-226) listed some commitments that can generally be applied in different contexts. These commitments include but not limited to a clear involvement strategy (e.g clear intended participatory techniques), commitment of the needed resources such as money and time, clear definition of objectives (who participate, when and how), provision of opportunities for community participation, keeping the communities updated regarding the level of influence their input has on the adoption process and lastly upholding the promises made to communities regarding their level of influence into the policy. The idea to empower the communities as co-decision makers could significantly allow them to actively participate because this stage is usually dominated by well organised policy networks who have resources and technical expertise to influence climate change policy formulation and implementation at both global and national levels (Rhodes, 2000; Bauer et al., 2012; Nasiritousi, Hjerpe and Linnér, 2016; Van Asselt, 2016). Genuine consideration of the communities' input should be seen happening at the policy adoption stage as well.

2.3.3.4 Communities as authorities during policy adoption

Having discussed the objectives of the communities' participation during policy adoption, it is noteworthy that these objectives can be achieved by communities when they i) participate as co-decision makers, ii) legitimise the policy adoption process, iii) are empowered to make decisions, and iv) are observers of the policy adoption process. Some prior literature and empirical research has applied these objectives and established that community participation as co-decision makers is when communities are involved to influence the decisions to be made in the proposed policy, which will be subjected to the policy adoption process (Glucker et al., 2013:105; Katsonis, 2019; Uittenbroek et al., 2019). Legitimation of the policy is when the communities significantly influence the final adopted content of the policy (Glucker et al., 2013:105). Although previously excluded, empowerment of communities is giving communities power to deliberately become part of the climate change policy process (Arnstein, 1969:216; Mees and Driessen, 2018:5).

Using top-down and bottom-up approaches in public governance, the following techniques could be used during policy adoption to empower communities to become authorities during policy adoption through the use of briefs, use of community presentations, and use of the media. An explanation for the participatory techniques is given in Section 2.3.1.3.

2.3.4 Policy implementation

2.3.4.1 Policymakers' participation objectives during policy implementation

The literature review shows that public governance's objectives during climate change policy implementation seek to generate legitimacy by clearly specifying the role of each actor involved during policy implementation and resolving conflicts (Mees and Driessen, 2018; Reed et al., 2018:4). To generate legitimacy, public administrators as stirrers of community participation and implementers of policies should ensure that the communities trust the implementation process (methods and procedures to achieve policy outcomes). Newig et al. (2016:1000), in their research, distinguished three dimensions of legitimacy, which are: i) input oriented legitimacy (legitimacy that comes because concerned actors' input is incorporated as part of the policy), ii) procedural legitimacy that emanates from allowing the actors who are not directly involved to monitor and consent to the implementation process, iii) output legitimacy, which emanates from acceptance of the policy outcomes. The three distinguished types of legitimacy may be useful to increase trust of the communities during policy implementation. Regarding community participation during climate change policy formulation and implementation, participation can be made a constitutional right. Thus, through public governance, just like electoral voting, community participation in climate change should be a constitutional right (Woodford and Preston, 2013:347). About conflicts, they are resolved if power dynamics are managed at all stages of the policy process to ensure that marginalised and underrepresented groups' views are considered (Arnstein, 1969:216; Karlsson-Vinkhuyzen and McGee, 2013:70; Karlsson-Vinkhuyzen, 2016:201; Quick and Bryson, 2016:5). However, managing power dynamics may be difficult for the policymakers as they seek the legitimacy of their implementation from the international organisations (Karlsson-Vinkhuyzen and McGee, 2013).

2.3.4.2 Policymakers as facilitators of community participation during policy implementation

A body of literature supports that public governance requires policymakers as facilitators of policy implementation to lay out clear rules and procedures of the implementation plan (Reed, 2008; Urwin and Jordan, 2008; Glucker et al., 2013; Mees and Driessen, 2018; Reed et al., 2018; Uittenbroek et al., 2019). Following the first-paradigm in the history of PA, which is the politics dichotomy (1887-1926) paradigm by Woodrow Wilson, public administration and politics should be separate in practice (Oyedele, 2015:3) to benefit community participation during policy implementation. The dichotomy would mean that public administration in practice is perceived as having its own values, rules and methods, separate from those of politics (Sayre, 1958:102), while as disciplines, politics and administration are viewed as different. The application of the politics dichotomy challenges public managers to bear the responsibility of structuring community participation in a way that will enable community input into public decisions throughout the policy process (Moore, 1995:33; Mees and Driessen, 2018). Due to its political nature, public administration, as part of its responsibility, should educate citizens about the governance of policy implementation process (Nabatchi, 2010:2). This is because public administration is about people interacting with people to accomplish a task (Berkley, 2004:6). Hence, politics-administration dichotomy in practice obliges policy implementers to expertly and objectively execute the implementation process for the common good (meaningful community participation) and not because for the political party or being loyal to politicians (Demir, 1993:3-4; Larsen and Gunnarsson-Östling, 2009:261).

2.3.4.3 Communities' participation objectives during policy implementation

During policy implementation, the objective of community participation is to share implementation responsibilities. Some authors through their case studies clearly support the idea that successful community participation during policy implementation is attributed to clearly defined responsibilities during policy implementation (Glucker et al., 2013; Uittenbroek et al., 2019). Because policy implementation depends upon the involvement of multiple actors, the communities' roles should be clearly defined to avoid communities being sidelined by the organised policy networks. Consequently, much attention should be paid to the needs and opinions of the targeted communities about what constitutes the communities' responsibilities during policy implementation (DeLeon and DeLeon, 2002:14). The big question would be which community does what, when and how? Politicians and public administrators work together to search for effective solutions for policy problems, in pursuit of community participation as the ultimate goal of public administration (Appleby, 1947; Demir, 1993:4-5) that manages a successful policy implementation process. The communities need to feel to be part of policy implementation as they take part in the implementation programme activities and services. Hence, the communities' responsibilities during policy implementation should be clear and agreed upon between the policymakers and the communities (Hill and Hupe, 2002:41; Taylor, 2007:18).

2.3.4.4 Communities as legitimate actors during policy implementation

The sharing of responsibilities as a means of participation by the communities during policy implementation refers to how communities determine the implementation of policy programmes and sharing of information (Arnstein, 1969:216). Through public governance, the communities would wish to see some minimal standards of fairness and competence (effectiveness and efficiency issues) in the deliberation of the implementation process that would produce effective policy implementation.

Accordingly, responsibilities during the implementation stage are shared by having clear rules and procedures that guide the policy implementation process (Fung, 2006:66). Considering that the public policy process is sometimes dominated by a few elites, the communities may not trust the policy implementation management, therefore, each actors' role should be clear and specific to encourage participation (Mees and Driessen, 2018:7). Trust is when the policymakers open policy implementation programmes to communities in a fair manner; however, what is fair may be debatable. This perceived fairness directly influences the level of trust the communities can have. The OECD's (2017) explanation of public governance concerning how policymakers build trust with communities suggests good implementation and coordination of communities' ideas as they would have suggested. Consequently, community members legitimise implementation through supporting the intended policy programmes. Communities support policy implementation by way of providing information, expert knowledge, resources and skills (Davies and Simon, 2013:7; Biljohn and Lues, 2019:145).

Through public governance, policymakers should ensure that policy implementation encompasses techniques such as Participatory Rural Appraisal (PRA) techniques, brief, media, participatory technology, workshops, facilitation and consensus building. All the other techniques mentioned here are the same as the ones referred to during agenda setting, policy formulation, and policy adoption. Facilitation is the only technique not yet explained. Facilitation is a set of skills required of a policymaker, particularly suited for leading public meetings (Creighton, 2005:111; Fung, 2006:66; Moser, 2009a:283). The participatory techniques in this context of policy implementation serve to keep the communities informed of progress regarding policy implementation (van Aalst et al., 2008; Halfacre, 2009; Moser, 2009a:296; Uittenbroek et al., 2019:2534).

2.3.5 Policy evaluation

2.3.5.1 Policymakers' participation objectives during policy evaluation

During the policy evaluation stage, the objectives of public governance should aim to enhance the communities' capacity to evaluate policies and build trust that promotes active participation in future policy processes (Mees and Driessen, 2018:17). Policy evaluation, as defined by Anderson (2003:245), is the appraisal of the policy content, implementation and goal attainment. Meaningful community participation in the policy process requires significant investments that build policymakers and the policy networks' skills in interactions (Mees and Driessen, 2018:17). Because the evaluation process should be agreed upon regarding perceived failures and successes, the public administrator should have skills in communication, bargaining and persuasion (Wu et al., 2018:7) to ensure that the communities participate in the evaluation process. Above all, trust should be built because feedback information to and from the communities at this stage may be important for communities to participate again in future policy processes (Mees and Driessen, 2018:8-9). However, it should be noted that instead of disseminating information to the communities about the policy outcomes, the policymakers may restrict access to the information (Anderson, 2003).

2.3.5.2 Policymakers as facilitators of communities' participation during the policy evaluation process

To achieve the objective of enhancing the communities' capacity to evaluate policies, policymakers should lead collaboration processes through using new practical evaluation methodologies (Sprain, 2016:66). To gain the trust of communities, frequent feedback after the deliberation process should always be given to ensure accountability. At least, feedback should be provided throughout the policy evaluation process to communicate the degree to which communities' recommendations are considered. Lack of feedback would suggest one-way communication. The policy evaluation stage gives policymakers an opportunity to get feedback pertaining to the implementation of a policy (Anderson, 2003:245). In the context of climate change policy evaluation, one of the most remarkable results to emerge from policymakers being the leaders of the policy evaluation is the co-ordination of the evaluation process and activities to avoid costly duplications (Schoenefeld and Jordan, 2017:280). Nevertheless, Schoenefeld and Jordan (2017:280) criticise the role of policymakers for being sometimes perceived to be monitoring policy performance to take monopoly and control of everything happening during the policy evaluation process. However, the relationship between communities and policymakers can potentially be improved when policy networks become part of the evaluation process and activities.

2.3.5.3 Communities' participation objectives during policy evaluation

The communities' objectives should aim to influence the evaluation process and activity by agreeing to discuss (giving a voice) the perceived failures and successes of the policy. Some studies refer to this kind of evaluation as deliberative (Crabb and Leroy, 2012:153; King, 2013). The other type of evaluation stated in the literature that can increase the communities' influence is empowerment evaluation (Carlsson, 2000:205). To ensure a successful evaluation process, the public administrator should have skills to communicate, bring all actors together, bargain and persuade for an agreed upon evaluation process (Wu et al., 2018:7). The existing literature points to deliberative evaluation as encompassing genuine dialogue, provision of dialogue platforms, non-partisan mediation (management of power dynamics by the policymakers), and consideration of actors' interests and values (Carlsson, 2000; Crabb and Leroy, 2012:154; King, 2013; Schoenefeld and Jordan, 2017). Regarding empowerment evaluation, the approach gives the communities an opportunity to be involved during the policy process. Some scholars argue that empowerment evaluation is self-evaluation because an equal opportunity is given to all actors to express their views to determine the evaluation process. Carlson's (2000:205) study is one such example where one village was self-empowered to make their village a better place. The results of the empowerment proved the importance of empowerment compared to another village whose evaluation process was planned by the policymakers (Carlsson, 2000:205).

2.3.5.4 Communities as information providers during policy evaluation

Communities can participate through giving a voice as evaluators of impacts and outcomes of implemented policy programmes through different ways. Public governance can apply some of the techniques (focus groups, public meetings, public hearings, PRA and interviews) already mentioned in agenda setting, policy formulation, policy adoption and policy implementation to policy evaluation process. Additionally, beneficiary assessment, polls and surveys can also be useful to increase community participation during policy evaluation. Polls are interviews by a trained interviewer to ask participants the same questions in a

pre-arranged order (Creighton, 2005:129; Kabir et al., 2016; Rohling, Wandersee, Baker and Tomlinson, 2016), whereas surveys are interviews conducted by a trained interviewer but can be both closed and open questions (Oppenheim, 1966:2; Creighton, 2005:128; Kabir et al., 2016). Polls and surveys provide quantitative data that could be insightful regarding the successfulness of the policy but also the quantitative data can be a disadvantage if poorly conducted (Creighton, 2005:129).

While community participation can aid in revealing information, forcing justification of demands and increasing consensus thereby legitimising the ultimate choice (Creighton, 2005:17; Nabatchi, 2010:12), community participation during climate change policy evaluation may delay administrative policy formulation and implementation. The communities' 'lack of expertise' to make good decisions from the administrator's point of view, for example, technical and scientific expertise and their unwillingness to compromise may complicate the ultimate decision by the policymakers (Moynihan, 2003:173; Neshkova and Guo, 2012:271). Ultimately, under such circumstances when administrators mistrust communities, it may cost time and money to the government (Irvin and Stansbury, 2004), while to participants it costs preferred activities (Rydin and Pennington cited in Nabatchi, 2010).

Considering the nature of measures usually taken to mitigate and adapt to climate change, it is notable that a different term ("maintenance phase") seems to be emerging in the climate change policy process. An example of such measures are discussed by Uittenbroek et al. (2019). The measures taken by the Netherlands local government to adapt to pluvial and fluvial flooding in Rotterdam, Tiel and Kockengen show that the maintenance phase is an emerging stage forming part of the climate change policy process, especially after policy evaluation (Mees et al., 2012:308; Mees and Driessen, 2018; Uittenbroek et al., 2019:15). In concluding the relationship of public governance with community participation during the policy process, a summary noting the participants, reasons for their participation, and how they participate is provided (Table 2.2). In the table, it is evident that public governance has a duty to advance community participation during the climate change policy process.

Table 2.6: Enhancing community participation through public governance

WHEN TO PARTICIPATE?	WHO SHOULD PARTICIPATE AND WHY?		HOW TO PARTICIPATE?		
DURING POLICY STAGES	POLICYMAKERS' OBJECTIVES	COMMUNITIES' OBJECTIVES	HOW POLICYMAKERS PARTICIPATE	HOW COMMUNITIES PARTICIPATE	TECHNIQUES
AGENDA SETTING	▪ To enhance democratic capacity. ▪ To enhance social learning. ▪ To empower marginalised actors.	▪ To influence policy. decisions ▪ To learn socially.	▪ Open up the policy process to all intended actors. ▪ Raise awareness on the policy problem and policy process. ▪ Have a strategy to invite and introduce actors into participation.	▪ Give a voice – giving feedback, interaction, collective input, choosing from available input. ▪ Significant influence of the agenda. ▪ Exercise democratic right. ▪ Collaborate – develop collaboration skills because of bottom-up vis a vis top-down participatory approaches (e.g. communication skills, co-operation skills, etc.).	▪ PRA techniques. ▪ Participatory technology. ▪ Consensus building. ▪ Facilitation. ▪ Focus groups. ▪ Interviews. ▪ Public meetings. ▪ Public hearings ▪ Workshops.
POLICY FORMULATION	▪ Gain information and knowledge to formulate a policy. ▪ Build trust.	▪ Add socially relevant information and knowledge.	▪ Create ways or innovative activities to enhance participation. ▪ Create a new variety of ways of extracting, consulting, deliberating, and collaborating to get relevant information. ▪ Build participant capacity.	▪ Deliberate – willing to deliberate, thereby promoting social learning. ▪ Co-produce policy input – give knowledge on indigenous knowledge systems. ▪ Communicate and bargain.	▪ PRA techniques. ▪ Participatory technology. ▪ Consensus building. ▪ Facilitation. ▪ Focus groups. ▪ Interviews. ▪ Public meetings. ▪ Public hearings. ▪ Workshops.
POLICY ADOPTION	▪ To put together information to prepare a final policy document. ▪ To generate legitimacy of the	▪ To share authority over the policy.	▪ Incorporate into the policy information from the communities. ▪ Harness the information together.	▪ Be co-decision makers ▪ Legitimise the policy adoption process. ▪ Empower ▪ Be observers of the policy adoption process.	▪ Briefings. ▪ Presentations to communities. ▪ Use of media (to publish reports,

	policy by incorporating harnessed information. ▪ To inform the public about the final policy decision.				news, broadcast talk shows, etc.).
POLICY IMPLEMENTATION	▪ To generate legitimacy. ▪ To resolve conflicts.	▪ To share responsibilities of implementation.	▪ Have clear rules and procedures.	▪ Legitimise the implementation through supporting policy programmes. ▪ Co-produce services.	▪ PRA techniques. ▪ Brief. ▪ Media. ▪ Participatory Technology. ▪ Workshops. ▪ Facilitation. ▪ Consensus building.
POLICY EVALUATION	▪ To enhance community's capacity to evaluate policies. ▪ To build trust that promotes future active participation.	▪ To influence the evaluation process by agreeing on the perceived failures and successes of the policy.	▪ Lead collaboration of the evaluation process. ▪ Give frequent feedback on the policy outcomes.	▪ Add a voice – contribute to the evaluation outcome.	▪ Focus groups. ▪ Workshops. ▪ Public meetings. ▪ Public hearings. ▪ Polls and surveys. ▪ PRA techniques ▪ Beneficiary assessment. ▪ Interviews.

Sources: Creighton (2005); Osborne (2010a); Glucker et al. (2013); and Uittenbroek et al. (2019)

2.4 POLICY NUDGING AND COMMUNITY PARTICIPATION: ENHANCING PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION

2.4.1 The concept of policy nudging

In this subsection, the discussion will include details of nudging, its features, shortcomings and its application during policy processes. The concept of nudging is here borrowed from Thaler and Sunstein (2008) in their book 'Nudge: Improving Decisions About Health, Wealth, and Happiness' to apply to policy. The concept of nudging gained popularity when this book was published in 2008 (Thaler and Sunstein, 2008; Fisher, 2010a:149). The book by Thaler and Sunstein is considered as applicable in social policy, behavioural economics and human psychology (Fisher, 2010a:150), but the current research argues that the principle can also work in climate change policy nudging (Benartzi, Beshears, Milkman, Sunstein, Thaler et al., 2017). Thaler and Sunstein (2008:8) originally defined a nudge as any factor that significantly alters the behaviour of human beings for their good, while the term 'choice architecture' refers to the act of creating an environment that guides an individual towards better choices. The term 'choice architect' is the person creating the environment (Thaler and Sunstein, 2008:3). The relationship between nudge and choice architecture is that 'nudge' is any aspect of the choice architecture aimed to alter behaviour in a predictable way without forbidding any options or significantly changing the usual economic incentives (Hersey, 2008:71; Ly and Soman, 2013:4). Other scholars argue that in policy, nudging occurs when small, transparent gestures are applied in policy implementation and radically effect behaviour change in a predictive way (Benartzi et al., 2017:1). In the context of this study, nudging occurs when small, transparent gestures are applied in policy-making and radically effect behaviour change in a predictive way without forbidding other usual policy tools that aim to enhance community participation in climate change policy-making. Considering policy nudging, it can be argued that the concept of nudging seeks to advance community participation during the policy process. Hence, policy nudging suggests ways, when and how to apply nudging.

2.4.2 Features of nudging

One of the distinctive features of a nudge is the argument that human beings are prone to mistakes and thus, choices can be designed to help minimise such mistakes by encouraging individuals towards a preferred outcome without restrictions and enforcing behaviour (Stewart and Ayres, 2001:83-84; Thaler and Sunstein, 2008; Fisher, 2010a:149). During the policy process, particularly policy formulation and implementation, nudging could be used to alter behaviour (Thaler and Sunstein, 2008:6; Benartzi et al., 2017), for example, stimulating participation in climate change policy formulation and implementation through taking advantage of people's tendency to accept regulations passively. Instead of only using the traditional economic incentives (e.g. fines, subsidies, bans, mandates), nudges could be used for successful policy implementation (Benartzi et al., 2017:2).

In addition to the idea that human beings are prone to mistakes, the idea of a nudge is to result in a scenario whereby the behavioural tendency towards doing nothing is influenced by the default option. If the chooser does nothing, the expectation is that the chooser ends up with the default option whether or not it is good for the chooser but because it is the recommended action (Thaler and Sunstein, 2008:83). In applying nudges, behaviour change can be influenced when there are options

available, for instance option A or B. One chooses option A when option B is the more desirable outcome (Ly and Soman, 2013:6). It is against this background that nudging seems to be an approach worth trying to enhance community participation in climate change policy formulation and implementation. This poses a question; how could policy nudging be used to enhance community participation during the stages of the policy process?

An important tool considered effective to change behaviour is the use of information, education and persuasion. The use of information, education and persuasion as nudges appears to acknowledge what could be done during policy formulation. Public policies in addressing climate change are concerned with changing behavioural patterns of individuals or societal groups through building capacities, raising awareness and assisting with adaptation (Bauer et al., 2012:280; Ministry of Energy and Meteorology, 2017:32). Apparently, building capacities and raising awareness to assist with adaptation measures are some of the most advocated for tools by the UNFCCC (1992) to encourage community participation in climate change policy formulation and implementation. The idea of information and education programmes is commonly and successfully used in personal healthcare and saving programmes, such as health insurance (Ly and Soman, 2013:7; Sunstein, Reisch and Kaiser, 2018:8). It is believed that once the individual is informed and educated, the knowledge will guide and motivate enough for one to choose a savings plan or make a decision regarding own health. Regarding persuasion, communications programmes not necessarily forceful but appealing can be used to persuade individuals to make better decisions (Ly and Soman, 2013:7; Sunstein et al., 2018:5).

Moreover, drawing from behavioural sciences experts, nudge units can be established, especially for public administration, for example, what happened in the United Kingdom (UK) where the Department for Environment, Food and Rural Affairs, Department of Health and Department of Energy and Climate Change had their own behavioural economics initiatives (United Kingdom Behaviour Change Report cited in Ly and Soman, 2013:13). In addition, other countries such as the United States (US), Denmark and Singapore are already reported to have nudge units (Ly and Soman, 2013:14). These units will aid the ability of administrators to work within clearly defined structures that include people. Hanekom (1987) argues that poor structures on the administrative part that exclude the people negatively affect participation in the policy process, particularly, climate change policies. Nevertheless, these units should be well equipped with human and financial resources. Failure to do so may result in underperformance, thereby defeating the purpose of community participation in climate change policies.

Clear separation of choices and their consequences in time to influence choices (Thaler and Sunstein, 2008) can be used as a nudging tactic. The clear separation of choices and consequences could be done during policy formulation. As an example, Adenle et al. (2017) bemoan lack of participation in National Adaptation Programme of Action policy (NAPA) in Africa. It is reported that a number of African countries failed to express the number of beneficiaries in NAPA, suggesting poor engagement of local institutions and other relevant stakeholders in the NAPA policy and projects. NAPA is an important policy tool for Least Developed Countries (LDCs) to manage climate change risks. To manage climate change risks through NAPA is to engage stakeholders, communities and local institutions in NAPA and other projects (Adenle et al., 2017). Considering this example,

community participation in future can be enhanced through conducting awareness campaigns. Extensive awareness programmes can be conducted across-sectors in government and across communities to acquaint people with the upcoming intentions of the policy. Likewise, the awareness campaigns can clearly explain what the policy intends to achieve, how people can contribute, as well as the consequences, if the policy fails as a result of lacking support. Nevertheless, it may be difficult to predict beforehand the consequences of the policy, but policymakers should provide for behavioural science experts to provide data that can help to determine some of the likely outcomes to enable rightful policy tool (incentives, education, persuasion and information, nudge and regulation) selection among them all (Ly and Soman, 2013:9; Tannenbaum, Fox and Rogers, 2017:1). This will assist to know when exactly the use of nudges is proper.

Nudges can also be used when people have a hard time to predict how their choices will end up affecting their lives (Thaler and Sunstein, 2008:76). The way information of policy processes is availed and explained may influence people towards a choice to participate or not (Brunsa, Kantorowicz-Reznichenko, Klementd, Luistro and Bilel Rahalif, 2018). Ly and Soman (2013:5) believe that the way choices and information are presented to individuals in a given context affects their decision making process. This follows that policymakers should carefully consider the way choices and information is presented to the actors involved and be able to steer people towards better choices (Ly and Soman, 2013:5; Schmidt, 2017:405) early enough during policy formulation. Ly and Soman (2013:8) emphasise the use of evidence-based approaches to design nudges that are effective. Thus, a closer attention could be paid to contextual factors such as politics, attitudes, values and culture (Bäckstrand and Lövbrand, 2015:xxv; Sunstein et al., 2018:5).

Nudges could be used through the way choices are presented and communicated. This follows that policymakers should carefully consider the way choices and information is presented to the actors involved and be able to steer people towards better choices (Ly and Soman, 2013:5; van der Heijden, 2019:2). Generally, science, technology and media influence policy initiation (Hague, Harrop and Breslin, 1987:262). Climate change may be a problem in the view of a certain section of the population, while regarded differently by another. For people to participate, every community needs to be convinced that climate change is a real problem that requires their contribution to fight against. Thus, ways of communication should be presented to the intended actors to choose their preference among the given choices. The way these modes of communication will be presented and informed to them could act as nudges where they will be expected to influence their choices.

2.4.3 Shortcomings of nudging

To some extent, policy nudging cannot be a panacea to enhance community participation. Admittedly, some policy interventions may be a success not because they reach the underlying causes of particular behaviours but because they address significant contributory factors (Stewart and Ayres, 2001:84). An example of policy nudging in climate change policies was in the United Kingdom where incentives were given to individuals to reduce energy use (Sunstein et al., 2018:3). The incentives focused on voluntary reduction of energy use by individuals through providing individuals with information, economic

incentives and subsidies. However, it is reported that the approach seemed to yield very little or no impact on individual behaviour (Lorenzoni, Nicholson-Cole and Whitmarsh, 2007:446).

While the concept of nudging appears applicable to predictively change human behaviour towards a certain choice, it is criticised for being paternalistic and potentially manipulative concerning indirectly forcing people to make choices. It is argued that a policy is paternalistic if choices are influenced and made according to one's own criteria (Hersey, 2008:71). Furthermore, in nudging, choices are not blocked or significantly burdened to ensure that they are not chosen; instead, paternalism is an attempt to move people's choices in a direction that will improve their life (nudge) (Hersey, 2008:71; Thaler and Sunstein, 2008:5). Also, there is a concern that gentle prompting of individuals, while preserving their autonomy, may not be effective (Fisher, 2010a).

2.4.4 Nudging communities to participate during the policy process

Nudges can also be used during agenda setting when communities lack interest in an issue because of their own personal needs (Hanekom, 1987:35). When communities lack interest it can be proposed that the government should identify the barriers to participation and attempt to reach out to communities on the basis of what they see as causing them not to participate. What is it that people are willing to contribute? How far are the people willing to contribute? Through what means? To what extent do they influence the policy process? How do they want to get involved? What are the preferred means of communication? Who can steer their involvement? This will be useful as nudges can be specifically applied early enough during agenda setting.

Through applying the principle of frequency as coined by Thaler and Sunstein (2008:74), a nudge can be applied through practice during policy formulation. Thaler and Sunstein (2008:74) argue that even hard problems become easier with practice. In relation to community participation in climate change policies, despite reports of participatory approaches, there is limited adaptation to climate change and lack of financial support to implement policies and programmes, not only in Lesotho. This is reported in countries such as Eswatini (previously called Swaziland), Botswana and Malawi (Adenle et al., 2017). Another study examined adaptation to three closely linked processes: climate change, desertification and drought (Stringer, Dyer, Reed, Dougill, Chasca Twyman et al., 2009). Stringer et al. (2009) reported that the formulation of adaptation policies were inclusive and participatory. However, inadequate support to adaptation that relies on social networks and neglects the usual practices recorded in literature reversed what has been gained during the participatory adaptation policy formulation (Stringer et al., 2009:764). The examples of studies mentioned above indeed express that, despite communities having been involved during policy formulation, the implementation of the adaptation policy was not successful. The question could be how can communities effectively participate not only in policy formulation but also in implementation? Thus, to answer this question through the concept of nudging, which encourages practice, efforts should be made to continue involving communities as "practice makes perfect".

Nudges can be applied during policy adoption by using regulations. One of the traditional ways used by governments to change behaviour is through regulation (restrictions, compliance rules and bans). Regulation explains well what usually happens during policy adoption. In applying nudges, the policy adoption process would entail modification or rejection of a preferred policy nudge by public officials (Anderson, 2003:119). The policy adoption is usually done by the public officials because they possess the formal authority to make decisions into law (Anderson, 2003:119). Nudges can also be used to increase alignment with current regulation or incentives (Ly and Soman, 2013:11; Sunstein et al., 2018). However, regulations take significant time to create and amend (Ly and Soman, 2013:6).

Incentives can also be used during policy implementation (Ewert, 2019:12). Another traditional way of changing behaviour is the use of incentives, for example, economic incentives such as fines, subsidies, grants and taxes. Both incentives and taxes work to deter behaviour as people weigh the costs and benefits (Ly and Soman, 2013:7). The use of incentives seems to suggest the type of nudges that can be used during policy implementation. Sometimes, fines and taxes, as negative as they sound, can effectively discourage behaviour, while grants and subsidies can act as positive influences. Likewise, both positive and negative economic incentives may result in undesired behaviour (Ly and Soman, 2013:7).

Also, without quick feedback, a nudge can be useful (Thaler and Sunstein, 2008:75) during policy evaluation. Thaler and Sunstein (2008:75) argue that by using nudges such as quick feedback for the purpose of information, learning is more likely to happen as people get immediate and clear feedback after each involvement. This quick feedback points to the importance of policy evaluation. Usually, concerning the policy process, the process is long because of multiple actors and interdependence. Again, apart from policy formulation, the state is overburdened with a lot of work like ensuring service delivery. Thus, quick feedback may not be possible in some cases (Thaler and Sunstein, 2008). Bäckstrand and Lövbrand (2015:xxiii) note that participation in climate governance operates in the shadow of hierarchy (bureaucracy) with background conditions of state intervention, steering, control, sanctions and public authority (Bäckstrand and Lövbrand, 2015:25).

2.4.5 A synthesis of policy nudging concept

Indeed, the concepts (identification of barriers to participation, choices and information, frequency, regulation, incentives, nudge units and feedback) give guidelines on the applicability of nudges during the policy process. Now, considering the proposed use of the nudging concepts, there seems to be a link on how socio-political governance, administrative governance and the political system could use policy nudging to enhance community participation in climate change policy formulation, implementation and governance. This is explained in detail in Chapter 3 of this thesis. The reason for linking policy nudging with the policy process and governance is that policy nudging in this context aims to ensure the enhancement of community participation during the policy process that is mainly governed by the political system.

Policy nudging assists policymakers to adopt guidelines regarding the behaviour of the concerned communities with respect to the policy process (Ewert, 2019:20). Thus, nudging appears to predictively change human behaviour towards a certain

choice but can also be manipulative by indirectly forcing people to make choices. Choices to the concerned communities are not blocked but an attempt would be made to twist people's choices in a direction that is viewed as desirable by policymakers to improve the community members' lives. However, there is no guarantee that policy nudging will work in the context of community participation during climate change policy processes. In conclusion, Table 2.7 gives an overview of expected results when nudges are used during the policy process to enhance community participation.

Table 2.7: Enhancing community participation in the policy process by using nudges

POLICY STAGES	POLICY NUDGES	EXPECTED RESULTS DURING THE POLICY PROCESS
AGENDA SETTING	▪ Identification of barriers to participation. ▪ Choices and information.	▪ Communities develop an interest to participate in the policy process. ▪ Communities are motivated to participate.
POLICY FORMULATION	▪ Frequency.	▪ Communities are motivated to participate.
POLICY ADOPTION	▪ Regulation.	▪ Effective regulation that voluntarily gives the communities an opportunity to participate.
POLICY IMPLEMENTATION	▪ Incentives. ▪ Nudge units.	▪ Positive behaviour change towards participation. ▪ Co-ordinated community participation by the policymakers.
POLICY EVALUATION	▪ Feedback.	▪ Communities learn the art of participation.

Source: Adapted from Thaler and Sunstein (2008)

2.5 A CONCEPTUAL FRAMEWORK FOR COMMUNITY PARTICIPATION IN THE STAGES OF THE POLICY PROCESS

A conceptual framework and a theoretical framework provide the structure to guide the conducting of a study (Grant and Osanloo, 2016:13). A conceptual framework is defined by Imenda (2014:189) as an end result of bringing together a number of related concepts to explain or predict a given event or give a broader understanding of the phenomenon of interest (Grant and Osanloo, 2016:16-17). It can be argued that the research problem "community participation in climate change policy process" can be meaningfully understood with reference to theories, in particular, the NPG theory (Osborne, 2010a), systems theory (Easton, 1957) and the theory of participation in environmental management (Reed et al., 2018). The different existing views on these theories and the concept of nudging will thus be synthesised through a conceptual framework which in essence represents an integrated way of looking into a problem (Imenda, 2014:189). Conceptual frameworks are useful to understand the complex world (Osborne, 2010c:414) and this conceptual framework is inductively derived from the concept of nudging and the concepts underpinning these theories, by developing a pattern of meaning regarding the subject under study (Creswell, 2014:32;37). These concepts are joined together to express a bigger map of possible relationships (Rocco and Plakhotnik, 2009; Imenda, 2014:189; Adom, Hussein and Joe, 2018) of community participation in the stages of the policy process. The current research argues that the use of a conceptual framework in the study of community participation in the stages of the policy process during climate change is important to give the entire research enterprise the focus of necessary concepts that need to be studied (Demir, 1993:11). This conceptual framework will inform data collection, analysis and interpretation.

Until now, policy-making, the policy process and policy formation in the literature are considered in stages, which constitutes a cycle. Through the review of literature (synthesised in Table 2.8), key variables pertaining to community participation during climate change policy formulation and implementation (also provided in Table 2.8) and their presumed relationships (Adom et al., 2018:439) were developed. The variables that describe community participation during climate change policy formulation and implementation (Table 2.8) focus on community participation as a plural (multiple actors) and pluralist (multiple processes), an objective process – specification of the objectives, a governance process and activity (collaboration, co-production, deliberation, democratisation, and policy nudging), and toolkit (participatory techniques) (Bingham, Nabatchi and O'Leary, 2005:554; Reed, 2008; Ranger and Garbett-Shiels, 2012; Prutsch, Steurer and Stickler, 2018). As such, in this conceptual framework (Table 2.8), community participation during the policy process relates to the specification of the actors (politicians, public administrators, experts, communities), when and how the actors can participate during the policy process. Politicians are political office bearers or public officials. Public administrators are sometimes called civil servants or public servants (Hill, 2005). Experts are individuals or organisations (international or local) with experience, skills and expertise in a subject matter (Kuhn and Zhang, 2014). Community representatives are influential people who represent other community members in any given community. The community representatives may have the power to limit access to community members and to represent community members in situations where all members cannot be present (McFadyen and Rankin, 2016). The table also shows the scope of the interests of the actors, how actors participate in the climate change policy process and their degree of influence. In summary, Table 2.8 presents the policy stages and what happens at each stage to ensure enhanced community participation in the climate change policy process. Later, Table 2.9 highlights the relationships that exist when variables that underpin community participation during the policy process are used as explained in the theories (systems, NPG and theory of participation in environmental management) and other sections covered in Chapter 2. From the synthesis of these theories, the variables, which can either enhance or deter community participation during the respective climate change policy stages, are administrative governance, socio-political governance, public policy governance and policy nudging.

Administrative governance is defined as aiming at effectively applying public administration (Osborne, 2010a:7) through prioritising citizens in public service, and prioritising change of the mindset of public officials through changing their values and behaviour and increasing administrative capacity (Robinson, 2015:15). As a variable for community participation in this study, administrative governance will be defined as the public administrators' capacity, values and behaviour towards prioritising communities' participation during policy formulation and implementation. Socio-political governance of community participation involves the consideration of social (culture, values, norms, indigenous knowledge) and political (new legislation, institutions and regulation) factors that could influence the nature and extent of community participation during the policy process (Beierle, 2002; Burton et al., 2004; Reed, 2008:2425; Smiley et al., 2010:1043; Reed et al., 2018:7). Socio-political governance in this study is defined as consideration of social factors (culture, values, norms, indigenous knowledge) and political factors (new legislation, institutions, regulation, co-governance, policy nudging) to encourage previously marginalised community members to participate in the climate change policy processes. Public policy governance is concerned with how policy elites and their networks interact in order to govern the public policy process (Osborne, 2010a:6). As a variable of community participation,

public policy governance in this study will be described as the interaction of policymakers and policy networks such as experts to improve interaction with communities during the formulation and implementation of climate change policies. A policy nudge is defined as any factor that significantly alters the behaviour of human beings for their good, by an individual (choice architecture) who creates an environment that guides an individual towards better choices (Thaler and Sunstein (2008:8). Policy nudging as a variable will be defined as when small, transparent gestures are applied in policy formulation and implementation to effect behaviour change in a predictive way without forbidding other usual policy tools that aim to enhance community participation in climate change policy process.

The application of socio-political governance, administrative governance, public policy governance and policy nudging as variables is influenced by, amongst others the objectives for participation of the respective actors which may vary during the different policy stages. Further, the objectives for participation determine the participatory techniques that are selected to enhance community participation during the policy stages. These participatory techniques as subsequently described include briefings, media, presentations to communities, PRA, participatory technology, consensus building, facilitation, focus groups, interviews, public hearings, public meetings, workshops, beneficiary assessment, surveys and polls.

- Briefings are small group meetings or telephone calls to inform communities of the progress being made or action to be taken of which valuable information can be received as a feedback to the briefing (Creighton, 2005:90).
- Media (to publish reports, news broadcast, talk shows) release information directly to communities (Narayanasamy, 2009:98; Uittenbroek et al., 2019:2534).
- Presentations to communities could be visual or oral depending on the needs of the communities (Glucker et al., 2013).
- PRA techniques (including interviews, discussions, mapping and trend analysis) are a group of techniques usually used in the context of development projects to enable the local people to provide information and to analyse the project processes (Creighton, 2005:126; Green and Raygorodetsky, 2010; Piccolella, 2013).
- Participatory technology involves communities using science and technology to enable them to make decisions (Creighton, 2005:126; Rask, 2013; Uittenbroek et al., 2019:2534).
- Consensus building comprises establishing a panel on behalf of a community to reach agreements and make commitments on behalf of the communities (Innes and Booher, 1999; Creighton, 2005:109).
- Facilitation is a set of skills particularly suited for leading public meetings (Creighton, 2005:111).
- Focus groups are groups of selected people that discuss a given topic in-depth, with the facilitation of a moderator (Patton, 2002:385-386; Halfacre, 2009).
- Interviews which can be both closed and open questions occur where a trained interviewer asks participants questions (Oppenheim, 1966:2; Creighton, 2005:128)
- Public meetings can be described as large community gatherings where procedures are less formal compared to the public hearing (Creighton, 2005:130).

- Public hearings are formal meetings between the public officials and community members where public officials present official statements about their plans on a particular problem to be solved and comments from the communities in response to the presentation are recorded (Creighton, 2005:130).
- Workshops comprise a group of people (twenty five or fewer) who come together to interact to complete a specific task (Creighton, 2005:134; Bartels, Furman, Diehl, Royce, Dourte et al., 2013).
- Beneficiary assessments is a consultative methodology (including focus groups and participant observation methods) used to ensure that marginalised actors provide insights on how a programme will affect them (Halfacre, 2009).
- Surveys are a form of interviews that may provide quantitative data (Creighton, 2005:129; Carvalho and Gupta, 2012:1).
- Polls are interviews by a trained interviewer who asks participants the same questions in a prearranged order while recording an opinion (Creighton, 2005:129; Carvalho and Gupta, 2012:1).

Against this background, the remainder of this section elaborates on these variables in the context of the policy stages as outlined in Table 2.8.

Table 2.8: Enhancing community participation during the policy process

COMMUNITY PARTICIPATION AS A GOVERNANCE PROCESS		INTERNAL ACTORS (HOW THEY PARTICIPATE/ OBJECTIVES FOR PARTICIPATION)			EXTERNAL ACTORS (HOW THEY PARTICIPATE OR OBJECTIVES FOR PARTICIPATION)		TECHNIQUES USED BY ACTORS DEPEND ON THE DEGREE OF INTENDED INFLUENCE
		POLITICIANS	PUBLIC ADMINISTRATORS	EXPERTS	COMMUNITIES	COMMUNITY REPRESENTATIVES	
POLICY STAGE 1 :AGENDA SETTING	ADMINISTRATIVE & SOCIO-POLITICAL GOVERNANCE	- Enhance democratic capacity. - Empower marginalised communities. - Promote interaction among policy networks, public administrators and communities. - Consider indigenous knowledge systems.	- Participate as highly skilled facilitators. - Co-ordinate co-production - Collaborate the agenda process. - Enhance social learning. - Manage conflicts and power dynamics (ideas from all actors to be considered equal). - Promote interactions and interdependence among all actors involved. - Consider indigenous knowledge systems. - Facilitate nudging. - Design choices in the form of nudges.	- Promote collaboration. - Promote interaction between communities and policymakers.	- Co-produce the agenda. - Are equal decision makers. - Are social learners through the influence of indigenous knowledge systems.	- Are leaders of the communities. - Support government and community initiatives.	- PRA techniques. - Participatory technology. - Consensus building. - Facilitation. - Focus groups. - Interviews. - Public hearings. - Public meetings. - Workshops.

POLICY STAGE 2: FORMULATION	ADMINISTRATIVE & SOCIO-POLITICAL GOVERNANCE	▪ Create an open policy formulation process (linear and non-linear interaction). ▪ Maintain trust and build more trust. ▪ Build support structures through legislation.	▪ Facilitate collaboration – interrelationships and interdependence for resources. ▪ Co-produce policy proposals ▪ Promote the use of policy nudges for enhanced community participation ▪ Facilitate deliberation processes. ▪ Build communities’ capacity within the limits of the law.	▪ Promote collaborations through interrelationships and interdependence between communities and policymakers.	▪ Are social learners ▪ Participate as co-producers of policy input - give knowledge on indigenous knowledge systems.	▪ In conjunction with public administrators, community representatives participate as leaders of the deliberation process.	▪ PRA techniques. ▪ Participatory technology. ▪ Public meetings. ▪ Facilitation. ▪ Interviews. ▪ Focus groups. ▪ Public hearings. ▪ Workshops. ▪ Consensus building.
POLICY STAGE 3: ADOPTION	PUBLIC POLICY & ADMINISTRATIVE GOVERNANCE	▪ Maintain trust. ▪ Increase legitimacy by creating opportunities for communities to participate as empowered marginalised actors who co-decide, legitimise, and observe the adoption process. ▪ Provide information, education, and persuasion about the climate change policy. ▪ Legalise nudges.	▪ Harness the information from the communities together in preparation for policy adoption procedures. ▪ Build support for policy adoption among concerned communities through facilitating collaboration. ▪ Assist communities to make contributions through organised brief, community presentations and in the media.	▪ Observe the policy adoption to ensure that the communities’ input is part of the final policy.	▪ Legitimise the policy adoption process. ▪ Are co-decision makers through community representatives. ▪ Participate as marginalised empowered actors. ▪ Are observers of the policy adoption process.	▪ Represent communities during formal meetings in situations where it is not feasible for community members to attend.	▪ Briefings. ▪ Use of media (to publish reports, news, broadcast talk shows, etc.). ▪ Presentations to communities.

POLICY STAGE 4: IMPLEMENTATION	ADMINISTRATIVE GOVERNANCE	▪ Ensure availability of funds for successful community participation. ▪ Generate legitimacy ▪ Make clear participation rules and procedures.	▪ Manage cross-sector (within relevant government ministries and departments) collaboration and collaboration with external actors. ▪ Promote co-production. ▪ Promote interdependence for resources among actors. ▪ Promote community nudging ▪ Manage power dynamics and conflicts.	▪ Share responsibilities with public administrators regarding leadership taking a lead in collaborating activities that involve the communities..	▪ Legitimise the implementation plan through consenting to proposed policy programmes during the planning. ▪ Co-produce the implementation plan.	▪ Consent to the implementation plan.	▪ PRA techniques. ▪ Workshops. ▪ Media. ▪ Participatory technology. ▪ Facilitation ▪ Brief. ▪ Consensus building.
POLICY STAGE 5: EVALUATION	ADMINISTRATIVE GOVERNANCE	▪ Build trust that promotes future active participation.	▪ Facilitate co-production of the evaluation programme ▪ Use policy nudges as a supplement to the usual participatory methods ▪ Enhance community's capacity to evaluate policies	▪ Apply nudges with the permission of policymakers. ▪ Through the permission of the policymakers, enhance community's capacity to evaluate policies.	▪ Add a voice as co-producers of the policy outcomes. ▪ Legitimise the evaluation process and evaluation outcomes.	▪ Leaders of communities together with public administrators add a voice to policy evaluation.	▪ PRA techniques ▪ Focus groups. ▪ Workshops. ▪ Beneficiary assessment. ▪ Public hearings. ▪ Polls and surveys. ▪ Interviews. ▪ Public meetings.

Source: Easton (1957); Thaler and Sunstein (2008); Osborne (2010a); Reed et al. (2018)

2.5.1 Agenda setting

With reference to Table 2.8, enhancing community participation during agenda setting involves administrative (Section 2.5.1.1) and socio-political governance (Section 2.5.1.2) processes, which involve multiple actors (politicians, public administrators, experts and community representatives) whose objectives would be to improve community participation. It is noteworthy that politicians, public administrators and experts are in this study classified as internal actors to the policy process, whereas the communities and community representatives are the external actors. Depending on the objective for participation, techniques that could be used are the PRA techniques, participatory technology, consensus building, facilitation, focus groups, interviews, meetings (public hearing / public meetings) and workshops. In this policy stage, the variables of administrative and socio-political governance are discussed as the basis for enhancing community participation during governance processes.

2.5.1.1 Administrative governance

The main actors during administrative governance are the public administrators whose objectives in relation to community participation is to build support, facilitate collaboration, facilitate deliberation and facilitate nudges. Other actors are external such as community representatives who ensure that the communities understand what policymakers and experts intend to do through mobilisation for support and acting as gatekeepers through which participation is conducted (Taylor, 2007:312). Administrative governance variable encompasses the duties of public administrators taking the lead to bring multiple actors together during agenda setting. Their duties, which include building support, facilitating collaboration, managing cross-sector collaborations, coordinating co-production, facilitating deliberation and facilitating policy nudging are described as follows:

- Building support: *This involves increasing support through creating new supportive structures and processes (Crosby et al., 2010:203; 2010b:203) for inclusive policy implementation among communities. Structures and processes can be built through the use of PRA techniques, setting up participatory technology, facilitating consensus building activities, focus groups, interviews, meetings and workshops.*
- Coordinating co-production: *This involves persuading and bargaining with communities during policy implementation for positive co-production of policies (O'Toole Jr and Meier, 2010:326). Co-production involves the participation of the communities as co-decision makers, co-planners, co-designers and co-evaluators of the decision until the agenda is approved as a policy. The public administrator should be an expert in performing managerial functions such as planning, coordinating, directing, delegating and budgeting to be able to effectively manage community participation (Wu et al., 2018:7).*
- Facilitating collaboration: *Facilitating collaborative efforts includes seeking agreements on objectives for participation during the policy process, initiating trust building processes and activities, managing collaborative activities, managing the forms of participation and managing the power dynamics among concerned communities (Anderson, 2003; Vangen and Huxham, 2010-184). Collaborations encompass the use of top-down and bottom-up participatory approaches, which are used to engage the communities and assisting communities to make commitments regarding how they wish to participate (Crosby and Bryton cited in Osborne et al., 2010:200).*
- Managing cross-sector collaboration: *Cross-sector collaborations are collaborations that are managed within government departments and ministries (Crosby et al., 2010:201).*

- Facilitating deliberation: *This involves dialogue, two-way consultation and two-way communication among communities, public administrators and other concerned actors (Flynn, 2009).*
- Facilitating policy nudging: *This is when the public administrators ensure the use of nudges to extract information from a community for harnessing into the agenda (Swyngedouw, 2005:2003; Katsamunsk, 2016:135).*
- Designing choices for communities in the form of nudges: *Various participatory nudges (frequency of participation, consultation, use of education, use of information, and use of persuasion) can be designed as choices in an attempt to encourage communities towards participation in climate change policy formulation and implementation (Stewart and Ayres, 2001:83-84; Thaler and Sunstein, 2008; Fisher, 2010a:149). However, the usual choices (regulation incentives, bans, etc.) are not necessarily blocked (Hersey, 2008:71; Thaler and Sunstein, 2008:5).*

2.5.1.2 Socio-political governance

Other than the experts, community representatives and the communities, the politicians and public administrators are the main actors who play the role of ensuring that values, norms, indigenous knowledge, societal factors, culture, political factors and policy nudging are considered during agenda setting. Social factors will be collectively referred to as indigenous knowledge systems and unless specified will focus on climate change and not on the general community cultural practices such as relating to adulthood and initiation, death, social gatherings, marriage and beer parties, among others. For the purpose of this study the variable of socio-political governance will encompass:

- ❖ **Societal factors:** *These are aspects or characteristics of social life such as economic, epistemologies, participation values, power dynamics, spatial (geographical location) (Newig et al., 2016) and temporal scales (the length of time) that affect and influence the way one lives and behaves in a society in which the person lives (Kooiman, 1999; Collins and Ison, 2009; Newig et al., 2016; Reed et al., 2018:1). Values, norms, indigenous knowledge and culture are defined under societal factors:*
 - Values: *Values (e.g. family and wealth) are a pattern of behaviour in a particular community, which is accepted as normal and that an individual is expected to follow (Business dictionary Online, 2019). Norms influence the policy through relating to what the majority of the community members believes in (Pettenger, 2007b).*
 - Norms: *Norms (e.g. agricultural practices) are principles or standards of behaviour and something believed to be important (Kooiman and Jentoft, 2009:834).*
 - Indigenous knowledge: *This refers to local knowledge and local experiences (Lahsen, 2007; Adger et al., 2012:5).*
 - Culture: *A set of beliefs e.g. physical things given meanings, rituals, identity, art, stories that create outlooks and behaviour, arts (human creative skill and imagination in a visual form such as painting or sculpture appreciated for emotional power or beauty) and some achievements regarded collectively, ideas, social behaviour and customs of a particular community (Adger et al., 2012:5; Oxford English Dictionary, 2017:5; Brink and Wamsler, 2019; Dang, 2018).*
- ❖ **Political factors:** *These are government activities (e.g. democratisation and policy nudging) related to the formulation and implementation of regulations that enhance community participation in climate change policy processes. It involves public administrators embracing new legislation (at the general level) and regulations (specific to a situation) that support*

participatory methodologies to ensure direct and active community participation irrespective of literacy levels. The political factors explained here are co-governance, democratisation, management of power dynamics and policy nudging

- *Co-governance: This comprises participation in governance of actors who are partially autonomous, through societal interaction to share common rights and duties (Kooiman, 2002:83).*
- *Democratisation: This is the availing of information regarding climate change and the action that a community can undertake based on their understanding and awareness of climate change to participate during the agenda setting (Bulkeley and Mol, 2003:148); (Sprain, 2016; Brink and Wamsler, 2019:94).*
- *Management of power dynamics: This occurs when public administrators empower the previously excluded communities to have an equal voice in the policy process (Moser, 2009a:288).*
- *Policy nudging: This involves politicians forming new institutions and regulations associated with participatory methodologies to advance community participation during every policy stage (Swyngedouw, 2005:2003; Katsamunskas, 2016:135).*

❖ **Experts**

- *Promoting interaction: Promoting interaction between communities and policymakers through a given independent authority to reduce bureaucracy and increase access to information and decisions that pertain to community participation during agenda setting (Theys, 2002:223; Boedeltje and Cornips, 2004).*
- *Interdependence: Promoting interdependence for resources among actors (policymakers and communities).*
- *Promoting collaboration: Promoting co-production of the agenda between policymakers and communities*

❖ **Community representatives**

- *Leadership: Leadership is ensuring that communities understand what the policymakers and experts intend to do through mobilisation for support and acting as gatekeepers through which participation in agenda setting is conducted (Taylor, 2007:312).*
- *Support government and community initiatives: The community representatives' support for policymakers' participatory initiatives will determine the level of participation by the grassroots community members.*

❖ **Communities**

- *Equal decision makers: Communities participate as co-producers of the agenda.*
- *Share indigenous knowledge systems: Communities participate by way of providing information, expertise, knowledge, resources, and skills regarding their indigenous knowledge systems. Communities become social learners through the influence of indigenous knowledge systems.*

2.5.2 Policy formulation

Community participation during policy formulation involves the administrative and socio-political governance process and activities bringing together politicians, public administrators, experts and community representatives. The objectives for the participation of these actors are to improve community participation of which these objectives determine the participatory techniques to be used during this policy stage. During policy formulation, the same techniques and their definitions (Section

2.5) as applicable during the policy agenda stage apply, such as PRA techniques, participatory technology, public hearings, facilitation, interviews, public meetings, focus groups, workshops and consensus building. It is worth noting that the participatory techniques used during policy formulation determine whether communities participate as leaders of the policy formulation process or not. In this policy stage the variables of administrative and socio-political governance are discussed as the basis for enhancing community participation during policy formulation.

2.5.2.1 Administrative and socio-political governance

During policy formulation, the variables of administrative governance and socio-political governance highlight that the multiple internal actors (politicians, public administrators) and external actors (communities, community representatives) are involved during this policy stage with the objective of enhancing community participation. Of significance during this stage is the role of communities that participate as co-producers of the policy proposals by sharing their indigenous knowledge systems through the application of socio-political governance by politicians and public administrators. As such, the role of actors such as politicians, public administrators and experts as well as their objectives for participation during policy formulation (administrative and socio-political governance) are defined in this section:

❖ Politicians

- Open policy formulation: *This occurs by making the policy formulation process open to communities through allowing linear and non-linear interaction.*
- Maintain and build more trust: *This involves managing power balances and power dynamics among politicians themselves, communities and experts (Crosby et al., 2010:210; Huys and Koppenjan, 2010:366; Peters, 2010; Reed et al., 2018).*
- Build support structures: *This occurs through developing and adopting legislation to enhance community participation during policy formulation.*

❖ Public administrators

- Facilitate collaboration: *Facilitate interrelationships and interdependence for resources with politicians, experts, community representatives and communities.*
- Co-produce policies: *co-plan, co-design, co-deliver and co-evaluate policy proposals through the use of bottom-up and top-down approaches with concerned actors.*
- Nudging: *Within the limits of legal frameworks, create and apply new ways or innovative small, transparent gestures to radically effect community behaviour change in a predictive way without forbidding other usual techniques that aim to enhance community participation during policy formulation. Conventional participatory methods such as consultation, information, persuasion and education are not necessarily blocked but can be designed in the form of policy nudges (Stewart and Ayres, 2001:83-84; Hersey, 2008:71; Thaler and Sunstein, 2008:5; Fisher, 2010a:149).*
- Facilitate deliberation processes: *Through improving the methods used when public discussions are conducted, and creating more opportunities for participatory techniques (PRA, participatory technology and consensus building) that seek to empower bottom-up participation and consensus building (Bulkeley and Mol, 2003:150).*

Community capacity building: *Within the limits of the law, build communities' capacity by jointly producing participation strategies and putting measures in place to ensure their participation during climate change policy formulation. This includes answering questions such as: What is it that community members are willing to contribute? How far are communities willing to contribute? Through what means? To what extent do they influence the policy process? How do communities want to get involved? What are the preferred means of communication? Who can steer their involvement?* (Takao, 2012).

❖ **Experts**

- Promote collaboration: *Experts share authority with other stakeholders that enable the facilitation of community participation during policy formulation.*
- Promote interrelationships: *Experts promote interrelationships for resources between communities and policymakers to enhance community participation during policy formulation.*
- Promote interdependence: *Experts promote interdependence of stakeholders for resources to enhance community participation during policy formulation.*

❖ **Community representatives**

- Leaders of the deliberation process: *In conjunction with public administrators, community representatives participate as leaders of the deliberation process to co-produce policy proposals*

❖ **Communities**

- Co-produce policy proposals - *Through the leadership of the community representatives who are also external actors, communities participate as co-producers (co-plan, co-design, co-deliver and co-evaluate) of the policy proposals by giving their knowledge regarding indigenous knowledge systems. The indigenous knowledge systems enable communities to learn socially because of the application of socio-political governance at this stage.*

2.5.3 Policy adoption

Enhancing community participation during the policy adoption stage involves the variables of public policy governance and administrative governance. Some of the actors who participate during policy adoption are public administrators, experts and community representatives, all with the objective of enhancing community participation. However, of significance during policy adoption is the roles played by public administrators and politicians. Public administrators promote community participation by building support for policy adoption among concerned communities through facilitating collaboration and assisting communities to contribute through organised brief, community presentations and the media. Politicians on the other hand seemingly dominate this stage because of representative democracy by creating opportunities for communities to participate as empowered marginalised actors who co-decide, legitimise and observe the adoption process. Further, worthy noting is that the participatory techniques used during policy adoption by these actors is determined by the intended objectives of these actors. During policy adoption, techniques such as briefings, media (publish reports, news broadcast, talk shows, etc.) and presentations to communities could apply. In this policy stage, the same characteristics that define the variable of administrative governance during agenda setting is applicable to policy adoption. Hence, its description will not be repeated here (see Section

2.5). In the remainder of this section, the variables of public policy governance are discussed as the basis for enhancing community participation during policy adoption.

2.5.3.1 Public policy governance

The public policy governance variable encompasses the interaction between public administrators and politicians, legitimacy, trust and collaboration between the governed and the policy governors in the formulation and implementation of policies (Huys and Koppenjan, 2010:366). Further, democratisation, equal distribution and sharing of power, information, education, and persuasion and nudges as part of regulation are defined for the purpose of this study:

- Interaction of policymakers and experts: *A mutual influencing interrelationship to create synergies among experts, politicians and communities (Kooiman, 2002:78; Prutsch et al., 2018:282).*
- Legitimacy: *A legitimate climate change policy considers procedural processes of the policy process that allows concerned communities to approve the process of deliberations as justified and acceptable (Brinkerhoff and Crosby, 2002:57), whereas legitimacy of the policy outcome would be related to equity and effectiveness (addressing and meeting the needs of the communities) (Quick and Bryson, 2016:4).*
- Trust: *Policymakers consider indigenous knowledge systems, participation experiences, level of willingness to act, level of understanding in policy issues to convince communities to believe in the policy process as a way of motivating them to participate. Likewise, policymakers' trust is when they can rely on communities' input for the policy process (Klijn and Koppenjan, 2000:143).*
- Collaboration: *This includes conducting joint activities such as interdependence for resources, interrelationships, and interactions where the policymakers invite the communities to be involved in policy dialogue and problem solving but retain decision-making and control regarding the technical policy process (Brinkerhoff and Crosby, 2002:54).*
- Democratisation: *This involves promotion of community interaction with politicians to share common rights and duties such as sharing authority and power over the policy adoption process. Sharing of power and authority can be done through availing detailed information through community presentations, a brief and in the media for feedback (Bulkeley and Mol, 2003:148).*
- Equal distribution and sharing of power: *Politicians equally distribute and share power with public administrators regarding climate change decisions through delegation and devolution of policy process power to the public administrators for the benefit of the communities (Irvin and Stansbury, 2004; Renée and Stansbury, 2004; Reed, 2008; Huys and Koppenjan, 2010:366; Peters, 2010:37; Reed et al., 2018).*
- Information, education and persuasion as nudges: *Enhancing community participation in climate change policy formulation and implementation through information, education and persuasion (Ly and Soman, 2013:11).*
- Nudges as part of regulation: *Nudges can be incorporated as part of regulation or incentives (e.g. fines, subsidies, bans, mandates) to enhance community participation (Ly and Soman, 2013:11).*

The remainder of this section defines the roles of other actors (experts, community representatives and communities) during public governance:

❖ **Experts**

- *Observe the policy adoption process: Experts observe the policy adoption process by ensuring that communities' input are part of the final policy (Rhodes, 2017:38).*

❖ **Community representatives**

- *Observers of the policy adoption: Represent communities in a clear pre-arranged plan to increase trust in the adoption process (OECD, 2017:109).*

❖ **Communities**

- *Legitimacy: Legitimise the policy adoption process by having confidence in the policy to be implemented.*
- *Marginalised empowered actors: Communities equally observe the adoption process through a brief, media and presentations. Because of communication, the communities' expertise, knowledge, resources and skills is equally considered (Davies and Simon, 2013:7; Biljohn and Lues, 2018:145).*

2.5.4 Policy Implementation

Enhancing community participation during the policy implementation stage involves the variables of administrative governance. The latter is generally accepted to describe public administrators as the facilitators of community participation during policy implementation (Hanekom, 1987:61; Demir, 1993:3-4; Larsen and Gunnarsson-Östling, 2009:261). Although politicians ensure the availability of funds for successful inclusion of the communities in policy programmes, public administrators can be regarded as the dominant actor during administrative governance. Another significant actor during policy implementation are communities that are recognised by a number of studies as important to legitimise the actual implementation of policies. This emanates from the role that communities play by first accepting the implementation plan through consenting to proposed policy programmes and co-producing implementation plans (Reed, 2008; Glucker et al., 2013; Reed et al., 2018; Uittenbroek et al., 2019). Whilst the objectives for participation of public administrators, communities and experts are to enhance community participation, their respective objectives determine the participatory technique that should be used during policy implementation. In light of this, public administrators should keep in mind that relevant participatory techniques should be selected to achieve communities' objectives for participation during policy implementation. Hence, similar to the stages of agenda setting, policy formulation and policy adoption, the same techniques (PRA techniques, workshops, media, participatory technology, facilitation, brief and consensus building), as defined (Section 2.5), are applicable to policy implementation. The remainder of this section outlines the variable of administrative governance as the basis for enhancing community participation during policy implementation.

2.5.4.1 Administrative governance

During policy implementation, the administrative governance variable encompasses the participation of public administrators, experts, community representatives and communities. Public administrators' and other actors' roles to enhance community participation are defined in the remainder of this section.

❖ **Public administrators**

- Cross-sector collaboration: *Collaborate and manage cross-sector (within relevant government ministries and departments) collaborations with communities and external actors to effectively manage community participation (Acevedo and Common, 2010:394; Crosby et al., 2010:201; Wu et al., 2018:7).*
- Facilitate co-production: *Facilitate community participation in co-planning, co-designing, co-implementing and co-evaluating the implementation plan.*
- Interdepend for resources: *Public administrators promote interdependence for resources between experts and other stakeholders through increased shared responsibilities during implementation.*
- Community nudging: *Through appropriate policies, it entails the careful designing of opportunities for communities to voluntarily participate during the policy process that allows voluntary participation.*
- Manage power dynamics and conflicts: *Managing power dynamics and conflicts by ensuring that the objectives for community participation during the climate change policy process are clear.*

❖ **Experts**

- Shared responsibilities: *Experts and public administrators take the lead in collaborating in community participation activities when planning implementation programmes as well as subsequent execution of those programmes (Rhodes, 2017:38).*

❖ **Community representatives**

- Consent: *The role of community representatives is to understand and consent to the implementation plan even as individuals because they may have influence on their community members.*

❖ **Communities**

- Legitimacy: *This involves the willingness of communities to support the implementation programmes, by first accepting the implementation plan through consenting to proposed policy programmes (Reed, 2008; Glucker et al., 2013; Reed et al., 2018; Uittenbroek et al., 2019).*
- Co-production: *Communities participate in co-planning, co-designing, co-implementation and co-evaluating the implementation programme.*

2.5.5 Policy evaluation

The variable of administrative governance is considered for enhancing community participation during policy evaluation. Policy evaluation which is argued to be a continuous process is influenced by and strongly depends on the quality of the preceding policy stages (Wergin, 1976:77) and warrants that politicians, experts and public administrators ensure that communities and their community representatives contribute to evaluation throughout the whole policy process (Armeni, 2016:427; Fuller and Lain, 2018:13). Public administrators, experts, communities and community representatives are therefore regarded as actors who directly get involved during policy evaluation. The objectives for participation by public administrators vary but with the ultimate goal of increasing community participation. About the communities, their objective for participation is to exercise their democratic rights on policy issues that affect them. Similar to the preceding stages of agenda setting, policy formulation, policy

adoption and policy implementation, the intended participation objectives of the respective actors (public administrators, experts, communities) determine the participatory techniques to be used. The techniques for policy evaluation are PRA techniques, focus groups, workshops, beneficiary assessment, public hearings, polls and surveys, interviews and public meetings (Section 2.5). However, the choice of participatory techniques should rest with the communities who are affected by the policy (Carvalho and Gupta, 2012:1; Armeni, 2016:427; Fuller and Lain, 2018:13). The remainder of this section outlines the variable of administrative governance as the basis for enhancing community participation during policy evaluation.

2.5.5.1 Administrative governance

During policy evaluation, the administrative governance variable encompasses the participation of politicians, public administrators, experts, communities and community representative as actors. The objectives for participation for these actors are defined in the remainder of this section.

❖ Politicians

- Trust: *Politicians build trust of communities and community representatives in the evaluation process through monitoring the duties of experts and public administrators.*

❖ Public administrators

- Facilitate co-production: *Facilitate co-production in the context of undertaking the evaluation of the co-planning, co-designing, co-implementing and co-evaluating of the evaluation programme.*
- Nudging: *Public administrators through nudging carefully design opportunities for communities to voluntarily participate during evaluation (Stewart and Ayres, 2001:83-84; Thaler and Sunstein, 2008; Fisher, 2010a:149). Public administrators, with the assistance of experts, use nudges to motivate community participation.*
- Capacity building: *Capacity building through empowering communities to evaluate policies. The critical questions to ask are when and how would the communities evaluate policies.*

❖ Experts

- Nudging: *Experts assist public administrators to use nudges (frequency of participation, use of feedback, use of consultation, use of education, presentation information and use of persuasion) that motivate community participation during the evaluation process of the climate change policy without using force or coercion (Hersey, 2008:71; Thaler and Sunstein, 2008:5).*
- Empower communities: *Through the permission of the policymakers, experts enhance community's capacity to evaluate policies.*

❖ Community representatives

- Leadership: *Leadership is when the community representatives together with public administrators add a voice to policy evaluation on behalf of the communities where deemed necessary.*

❖ Communities

- *Add a voice: As co-producers, communities add their voice to policy outcomes and the evaluation process occurs through socio-political governance whereby communities have authority (add a voice) early enough on key evaluation decisions in relation to the interpretation and release of the findings (Stufflebeam, 2001:62).*
- *Legitimacy: Results of the evaluation process are acceptable by the communities because they are part of the evaluation process (Boedeltje and Cornips, 2004:1; Scharpf, 2009; Fawcett and Daugbjerg, 2012:202).*

2.5.6 Main variables that enhance community participation in climate change policy process

Against the background in this section (Section 2.5), it can be deduced that the variables underpinning community participation during the respective policy stages are as follows:

- (i) Agenda setting: Deliberation, co-production, collaboration, interdependence for ideas, interaction, consideration of indigenous knowledge systems, context, power dynamics, policy nudging and governance.
- (ii) Policy formulation: Collaboration, co-production, policy nudging, context and governance.
- (iii) Policy adoption: Legitimacy, co-production, policy nudging and governance.
- (iv) Policy implementation: Legitimacy, co-production, policy nudging and governance.
- (v) Policy evaluation: Co-production, policy nudging and governance.

As shown in this section, it is apparent that co-production, policy nudging and governance are necessary requirements for enhancing community participation, during each policy stage. Deliberation, consideration of interdependence for ideas, interaction, context, power dynamics and consideration of indigenous knowledge systems only seem to be fundamental during agenda setting. The respective variables considered at each policy stage may produce expected results during these policy stages as outlined in Table 2.9.

Table 2.9: Main variables that underpin community participation in the climate change policy process

POLICY STAGE	VARIABLES UNDERPINNING COMMUNITY PARTICIPATION	EXPECTED RESULTS WHEN APPLYING THE VARIABLES
AGENDA SETTING	Deliberation, co-production, and collaboration.	- Enhanced inclusive agenda setting. - Enhanced communities' democratic capacity and legitimacy of the intended policy.
	Interdependence for ideas.	Community collaboration to put together resources.
	Interaction.	Community collaboration in setting the policy agenda.
	Consideration of indigenous knowledge systems.	- Promotion of social learning. - Inco-operation of indigenous knowledge systems in the agenda early enough.
	Context.	Indigenous knowledge systems act as a motivator for community participation.
	Power dynamics.	Participation of marginalised communities (ensuring all actors' ideas are considered important).
	Policy nudging.	Community accepts the proposed nudges.
	Governance.	- Community decision making in setting the agenda. - Empowerment of marginalised communities. - Enhanced democratic capacity for communities. - Community nudging. - Community understanding and awareness of the policy problem.
FORMULATION	Collaboration.	Community collaboration to identify relevant solution to the agreed agenda.
	Policy nudging.	Community uses the designed nudges.
	Context.	Indigenous knowledge systems act as a motivator for community participation.
	Governance.	- Community add a voice to the decisions regarding policy formulation. - Increased community' capacity to become co-decision makers. - Community nudging.
	Legitimacy.	Community trust the policymakers and legitimise the adoption process.
ADOPTION	Co-production.	Co-decision making.
	Policy nudging.	Acceptance of designed nudges.
	Governance.	- Community legitimising the adoption process. - Shared power. - Participation of marginalised communities.
	Legitimacy.	Community willingness to support the implementation programmes.
IMPLEMENTATION	Co-production.	Co-designing, co-planning, co-implementation and co-evaluation of the implementation programme.
	Policy nudging.	Community uses designed participation nudges.
	Governance.	- Co-production of the implementation plan. - Increased shared responsibilities in implementation. - Community nudging.
	Co-production.	Co-planning, co-designing, co-implementation, and co-evaluation of the evaluation programme.
	Policy nudging.	Careful designing of opportunities to participate that allow voluntary participation.
EVALUATION	Governance.	- Community influence or add a voice to the evaluation process. - Community nudging.

Source: Easton (1957); Thaler and Sunstein (2008); Osborne (2010a); and Reed et al. (2018)

2.6 CONCLUSION

This chapter presented the conceptual framework for community participation during the stages of the policy process, following the review of literature. Section 2.2.2 analysed systems, governance and participation theories influencing community participation in climate change policy formulation, implementation and governance. The discussion of the theories focused on the systems theory (Section 2.2.1), the NPG theory (Section 2.2.3) and the theory of participation in environmental management (Section 2.3). The specific discussion for each theory focused on the historical introduction, features, focus in respect of policy and community participation, role played in facilitating community participation, as well as shortcomings in this regard and, internal compared to the external environment. The discussion is concluded with a synthesis. The review of these theories found that governance processes and activities are key methods that could promote community participation during climate change policy formulation and implementation, instead of merely using only participatory techniques. Nevertheless, the participatory techniques used during community participation also contribute to the level of community understanding and awareness of climate change. This was followed by Section 2.3, which examined the relationship between public governance and community participation in the stages of the policy process. Afterwards, Section 2.4 explored how policy nudging could be used to enhance community participation in climate change policy formulation, implementation and governance. Lastly, Section 2.5 presents the end result, a conceptual framework for community participation in the stages of the policy process. The conceptual framework, which is a synthesis of the theories, policy nudging and public governance, found that socio-political governance, administrative governance and public policy governance variables, as well as participatory techniques can enhance or hamper community participation during climate change policy formulation and implementation.

CHAPTER 3: PERSPECTIVES REGARDING CLIMATE CHANGE AND INDIGENOUS KNOWLEDGE SYSTEMS

3.1 INTRODUCTION

The discord in the formulation and implementation of climate change policies so far and the call for more participatory approaches through the Paris Agreement (2015) confirm that participation in climate change policy processes should be community-based (United Nations, 2009). This seems to provide strong evidence and a need for more debate and exploration on community participation during the climate change policy process to provide a contextual community participatory strategy. As such, this chapter aims to contribute to the research agenda for future studies regarding community participation in climate change policy formulation and implementation. This is achieved through assessing how community awareness and understanding regarding climate change and climate change policy influence their participation in climate change policy formulation and implementation (objective iii and research question ii). Further, this chapter explores the use of indigenous knowledge systems in climate change policy formulation and implementation to facilitate community participation in climate governance (objective iv and research question iii). Lastly, the chapter also determines the nature of community participation in climate change policy formulation and implementation (objective v) and delineates how public policy governance influences community participation during climate change policy formulation and implementation (research question i). Against this background, Section 3.1 introduces the chapter, followed by Section 3.2 that assesses how community awareness and understanding regarding climate change policy influence their participation in policy formulation and implementation (objective iii). Section 3.3 discusses the extent to which indigenous knowledge systems could be incorporated in climate change policy to facilitate community participation. Section 3.4 discusses the use of policy nudging by socio-political, administrative and public policy governance (objective (ii) and research question v). In conclusion, the nature of community participation in climate change policy formulation and implementation is discussed (Section 3.5). The chapter ends with the conclusion (Section 3.6).

3.2 INFLUENCE OF COMMUNITY AWARENESS AND UNDERSTANDING REGARDING CLIMATE CHANGE ON THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

In literature, community understanding and awareness of climate change are abstract concepts regarding their influence on community participation in climate change policy formulation and implementation. The words understanding and awareness are here defined in terms of antecedents, consequences and empirical referents. The definitions of the concepts understanding and awareness of climate change present how the concepts could be used when aiming to enhance community participation during climate change policy processes. Defining a concept using antecedents, consequences and empirical referents contributes useful perspectives that could be applied in any discipline to define concepts (Cronin, Ryan and Coughlan, 2010:66; Brush, Kirk, Gultekin and Baiardi, 2011:163). According to Walker and Avant cited in Cronin et al. (2010:65), concepts are categories of information that contain defining attributes, whereas delineating these defining attributes is called analysis of the concepts (Wilson, 1963:53). Concept analysis can be done using a number of approaches, such as Wilson's method (1963), Walker and Avant's method (2005), Schwart-Barcott and Kim's Rodgers – hybrid model (2000) and Rodgers's method – revolutionary approach (Cronin et al., 2010; Brush et al., 2011; Rodgers, Jacelon and Knafl, 2018). It is noteworthy that many of these approaches are built upon Wilson' (1963) work (Cronin et al., 2010:64). However, it is not possible in the scope of this section to give a definitive discussion of all the approaches. Therefore, for the purpose of defining the concepts understanding and awareness of climate change with

regard to their antecedents, consequences and empirical referents, Walker and Avant's (2005) approach to concept analysis will be applied.

Walker and Avant's approach is described in stages: i) selecting the concept, ii) determining the aim of the analysis, iii) identifying the uses of the concept, iv) determining the uses of the attributes, v) constructing a model case, vi) identifying borderline, related and contrary cases, vii) identifying antecedents and consequences, and viii) defining the empirical referents (Henneman, Lee and Cohen, 1995; Jonas-Simpson, 2006:176; Von Colln-Appling and Giuliano, 2017). However, although the steps are in sequence, they can simultaneously occur in practice.

Although the literature on climate change is extensive, the analysis is limited to studies that attempt to mention community understanding and awareness of climate change as factors influencing their participation in policy formulation and implementation. Thus, the study focuses on international instruments' definition of 'environmental understanding and awareness' because they are the ones that provide general guidelines on community participation in climate change policy formulation and implementation (Meakin, 1992; UNFCCC, 1992; UNECE, 2015; UNEP, 2015; UNESCO and UNFCCC, 2016). These international instruments are the UNFCCC (1992) (article 6), Rio Earth Summit (article 10) (Meakin, 1992), Paris Agreement (2015) (article 12) and Action for Climate Empowerment (ACE) (UNESCO and UNFCCC, 2016). The definition of the concepts understanding and awareness of climate change in these international documents are broad and vague, considering the complexity of community participation in climate change policy formulation and implementation. The absence of a standardised general meaning of community understanding and awareness could contrast the UNFCCC's expectation to see governments increasing community participation in climate change policy formulation and implementation. Nevertheless, the question to be answered in Section 3.2, how community awareness and understanding regarding climate change influence their participation in climate change policy formulation and implementation, is compound. Therefore, to ensure that each concept is dealt with adequately, community understanding and awareness regarding climate change are discussed separately (Section 3.2.1 and Section 3.2.2, respectively).

3.2.1. Influence of understanding climate change on community participation during climate change policy formulation and implementation

Largely, many scholars agree that the understanding of climate change influences community participation during climate change policy formulation and implementation (Bulkeley, 2000; Zahran, Brody, Grover and Vedlitz, 2006; Semenza, Hall, Wilson, Bontempo, Sailor et al., 2008; Halady and Rao, 2010; Lee, Markowitz, Howe, Ko and Leiserowitz, 2015; Ross, Shaw, Rissik, Cliffe, Chapman et al., 2015:88; Pandey, 2019), yet community understanding of climate change lacks clarity regarding its operational definition (Meakin, 1992; 1992; Paris Agreement, 2015; UNESCO and UNFCCC, 2016). Further, community participation in climate change policies does not have a specific theory that clearly defines community understanding of climate change but the subject is discussed under environmental management or governance in literature (Wengert, 1976; Brundtland et al., 1987; The Rio Declaration on Environment and Development, 1992; Lemos and Agrawal, 2006; Drexhage, 2008:3; Reed, 2008; Pinkse and Kolk, 2012; UNECE, 2015; Reed et al., 2018:1). Probably, this lack of an operational definition for the concept (community understanding of climate change) may account for the lack of co-ordinated community participation during climate change policy formulation and implementation (Adenle et al., 2017;

Friis-Hansen, 2017b). Using Walker and Avant's method of concept analysis, the purpose of analysing the concept community understanding of climate change is to gain an in-depth understanding of the concept from a theory perspective, define an operational definition for the study, and use a clarified meaning for data collection and analysis (Cronin et al., 2010:65). Despite growing scholarship on the subject, which supports that community understanding of climate change enhances their participation during climate change policy formulation and implementation (Beierle and Konisky, 2000; Bulkeley, 2000; Whitmarsh, 2009; Weber and Stern, 2011; Becken, Lama and Espiner, 2013; McIntyre-Tamwoy, Fuary and Buhrich, 2013:104; Niles, Lubell and Haden, 2013; Tan and Xu, 2019), it could be necessary to explore the subject to develop a theory, which could support the development of a coherent theory in future research.

3.2.1.1 Uses of community understanding of climate change

Identifying uses of a concept can be conducted using different sources, such as dictionaries and literature (discipline or non-discipline) (Cronin et al., 2010:65). About community understanding of climate change, the uses are discussed in terms of the i) dictionary meaning of the word understanding, ii) climate change definition, iii) climate change causes, iv) likelihood and severity of expected climate change impacts, v) climate change policy process, vii) climate change risks, viii) planned future climate change adaptation and mitigation responses.

Generally, the word understanding is defined in different ways, which are (i) having knowledge about a situation or subject, (ii) the ability to comprehend something, (iii) sympathetic awareness or tolerance, (iv) an informal agreement between people and (v) having reason to believe in something (Cambridge Dictionary, 2020). In some instances, community understanding of climate change is referred to as scientific understanding of climate change (Eden, 1996; Kellstedt, Zahran and Vedlitz, 2008; Hegger, Mees, Driessen and Runhaar, 2017). Scientific understanding of climate change is having the knowledge of the definition of climate change and its causes, the likelihood and severity of expected impacts, the risks and planned future responses through the accumulation of observational data, construction of theories and models to interpret climate variability and empirical testing of theories and models (National Research Council of the National Academies, 2010:19-21; IPCC, 2014b:9; Friis-Hansen and Aben, 2017). The evidence of scientific data regarding climate change is detailed in reports such as the IPCC (1990; 2001; 2007; 2014a; 2018).

In the current study, the definition of the word 'understanding' is derived from how the United Nations Economic Commission for Europe (UNECE) (2015:49-50) described the designing of participation procedures in decision making relating to environmental matters. It could be argued that these participation procedures would be informed by applying socio-political, administrative and public policy governance to increase community understanding of climate change definition, impacts, causes, policy processes, risks and planned responses. Resultantly, the understanding should influence community participation in climate change policy formulation and implementation. Influence is the capacity to have an effect on the character or behaviour of someone or something (Cambridge Dictionary, 2020). Influence is referred to here as the power of community understanding and awareness of climate change to have an effect on their participation during climate change policy formulation and implementation.

Community understanding of climate change that influences participation during policy formulation and implementation is affected by the extent to which a community understands the likelihood and severity of expected climate change impacts (Whitmarsh, 2009; IPCC, 2014b:11). Nevertheless, it is noteworthy that impacts vary from place to place, depending on the climate and human activities (McIntyre-Tamwoy et al., 2013; Niles et al., 2013; Cai, Haile, Magidi, Mapedza and Nhamo, 2017). These include compromised agricultural production, floods, water insecurity problems, health impacts and significant loss of biodiversity and ecosystems (IPCC, 2007:9-18). The impacts of extreme weather events resulting from climate change are felt on communities' livelihoods, health and food security. Resultantly, communities experience cyclones, floods, wildfires, droughts, water shortages and heatwaves, among others (IPCC, 2014b:12-14).

Community understanding of climate change, as it relates to their participation during policy formulation and implementation, has been described in terms of understanding climate change causes (Lorenzoni et al., 2007; Whitmarsh, 2009; Niles et al., 2013; Cai et al., 2017), which are mainly a result of human activities. It may be important for communities to know that naturally occurring greenhouse gases, including carbon dioxide, methane and nitrogen oxide, keep the earth warm enough for humans to live (IPCC, 1990:xiv). However, human activities such as deforestation, wildfires, air pollution, urbanisation, industrialisation and poor agricultural practices increase the concentrations of these gases in the atmosphere, thereby causing climate change. Despite human activities, natural causes such as climate variability, temperature changes, weather changes and ozone depletion also cause climate change. It is when communities have an understanding that human activities increase greenhouse gas concentrations in the atmosphere that their behaviour towards participation in climate change policy formulation and implementation is expected to be positive (IPCC, 1990:xiv; 2014b:9).

Community understanding of climate change that influences participation in policy formulation and implementation is described in terms of having knowledge about climate change policy processes (Adenle et al., 2017). This brings in the crucial role (making information available) of socio-political, administrative and public policy governance (Friis-Hansen, 2017b). The communities should have an understanding of how governance processes (socio-political, administrative and public policy governance) work. Critical to community understanding of climate change is the extent to which communities are involved in socio-political, administrative and public policy governance (Measham et al., 2011; Adenle et al., 2017; Diver, 2017; Friis-Hansen, 2017b). During these forms of governance, the communities' involvement influences their understanding of climate change policy formulation and implementation through activities such as co-production, collaboration, deliberation and consultation (Ansell and Gash, 2007; Wana, 2008; Ansell, 2016; Brink and Wamsler, 2019).

Community understanding of climate change that influences participation during climate change policy formulation and implementation is described in terms of understanding climate change risks (Larsen and McGuinness, 2016:402; Pandey, 2019). Risks faced by communities vary from community to community and include but are not limited to floods, food insecurity because of drought, land degradation and loss of biodiversity (IPCC, 2014b:14-19; KOL. Department of Environment, 2014; Hegger et al., 2017). Understanding climate change risks becomes important because the risks are associated with challenges such as food insecurity, loss of rural livelihoods, insufficient access to safe drinking water,

reduced agricultural production and extreme weather events that directly affect communities (Niles et al., 2013; IPCC, 2014b:15; Tan and Xu, 2019). Consequently, health and other critical services, for example, networks and transport, will be disrupted because of climate change risks (IPCC, 2014b:15). In some studies, community understanding of these risks has led to their willingness to participate in climate change policy formulation and implementation (Vedeld et al., 2015; Hegger et al., 2017).

Community understanding of climate change that influences participation during climate change policy formulation and implementation is also described in terms of understanding the planned future adaptation and mitigation responses (D'haen and Nielsen, 2017:34). Climate change adaptation occurs when natural or human systems adjust in response to expected actual climatic factors or their effects, which reduces harm or exploits beneficial opportunities (IPCC, 2001:982). Mitigation is defined by the IPCC (2001:990) as an anthropogenic (originating from human activity) intervention to reduce the sources or enhance the sinks of greenhouse gases. As argued by Smit et al. (2000:224), a relationship exists between adaptation and mitigation, concerning how climate change impacts can be addressed (IPCC, 2001; 2007; 2014b). The impacts of climate change are usually addressed through adaptation. In fact, adaptation is ensuring communities understand the intended ways to be used to cope with climate change causes, impacts and risks (Smit et al., 2000:227; IPCC, 2014b:23). Adaptation actions have consequences for mitigation and vice versa (Smit et al., 2000:245; IPCC, 2007:747).

3.2.1.2 Defining attributes

Community understanding of climate change is sometimes referred to as public understanding (Eden, 1996; Bulkeley, 2000; Kellstedt et al., 2008; Reid, Alam, Berger, Cannon, Huq et al., 2009; Whitmarsh, 2009; Weber and Stern, 2011; Hobson and Niemeyer, 2013; Bakuwa, 2015) or community understanding of environmental issues (Darier and Schüle, 1999:29; D'haen and Nielsen, 2017). However, the concept community understanding of climate change is usually mentioned together with awareness (Semenza et al., 2008; Lee et al., 2015; Hegger et al., 2017:23). The concepts community understanding and awareness of climate change are frequently used together regarding how their occurrence can influence community participation during climate change policy formulation and implementation (Hegger et al., 2017:23). The word understanding in relation to community participation in climate change policy is not defined in the UNFCCC (1992), and in practice, the concept community understanding of climate change is used differently, although related to community awareness of climate change (Semenza et al., 2008; Whitmarsh, 2009:402; Lee et al., 2015; Hegger et al., 2017:23).

Attributes are defining characteristics that best describe a concept, without which the concept cannot be said to occur (Henneman et al., 1995:104; Wilde and Garvin, 2007:344; Alghamdi, 2016:451; Von Colln-Appling and Giuliano, 2017:107). The defining attributes of community understanding of climate change, as noted in literature, are many (refer to Section 3.2.1.1 for details). A community that understands climate change would demonstrate the following: i) having knowledge about climate change ii) having the ability to comprehend (grasp the definition of climate change mentally), iii) being aware of climate change, and iv) having reason to believe in climate change. At the least, a community should understand climate change causes, impacts, policy process, risks and planned mitigation and adaptation measures (refer

to Section 3.2.1.1 for details) (Wi and Chang, 2019). Without these attributes, community understanding of climate change cannot be said to have occurred.

3.2.1.3 Cases: Model case, borderline case and contrary case

The cases used in this study are empirical studies purposefully selected to illustrate a model case, a contrary case, and a borderline case. A model case, according to Wilson (1963:28), is a particular instance that correctly describes a concept. Cronin et al. (2010:66) clarify it as an example scenario from practice or constructed by the analyst of the concept that shows the defining attributes of the concept. A borderline case contains most of the defining attributes but not all (Cronin et al., 2010:66; Brush et al., 2011:165). A contrary case is an instance that does not depict the attributes of the concept (Wilson, 1963:29).

The model case for community understanding of climate change used here is an example of empirical studies that demonstrate the positive influence of understanding climate change causes, risks, impacts, planned mitigation and adaptation, all at one goal, on community participation during climate change policy formulation and implementation. In terms of empirical studies conducted so far, it seems difficult to identify a model case that depicts the concept community understanding of climate change because most climate change policies that involved communities were inclusive during formulation, but lacked co-ordination through socio-political, administrative and public policy governance during their implementation (Stringer et al., 2009; Adenle et al., 2017; Friis-Hansen, 2017b). Again, community understanding of climate change is variably referred to as community understanding of 'climate change issues (Whitmarsh, 2009), 'climate change actions' (United Nations, 2016; Friis-Hansen, 2017a), 'environmental issues or concerns' (Meakin, 1992; Lorenzoni et al., 2007:447; Shahid and Piracha, 2016:414) and 'climate change adaptation' (Smit and Wandel, 2006). Whenever community understanding of climate change is variably used in these categories mentioned here, it is not clear if the causes, risks, impacts and adaptation and mitigation responses would be referred to as blurred under one category. Consequently, it seems difficult to identify from literature a common definition of community understanding of climate change that influences community participation during policy formulation and implementation. However, the barriers to engagement with climate change noted by Lorenzoni et al. (2007:45-451) could sum up what should describe community understanding of climate change, which could positively influence participation during climate change policy formulation and implementation. In summary, the barriers to engagement include the need for a community to understand the causes, risks, impacts and adaptation and mitigation measures (Lorenzoni et al., 2007:450), as well as socio-political (see barrier 'lack of social norms and expectations'), administrative (see barrier 'lack of enabling initiatives') and public policy governance (see barrier 'lack of political action and lack of action by business and industry') (Lorenzoni et al., 2007:451). Thus, in this case, Lorenzoni, Nicholson-Cole and Whitmarsh's noted barriers to engagement on climate change are here used as a model case that depicts community understanding of climate change, if the barriers are addressed.

A borderline case for the concept community understanding of climate change seems to be reflected in Friis-Hansen's (2017b) study of the African National Climate Change Policies (NCCPs). In an analysis of 11 African NCCPs, Friis-Hansen (2017b) found that the power to take action is centralised to public policy governance not only during the climate change policy formulation, but also during the implementation of these 11 NCCPs. The study shows that limited attention is given

to other forms of governance (administrative and socio-political) (Friis-Hansen, 2017b:15). The formulation of the 11 NCCPs was somehow inclusive, but administrative governance was not part of the process (Friis-Hansen, 2017b:13). Most of the NCCPs, such as the Uganda's NCCP and the Zambia's NCCP were primarily developed through public policy governance. National consultants (experts) led the policy formulation processes (Friis-Hansen, 2017b:13). This resulted in top down policies, which by-passed the input of public administrators (Friis-Hansen, 2017b:13) and communities. The fact that public policy governance dominated the NCCPs formulation makes it difficult to assess community understanding of climate change in relation to lack of participation during implementation. Under these circumstances, where some attributes (socio-political and administrative governance) are not occurring, Friis-Hansen's (2017b) study is here used as a borderline case.

Empirical studies on community understanding of climate change reported not only failures of community participation in different cases due to the plural and pluralist nature of climate change policy formulation and implementation, lack of specified objectives, lack of relevant participatory methods, for example, the failure of National Adaptation Programme of Action (NAPA) in Africa (Adenle et al., 2017), but also a lack of co-ordinated governance processes and activities within relevant government ministries and departments (Friis-Hansen, 2017b). None of these studies referred to here as contrary cases mentioned the lack of community understanding of climate change as an influencer of community participation during climate change policy formulation and implementation. In these studies (Adenle et al., 2017; Friis-Hansen, 2017b), the attribute public policy governance dominates the climate change policy formulation and implementation without necessarily allowing other forms of governance to occur. If other forms of governance are not allowed to occur, it may be difficult to assess the influence of understanding climate change on community participation during climate change policy formulation and implementation.

3.2.1.4 Antecedents

Antecedents are events that must occur before the concept occurs (Cronin et al., 2010:162). Therefore, to increase community understanding of climate change, socio-political, administrative and public policy governance should bring community members together for collective action and should occur before community understanding of climate change can occur.

3.2.1.4.1 Socio-political governance

Through socio-political governance, policymakers as key collaborators have a duty to form new institutions and regulations that will assist in the incorporation of communities' indigenous knowledge systems in climate change policy (Swyngedouw, 2005:2003; Katsamunskaya, 2016:135). Through socio-political governance, exploring how communities understand their own lives in relation to the environment gives the communities an opportunity to collaboratively, deliberately and democratically achieve successful inclusive formulation and implementation of a climate change policy (Eden, 1996:15; Carvalho and Gupta, 2012:1). Community understanding of climate change that influences participation in policy formulation and implementation is the understanding of indigenous knowledge systems (Pettenger, 2007a; Adger et al., 2012; Egeru, 2012; Etchart, 2017; Hegger et al., 2017). Community understanding of climate change in the context of

indigenous knowledge systems is when communities make sense of their relationship with their surroundings and nature (McIntyre-Tamwoy et al., 2013; Hegger et al., 2017:32; Lewickaa, Rowińskib, Iwańczakc, Bałaja, Maria Kulad et al., 2019).

Socio-political governance empowers communities to have authority over climate change policy formulation and implementation through using participatory techniques that promote the incorporation of indigenous knowledge systems in the climate change policy (Maharjan, Maharjan, Tiwari and Sen, 2017). The policymakers, through socio-political governance, facilitate interdependence for resources and interrelationships with communities (Osborne, 2010a:8). In applying socio-political governance, policymakers are required to give more attention to communities that are traditionally left out of the climate change policy formulation and implementation because of power dynamics (Anderson, 2003:102-105; Bauer et al., 2012). The understanding of climate change that affects the level of community participation during climate change policy formulation and implementation is determined by the type of the methods used by policymakers to co-produce climate information with communities (Hobson and Niemeyer, 2013). The community's understanding and use of techniques such as the cause and impact diagrams and vulnerability maps can enhance or hamper participation during climate change policy formulation and implementation. Because climate change is a problem considered to be of little concern to some individuals (Nkoana, Verbruggen and Hugé, 2018:9), the cause and impact diagram benefits a community to understand the problems caused by climate change. A cause and impact diagram is a type of diagram that can be used to visualise different causes and impacts of a problem (Narayanasamy, 2009:126). The diagram is useful to sensitise communities about the problem of climate change and to assess the extent to which communities associate known risks with climate change. Consequently, the communities' understanding of climate change and its causes, risks and impacts through the cause and impact diagrams could influence the level of community participation in climate change policy formulation and implementation (Awuor and Hammill, 2009).

The type of techniques used has a huge effect on community understanding of climate change, whether they participate as co-producers or social learners during the climate change policy formulation and implementation (Collins and Ison, 2009; Uittenbroek et al., 2019). Politicians and public administrators play a major role in ensuring community understanding of climate change through considering indigenous knowledge systems (societal factors, values, norms, indigenous knowledge, culture and political factors) (Kooiman, 1999; Swyngedouw, 2005; Collins and Ison, 2009; Adger et al., 2012; Katsamunska, 2016; Newig et al., 2016; Dang, 2018; Reed et al., 2018:1; Brink and Wamsler, 2019). Community understanding of climate change impacts could influence their participation during socio-political governance when information is presented in relation to their indigenous knowledge systems (Bulkeley, 2000), which is easy to visualise and comprehend (Kellstedt et al., 2008:320; Pandey, 2019). In addition, the various techniques under the cause and impact diagram, such as a vulnerability map, can be simultaneously used (Narayanasamy, 2009:50). A vulnerability map (Narayanasamy, 2009:50) serves to assist communities in identifying the most vulnerable groups of people who are unable to cope with the risks posed by climate change. The definition of climate change to communities through vulnerability maps enhances their participation during climate change policy processes (Maharjan et al., 2017). The agreement between communities and the government concerning how big the problem is, positively influences community participation in climate change policy formulation and implementation (Prutsch et al., 2018). It is beneficial for policymakers, through

adopting socio–political governance, to complement the awareness programme through co-ordinating a cause and impact diagram within the targeted communities, which will enhance their understanding.

3.2.1.4.2 Administrative governance

Administrative governance mobilises co-ordinated participation. To increase community understanding of climate change, administrative governance creates an opportunity for communities to co-produce solutions that can be part of climate change policies (Bauer et al., 2012; Friend, Jarvie, Reed, Sutarto, Thinphanga et al., 2014). Certain choices made by public administrators can affect the level of community participation during climate change policy formulation and implementation (Kehewa, Kolisab, Rollo, Callejas, Albere et al., 2013; Brink and Wamsler, 2019). Administrative governance should devote more time and lead well-co-ordinated collaborations with experts and community representatives to increase direct participation of communities (Woodford and Preston, 2013; Mattijssen, Buijs, Elands and Arts, 2017:346). Experts through administrative governance promote community understanding by increasing access to climate change information on its impacts (Renn, Webler, Rakel, Dienel and Johnson, 1993:205). The community representatives mobilise support by ensuring communities understand the objectives of policymakers and experts regarding climate change policy formulation and implementation. The community representatives keep the community members informed all the time (McFadyen and Rankin, 2016). However, the effectiveness of community representatives during administrative governance depends on their understanding and awareness of climate change (Samaddar et al., 2019:365). Through administrative governance, communities are expected to participate as equal decision makers and social learners through sharing their indigenous knowledge systems (Green and Raygorodetsky, 2010). Nevertheless, the ability of policymakers, experts and community representatives to apply administrative governance to enhance community participation in climate change policy processes highly depends upon the techniques used to participate, which can be used to ensure inclusiveness (Renn et al., 1993; Samaddar et al., 2019).

The techniques used during administrative governance, such as resource mapping and transects, affect community understanding of climate change (Mascarenhas, 1991:13; Diver, 2017:5). Communities' understanding of climate change when using participatory techniques, such as resource mapping and transects, can enhance their participation during climate change policy formulation and implementation. Information on trees as resources, crop patterns and current level of livelihood production can be co-produced through a resources map (Narayanasamy, 2009:59) by the communities and the public administrators. The purpose of resource mapping is to ascertain the resources' existing status and gauge the extent of resource exploitation. Resultantly, this would provide a base to map ways of conserving and improving the existing resources (Narayanasamy, 2009:59). The agreed mapped ways should then be included in the climate change policies. Consequently, co-production of a resource map increases communities' understanding of the importance of terracing, contour ploughing and water diversion furrows, while on the other hand revealing to communities reasons for the need to change behaviour concerning deforestation, wildfires and the use of poor agricultural practices as a way of managing human activities that exacerbate climate change (Saarikoski, Tikkanen and Leskinen, 2010; Diver, 2017; Kurniawan, 2018; Teder and Kaimre, 2018; Wamsler, Alkan-Olsson, Björn, Falck, Hanson et al., 2020). Against this background, communities are motivated to take part in climate change policy formulation and implementation through the activities they practically carry out in their daily lives (Maharjan et al., 2017).

Understanding of climate change impacts through transects motivates communities to take part in climate change policies (Egeru, 2012:221; Ross et al., 2015:88; KOL Government and WFP, 2019:31). Narayanasamy's (2009:84) definition of transects is when outsiders and village members systematically walk across the village and fields to study and observe natural resources, indigenous technology, soils, vegetation, topography and farming practices to cross-tally with resource mapping. Transects focus mostly on natural resources, although social aspects other than resources and infrastructure can also be depicted (Narayanasamy, 2009:84; Lee et al., 2015:8). There are three types of transects, which are village, resource and cultural (Narayanasamy, 2009:85). Village transects bring focus to livestock management, rural trades and crafts, as well as economic activities, thus giving insights into the social aspects of the village activities (Narayanasamy, 2009:85). In addition to village transects, resource transects (preferably multiple loops) can be conducted by the public administrators and the targeted community (Ross et al., 2015). A multiple loop requires that community members and the facilitators be placed in various groups. Each group will walk along a selected path to observe farming practices, for example, moving from point A to point B, and then all the groups will meet to compare and discuss the observations made during the walk (Narayanasamy, 2009:85; Lee et al., 2015:8). The role of facilitators when using transects as a technique is to be learners who listen and create a relaxed environment. However, sometimes transects can be dominated by men because the walk is tiresome, time-consuming and demanding (Narayanasamy, 2009). Communities' understanding about their natural resources, soils, topography, vegetation and farming practices in relation to climate change can increase their participation in climate change policy formulation and implementation and affords them an adequate opportunity to express their views during policy formulation and implementation (United Nations Environment Programme (UNEP), 2015; De Vente, Reed, Stringer, Valente and Newig, 2016; Wamsler et al., 2020).

3.2.1.4.3 Public policy governance

Community understanding of climate change that enhances participation during policy formulation and implementation requires public policy governance (Sprain, 2016; Reed et al., 2018; Pandey, 2019). Public policy governance should put in place structures and processes to allow community members' direct involvement. Public policy governance should not only acknowledge the importance of community participation in climate change policy formulation and implementation, but should also provide details of how exactly communities can be involved (Driessen et al., 2012; Pandey, 2019; Uittenbroek et al., 2019). The main characteristic of public policy governance is to promote interaction (interdependence for resources, interrelationships, collaborations and co-production of climate change ideas) among actors (policymakers, experts, community representatives and communities) to benefit community understanding of climate change (Kooiman, 2002:78; Karim and Thiel, 2017; Prutsch et al., 2018:282). The main actors are the politicians who are supposed to unify all forms of governance and climate actions through adopting a community centred policy that promotes communities' roles in sharing, collecting and using information towards climate change policy formulation and implementation. The UNEP (2015:12) stresses that the Rio Declaration emphasises that community participation in environmental decision-making depends upon the free flow of relevant information to the people. However, the ability of politicians to apply public policy governance for community understanding that influences active participation largely depends on the participatory techniques used (Rohling et al., 2016).

The use of participatory techniques such as public meetings, facilitation, PRA, participatory technology, consensus building, media and public hearing helps to ensure communication that may result in community understanding of climate change processes. Lack of community understanding about climate change and climate change policy in an open system of government fundamentally influences their participation during policy formulation and implementation (Awuor and Hammill, 2009; McIntyre-Tamwoy et al., 2013; Hegger et al., 2017:25). Community participation here implies active involvement in making decisions with understanding regarding climate change policy formulation and implementation where politicians are key actors who should ensure that the community's understanding about climate change results in direct active participation (Brody, Godschalk and Burby, 2011:204; Nagoda and Nightingale, 2017).

Through public policy governance, community understanding of climate change policy processes should be co-ordinated among various actors (public administrators, experts, community representatives and communities) for the common purpose of inclusive climate change policy formulation and implementation (Kuhn and Zhang, 2014). The politicians take the lead and provide central guidance through legislation to ensure that all the activities are carried out accordingly (Katsamunskas, 2016:136; Prutsch et al., 2018; Pandey, 2019). Attempting to use participatory techniques such as facilitation, consensus building, PRA, participatory technology, media, public hearings and public meetings may be necessary to combine ideas and recast them to meet new circumstances (Rondinelli, 2007:8-9). Thus, modifying and realising known created ideas of these participatory techniques to challenge facilitators (policymakers and experts) to reach a consensus that benefits all actors, including community representatives and community members (Frederickson, 1991:12).

3.2.1.5 Consequences

Consequences are events or incidents that can occur because of the occurrence of the concept (Brush et al., 2011:163). Consequences here refer to positive and negative events that could occur following community participation during climate change policy formulation and implementation because of the community's understanding of climate change. In addition, consequences are simply the influence of community understanding of climate change. Because of community understanding of climate change, the following consequences could happen: (i) understanding the relationship of community with the environment, (ii) building trust, (iii) strengthening collaborations and (iv) understanding climate change policy processes. The consequences of community understanding of climate change on their participation during climate change policy formulation and implementation also depend on the type of governance that would have been applied. Through socio-political, administrative and public policy governance, the consequences of community understanding of climate change on their participation in climate change policy formulation and implementation are discussed.

Firstly, through socio-political governance, communities' understanding of their relationship with the environment and climate change motivates participation during the climate change policy process (Bulkeley, 2000; Ross et al., 2015:88). Understanding the ways in which communities relate to the environment based on their culture, morale and social interaction enhances the incorporation of such information into the climate change policy (Eden, 1996:22). Because some communities ignore disaster warnings because of cultural beliefs (KOL Government and WFP, 2019), communities' perceptions about climate change in relation to indigenous knowledge systems influence their participation during climate

change policy formulation and implementation (Awuor and Hammill, 2009). Community understanding of climate change impacts fundamentally influences their participation during policy formulation and implementation when information is presented in the language and graphics that are easy to visualise and comprehend (Kellstedt et al., 2008:320; Thomas, Hardy, Lazrus, Mendez, Orlove et al., 2018:6; Pandey, 2019).

However, it may be difficult to know how community members feel and how they could be moved and within which limits (to what extent) they would be able to participate when applying socio-political governance (Appleby, 1947:96; Wu et al., 2018:7). Compared to scientific understanding of climate change that is universal, socio-political governance factors (including societal and political factors) vary from community to community (Makondo and Thomas, 2018). Therefore, despite attempting to use indigenous knowledge systems as the link to promote active community participation during climate change policy formulation and implementation, there are some limitations. Unlike indigenous knowledge systems, scientific understanding of climate change is based on reasonably accurate projections (Guthiga and Newsham, 2011:2). Thus, one may conclude that although the use of socio-political governance could positively influence communities' understanding of climate change and participation during climate change policy formulation and implementation, it is not given. This is due to culture, norms, values, indigenous knowledge and political factors that may cause conflicts that can negatively influence community participation during climate change policy formulation and implementation (Dang, 2018).

Secondly, administrative governance builds trust, strengthens collaborations and enhances support for policy implementation. Through co-ordination of co-production of climate change policies by administrative governance, communities participate as co-decision makers, co-planners, co-designers and co-evaluators of the climate change policy (Wu et al., 2018:7). Consequently, the communities' understanding of climate change creates an opportunity for them to be directly involved in climate change policy formulation and implementation (D'haen and Nielsen, 2017:28). In the long run, effective administrative governance leads to community understanding of climate change and reduces conflicts during climate change policy formulation and implementation (Prutsch et al., 2018:273). However, the techniques used during administrative governance affect community understanding of climate change, which will influence community participation positively or negatively. Lack of trust in the climate change policy process for any reasons by the community members can negatively affect their willingness to participate (Hügel and Davies, 2020:10). Again, collaborations during climate change policy formulation and implementation are described as 'messy, cumbersome and slow' (Hügel and Davies, 2020:13) because of multiple actors (politicians, public administrators, experts, community representatives and communities) involved. Because of multiple actors, power relations may negatively affect how communities participate in climate change policy formulation and implementation.

In as much as administrative governance seeks to build trust, strengthen collaborations and enhance support for policy implementation between communities and other actors, it is affected by the political-administrative interface (Measham et al., 2011:892-893). The political-administrative interface is shared responsibility and leadership between the public administrators and politicians during interactions. Although administrative governance seeks to increase community participation during climate change policy formulation and implementation, it is noteworthy that administrative governance when facilitated by public administrators is merely management or administration of the participation processes (Appleby,

1947:95). Ultimately, all actors (public administrators, experts, community representatives and communities) involved during administrative governance are required to account to politicians (Shawoo and Thornton, 2019:8). The actors should understand political processes to gain access to the communities. Consequently, the political-administrative interface may hamper community participation during the climate change policy formulation and implementation.

Thirdly, effective public policy governance results in community understanding of the climate change policy process, which generates support for policy implementation. Therefore, active community participation during policy formulation and implementation hinges on how community members understand climate change regarding interpreting associated risks (Awuor and Hammill, 2009; McIntyre-Tamwoy et al., 2013; Hegger et al., 2017:25). It is only when communities participate with understanding that the outcomes of their participation can build good practice and legitimate policies when applying public policy governance (Carvalho and Gupta, 2012:1). Community understanding of climate change could lead to consensus building by improving policy implementation, increasing the likelihood of policy decisions supported by the affected people, exchanging information between communities and the other actors involved, developing trust and solving conflicts (Jennings, 2009; Piccolella, 2013:27; UNEP, 2015:12; Dang, 2018). Regardless of how inclusive the climate change policy process could be, decision making is ultimately centred upon politicians. Against this background, the participatory techniques to be used when assessing community understanding of climate change could result in increased or reduced participation.

3.2.1.6 Empirical referents for community understanding of climate change

Collaboration, deliberation, co-production and democratisation during climate change policy formulation and implementation could be considered as empirical referents of community understanding (Buijs, Mattijssen, Van der Jagt, Ambrose-Oji, Andersson et al., 2016). Empirical referents are defined as measurable ways to demonstrate the occurrence of the concept (Cronin et al., 2010:66; Brush et al., 2011:163). The presence of empirical referents (collaboration, deliberation, co-production and democratisation) during climate change policy formulation and implementation therefore demonstrates the occurrence of the concept community understanding of climate change. However, community understanding of climate change that increases participation during climate change policy formulation and implementation is complex because participation could be enhanced only in an environment where socio-political, administrative and public policy governance exist, which have been identified as antecedents (Friis-Hansen, 2017b). Therefore, it can be argued that socio-political, administrative and public policy governance should be applied first, for community understanding of climate change to occur (IPCC, 2014b:30). Under such circumstances, socio-political, administrative and public policy governance become antecedents (Lorenzonio et al., 2007). Hence, the effectiveness of pre-applied socio-political, administrative and public policy governance forms the basis for assessing community understanding of climate change that influences participation during policy formulation and implementation (IPCC, 2014b:31). To identify empirical referents (collaboration, deliberation, co-production and democratisation), it is here argued that the antecedents such as socio-political, administrative and public policy governance should be effective for community understanding of climate change to positively influence their participation during climate change policy formulation and implementation. In summation, Table 3.1 shows an analysis of the concept community understanding of climate change, using Walker and Avant's (2005) concept analysis method on community participation during climate change policy formulation and implementation.

Table 3.1: Analysis of community understanding of climate change using Avant and Walker's (2005) concept analysis method

Analysing the concept community understanding of climate change using Walker and Avant's concept analysis method	
Stages used in analysing the concept	Results
Concept.	Community understanding of climate change.
Aim of the analysis.	- To gain an in-depth understanding of the concept from a theory perspective. - To define an operational definition for the study. - To use the concept for data collection and analysis.
Identifying the uses of the concept.	- Regarded as scientific understanding of climate change. - Understanding climate change causes. - Understanding the likelihood and severity of expected climate change impacts. - Understanding the climate change risks. - Understanding planned future adaptation and mitigation responses.
Defining attributes.	- Having knowledge about climate change. - Having the ability to comprehend (grasp mentally the definition of climate change). - Being aware of climate change. - Having reason to believe in climate change.
Constructing a model case.	Effective socio-political, administrative and public policy governance.
Identifying borderline case.	The formulation and implementation of NCCPs in Africa (Friis-Hansen, 2017b:15).
Related and contrary cases.	Is when socio-political, administrative and public policy governance are applied to enhance community participation, but will not produce effective results.
Identifying antecedents.	Socio-political, administrative and public policy governance are a requirement to enhance participation.
Consequences.	Positive consequences - Results in the community understanding climate change definition, causes, risks and impacts. - Results in the community understanding the relationship between them and their environment. - Build trust. - Strengthen collaborations. - Results in the community understanding of climate change policy processes.
	Negative consequences - Indigenous knowledge systems are contextual; cannot be generalised - The negative influence of the political-administrative interface - Results in decision-making being centralised on politicians, which is against the principle of community participation
Empirical referents.	Collaboration, deliberation, co-production and democratisation during climate change policy formulation and implementation.

Source: Adapted from IPCC (1990; 2001); Walker and Avant (2005); IPCC (2007); Osborne (2010a); and Adenle et al. (2017)

3.2.1.7 Implications for the theory of community understanding of climate change

The concept community understanding of climate change that influences participation in climate change policy formulation and implementation has been mentioned in international documents and also in various studies but it seems it is not yet

conceptualised to show a coherent theory (Meakin, 1992; UNFCCC, 1992; UNECE, 2015; UNEP, 2015; UNESCO and UNFCCC, 2016). Resultantly, a standard definition of the concept community understanding of climate change is needed to guide the application of socio-political, administrative and public policy governance as antecedents of community understanding of climate change. The analysis of the concept community understanding of climate change presents theoretical data to show the practical meaning of community understanding of climate change, which will result in increased participation in climate change policy formulation and implementation. Community understanding of climate change is argued in this study as an integral element that enhances community participation in climate change policy formulation and implementation. Despite having its limitations (described in Section 3.2.3), a lack of communities' understanding of climate change may seriously hamper their participation in climate change policy formulation and implementation, which could result in failed policy implementation. It will therefore be more useful if the meaning of community understanding of climate change is standardised.

3.2.2 Influence of awareness of climate change on community participation during climate change policy processes

Community awareness of climate change that increases participation in climate change policy formulation and implementation is usually described broadly under the subject environmental issues (UNECE, 2015:7; UNESCO and UNFCCC, 2016:197; Reed et al., 2018). Community awareness of climate change is a very broad construct (Halady and Rao, 2010:9). Since 1992, the word awareness in relation to community participation in climate change policy formulation and implementation has been used in the UNFCCC (1992) article 6 to refer to awareness programmes. The word 'awareness' is not clearly defined in the UNFCCC document and in other climate change awareness studies (Reid et al., 2009; Ratter, Philipp and Hans, 2012; Lee et al., 2015). In the UNFCCC (1992) document, 'awareness' is simply used as an English word (Meakin, 1992:3; UNEP, 2015:11). Likewise, the purpose of analysing community awareness of climate change is to provide an operational definition for the study to use during data collection and analysis (Cronin et al., 2010; 65). A general agreement should be reached to ensure consistency of the meaning of community awareness of climate change (Cronin et al., 2010:63; Rodgers et al., 2018). Defining community awareness of climate change assists in finding common ground to assess it for the purpose of this study. The definition will point to issues that must be addressed when communities participate in climate change policy formulation and implementation. Using Walker and Avant's (2005) suggestion of concept analysis, community awareness of climate change is defined to develop an operational definition. In this study, the concept community awareness of climate change is defined in terms of its uses, attributes, model case, contrary case, antecedents, consequences and empirical referents (Walker and Avant, 2005; Von Colln-Applying and Giuliano, 2017).

3.2.2.1 Uses of community awareness of climate change

Awareness, according to the Cambridge Dictionary (2020), refers to the understanding of a current subject based on information or experience. Awareness is also defined as the state or quality of being aware of something (STANDS4 Network, 2020). In the context of climate change, the word awareness is used without necessarily being defined (Darier and Schüle, 1999; Innes and Booher, 2005; Lorenzon et al., 2007; Halady and Rao, 2010; Lee et al., 2015). There seems to be no clarity of the meaning concerning community awareness of climate change (Kuhn and Zhang, 2014; Lee et al.,

2015) in relation to enhancing community participation during climate change policy formulation and implementation. In this study, community awareness of climate change is defined as the community's understanding of climate change in terms of its definition, causes, impacts, risks and planned responses (mitigation and adaptation) based on information or experience (Shepard, Boudet, Zanocco, Cramer and Tilt, 2018). Having information and experience will lead to communities being well informed and critically conscious about climate change (Lorenzoni et al., 2007:447; Friis-Hansen, 2017b:15).

Community awareness of climate change is defined as when information about environmental issues is available and accessible to community members (UNEP, 2015:25; Wi and Chang, 2019:10). Awareness of climate change that influences the level of community participation during policy formulation and implementation depends on the known information about climate change and its policies. Lack of relevant governance activities (co-production, deliberation, democratisation and policy nudging) to avail adequate flow of information regarding proposed or existing activities to be carried out may significantly reduce the desire of communities to participate (Reichel and Frömming, 2014:6). van Aalst et al. (2008:169) argue that communities, at least, are aware of the 'normal' hazards caused by changes in weather, but are unaware of more dangers as a result of climate change (Ensor and Berger, 2009:231; Friis-Hansen, 2017b:17; Samaddar et al., 2019:52; Consortium of Zimbabwe Universities, International and Local Researchers, NGOs, Chimanimani RDC, Government Agencies et al., 2020). Against this background, the application of socio-political, administrative and public policy governance to increase community awareness of climate change becomes inevitable.

Similar to community understanding, community awareness of climate change is described in relation to having knowledge about climate change causes (Kuhn and Zhang, 2014; Shahid and Piracha, 2016:486). The causes of climate change are mainly human activities, which increase the greenhouse gas concentrations in the atmosphere (IPCC, 2007:82-85). Raising such awareness of climate change causes should aim at giving information to influence behaviour change towards active participation during climate change policy formulation and implementation (Lorenzoni et al., 2007; Shepard et al., 2018; Wi and Chang, 2019).

Community awareness of climate change is described in relation to having knowledge of climate change impacts (Bulkeley, 2000:316; Shahid and Piracha, 2016; Dhungana, Silwal, Upadhaya, Regmi and Adhikari, 2018; Evadzi, Scheffran, Zorita and Hünicke, 2018). The impacts of climate change vary from context to context but also include, among others, floods, loss of livelihoods, hazards, heat waves, exacerbated water related problems and health problems (IPCC, 2007:11-18; Friis-Hansen, 2017b:17; Karim and Thiel, 2017; Shepard et al., 2018). For communities to influence climate change policy formulation and implementation, access to adequate information about climate change impacts should be ensured (Cai et al., 2017; Shepard et al., 2018). Nevertheless, the way information is disseminated and collected plays a role in ensuring that communities input their ideas in climate change policy formulation and implementation (Dhungana et al., 2018; Evadzi et al., 2018).

Community awareness of climate change is described in the literature in relation to risks (Larsen and McGuinness, 2016; Barreda, 2017). Depending on the context, the risks associated with climate change are many and include, among others,

extreme weather events such as drought, floods, wildfires and less rainfall (KOL. Department of Environment, 2014:41; Larsen and McGuinness, 2016:396). Usually, such effects have a huge impact on human beings and their environment. Using participatory techniques to collect, share and disseminate information about climate change risks could result in community awareness of climate change that influences their participation in policy formulation and implementation (Sheppard, Shaw, Flanders, Burch, Wiek et al., 2011).

Community awareness of climate change that increases participation in policy formulation and implementation is described in terms of having knowledge about planned adaptation and mitigation responses (Adenle et al., 2017; D'haen and Nielsen, 2017). In this regard, informed consent must be sought in advance by the policymakers prior to any direct community involvement in climate change policy formulation and implementation. Communities should know the aims, procedure and expected mitigation and adaptation responses (Smit et al., 2000; Lorenzoni et al., 2007; Hegger et al., 2017:13). As pointed out by Smit et al. (2000:223), communities should be aware of what they should adapt to, actors to be involved and understand how adaptation will occur in their context.

3.2.2.2 Defining attributes of community awareness of climate change

As noted earlier, attributes are defining characteristics that best describe the concept without which a concept cannot be said to occur (Henneman et al., 1995:104; Wilde and Garvin, 2007:344; Alghamdi, 2016:451; Von Colln-Appling and Giuliano, 2017:107). The words “well informed” and “critical consciousness” seem to show the defining attributes of community awareness of climate change (Lorenzonia et al., 2007:447; Friis-Hansen, 2017b:15). Thus, awareness would be the state of the mind of community members after experiences and receiving information about climate change. In terms of defining attributes, community awareness of climate change is when communities would be well informed and critically conscious about climate change causes, risks, impacts, planned adaptation and mitigation measures after experiences and receiving information.

The term ‘well informed’ should be defined to reduce the tendency of advocating for community participation in climate change policy formulation and implementation when community members are not well-informed (Rhodes, Axsen and Jaccard, 2014). Meaningful participation should involve community members who are well informed about climate change. As defined by Schütz (1946:465), to be well informed is to have knowledge of reasonably founded opinions on issues that concern an individual or a community. A community gets well-informed about climate change through socially derived knowledge, which is gained through information passed on from fellow community members (Becken et al., 2013). This kind of knowledge could be passed on by eyewitnesses, community members, elders and people in authority, among others. Well informed communities are experts in terms of understanding climate change technicalities and implications as they experience it in their context (Sullo, King, Yiridomoh and Doghle, 2020:61). The well informed communities are able to give their opinions regarding climate change after the experts give theirs (Pietsch and McAllister, 2010). In the current study, the term well-informed entails a universal detailed understanding of climate change causes, impacts, policy process, risks and planned mitigation and adaptation measures within a community (Lorenzoni et al., 2007:447).

Critical consciousness was developed to understand how marginalised or oppressed people understand their world (Diemer, McWhirter, Ozer and Rapa, 2015:809). The process of gaining critical consciousness in a community happens through dialogue, participatory action and collective empowerment. It is developed in the mind when community members come together to dialogue to take action. In the context of climate change decision making, critical consciousness is said to have occurred when a community exhibits the ability to critically evaluate climate change and being able to take action against power imbalances (inequality) (Mistry and Berardi, 2016). Critical consciousness encourages community members to have a strong desire to participate in climate change decision making based on their knowledge and experience (Friis-Hansen, 2017b:15). Thus, community members understand the importance of working as a community rather than as an individual to promote community achievements over individual achievement.

Thus, information may lead to active involvement during climate change policy formulation and implementation, as well as changing personal behaviour (Bulkeley, 2000:328; Wi and Chang, 2019). Out of date information about climate change may result in less community participation in policy formulation and implementation (Beierle and Konisky, 2000:595-596). Therefore, information regarding climate change and its policies should be disseminated timeously to ensure that the concerned communities take action as soon as possible to reduce further harm to the environment (Brink and Wamsler, 2019:88). Thus, in an attempt to link objective (iii) and question (ii), the discussion of community awareness of climate change and its influence on community participation during policy formulation and implementation is done in relation to socio-political, administrative and public policy governance.

3.2.2.3 Cases: Model Case, Borderline Case and Contrary Case

Despite the many available studies about community awareness of climate change, the subject is a very broad construct because aspects of awareness are not universally defined (Halady and Rao, 2010:9). The broadness of the concept community awareness of climate change makes it difficult to select what could be described as a model case for the concept in relation to how it is defined in Section 3.2.2. Some studies only note the importance of community awareness to enhance participation during the formulation of climate change adaptation strategies (McNamara, 2013; Shaffril, D'Silva, Kamaruddin, Omar and Bolong, 2015:521). Without necessarily defining community awareness of climate change, other studies simply claim to assess community awareness of climate change about opinions, level of understanding, concerns, attitudes and the extent to which community members support adaptation and mitigation strategies in different communities (Seacrest, Kuzelka and Leonard, 2000; Sheppard, 2005; Kellstedt et al., 2008; Sarkar and Padaria, 2010; Pandve, Chawla, Fernandez, Singru, Khismatrao et al., 2011; Hajito, Gesesew, Bayu and Tsehay, 2015; Ajuang, Abuom, Bosire, Dida and Anyona, 2016; Consortium of Zimbabwe Universities et al., 2020). Some studies simply refer to community awareness of climate change without necessarily mentioning whether it is in reference to causes, risks, impacts or planned mitigation and adaptation responses (Kellstedt et al., 2008; Semenza et al., 2008; McNamara, 2013; Ochieng and Koske, 2013; Kuhn and Zhang, 2014). Further, some studies discuss risks only as a characteristic of community awareness of climate change (Dolan and Walker, 2006; Mortreux and Barnett, 2009; Dumar, 2010; Sujit and Padaria, 2010; Hori and Shaw, 2013; Lieske, Wade and Roness, 2014; Hajito et al., 2015; Lee et al., 2015; Shaffril et al., 2015; Barreda, 2017; Shepard et al., 2018).

Some studies focus only on community awareness of climate change impacts (Mortreux and Barnett, 2009; Shaffril et al., 2015:520; Shukla, Kumar, Pala and Chakravarty, 2016; Dhungana et al., 2018; Evadzi et al., 2018), whereas others focus on community awareness of adaptation responses (Seacrest et al., 2000; Sheppard, 2005; van Aalst et al., 2008; Mortreux and Barnett, 2009; Dumar, 2010; Mercer, 2010:249; Shepard et al., 2018:7-8). Other studies focus only on community awareness of climate change mitigation responses (Semenza et al., 2008; Shepard et al., 2018:7-8; Wi and Chang, 2019). Some studies focus on community awareness of climate change risks, causes and impacts all at one goal (van Aalst et al., 2008; Sarkar and Padaria, 2010; Hori and Shaw, 2013; Burnside-Lawry and Carvalho, 2016). Again, the two concepts community understanding and awareness of climate change seem to be used concurrently, although the purported meaning would be different (Semenza et al., 2008; Lee et al., 2015; Hegger et al., 2017:23). Consequently, the broadness of the concept community awareness of climate change makes it difficult to select what could be described a model case for this study.

A borderline case used to show the occurrence of community awareness of climate change is an identified empirical study, which looked at how the community's level of information and critical consciousness of climate change risks, causes and impacts in relation to their participation during formulation and implementation of adaptation measures (Hori and Shaw, 2013). However, it is noteworthy that socio-political, administrative and public policy governance also matter (Mortreux and Barnett, 2009; Halady and Rao, 2010:9; Hori and Shaw, 2013:81; Lieske et al., 2014; Shepard et al., 2018; Brink and Wamsler, 2019). The study by Hori and Shaw (2013) is used here as a borderline case because it mainly focused on how community awareness of climate change risks, causes and impacts influenced Cartago, Costa Rica community members to take action in disaster risk reduction. According to the definition of community awareness of climate change noted in Section 3.2.2, an ideal situation would be for communities to be well informed and become critically conscious not only of climate change causes, impacts, risks as well as adaptation and mitigation responses, but also of how socio-political, administrative and public policy governance could contribute when facilitating the climate change policy process (Adenle et al., 2017; Friis-Hansen, 2017b). Being well informed of such governance processes could motivate communities to participate in climate change policy formulation and implementation to take action.

Considering the theory and practice of community participation in climate change policy formulation and implementation, it seems difficult to point to a contrary case that shows a lack of community awareness of climate change (Nzeadibe, Egbule, Chukwuone and Agu, 2011; Kuhn and Zhang, 2014; Shahid and Piracha, 2016; Dhungana et al., 2018; Evadzi et al., 2018; Reed et al., 2018; Shepard et al., 2018). In the language of Sprain (2016), the 'paradoxes' of community participation are many such that in most studies where communities were involved, only one of the attributes of community awareness was present (Adenle et al., 2017; Friis-Hansen, 2017b). Resultantly, socio-political, administrative and public governance are expected to co-ordinate multiple actors and processes, thereby causing complexity in the whole exercise of climate change policy formulation and implementation (Friis-Hansen, 2017b). Against this background, this study argues for the analysis of the concept community awareness of climate change. The analysis provides a basis upon which community awareness of climate change could be measured for this study and in future (Wamsler et al., 2020:245).

3.2.2.4 Antecedents

As defined earlier during community understanding of climate change, antecedents are events that must occur before the concept occurs (Cronin et al., 2010:162). Similar to community understanding of climate change, community awareness of climate change is also enhanced by effective socio-political, administrative and public policy governance. Thus, in the remainder of this section, socio-political, administrative and public policy governance are discussed to show how they should occur for community awareness of climate change to influence their participation in climate change policy formulation and implementation.

3.2.2.4.1 Socio-political governance

Socio-political governance is about giving the communities a voice during climate change policy formulation and implementation through giving them an opportunity to share their indigenous knowledge systems (Kooiman, 1999; Few, Brown and Tompkins, 2007:49; Collins and Ison, 2009; Newig et al., 2016; Reed et al., 2018:1). Community participation during the climate change policy process is supported here as a democratic right and an approach to improve climate change policy awareness through the use of indigenous knowledge systems (Sprain, 2016:65; Friis-Hansen and Aben, 2017:356; Dang, 2018). The democratisation of community participation during climate change policy formulation and implementation may reveal several things regarding the level of community awareness, willingness to participate and socio-political relations within the community. These include, among others: (i) How far are community members willing to contribute to the policy process; (ii) To what extent are communities participating? (iii) Who is involved and not? (iv) What is the influence of their involvement? (v) Who influences their involvement? (vi) Which techniques are preferred to the others? and (vii) How communities socially and culturally view participation, climate change policy and climate change. Such an assessment could assist policymakers with future planning interventions that seek to support bottom-up approaches to help communities understand the definition, impacts, causes, policy processes, risks and planned adaptation and mitigation responses to climate change from the point of view of their indigenous knowledge systems.

Community awareness of climate change causes, impacts and risks, could be raised through participatory techniques such as cultural transects from a socio-political governance perspective (Reid et al., 2009:17-18). The techniques used during socio-political governance can raise awareness that can either impede or increase community participation during climate change policy formulation and implementation (Sheppard et al., 2011; Maharjan et al., 2017). To increase community awareness regarding the evident threat of climate change and stimulate their interest in making contributions to climate change policy formulation, cultural transects can be used to raise awareness (Narayanasamy, 2009:84; Reid et al., 2009:17-18). Cultural transects contribute to awareness creation as community members and policymakers will have an opportunity to systematically walk in the fields to study and observe natural resources, effects of poor agricultural practices, effects of deforestation and effects of wildfires on climate in relation to their culture (Narayanasamy, 2009:85). Resultantly, this will increase awareness about the threat of climate change on communities in a bid to increase their participation in climate change policies (Ross et al., 2015:77; Wamsler et al., 2020). However, some policymakers may view this idea as too complex for the communities but the emergence of socio-political, administrative and public policy governance says it all that communities are demanding a robust engagement not only in policy implementation, but also in the policy formulation itself.

3.2.2.4.2 Administrative governance

Without administrative governance, community awareness of climate change is negatively affected (Friis-Hansen, 2017a). Different actors (public administrators, politicians, experts and community representatives) play different roles to benefit community participation during climate change policy formulation and implementation. Administrative governance creates opportunities for communities to participate when public administrators build support, co-ordinate co-production and facilitate collaboration for policy formulation and implementation through the use of participatory techniques (van Aalst et al., 2008; Burnside-Lawry and Carvalho, 2016; Brink and Wamsler, 2019). Other actors such as politicians, experts and community representatives also play their roles. Politicians strengthen communication through formulating legislation that supports community awareness of climate change, interdepend with public administrators and experts for resources and manage power dynamics to benefit community awareness of climate change. Experts mobilise resources and all round participation to link between communities and other actors. Community representatives ensure co-ordination of the policymakers' intended responses (Taylor, 2007:312; McFadyen and Rankin, 2016). Ultimately, community awareness of climate change should be increased.

Administrative governance encourages collaboration where communities actively and directly participate in policy formulation and implementation through participatory maps, which can be in various forms, such as resource maps (Sheppard et al., 2011; Diver, 2017:5; Maharjan et al., 2017:9). Participatory mapping is transferring the mental picture from the mind onto the ground to form some kind of a map diagrammatically, irrespective of literacy status (Narayanasamy, 2009:41; Cronkleton, Alborno, Barnes, Evans and de Jong, 2010; Frazier, Wood and Yarnal, 2010; Cadag and Gaillard, 2012; Piccoella, 2013; Reichel and Frömming, 2014; Lee et al., 2015). In literature, a resource map as a type of participatory mapping could be used for different reasons, which are, among others, raising awareness of the existing natural resources, developing a basis for comparing different activities, providing a visual understanding that could be understood by everyone concerned and creation of the basis for impact analysis or for monitoring and evaluation (Narayanasamy, 2009:42; Sheppard et al., 2011; Lee et al., 2015; Diver, 2017:5). In the case of climate change, resource maps would be drawn to raise awareness on the state of depleting natural resources because of deforestation and poor agricultural practices (Kurniawan, 2018; Wamsler et al., 2020). Resultantly, a vulnerability map could be developed. In addition, the maps could assist policymakers to assess communities' participation capacity, comprehension of climate change and their willingness to be part of the climate change policy formulation and implementation processes. Ultimately, resource mapping can ascertain the existing status of the resources, measure the extent of resource exploitation and also provide a base for mapping ways of conserving and improving the existing resources for future use (Narayanasamy, 2009:59; Lee et al., 2015).

Genuine deliberation, facilitated through administrative governance, enables communities not only to go beyond acquiring knowledge about climate change, but also to collectively and creatively develop solutions for the problem under discussion (De Vente et al., 2016:7; Shahid and Piracha, 2016:44; Sprain, 2016:63). In light of this argument, the public administrators and experts could facilitate collaboration during the formulation of the policy through letting the communities to draw a cause and impact diagram. The diagram could be used to propose different solutions to the problem. Simultaneously, the policymakers can be able to assess not only the level of community understanding, but also their awareness concerning

the risks posed by climate change (Ross et al., 2015:88). Past disasters, for instance, can motivate communities to get involved in climate change policy formulation and implementation (Hajito et al., 2015). Consequently, based on the cause and impact diagram drawn by the community members, the policymakers can then take the responsibility of adding new relevant information to the contributions already made by the community to increase community awareness. van Aalst et al. (2008:173) argue that awareness on local experiences may be part of the basis upon which planning for the future can be made. This is because in some communities, people may be able to identify trends in general weather that are not climate induced but their extrapolations concerning disasters could be valuable when formulating the climate change policies (Semenza et al., 2008:4).

3.2.2.4.3 Public policy governance

Awareness of climate change that influences community participation during climate change policy formulation and implementation is affected by the system of governance, whether open or closed. In applying public policy governance, participation of communities would depend on the systems of governance (open or closed systems) (Cochran, Huntington, Pungowiyi, Tom, Chapin et al., 2014; Dang, 2018:318-319). Developing consistent solutions requires governments to be open and accessible to communities (Osborne et al., 2013:10; Robinson, 2015; Dang, 2018). An open system of governance ensures interaction, trust and legitimacy during policy formulation and implementation (Mees, Uittenbroek, Hegger and Driessen, 2019). The policymakers' role would be to invite the communities to participate in climate change policy formulation and implementation (Brinkerhoff and Crosby, 2002:54). This could be done through conducting joint activities using participatory techniques, which enhances community awareness of climate change and its associated policy processes.

The use of techniques such as a seasonal calendar during public policy governance could act as a catalyst for increasing community awareness of climate change by enabling community members to have a say in the climate change policy process (Maharjan et al., 2017:10). A seasonal calendar is a diagram drawn for major seasons or months by the local people using available materials to show trends in main activities and their implications on the people's livelihoods and lives (Narayanasamy, 2009:172; Yang, Ranjitkar, Zhai, Zhong, Goldberg et al., 2019). A seasonal calendar is applicable in studying rainfall and temperature, indigenous seasons, crop diseases and pests and collection of wild fruits, among other things (Awuor and Hammill, 2009; Narayanasamy, 2009:172; Yang et al., 2019). Seasonal calendars can be used together with focus groups (Narayanasamy, 2009:184). The intended objectives for using the seasonal calendar determine the participants (Narayanasamy, 2009:172). The information obtained from a seasonal calendar can be used to design a set standard for appraising livelihood sources in different communities (Narayanasamy, 2009:175; Ross et al., 2015:81-82). The calendar may also assist policymakers to understand seasonal activities, which are affected by seasonal changes because of climate change, thereby making communities to deliberate on the problems they experience and the solutions to the problems exacerbated by climate change with understanding.

Awareness of climate change influences community participation during policy formulation and implementation through built-up relationships in an open system of governance. Experts and public administrators could raise community awareness of climate change through pair-wise ranking and transects in an open system of governance (Mwongera,

Mwungu, Kinyua and Karanja, 2017). Building relationships is important and this could be done through open systems of governance where the communities feel their ideas are welcome and important. In open systems of governance, a community would have an opportunity to set priorities and preferences that can be part of climate change policies (Brink and Wamsler, 2019; Mees et al., 2019). Pair-wise ranking is one example of a participatory technique which gives communities an opportunity to prioritise their problems with the facilitation of policymakers or experts. During the pair-wise ranking, problems are compared to understand preferences and priorities of different people (Mascarenhas, 1991:4; Narayanasamy, 2009:221). The technique can be practised in a mixed group (Narayanasamy, 2009:221). The number of participants can be a minimum of six (Narayanasamy, 2009:221). The techniques assist policymakers to determine relevant and appropriate interventions based on understanding the priorities of the people concerned (Narayanasamy, 2009:221; Mwongera et al., 2017). The pair-wise ranking could be used with other techniques such as focus groups, followed by transect walks and semi-structured interviews (Mascarenhas, 1991:4; Narayanasamy, 2009:221). However, the technique can be boring if it is done without complementing it with other techniques or when used to compare more than ten items (Narayanasamy, 2009:230).

3.2.2.5 Consequences

Due to community awareness of climate change, a number of consequences will happen. Consequences are the positive and negative influences of community awareness on climate change to community participation during the climate change policy formulation and implementation. Community awareness of climate change results in shared indigenous knowledge systems (Mistry and Berardi, 2016:2; Diver, 2017), building of trust due to collaborations (Beierle and Konisky, 2000; Lieske et al., 2014:92) and co-production of climate change policies (Saarikoski et al., 2010; Dhungana et al., 2018).

To begin with, socio-political governance provides communities with an opportunity to share with policymakers their indigenous knowledge systems, based on practical knowledge and daily experiences (Chanza and De Wit, 2016; Jiri, Mafongoya, Mubaya and Mafongoya, 2016). Resultantly, awareness of climate change determines the level of community participation during climate change policy formulation and implementation if democratised (Bulkeley and Mol, 2003:147; Zahran et al., 2006:771). However, communities may refuse to accept the proposed adaptation and mitigation measures because of their indigenous knowledge systems (Brink and Wamsler, 2019:20).

Community awareness of climate change as a result of effective administrative governance builds trust because of some form of collaboration during policy formulation and implementation (Shepard et al., 2018). Because of administrative governance, the communities have a direct voice in policy formulation and implementation (Mees et al., 2019). Communities become reliable actors whose perspectives are worth incorporating into the climate change policy (Samaddar et al., 2019). This gives the communities an opportunity to be aware of the climate change and climate change policy. Administrative governance should ensure that climate change and climate change policy process information is understandable and accessible (Bulkeley, 2000).

Community awareness of climate change, as a result of public policy governance, enables communities to co-produce climate change policies and engaging them adds value to both public policy and adaptation measures in practice (Buijs et

al., 2016). Co-production of policies does not only increase the legitimacy of policies, but also enhances community awareness of climate change policies in an open system of government (Newig et al., 2016). Further, awareness of climate change results not only in increasing community participation during policy formulation and implementation, but also builds relationships between a community and policymakers because of an open system of governance (Buijs et al., 2016; Brink and Wamsler, 2019; Mees et al., 2019).

Awareness of climate change may not necessarily lead to building trust, co-production and collaboration during climate change policy formulation and implementation for various reasons (Lieske et al., 2014:11; Hajito et al., 2015:355; Shepard et al., 2018:4). However, in terms of negative consequences, it is difficult to point out precise negative consequences because community awareness of climate change 'is a pre-cursor' for desired action (active community participation) (Hajito et al., 2015:355). For example, socio-political governance largely encourages the incorporation of indigenous knowledge systems with the input of communities. Resultantly, communities are expected to increase trust in the climate change policy process, but this may not always be the case, depending on the community (Brink and Wamsler, 2019). Thus, because of socio-political, administrative and public policy governance, co-production of policy ideas is expected to happen at all stages of the climate change policy decisions, despite the literacy level of the communities involved (van Aalst et al., 2008; Sarkar and Padaria, 2010; Hori and Shaw, 2013; Burnside-Lawry and Carvalho, 2016). Despite that community awareness is likely to increase the chances of collaboration and co-production, there are already general problems associated with community participation during climate change policy formulation and implementation (Sprain, 2016). Less participation during climate change policy formulation and implementation is linked to many reasons in literature because of collective action involving multiple actors at one goal (Mortreux and Barnett, 2009; Lieske et al., 2014; Shepard et al., 2018). Many of the reasons are contextual and reactionary to collaboration, deliberation and co-production processes (Zahran et al., 2006:784; Lieske et al., 2014).

During interactions, power relations can be a disadvantage to community participation (Bertana, 2020). The interactive relationships of actors and communities give the communities an opportunity to communicate, experiment and learn about the climate change policy processes (Pelling, High, John and Smith, 2008:868). However, community awareness of climate change may lead to conflicts because of power relationships among multiple actors (politicians, public administrators, experts and community representatives) and participation techniques used (Sheppard et al., 2011; Maharjan et al., 2017; Dang, 2018; Bertana, 2020).

3.2.2.6 Empirical referents for community awareness of climate change

Similar to community understanding of climate change, co-production, collaboration and deliberation during climate change policy formulation and implementation could be considered as empirical referents of community awareness of climate change. Nevertheless, as noted in Section 3.2.1.6, stating empirical referents for community awareness of climate change is complex for the same reasons given about community understanding of climate change. Participation could be enhanced only in an environment where socio-political, administrative and public policy governance is effective (IPCC, 2014b:30). Arguably, socio-political, administrative and public policy governance should pre-occur as antecedents for communities' awareness of climate change to occur (Lorenzonio et al., 2007). Consequently, effective governance leads to co-

production, collaboration and deliberation, as a sign of community awareness of climate change, between communities and other actors during policy formulation and implementation (Mees et al., 2019).

3.2.2.7 Implications for research

An analysis of community awareness of climate change shows that there is no clarity of meaning to differentiate it from community understanding of climate change (Semenza et al., 2008; Dumar, 2010; Arlt, Hoppe and Wolling, 2011; Kuhn and Zhang, 2014; Shaffril et al., 2015; Knight, 2016; Wi and Chang, 2019). Through this analysis, it is clear that community awareness of climate change includes being well informed, guided and conscious about the definition, causes, impacts, risks and planned adaptation and mitigation responses for climate change (Lorenzoni et al., 2007; Friis-Hansen, 2017b; Wi and Chang, 2019). Although community awareness and understanding of climate change are two concepts usually used together, the two refer to different things (Lee et al., 2015). Community awareness of climate change does not necessarily mean community understanding of climate change. Nevertheless, community understanding of climate change includes awareness. The two concepts aim to change the behaviour of communities towards participation during climate change policy formulation and implementation (Eden, 1996:15). When the two concepts (community understanding and awareness of climate change) are used together, it should be appreciated that being well informed only without an understanding cannot increase community participation during climate change policy formulation and implementation (Anderson, 2012:198; Shahid and Piracha, 2016:38). Eden (1996:15) asserts that policymakers should appreciate the substantial difference between understanding as the cause of behaviour and understanding as general awareness, because climate change education of communities alone may not link to their participation during policy formulation and implementation (Anderson, 2012:198; Shahid and Piracha, 2016:38). The concepts complement each other. In an overview, Table 3.2 shows community awareness of climate change using Walker and Avant's (2005) method of concept analysis.

Table 3.2: Community awareness of climate change using Walker and Avant's concept analysis method (2005)

COMMUNITY AWARENESS OF CLIMATE CHANGE USING WALKER AND AVANT'S CONCEPT ANALYSIS METHOD	
Stages used in analysing the concept	Results
Concept.	Community awareness of climate change.
Aim of the analysis.	- To gain an in-depth understanding of the concept from a theory perspective. - To define an operational definition for the study. - To use the concept for data collection and analysis.
Uses of the concept.	- Can be used as an English word. - Being aware of available environmental information. - Being aware of the definition of climate change, based on indigenous knowledge systems, experiences and available information - Being aware of climate change causes. - Being aware of climate change impacts. - Being aware of climate change risks. - Being aware of planned adaptation and mitigation responses.

Defining attributes.	▪ Well informed ▪ Critical consciousness
Model case.	▪ No model case.
Identifying borderline.	▪ Failed adaptation policies, which were inclusive during formulation, such as NAPAs in Africa.
Related and contrary cases.	▪ No related or contrary case identified.
Antecedents.	▪ Effective socio-political governance. ▪ Effective administrative governance. ▪ Effective public policy governance.
Consequences.	Positive consequences ▪ Community awareness of climate change results in shared indigenous knowledge systems because of socio-political governance. ▪ Build trust because of administrative governance due to collaborations. ▪ Co-production of climate change policies due to public policy governance.
	Negative consequences ▪ Shared indigenous knowledge, trust and co-production may not necessarily happen, depending on the community's context. ▪ Conflicts between a community and policymakers may arise because of power relations among multiple actors.
Empirical referents.	▪ Co-production, collaboration and deliberation.

Sources: Adapted from Walker and Avant (2005); Osborne (2010a); IPCC (2014a); D'haen and Nielsen (2017); and Friis-Hansen (2017b)

3.2.3 Shortcomings of community understanding and awareness of climate change in relation to their participation during climate change policy formulation and implementation

Community awareness and understanding of climate change do not always change lack of participation to participation or communities from being not concerned to concerned (Brody et al., 2011:205;207; Jamero, Onuki, Esteban, Billones-Sensano, Tan et al., 2017; Shepard et al., 2018). Therefore, community awareness and understanding of climate change do not always positively influence their participation during climate change policy formulation and implementation (Schmidt, 2017:1026). This is because the influence of community understanding and awareness of climate change on their participation during policy formulation and implementation is debatable. Hence, the shortcomings of community understanding and awareness of climate change with respect to community participation are complex to define. Nevertheless, the discussion about the shortcomings of the concepts will focus on lack of empirical referents (refer to Section 3.2.1.6 and 3.2.2.6 for details), techniques used to collect and disseminate information, lack of operational definitions of the concepts, too many surrogate terms for the concepts 'understanding and awareness of climate change' and communities prioritising other social issues over participation in climate change policy formulation and implementation.

Participatory techniques used to collect and disseminate information about climate change causes, impacts and risks should be perceived to be credible depending on the targeted communities (Lorenzoni et al., 2007:454). Therefore, the way information is collected and disseminated determines the level of community understanding and awareness of climate change (Van den Hove, 2000:468). It is noteworthy that no single technique (PRA techniques, media, public meetings,

participatory technology, consensus building, facilitation, focus groups, surveys and polls) could accomplish all set objectives. The decision to use a technique should be based on the intended objectives and the target communities because the impacts and risks of climate change vary from community to community (Glucker et al., 2013).

Community understanding and awareness of climate change lack operational definitions (Meakin, 1992; UNFCCC, 1992; UNECE, 2015; UNEP, 2015; UNESCO and UNFCCC, 2016). The concepts community understanding and community awareness of climate change discussed in the literature are not clearly defined for the purpose of ensuring increased community participation in policy formulation and implementation. Usually, community understanding and awareness of climate change are blurred together (Lorenzonio et al., 2007:447; Shahid and Piracha, 2016:414). Both theory and practice of community understanding and awareness of climate change are dominated by ambiguity. Therefore, the basis for the concepts' power to influence community participation in climate change policy formulation and implementation is not clearly outlined in literature (Meakin, 1992; UNFCCC, 1992; UNECE, 2015; UNEP, 2015; UNESCO and UNFCCC, 2016).

Community understanding and awareness of climate change have several confusing terms. Both concepts (community understanding and awareness of climate change) could be categorised into four descriptions. The categories are understanding and awareness of i) 'climate change issues (Whitmarsh, 2009), ii) 'climate change actions' (United Nations, 2016; Friis-Hansen, 2017a), ii) 'environmental issues or concerns' (Lorenzonio et al., 2007:447; Shahid and Piracha, 2016:414), and iv) 'climate change adaptation' (Smit and Wandel, 2006). Within these four categories, at least one of the following: impacts, risks, floods, adaptation, policies, climate change policy process, causes, definition and planned responses about climate change is used to describe either or both community understanding and awareness of climate change. This raises the question of whether each of the four categorises refers to one or all the characteristics (outlined in the preceding sentence) whenever discussed. Consequently, this makes it difficult to assess community understanding and awareness of climate change and how they influence their participation in climate change policy formulation and implementation. The difficulty emanates from the fact that community understanding and awareness of climate change is not usually well-defined when using each category. Against this background, the analysis of community understanding and awareness of climate change is inevitable to come up with a theory of participation in climate change policy formulation and implementation in future research.

Community understanding and awareness of climate change may not (Mortreux and Barnett, 2009; Halady and Rao, 2010:9; Hori and Shaw, 2013:81; Lieske et al., 2014; Shepard et al., 2018), but may also influence participation in climate change policy formulation and implementation because the idea is based on voluntary action (Dolan and Walker, 2006; Mortreux and Barnett, 2009; Dumar, 2010; Sujit and Padaria, 2010; Hori and Shaw, 2013; Lieske et al., 2014; Hajito et al., 2015; Lee et al., 2015; Shaffril et al., 2015; Barreda, 2017; Shepard et al., 2018). In fact, community understanding and awareness of climate change is not something tangible or visual, but an expression of an individual in the mind. Thus, responses to participation may be different among individuals within the same community because of heterogeneity. Other communities may not be prepared to take action based on their understanding and awareness of climate change without some external push factors, such as socio-political governance, administrative and public policy governance or antecedents (Katsamunski, 2016). Some communities may prefer the use of regulations to participate as a collective

other than their understanding and awareness of climate change for them to participate in climate change policy formulation and implementation (van der Heijden, 2019).

Although some studies (Zahran et al. (2006); Semenza et al. (2008); Halady and Rao (2010); Lee et al. (2015); Pandey (2019) proved that understanding and awareness of climate change increase community participation during policy formulation and implementation, others in different contexts found that community members who are more informed are less concerned and feel less responsible about climate change (Seacrest et al., 2000; Kellstedt et al., 2008; Engels, Hüther, Schäfer and Held, 2013; Kuhn and Zhang, 2014). Empirical studies are used here to give examples of past studies about community understanding and awareness of climate change and the links to their participation in climate change policy formulation and implementation. In other empirical studies in some contexts, community understanding and awareness of climate change led to conflicts and 'participation fatigue' (Dang, 2018).

There could be many other reasons for the negative influence of community understanding and awareness of climate change on community participation during climate change policy formulation and implementation. Again, the reasons could be considered more important than participation in climate change policy formulation and implementation (Shaffril et al., 2015:521). The reasons for lack of community participation despite the level of understanding and awareness on climate change vary from community to community. These reasons may include, among others, level of education (Kuhn and Zhang, 2014), lack of trust in the governance process by community members (Collins and Ison, 2009:2421; Crosby et al., 2010; Brody et al., 2011:204), community members who claim to be always busy, providing livelihoods (Yang et al., 2019) and socio-political factors (Lorenzoni et al., 2007:449). Nevertheless, it can still be argued that understanding and awareness of climate change largely increase community participation during policy formulation and implementation because a person is more likely to act voluntarily based on something that is known than on an unknown subject (Zahran et al., 2006:786; Lorenzoni et al., 2007:450; Brink and Wamsler, 2019:94; Shepard et al., 2018:5). In concluding the discussion on the influence of understanding and awareness of climate change and climate change policy on community participation, Table 3.3 gives an overview.

Table 3.3: Influence of community understanding and awareness of climate change on their participation during the climate change policy process

Concept	Antecedents	Defining attributes	Empirical referents	Participatory techniques	Positive influence of community understanding and awareness of climate change	Negative influence of community understanding and awareness of climate change
Community understanding of climate change	Socio-political governance – collaborate, deliberate, and democratise. Administrative governance – facilitate co-production Public policy governance ▪ Co-ordinate decisions regarding the climate change policy process. ▪ Disseminate information	Community understanding of climate change ▪ Having knowledge. ▪ Being able to comprehend. ▪ Having sympathetic awareness or tolerance. ▪ Having reason(s) to believe in climate change causes, impacts, policy process, risks and planned mitigation	Community understanding of climate change ▪ Collaboration. ▪ Deliberation. ▪ Co-production. ▪ Democratisation during climate change policy formulation and implementation.	Socio-political governance ▪ Cause and impact diagram. ▪ Vulnerability maps. Administrative governance ▪ Resources maps and transects (village, resource and cultural). ▪ Public policy governance Public policy governance ▪ Media. ▪ Public meetings. ▪ Public hearings.	Socio-political governance promotes collaboration, co-production, and deliberation which would result in the following: ▪ Community understanding their relationship to the environment and climate change. ▪ Community understanding participatory techniques. ▪ Community understanding climate change impacts. ▪ Community defining climate change through vulnerability maps. Administrative governance promotes collaboration, co-production and deliberation which would result in the following: ▪ Community establishing and understanding information on trees as resources, crop patterns and current level of livelihood production. ▪ Community understanding the importance of terracing, contour ploughing and water diversion furrows. ▪ Community understanding the need to change behaviour concerning deforestation, wildfires and the use of poor agricultural practices.	Community understanding of climate change ▪ Do not always change lack of participation to participation. ▪ May result in conflicts. ▪ May not necessarily lead to building trust, co-production, and collaboration during policy formulation and implementation

	on climate change and climate change policy.	and adaptation responses		▪ Participatory technology. ▪ Consensus building. ▪ Facilitation.	▪ Community understanding about their natural resources, soils, topography, vegetation and farming practices in relation to climate change. Public policy governance promotes collaboration, co-production and deliberation which would result in the following: ▪ Community understanding how to interpret climate change associated risks. ▪ Community understanding the climate change policy process. ▪ Community developing trust in the policymakers' leadership on climate change policy formulation and implementation.	
Community awareness of climate change	Socio-political governance ▪ Democratise. Administrative governance ▪ Collaborate. ▪ Deliberate. Public policy	Community awareness ▪ Being well informed and critically conscious of climate change causes, risks, impacts, mitigation, and adaptation responses.	Community awareness of climate change ▪ Co-production. ▪ Collaboration. ▪ Deliberation.	Socio-political governance ▪ Cultural transects. Administrative governance ▪ Participatory mapping (vulnerability and resource) ▪ Cause and impact diagram.	Socio-political governance promotes collaboration, co-production, and deliberation which would result in the following: ▪ Community having a voice in climate change awareness programmes. ▪ Increased awareness of climate change threats. Administrative governance promotes collaboration, co-production, and deliberation which would result in the following: ▪ Community awareness of climate change impacts. ▪ Raised awareness on the existing natural resources. ▪ Development of a basis for comparing different activities. ▪ Visual understanding through mapping.	Community awareness of climate change ▪ Because of multiple actors and power relations, shared indigenous knowledge, trust, and co-production may not necessarily happen depending on the

	Open the system of governance.			Public policy governance ▪ Seasonal calendars. ▪ Par-wise ranking. ▪ Focus groups. ▪ Transect walks. ▪ Semi-structured interviews.	▪ Helping communities to create a basis for impact analysis or for monitoring and evaluation of climate change. ▪ Raised awareness on the state of depletion of natural resources as a result of deforestation and poor agricultural methods. Public policy governance promotes collaboration, co-production and deliberation which would results in the following: ▪ Community's ability to comprehend rainfall and temperature trends. ▪ Community being able to articulate indigenous seasons, crop diseases and pests.	community's context ▪ Do not always change lack of participation to participation. ▪ May results in conflicts.

Source: Cahill (1996); Bulkeley (2000); Creighton (2005); Rondinelli (2007); Jennings (2009); Narayanasamy (2009); Osborne (2010a); Nzeadibe et al. (2011); Carvalho and Gupta (2012); Ly and Soman (2013); McIntyre-Tamwoy et al. (2013); Piccolella (2013); Lee et al. (2015); Ross et al. (2015:88); UNEP (2015); Hegger et al. (2017); Dang (2018); Wamsler et al. (2020)

3.3 INDIGENOUS KNOWLEDGE SYSTEMS AND ITS INCORPORATION INTO CLIMATE CHANGE POLICY FOR FACILITATING COMMUNITY PARTICIPATION IN CLIMATE GOVERNANCE

The use of indigenous knowledge systems in climate change policy formulation and implementation to facilitate community participation in climate governance largely depends on the effective application of socio-political and administrative governance (Meakin, 1992; Pettenger, 2007a:3; Takao, 2012; Wildcat, 2014:5; UNEP, 2015; Ertman, 2017; Wamsler et al., 2020). The societal and political factors matter in increasing community participation in climate governance (Pettenger, 2007a:27; Whitmarsh and Corner, 2017). Administrative governance matters in minimising maladaptation and unsuccessful mitigation to climate change (Becken et al., 2013:23). Accordingly, this study is limited to indigenous knowledge systems that focus on climate change and not the cultural practices, which could relate to death, social gatherings, adulthood and initiation, marriage and beer parties, among others. Through participatory techniques as a medium of communication between communities and policymakers, the benefits of using indigenous knowledge systems during climate change policy formulation and implementation could be verified against scientific knowledge. Participatory techniques could also be used to communicate climate change information in a way that is understood by communities without causing anxiety and confusion (van Aalst et al., 2008:173;177; Semplici, 2019). In Africa, communities depend on a specific livelihood linked in some way to livestock production, agriculture production, forest and fishing, as part of using indigenous knowledge systems (Suubi and Friis-Hansen, 2017:137). To apply the use of indigenous knowledge systems in climate change policies, policymakers should be flexible and learn through art (primarily studying indigenous knowledge systems as opposed to scientific methods), other than using scientific methods only (Pettenger, 2007a; Ensor and Berger, 2009; Narayanasamy, 2009:15; Ertman, 2017). During climate change policy formulation and implementation, the use of indigenous knowledge systems will give officials an opportunity to learn from relaxed and unhurried interactions, while establishing rapport with communities as a motivation to change their behaviour towards participation in climate change policy processes.

There seems to be a link between climate change policy formulation and implementation and climate governance in general, which could be facilitated through the use of indigenous knowledge systems (Meakin, 1992; UNEP, 2015; United Nations, 2015; Chanza and De Wit, 2016; Wamsler et al., 2020). It is argued here that using indigenous knowledge systems in climate change policy formulation and implementation can, to a greater extent, facilitate community participation in climate governance (Chanza and De Wit, 2016). Against this background, indigenous knowledge systems could be used to do the following as discussed in this section: (i) identifying, assessing and monitoring the impacts of climate change, (ii) assessing the significance of the sequence of changes as a result of climate change, (iii) determining changes in climate to identify current and past interventions, (iv) promoting the socio-economic well-being of the targeted communities, (v) identifying the things classified by communities as indigenous knowledge to consider as part of climate change policy, (vi) identifying indicators which can be used by experts to forecast expected rainfall, appropriate crop mix and appropriate farming methods, (vii) identifying certain behaviour (acceptable and unacceptable) amongst community members, (viii) enhancing co-governance, (ix) preparing mitigation and adaptation responses that are specific to a community, (x) increasing the trust of community members in climate change policy formulation and implementation, and (xi) managing power dynamics within communities. Resultantly, communities are likely to get motivated to participate during climate

change policies, while policymakers have an opportunity to incorporate indigenous knowledge systems into the climate change policy.

3.3.1 Using indigenous knowledge systems in climate change policy formulation and implementation to facilitate community participation in climate governance

The use of indigenous knowledge systems in climate change policy formulation and implementation has been embraced as integral to address multiple challenges, such as an attempt to conserve natural resources, sustain livelihoods, sustain development and manage the environmental challenges bedeviling climate governance (Reed et al., 2018; Ahearn, 2019:10). Using indigenous knowledge systems in climate change policy formulation and implementation seeks to convince communities to come up with their ways of formulating adaptation strategies and implementing them (Newig et al., 2016; Ahearn, 2019; Semplici, 2019). Indigenous knowledge systems could help policymakers to discover the communities' capabilities regarding existing coping strategies and ultimately to help communities to build upon those capabilities (Agrawal and Perrin, 2009; Cochran et al., 2014:53; Lynn, Daigle, Hoffman, Lake, Michelle et al., 2014:38; Voggesser, Lynn, Daigle, Lake and Ranco, 2014:109). Paragraph ten of the Rio agreement encourages governments to develop policies that consider, among other things, population changes, local people's interests, appropriate indigenous and traditional land use (for example, following good recommended agricultural practises, pastoralism), and active participation of the affected groups in decision making (The Rio Declaration on Environment and Development, 1992; Eden, 1996:184). The successful use of indigenous knowledge systems in climate change policies is dependent upon the techniques used to extract the information, the type of governance used (whether socio-political, public policy or administrative) and the objectives for participation. Hence, building skills of the local community members by giving them an opportunity to discover their capabilities and input their individual contributions in the policy process is also critical when using participatory techniques. Apart from some techniques such as participatory technology, public hearings, consensus building, focus groups and interviews, the methods proposed by the RRA consider people's input as valuable where the community can analyse their situations to proffer own solutions (Cornwall and Jewkes, 1995:1670). Indigenous incorporation is about respecting and understanding the local people's societal and political factors, while acknowledging them as problem solvers. If communities own the climate change policy, the implementation of the policy may be guaranteed (Gautam, Chief and Smith, 2014:88). The remainder of this section discusses the use of indigenous knowledge systems (societal and political factors) in climate change policy formulation and implementation to facilitate community participation in climate governance. The discussion is in respect of social factors (values, norms, indigenous knowledge and culture) and political factors (co-governance, democratisation and management of power dynamics).

3.3.1.1 Social factors

Using social factors could be an important route to encourage direct community participation during climate change policy formulation and implementation. Social factors in this study refer to factors such as values, norms, indigenous knowledge and culture associated with a community (Kooiman, 1999; Collins and Ison, 2009; Adger et al., 2012; Newig et al., 2016; Reed et al., 2018:1). The social factors to be discussed here include values, norms, indigenous knowledge and culture about climate change. Values, norms, indigenous knowledge and culture are collectively referred to as indigenous

knowledge systems, unless specified. As noted in Chapter 2 of this thesis, unless specified, the focus is on indigenous knowledge systems about climate change and not the general community practices such as adulthood and initiation, marriage, social gatherings and beer parties, among others. A comprehensive understanding of values, norms, indigenous knowledge and culture could be needed to effectively use social factors to motivate community participation during climate change policy formulation and implementation. Thus, the discussion for each social factor (values, norms, indigenous knowledge and culture) proceed as follows: i) an explanation of the factor, ii) an explanation that links the factor to community participation during policy formulation and implementation, iii) an explanation of how the factor facilitates the use of indigenous knowledge systems in the climate change policy, and iv) an explanation of how the factor could facilitate community participation through the use of various participatory techniques.

3.3.1.1.1 Values

First, to give an explanation of the factor, values are community principles that are intrinsically valuable or desirable (Merriam-Webster Dictionary, 2020). Examples of values discussed are natural resources (e.g. traditional land, flora and fauna), historical information, family, wealth and cultural values (see Section 3.3.1.1.4 for examples). Values influence the perception and interpretation not only about climate change, but also about climate change policy formulation and implementation (Wolf, Alice and Bell, 2013:548; Taylor et al., 2014). Climate change usually results in extreme weather events (natural disasters, floods and droughts), but a community's attachment to a place sometimes lowers risk perception and builds a strong desire to stay in a place despite the risks (Charis and Carmen, 2014:453). Because of conflicting values, a community may be unwilling to participate in climate change policy formulation and implementation that threaten the community's ability to maintain their values. Therefore, there should be a link between a community and their values to encourage participation in climate change decisions. This raises questions such as who should clarify a community's values? When? How should a community's values be incorporated into the climate change policy? (Kooiman and Jentoft, 2009:834).

Second, an explanation that shows a link of community values to community participation during policy formulation and implementation is given here. Deliberations on specific community values to incorporate the values into the climate change policy could nudge communities into participation during climate change policy formulation and implementation (Hamilton and Lubell, 2018). Community participation during climate change policy formulation and implementation depends upon a community's understanding of the diverse values that are related to climate change (Egeru, 2012; Armeni, 2016; Diver, 2017). Values determine the community's perceptions of climate change risk (Adger, Dessai, Goulden, Hulme, Lorenzoni et al., 2009:344). Active community participation during climate change policy formulation and implementation is dependent on the level of community understanding and awareness of causes, risks and impacts of climate change. The first thing is to convince a community that climate change is anthropogenic (human made) from a community's perspective of values (Stehr and von Storch, 1995:100). If not deliberated on as part of the climate change policy, whatever values held by a community could limit community members' involvement in climate change policy formulation and implementation (Stehr and von Storch, 1995:104; Shepard et al., 2018). Incorporation of specific community values about natural resources (e.g. traditional land, flora and fauna), historical information and cultural values into the climate change policy

would ensure that a community gets concerned when the climate changes. There is a possibility that a community may then accept climate change as a problem and subsequently participate during policy formulation and implementation to protect their values (Stehr and von Storch, 1995:104).

Third, to effectively use values as a social factor, an explanation of how values facilitate the use of indigenous knowledge systems in climate change policy formulation and implementation could be necessary and is given here. As part of indigenous knowledge systems, values of a community could be used to identify, assess and monitor the impacts of climate change through making explicit the underlying values shaping policy alternatives of the climate change policy (Cozzetto, Chief, Dittmer, Brubaker, Gough et al., 2014:73). Values regarding traditional land, flora and fauna, historical information, family, wealth, religion and culture affect individual community members' decisions to participate during the climate change policy formulation and implementation. Considering that climate change is associated with extreme weather events, community participation may increase if policymakers assess how community adaptation could be enhanced or hampered when their values are incorporated into the climate change policy. The policymakers should ensure that the values adopted into the national climate change policy support already running local adaptations and assist to retain values that support the resilience of ecosystems (Stringer et al., 2009:748). The historical information concerning previous participation experiences of a community may determine whether community participation during climate change policy formulation and implementation could be possible or not.

Again, cultural values could facilitate the use of indigenous knowledge systems by being used to assess the significance of the sequence of changes as a result of climate change (De Vente et al., 2016:2). Cultural values may hamper community participation during climate change policy formulation and implementation if the sequence of changes resulting from climate change are not linked to cultural values (Adger et al., 2009:347; Adger et al., 2012; Leonard, Parsons, Knut and Kofod, 2013). This is because cultural values demonstrate a community's preference concerning what should constitute the climate change policy in relation to cultural values. Some scholars argue that policies formulated through considering cultural values as part of policy alternatives encourage communities to be part of the climate change policy process (Adger et al., 2009:347; Adger et al., 2012; Leonard et al., 2013). However, perceptions regarding community values could be very different within the same community. Usually, communities value traditional land, flora and fauna, language and culture (Leonard et al., 2013:631; Wolf et al., 2013).

Fourth, an explanation to show how values could facilitate community participation through the use of various participatory techniques is given here. There seems to be a link between participatory techniques and community awareness on climate change policy formulation and implementation to identify, assess and monitor climate change impacts related to a community's values (Uittenbroek et al., 2019:2534). In the context of values, impact diagrams enable a community to identify observed changes, which negatively or positively affect values. Based on a community impact diagram, for instance, observed changes in climate, combined with observations by public administrators and experts at the national level, can assist in the identification and translation of those observed impacts to determine how far they can impact the communities' livelihoods and lives (van Aalst et al., 2008:174). Afterwards, impact analysis could be undertaken to assess

and monitor the extent of the damage on the ecosystems due to factors such as poor agricultural practices, cattle grazing, cutting trees for fuelwood and building houses, collecting thatching grass and wildfires (Narayanasamy, 2009:118). Ecosystems comprise the ecological communities and their physical environment (Begon, Harper and Townsend, 2006:499). Once impact analysis is done, the conclusions based on a community's input can be included in the climate change policy documents as part of awareness programmes.

Historical information about climate change, as a community value, could be identified and assessed through historical and seasonal calendars. Impact diagrams, historical calendars and seasonal calendars are PRA techniques, which promote community participation (Creighton, 2005:126; Green and Raygorodetsky, 2010; Piccolella, 2013). Historical calendars help a community to identify major events that happened, which may have affected values (Reid et al., 2009). Seasonal calendars enable a community to identify changes in seasons that affected values (Yang et al., 2019). Historical and seasonal calendars offer valuable qualitative data that can be unknown to outsiders (politicians, public administrators and experts) and at national-level data (official statistics published by a government) (van Aalst et al., 2008:170). This encourages communities to recall values, which are negatively or positively affected by climate change, for example, lifetime hazards (e.g. floods and droughts). Communities' first hand experiences can be a source of empowerment to motivate participation in climate change policy formulation and implementation (Eden, 1996:9; Balstad, Russell, Gill and Marx, 2009; Codjoe, Owusu and Burkett, 2014:13). Thus, the community's memories and understanding of what happened in the past would then enable them to understand that climate change is a problem that requires all people to be involved (Stehr and von Storch, 1995; Ensor and Berger, 2009:231; Pyhälä et al., 2016). However, historical information about climate change should be collected with caution because the memory of what happened during the hazards may vary from one individual to another in the same community, for example, considered severe hazards may be narrated over less severe but significant hazards (van Aalst et al., 2008:170).

3.3.1.1.2 Norms

First, as an explanation, norms in this study are principles and standards regarded as acceptable action or behaviour that is considered important and binding upon a particular community (Kooiman and Jentoft, 2009:834; Ahearn, 2019; Merriam-Webster Dictionary, 2020). The norms guide, control and regulate the 'acceptable action and behaviour' of community members (Egeru, 2012; Jiri et al., 2016; Dang, 2018). Community participation during climate change policy formulation and implementation could be enhanced by identifying the community's specific norms for consideration in the climate change policy as a way of motivating them to participate (Kooiman and Jentoft, 2009:834). Examples of norms discussed are agricultural practices, cattle grazing, cutting trees for fuelwood and building houses, collecting grasses for thatching houses, and wildfires. These norms are chosen because of their contribution in exacerbating climate change.

Second, an explanation that links norms to community participation during policy formulation and implementation is necessary for a comprehensive understanding of how participation is enhanced through norms (Sullo et al., 2020). Explicit identification of the impacts of climate change related to a community's norms could encourage their participation during climate change policy formulation and implementation. Based on a community impact diagram, for instance, observed

changes in climate, combined with observations by public administrators and experts at the national level, can assist in the identification and translation of those observed impacts to determine how far they can impact the communities' livelihoods and lives (van Aalst et al., 2008:174). Afterwards, impact analysis could be undertaken to assess and monitor the extent of the damage on the ecosystems due to factors such as poor agricultural practices, cattle grazing, cutting trees for fuelwood and building houses, collecting thatching grass and wildfires (Narayanasamy, 2009:118). Ecosystems comprise the ecological communities and their physical environment (Begon et al., 2006:499). Once impact analysis is done, the conclusions based on a community's input can be included in the climate change policy documents as part of awareness programmes.

Norms could be used to facilitate community participation by understanding the communities' history about agricultural practices, cattle grazing, cutting trees for fuelwood and building houses, collecting grasses for thatching houses and wildfires, to promote bottom-up policy alternatives regarding mitigation and adaptation, to identify changes in climate and to identify current and past interventions (Ensor and Berger, 2009:232; Lynn et al., 2014:45; Aben, 2017:90). Already, climate change is exacerbated by poor agricultural practices, cattle grazing, cutting trees for fuelwood and building houses, collecting grasses for thatching houses and wildfires. Under such circumstances, indigenous knowledge systems about community norms should be specifically understood from the communities' perspectives to enhance their participation during climate change policy formulation and implementation (Diver, 2017:2).

Third, for a comprehensive understanding of norms, an explanation of how norms facilitate the use of indigenous knowledge systems in the climate change policy is critical. As part of indigenous knowledge systems, norms could also be useful to promote the socio-economic well-being of the targeted communities, which is an incentive for community participation during climate change policy formulation and implementation (Gautam et al., 2014:77). During the co-production of seasonal calendars and trend analysis the norms of communities should be considered as they could result in increased participation and collaboration in formulating climate change policies. Trend analysis enables a community to narrate history in relation to changes in beneficial things at different points in time. As part of trend analysis, the extent to which community norms have influenced trends regarding climate change can be included in seasonal calendars (van Aalst et al., 2008:169; Green, Billy and Tapim, 2010; Semplici, 2019).

A seasonal calendar can be prepared to record the annual cycle of economic and social activities such as the rainy and dry seasons and their connection to climate change. The community norms, which are agricultural practices, cattle grazing, cutting trees for fuelwood and building houses, collecting grasses for thatching houses and wildfires contribute to or exacerbate these hazards. Therefore, a seasonal calendar does not only serve to record economic and social cycles, but also to educate the community regarding the extent to which community norms positively or negatively influence economic gains, and how these norms should be managed. Seasonal hazards such as soil erosion, disease outbreaks, floods, landslides and pest outbreaks can also be included (van Aalst et al., 2008:169; Ensor and Berger, 2009:233; Semplici, 2019). Some authors argue that crucial hazards induced by climate change such as floods and storms may be less important on communities' list, probably because communities may have adapted to the hazards as part of their norms

(van Aalst et al., 2008:169; Maldonado, Shearer, Bronen, Peterson and Lazrus, 2014:97). Participation in climate change policy debates may not be a priority to communities as their main priority would be providing for their families (livelihoods). Resultantly, any participation methodology should be integrated with livelihood strategies that consider existing community norms (van Aalst et al., 2008:170; Ensor and Berger, 2009:231; Gautam et al., 2014:81-82; Aben, 2017:90).

Fourth, an explanation of how norms could facilitate community participation through the use of various participatory techniques is necessary to have an idea of how community participation could be enhanced. Through socio-political governance, community participation techniques (e.g. timeline) that promote bottom-up one-way or two-way approaches should encourage self-initiatives by making a community to understand their history and norms concerning climate change to be able to enhance the current intended adaptation and mitigation strategies (Maldonado et al., 2014:99). One such participatory method is the use of a timeline to list critical changes, landmarks and key events because of community norms and their relationship to climate change. A timeline could be used as a guideline for in-depth probing to get valuable historical perspectives about the community's norms (Mascarenhas, 1991; Narayanasamy, 2009:146). A timeline is a community or individual history that lists critical changes, landmarks and key events, showing their relationship with the present situation (Narayanasamy, 2009:143).

The timeline is important to show a community's history concerning critical changes and key events that may have happened as a result of agricultural practices, cattle grazing, cutting trees for fuelwood and building houses, collecting grasses for thatching houses and wildfires. A mixed group of community members, including those who are experienced and have knowledge of the critical changes and key events and those without knowledge can map a timeline (Narayanasamy, 2009:144). The reasons for using a timeline include assisting to identify policy alternatives, such as identifying coping strategies, identifying strategies of monitoring the impact of the identified changes, appreciating past interventions and identifying the significance of the sequence of changes for incorporation in the climate change policy (Narayanasamy, 2009:144). Information gathered using a timeline exercise could be used to conduct focus group discussions for further probing and to fix reference years for trend analysis. Narayanasamy (2009:154) asserts that trend analysis can be applied in studying people's history in relation to changes in beneficial things at different points in time. Trend analysis generates information from changes such as land use and cropping patterns, customs and practices, fuels used and ecological history, among others (Jennings, 2009:240; Narayanasamy, 2009:154).

3.3.1.1.3 Indigenous knowledge

First, to give an explanation, indigenous knowledge can be described as a body of traditional knowledge of a people who lived together as a community over a long period of time (Barker, 2016). Traditional knowledge includes knowledge about plants, animals, natural resources and weather, which are part of a community's livelihood norms (Barker, 2016). However, some authors argue that indigenous knowledge does not have an internationally accepted definition because communities are heterogeneous (Barker, 2016:1; Petzold, Andrews, Ford, Hedemann and Postigo, 2020:3). Indigenous knowledge in this study refers to universally shared local knowledge and local experiences of a community. It is noteworthy that some scholars refer to indigenous knowledge of climate change as traditional ecological knowledge, local traditional knowledge,

and community knowledge (Wolf et al., 2013; Mistry and Berardi, 2016; Ahearn, 2019:549; Shawoo and Thornton, 2019). The terms traditional ecological knowledge, local traditional knowledge and community knowledge overlap in meaning (Petzold et al., 2020:3). However, this study uses the term indigenous knowledge. Therefore, to link indigenous knowledge and community participation in climate change policy formulation and implementation, the facilitators of community participation should clearly identify the indigenous people to give an account of their local knowledge and local experiences (Eden, 1996:197; Ahearn, 2019; Samuel, 2019; Latulippe and Klenk, 2020). Indigenous knowledge in relation to climate change issues includes knowledge about a whole range of things. These are, among others: (i) history of droughts and floods (ii) water shortages (iii) beliefs (iv) moral values (v) changes in weather patterns (vi) the wind that brings rain (vii) the moon cycle (viii) clouds that bring rains (ix) tree patterns as a predictor of rainfall (x) traditional rain-making ceremonies (xi) seasons and their activities (xii) notable diseases (xiii) notable disappearances of birds and animals (xiv) indigenous fruits (xv) wild fruits (xvi) vegetation and (xvii) crop production (Jennings, 2009; Green and Raygorodetsky, 2010:241; Egeru, 2012:58-59; Cochran et al., 2014; Codjoe et al., 2014:10-11; Cozzetto et al., 2014:62; Jiri et al., 2016; Samuel, 2019).

Second, an explanation that shows a link between indigenous knowledge and community participation during policy formulation and implementation is critical to understand how participation is enhanced and is given here. Indigenous knowledge assists a community to study weather, observe climate variability and study the environment (Henstra, Thistlethwaite and Vanhooren, 2020; Sullo et al., 2020). A community depends on its indigenous knowledge to develop strategies that assist to adapt to climate change. Community participation could be enhanced if indigenous knowledge systems assist communities to identify the things classified as indigenous knowledge to consider as part of climate change policy (Wildcat, 2014:4; Ahearn, 2019; Semplici, 2019). Through acknowledging the indigenous knowledge of communities in climate change policies, the chances of a community owning policies may increase, resulting in increased participation because of trust in the governance system (van Aalst et al., 2008:168; Aben, 2017:90). The intention of linking indigenous knowledge and climate change policy processes in climate governance is to document information and getting rooted with individual community members in a way that enhances active participation based on communities discovering their own means to mitigate and adapt to climate change (Ensor and Berger, 2009:231; Samuel, 2019). Therefore, indigenous knowledge should be included in climate change policy processes and community based adaptation projects, which empower communities after the project is completed (Egeru, 2012:223). Documentation of indigenous knowledge should be a priority to improve the legitimacy of a policy that seeks to standardise community-based adaptation and mitigation of climate change during policy implementation (Egeru, 2012:224).

Third, an explanation of how indigenous knowledge facilitates the use of indigenous knowledge systems in the climate change policy is critical to examine how community participation could be enhanced. Indigenous knowledge facilitates community participation because individuals within a community live together geographically, share natural resources, have the same culture and share social, political, economic and cultural institutions (Petzold et al., 2020:3). As part of indigenous knowledge systems, indigenous knowledge could be used to form part of climate change projections based on something communities experienced and know (Egeru, 2012; Jiri et al., 2016). The community's local experiences and

knowledge could be used to enhance community participation during climate change policy formulation and implementation (Gearheard, Pocernich, Stewart and Sanguya, 2010; Guthiga and Newsham, 2011). Using local experiences and knowledge, communities can assist to point out indicators which weather experts could use to forecast expected rainfall, appropriate crop mix, and appropriate farming methods as part of the climate change policy (Gautam et al., 2014:88). This can be based on local observations on vegetation, the direction of wind, type of clouds and the behaviour of animals and birds (Shah, Bharadwaj and Ambastha, 1991:3; Egeru, 2012:221; Jiri et al., 2016:160).

Fourth, an explanation of how indigenous knowledge could facilitate community participation through the use of various participatory techniques is necessary to show how community participation is enhanced. Through focus group discussions, impact diagrams can be drawn using the input from community members. Focus group discussions enable a community to discuss community indigenous knowledge (Nyumba, Wilson, Derrick and Mukherjee, 2017). Shah et al. (1991:3) argue that complex issues on which it is difficult to get responses from people can easily be diagrammed because people do not feel threatened (Mascarenhas, 1991:27; Piccolella, 2013). Mapping and diagramming enable communities to discuss and understand the costs and benefits of indigenous knowledge practices and the practices' relationship to climate change (Yang et al., 2019). Mapping and diagramming will make the basis for strategies meant to improve people's socio-economic well-being (Chanza and De Wit, 2016). Improving the communities' socio-economic well-being could motivate a community to participate in climate change policy formulation and implementation (Peters, 2010; Pinkse and Kolk, 2012).

3.3.1.1.4 Culture

First, as an explanation, culture are customs and set of beliefs, which include but not limited to beliefs in physical things given meanings, rituals, identity, art and stories, as well as some collective community achievements (Adger et al., 2012:5; Oxford English Dictionary, 2017:5; Dang, 2018; Brink and Wamsler, 2019). Culture provides decision-making rules of thumb, which should be followed by a community member (Ajani, Mgbenka and Okeke, 2013:27). Members of a community are expected to comply with their culture to maintain affiliation or risk isolation (Ajani et al., 2013:27). Examples of culture to be discussed here are beliefs in physical things given meanings, rituals, identity, art and stories and collective achievements for a community. The policymakers should ensure that the actors who lead community participation allow communities to share their culture for consideration during all stages of the climate change policy (Mees et al., 2019).

Second, an explanation that shows a link between culture and community participation during policy formulation and implementation is necessary. Because climate change may impact on things that a community believes in, recognising given meanings, rituals, identity, art, stories and some collective community achievements may enhance community participation during climate change policy formulation and implementation. There is no doubt that culture needs to be part of the climate change policy (Adger et al., 2012; Cronk, 2016). However, because culture is partly about belief and some collective achievements, it may be difficult to explicitly say how culture should be included in the climate change policy (Adger et al., 2009:348). Nevertheless, policymakers should consider specific places of significance that a community may have lost, define the indigenous people to ensure their identity is recognised, note the community's important art (e.g.

paintings and sculpture), note collective achievements and note some of the significant stories, which may be invisible to the physical environment in the climate change policy to enhance their participation during climate change policy formulation and implementation. To some extent, culture sounds invisible but is real to the communities experiencing it (Adger et al., 2009:348; Jiri et al., 2016; Makondo and Thomas, 2018).

Third, an explanation to show how culture facilitates the use of indigenous knowledge systems in the climate change policy is necessary and is given here. As part of indigenous knowledge systems, the culture of a community may be used to identify acceptable and unacceptable behaviours as a way of enhancing community-based policy implementation that is binding. Community participation during climate change policy formulation and implementation could be enhanced when communities are allowed to lead the policy process based on their priorities, knowledge, needs and capacities (resources) concerning their beliefs in physical things given meanings, rituals, identity, art and stories, and collective achievements (Reid et al., 2009:13). Even if provided with implementation programmes to adapt to climate change, adaptation measures that oppose cultural views may derail community participation (Shepard et al., 2018). Culture could be used to identify specific behaviours (acceptable and unacceptable) amongst community members (Dang, 2018). The idea of involving community's culture through incorporating their specific beliefs of physical things being given meanings, rituals, identity, art and stories and some collective achievements for a community is to practically consider cultural views and their implications in climate change policies. The understanding of such information enables explanation concerning certain behaviours. In other words, culture is the communities' worldview through which decisions are made as a collective (Nkoana et al., 2018:4). Adaptation priorities of communities are often shaped by their culture (Dang, 2018; Nkoana et al., 2018:4). It can be argued that the policymakers' inclusion of culture into the climate change policy can motivate change in community members' behaviour towards active participation during climate change policy formulation and implementation.

Fourth, an explanation to show how indigenous knowledge could facilitate community participation during climate change policy formulation and implementation through the use of various participatory techniques could be helpful. Thus, the forms and format of soliciting indigenous knowledge become key to practically embrace the idea of incorporating culture into the climate change policy process as an incentive to motivate community participation in climate governance (Nkoana et al., 2018:8). Techniques such as presentations to communities, consensus building, interviews, public hearings and public meetings could assist communities towards reaching agreements regarding how beliefs in-physical things given meanings, rituals, identity, art and stories, as well as some collective achievements could be noted (Egeru, 2012; Etchart, 2017; Samuel, 2019; Semplici, 2019). Presentations to communities give an opportunity to a community to identify their specific culture as a collective when policymakers make official statements. Consensus building helps a community to agree on a specific culture that can be part of the climate change policy. Interviews help a community to give perspectives regarding a specific culture. Public hearings help a community to listen to other actors and to talk to each other during the hearing. Participatory techniques give a community an opportunity to share and agree as a group on the cultural beliefs that should be incorporated into the climate change policy. Cultural beliefs and collective achievements should be agreed upon because misrepresenting culture during climate change policy formulation beyond a certain agreed range makes it impossible to make binding decisions during policy implementation (David-Chavez and Gavin, 2018). Culture binds

community members' decisions. As explained by Easton (1957:397), a community member accepts various orientations towards policy formulation and implementation in accordance with the community expectations. Culture affects decision making through influencing a community's political behaviour and shaping political trust (Dang, 2018:2). Community members make decisions within the community's cultural framework, which shapes how one wishes to participate in policy formulation and implementation (Easton, 1957:388; Dang, 2018; Semplici, 2019).

3.3.1.2 Political factors

Political factors are circumstances which show how socio-political, administrative and public policy governance guide community participation during climate change policy formulation and implementation. In other words, socio-political, administrative and public policy governance determine the way activities such as co-governance, democratisation, management of power dynamics and policy nudging could be conducted to incorporate indigenous knowledge systems into the climate change policy as a way of enhancing active community participation during climate change policy formulation and implementation. Examples of political factors discussed include co-governance, democratisation and management of power dynamics. As for policy nudging, see details in Section 3.3. However, it is noteworthy that political factors are contextual. They vary from one context to another. The discussion on political factors include the following for each factor: i) an explanation of the factor, ii) an explanation of how the factor links to community participation during policy formulation and implementation, iii) an explanation of how the factor facilitates the use of indigenous knowledge systems and iv) an explanation of how the factor could facilitate community participation through the use of various participatory techniques.

3.3.1.2.1 Co-governance

First, to explain the factor, co-governance is a scenario where policymakers share with the communities the decision making power regarding the formulation and implementation of the climate change policy (Brink and Wamsler, 2019; Samuel, 2019). Co-governance embeds deliberation and collaboration (Dodson, 2014:525). During co-governance, communities contribute to the decisions made at every stage of the climate change policy through participatory techniques (Hamilton and Lubell, 2018). The politicians, public administrators, experts and community representatives, collaborate on activities that give a community an opportunity to co-plan, co-design, co-implement and co-evaluate the climate change decisions during every stage of the policy (Ansell and Gash, 2007; Wanna, 2008; Mees et al., 2019). Communities participate in climate change policy formulation and implementation as co-producers of the climate change policy through the use of indigenous knowledge systems. The use of community indigenous knowledge systems ensures that the community's perspectives (e.g. values, norms, indigenous knowledge and culture) about climate change are considered during policy formulation and implementation. The purpose of co-governance should be to ensure community buy-in during climate change policy formulation and implementation.

Second, an explanation of how co-governance links indigenous knowledge systems to community participation during policy formulation and implementation could be critical. Through the leadership of policymakers, experts and community representatives, co-governance guides how collaboration activities should be conducted for communities to co-plan, co-

design, co-implement and co-evaluate climate change policy decisions (Ansell and Gash, 2007; Wanna, 2008; Diver, 2017; Mees et al., 2019). It is noteworthy that collaboration is embedded (part of) in co-production. It could be argued that co-governance embeds co-production, while co-production embeds collaboration. Consequently, without the occurrence of co-production and collaboration, co-governance could not be said to have happened (Ansell and Gash, 2007; Wanna, 2008; Mees et al., 2019). The three concepts work hand and glove as a web.

Co-governance provides a way in which policymakers should create opportunities for communities to add their voice about indigenous knowledge systems to the climate change policy decision making (Ansell and Gash, 2007; Wanna, 2008; Mees et al., 2019). Policymakers are required by co-governance to form new legislation, institutions and regulations, which promote the incorporation of social factors into the climate change policy (Swyngedouw, 2005:2003; Katsamunsk, 2016:135). The public administrators lead the co-governance process through co-ordinating co-production of climate change policy decisions between a community and other multiple actors (politicians, experts and community representatives). Public administrators together with other actors (politicians, experts and community representatives) lead to ensure that communities use indigenous knowledge to co-plan, co-design, co-implement and co-evaluate the climate change policy (O'Toole Jr and Meier, 2010:326; Brink and Wamsler, 2019). The experts and community representatives enhance community co-production of the climate change policy by promoting interdependence for resources and interaction during collaboration.

Third, an explanation of how co-governance facilitates the use of indigenous knowledge systems is critical to understand how community participation can be enhanced. When using indigenous knowledge systems, co-governance implies that communities are allowed to co-plan, co-design, co-implement and co-evaluate climate change policy decisions based on their priorities, knowledge, needs, capacity and expertise to incorporate their values, norms, indigenous knowledge and culture into the climate change policy (Reid et al., 2009:13). Communities co-plan, co-design, co-implement and co-evaluate climate change policy decisions and subsequent policy implementation. Co-planning is a process where a community makes decisions together with politicians, public administrators, experts and community representatives about the contents of the climate change policy (Diver, 2017; Hamilton and Lubell, 2018). Co-planning during co-governance is when communities get involved in co-planning the climate change agenda and in the formulation, adoption, implementation and evaluation of climate change policy decisions both as policymakers and beneficiaries of the policy (Berkes, Berkes and Fast, 2007; Etchart, 2017:1). The same applies to co-designing, co-implementing and co-evaluating; communities participate at every climate change policy stage as decision makers and as target beneficiaries of the policy, just like any other actor involved. Co-designing is when communities together with politicians, public administrators, experts and community representatives identify and design mitigation and adaptation measures of climate change from co-planned decisions (Armeni, 2016). Co-implementing is when communities, together with politicians, public administrators, experts and community representatives implement climate change decisions that were co-planned and co-designed (Nyong, Adesina and Elasha, 2007; Semplici, 2019). Co-evaluating is when communities, together with politicians, public administrators, experts and community representatives evaluate climate change policy decisions that were co-planned, co-designed and co-implemented (Samaddar, Yokomatsu, Dayour, Oteng-Ababio, Dzivenu et al., 2015). Consequently,

the occurrence of co-production shows the presence of co-governance. Thus, co-governance enables communities to co-produce policy decisions related to indigenous knowledge systems at every stage of climate change policy formulation and implementation.

Fourth, an explanation of how co-governance could facilitate community participation through the use of various participatory techniques is critical to show how co-governance could enhance community participation. The participatory techniques used to gain information about values, norms, indigenous knowledge and culture from the communities during co-governance is key to enhance co-production of the climate change policy. Techniques such as briefings, media, presentations to communities, PRA, participatory technology, consensus building, facilitation, focus groups, interviews, public hearings, public meetings, workshops, beneficiary assessment and surveys and polls could be used to increase co-production of decisions regarding climate change policy. It depends on the objectives of co-governance; some techniques enhance co-planning, co-designing, co-implementation and co-evaluation (Chambers, 1983:199; Ann, D'haen and Nielsen, 2017:29-30). The idea of a contextual strategy when co-governing is to inform policy formulation and implementation through the incorporation of indigenous knowledge systems (Eden, 1996:13; Aben, 2017:19).

Co-governance on indigenous knowledge motivates communities to take the responsibility of formulating and implementing climate change policy that is relevant to what a community knows and experiences (Dodson, 2014; McNamara, Clissold, Westoby, Piggott-McKellar, Kumar et al., 2020) and enhances democratic accountability (Ackerman, 2004; Diver, 2017). Consequently, co-governance between a community and policymakers in formulating policies produces joined up adaptation measures through joint decision making (Dodson, 2014). Community participation is deepened by co-governance because 'real' power is devolved to communities rather than allowing policymakers and experts to dominate the climate change decision making (Somerville and Haines, 2008). Communities are empowered as experts whose contribution matters, despite being in the form of indigenous knowledge systems. More opportunities are given to a community to influence climate change policy formulation and implementation not only to enhance democratic accountability, but also to build support for policy implementation.

3.3.1.2.2 Democratisation

First, an explanation of democratisation is given in light of its meaning, the conditions that enable the achievement of the process of democratisation, and how the intended beneficiaries of democratisation perceive the process. Tilly (2000:1) defines democratisation as a drive towards broad citizenship, equal citizenship, binding consultations of citizens and protection of citizens from arbitrary state. In this study, democratisation is when the policymakers avail information in a non-linear communication to communities through legislation, institutions and regulations regarding participation during climate change policy formulation and implementation (see Section 3.5.1.5 for details) (Bulkeley and Mol, 2003:148; Sprain, 2016; Brink and Wamsler, 2019:94). Availability of legislation, institutions and regulations that enhance community participation during policy formulation and implementation are the conditions that make the climate change decision making democratic (Funder, Mweemba and Nyambe, 2017). Through democratisation of the policy process, communities govern themselves by directly formulating and implementing policies that affect them (Termeer, Dewulf and Biesbroek,

2017; Henstra et al., 2020). The occurrence of democratisation is largely determined by how public policy governance and administrative governance is applied by the policymakers (Measham et al., 2011; Carvalho and Gupta, 2012; Brink and Wamsler, 2019). The main actors of democratisation are policymakers who facilitate the climate change policy formulation and implementation to incorporate the indigenous knowledge systems in the climate change policy as a means to enhance their participation through opening up the decision making process. Democratisation provides ways, such as the use of participatory techniques in making policy decisions, in which interactions in a democratic environment should occur to generate high levels of trust among plural actors and pluralist processes. A community should have confidence in climate change policy formulation for them to participate during its implementation. Generally, in social environments, politicians as the major actors may have incentives and means to block the very process that promote democratisation of community participation during the climate change policy formulation and implementation (Tilly, 2000:3; Bertana, 2020).

Second, an explanation to show how democratisation enhances community participation during policy formulation and implementation is given here. Democratisation increases community participation because of repeated non-linear interaction and communication in an open system of governance (Measham et al., 2011; Biljohn, 2018:158; Brink and Wamsler, 2019; Mees et al., 2019). Democratisation is about policymakers giving communities an opportunity to share their indigenous knowledge systems to contribute to the climate change policy through deliberative methods (Bulkeley and Mol, 2003:149; UN General Assembly, 2007; Ajani et al., 2013; Ross et al., 2016; Diver, 2017; Ahearn, 2019; Semplici, 2019). Deliberation in this context means repeated interactions at every stage of the policy process. The higher the frequency of interaction, the higher the possibility that policymakers will get communities' preferences regarding values, norms, indigenous knowledge and culture that relate to climate change (Hamilton and Lubell, 2018). Frequent interactions may result in a climate change policy that reflects a community's values, norms, indigenous knowledge and culture about climate change.

Third, an explanation of how democratisation facilitates the use of indigenous knowledge systems during climate change policy formulation and implementation is critical in understanding ways that enhance community participation in climate change policy decisions. As part of indigenous knowledge systems, democratisation facilitates non-linear communication. A community is allowed to make specific decisions regarding the values, norms, indigenous knowledge and culture about climate change to be included in the climate change policy (Semplici, 2019). Allowing communities to make decisions in the context of democratisation refer to creating space to allow the identification of indigenous knowledge systems into the climate change policy rather than attempting to change the community's social behaviour. Instead of changing a community's social behaviour, democratisation requires that whatever planned adaptation and mitigation responses should be tailored according to the response options already available to a community as norms, values, indigenous knowledge and culture. The reason for democratising already known indigenous knowledge is that many of the indigenous knowledge systems are successfully implemented by a community without much or no influence from outsiders because indigenous knowledge systems are context specific (Jiri et al., 2016; Makondo and Thomas, 2018) and are usually passed on orally (Makondo and Thomas, 2018:83). Thus, democratisation could facilitate the use of values, norms, indigenous knowledge and culture to enhance community participation through repeated interactions when making decisions about

climate change policy. Usually, in a democratic environment, repeated interactions and nonlinear communication are expected to form the basis upon which communities can trust and subsequently legitimise the policy formulation and implementation processes. Consequently, a climate change policy that includes the communities' values, norms, indigenous knowledge and culture about climate change may make communities to feel obliged to support its implementation (Etchart, 2017). The policymakers, through democratisation, should avail information regarding climate change policy formulation and implementation and the actions that a community can undertake to make a contribution (Bulkeley and Mol, 2003:143; Sprain, 2016; Brink and Wamsler, 2019:94).

Fourth, an explanation to show how democratisation could facilitate community participation through the use of various participatory techniques can be critical to understand the concept. During interactions, participatory techniques such as PRA, consensus building, focus groups, interviews, public hearings and public meetings should be legislated, regularised, and institutionalised in a way that gives communities an opportunity to voice their views about climate change policy decisions that are related to indigenous knowledge systems (Tompkins and Adger, 2005:565). The legislation spells out the participatory techniques, regulation regulates the use of participatory techniques, and institutions are formalised structures through which actors could facilitate community participation. Legislation, regulation and institutionalisation ensure that the final decisions concerning the climate change policy lie with the affected community and not just with policymakers. PRA techniques are predominantly participatory, interactive and seek to empower a community to plan, evaluate and monitor decisions (Narayanasamy, 2009:27). Consensus building helps a community to make decisions as a collective (Creighton, 2005:10). Focus groups help a community to come together to deliberate and agree on certain decisions regarding indigenous knowledge systems. Interviews enable a community to give perspectives regarding specific indigenous knowledge systems (Jiri et al., 2016). Public hearings give a community an opportunity to respond to official statements.

Further, democratisation could facilitate the use of indigenous knowledge systems through deliberative techniques such as PRA, consensus building, focus groups, interviews, public hearings and public meetings could counter the loss of trust in the policy process (Bulkeley and Mol, 2003:150; Ahearn, 2019; Semplici, 2019). Indigenous knowledge systems documented in the climate change policy through a deliberative approach are considered 'good' and 'right' (Bulkeley and Mol, 2003:149). Ultimately, the deliberation of indigenous knowledge systems is a means through which communities are encouraged to freely share with policymakers their experiences, information and priorities about values, norms, indigenous knowledge and culture linked to climate change for inclusion in the climate change policy. Therefore, only the community's preferred values, norms, indigenous knowledge and culture should be part of the climate change policy. Consequently, the inclusion of indigenous knowledge systems in climate change policy formulation and implementation could enhance community participation.

3.3.1.2.3 Management of power dynamics

First, to give an explanation of the factor, management of power dynamics is when policymakers empower communities, just like any other actors, to give perspectives about indigenous knowledge systems to add to the scientific information

available during the climate change policy formulation and implementation (Moser, 2009b:288; Egeru, 2012; Mistry and Berardi, 2016:1275; Samaddar et al., 2019). Because of resources such as expertise, money, human and time, the policymakers and experts play critical roles to manage power dynamics during climate change policy formulation and implementation (Henstra et al., 2020). Examples of power dynamics are the debate on the supremacy of science over indigenous knowledge systems and lack of community participation in key climate change decisions (Petzold et al., 2020:2). Thus, policymakers and experts are generally considered to be more powerful than the communities in terms of making climate change policy decisions (Mistry and Berardi, 2016; Petzold et al., 2020). Therefore, the management of power dynamics aims to increase the incorporation of indigenous knowledge systems into climate change policy. Indigenous knowledge systems are traditionally understood as subjective, and not reliable compared to scientific information (Mistry and Berardi, 2016:1275). Scientific information is preferred in the climate change policy because of its associated rigour, objectivity, scientific models and theories used to make projections about causes, risks and impacts (Mistry and Berardi, 2016:1275). Therefore, acknowledging that all knowledge, whether indigenous or scientific, is equally invaluable for climate change policy is part of managing power dynamics (Makondo and Thomas, 2018:83). Again, actors (international, national and community) should be empowered to ensure that previously excluded actors during the climate change policy formulation and implementation are included (Shawoo and Thornton, 2019). The use of indigenous knowledge systems assists policymakers to manage power imbalances (De Vente et al., 2016:2). However, the use of indigenous knowledge systems requires a high level of expertise regarding the facilitation of public administrators to manage power dynamics (De Vente et al., 2016:2).

Second, an explanation to show how managing power dynamics could facilitate community participation in climate change policy formulation and implementation is given here. Management of power dynamics among the communities and other actors (policymakers and experts) enhances community participation during climate change policy formulation and implementation through building trust (Petzold et al., 2020). At least, a community should trust the climate change policy formulation and implementation process (Smyth, 2008:51; Vangen and Huxham, 2010:165). Trust is a pillar of collaboration (Crosby et al., 2010:203; Huys and Koppenjan, 2010:366; Reed et al., 2018). Both the policymakers and experts could manage power dynamics when facilitating community participation during policy formulation and implementation (Mistry and Berardi, 2016; Henstra et al., 2020; Petzold et al., 2020). Resultantly, a community builds trust in the way policymakers and experts facilitate community participation. Because of trust in the fairness of co-production processes, communities should be satisfied with the way indigenous knowledge systems are incorporated into the climate change policy to an acceptable extent. Participation of all actors (politicians, public administrators, experts, community representatives and communities) should be on an equal footing (Ansell and Gash, 2007:9). Unlike politicians, public administrators and experts who are formally organised, a community is a group of individuals who geographically live together and have common indigenous knowledge systems (Petzold et al., 2020:3). The management of power dynamics compel policymakers to put in place measures, for instance, resources such as money and use of participatory techniques to ensure the less powerful voices of a community are also represented (Ansell and Gash, 2007:9). When power dynamics are managed satisfactorily, it may mean that facilitators (policymakers and experts) recognise and consider the

community's knowledge, expertise, skills and understanding regarding indigenous knowledge of climate change, despite literacy level (Henstra et al., 2020; Sullo et al., 2020).

Third, an explanation of how managing power dynamics facilitates the use of indigenous knowledge systems is given here. As part of indigenous knowledge systems, the management of power dynamics enhances community participation when policymakers equalise the use of indigenous knowledge systems and scientific knowledge when making decisions during climate change policy formulation and implementation. Traditionally, politicians, public administrators, experts and community representatives have been actively involved in climate change policy formulation and implementation (Anderson, 2003:102-105; Bauer et al., 2012). Management of power dynamics by policymakers and experts gives a community authority to make decisions by allowing them to express their knowledge and priorities regarding indigenous knowledge systems. This avoids certain powerful groups, such as experts from dominating climate change policy formulation and implementation (Mees et al., 2019).

Fourth, an explanation of how managing power dynamics could facilitate community participation through the use of various participatory techniques is given here. The management of power dynamics in the context of using indigenous knowledge systems to motivate community participation in climate change policy formulation and implementation depends on how the public administrator manages the plural and participatory techniques chosen. The management of power dynamics by policymakers and experts in terms of plural actors (policymakers, experts, community representatives and communities) has to do with the way potential conflicts are dealt with during the interdependence and interrelationships. Policymakers are known for bringing experts, community representatives and communities together (Henstra et al., 2020). To incorporate indigenous knowledge in the climate change policy, the policymakers should manage (e.g. leading collaboration, deliberation, co-production and cross-sector collaboration) the experts, community representatives and communities to ensure equal consideration of ideas, whether they are scientific or indigenous knowledge systems (Petzold et al., 2020). It may be critical for policymakers as facilitators of the climate change policy formulation and implementation to have an inclusively designed participation plan of who does what, when and how to manage the plural actors with diverse ideas (Reed et al., 2018). Consequently, sharing of responsibilities among actors enhances equal consideration of indigenous knowledge systems during climate change policy decision making. The policymakers should assist communities in their indigenous knowledge systems so that they can be incorporated in the climate change policy just like scientific information (Ubisi, Kolanisi and Jiri, 2019; Sullo et al., 2020).

The participatory techniques used to manage power dynamics should be simple and manageable to a community (Reid et al., 2009). Diagramming empowers communities to make diagrams that depict indigenous knowledge systems. Seasonal calendars are prepared visually; thus, they manage power dynamics by increasing community interaction with the other actors involved (Creighton, 2005:186). Increasing community interaction is needed considering that community's indigenous knowledge systems were previously regarded less powerful compared to science (Weber and Stern, 2011:318; Mistry and Berardi, 2016:1275). Diagrams (drawings) such as Venn diagrams, flow and causal diagrams and seasonal calendars (Narayanasamy, 2009:14) require a lot of expertise. Thus, the facilitators should be patient enough not to take

over the process, especially from the less formally educated community members (Shah et al., 1991; Narayanasamy, 2009:121). Low literate levels of communities may increase the possibility of the process being dominated by the facilitator if the information is being written down (Ensor and Berger, 2009:231; Narayanasamy, 2009:154). Some groups of people, such as the elderly men may dominate the process, while women agree with everything being said (Ensor and Berger, 2009:231; Narayanasamy, 2009:154). The extraction of indigenous knowledge may be fairly quick, flexible and adaptable to all kinds of members in all communities if the facilitators professionally manage power dynamics when using participatory methods. Resultantly, the policymakers will get an opportunity to learn what needs to be known from the local people and simultaneously motivate community members to take part in climate change policy formulation and implementation. In summary, Table 3.4 gives an overview of how indigenous knowledge systems could be used in climate change policy formulation and implementation to facilitate community participation in climate governance.

Table 3.4: Using indigenous knowledge systems in climate change policy formulation and implementation to motivate community participation in climate governance

Socio-political governance		Explanation of the factor	Link between the factor and community participation during climate change policy formulation and implementation	How the factor facilitates the use of indigenous knowledge systems in the climate change policy	Techniques that facilitate community participation
Social factors	Values	- Values are intrinsically valuable or desirable principles. - Examples of values are – natural resources (e.g. traditional land, flora and fauna), – historical information – family – wealth – cultural values.	Deliberation of specific community values that relate to climate change causes, risks and impacts could enhance community participation.	- Values help a community to identify, assess and monitor the impacts of climate change. - Values help a community to assess the significance of the sequence of changes as a result of climate change.	- Impact diagrams – help a community to identify observed changes that negatively or positively affect values. - Historical calendars – help a community to identify major events that happened that affected values. - Seasonal calendars – help a community to identify changes in seasons that affected values.
	Norms	- Norms are binding principles and standards that guide the behaviour or action of a community. - Examples of norms are – agricultural practices – cattle grazing – cutting trees for fuelwood and building houses – collecting grasses for thatching houses – wildfires.	- Identifying explicit impacts of values on climate to enhance community participation. - Understanding community's history about norms to promote bottom-up policy alternatives could enhance community participation. - Promoting the socio-economic well-being of the targeted community could enhance community participation.	Norms help a community to identify changes in climate and identify current and past interventions.	- Timeline – helps a community to identify critical changes and key events that may have happened as a result of community norms. - Trend analysis – helps a community to narrate history in relation to changes in beneficial things at different points in time. - Seasonal calendar – helps a community to record the annual cycle of economic and social activities such as the rainy and dry season and their connection to climate change. – a seasonal calendar educates the community regarding the extent to which community norms positively or negatively influence economic gains, and how these norms should be managed.

	Indigenous knowledge	- Indigenous knowledge is universally shared local knowledge and local experiences of a community. - Examples of indigenous knowledge are – history of drought and floods – water shortages – beliefs – moral values – changes in weather patterns – the wind that brings rain – the moon cycle – clouds that bring rains – tree patterns as a predictor of rainfall – traditional rain-making ceremonies – seasons and their activities – notable diseases – notable disappearances of birds and animals – indigenous fruits – wild fruits – crop production.	- Promoting a community to identify aspects classified as indigenous knowledge for consideration into the climate change policy. - Promoting a community to point out indicators, which can be used by weather experts to forecast expected rainfall, appropriate crop mix, appropriate farming methods.	Indigenous knowledge could be used to form part of climate change projections based on something communities experienced and know.	- Focus group discussions – help a community to come together to discuss community indigenous knowledge. - Diagramming – helps a community to draw the costs and benefits of indigenous knowledge practices in relation to climate change. - Mapping – helps a community to map the costs and benefits of indigenous knowledge in relation to climate change.
	Culture	- Culture are customs, set of beliefs and collective achievements for a community. - Examples of culture are – beliefs in physical things given meanings – rituals – identity – art – stories – Collective achievements.	Helping a community to recognise given meanings, rituals, identity, art and stories, and collective community achievements that would be incorporated as part of the climate change policy.	Helps a community to identify certain behaviours (acceptable and unacceptable) to enhance community-based policy implementation that is binding.	- Presentations to communities – give an opportunity to a community to identify their specific culture as a collective. - Consensus building – helps a community to agree on a specific culture, which could be part of the climate change policy. - Interviews – help a community to give perspectives regarding a specific culture. - Public hearings – help a community to listen to other actors and to talk to each other during the hearing.

Political factors	Co-governance	▪ Co-governance is where policymakers share with the communities the decision making power throughout the climate change policy formulation and implementation. ▪ Co-governance is achieved through co-production. Steps of co-production are – co-planning. – co-designing. – co-implementation. – co-evaluation.	▪ Co-governance guides how collaboration activities should be conducted for communities to co-plan, co-design, co-implement and co-evaluate climate change policy decisions. ▪ Co-governance motivates a community to take the responsibility of formulating and implementing climate change policy. ▪ Co-governance enhances democratic accountability.	▪ Co-governance creates an opportunity for a community to co-plan, co-design, co-implement and co-evaluate climate change policy decisions based on priorities, knowledge, needs, capacity and expertise to incorporate norms, values, indigenous knowledge and culture into the climate change policy	▪ Depending on the objectives (co-planning, co-designing, co-implementing and co-evaluating) of co-production, any participatory technique e.g. briefings, media, presentations to communities, PRA, participatory technology, consensus building, facilitation, focus groups, interviews, public hearings, public meetings, workshops, beneficiary assessment, surveys and polls could be used.
	Democratisation	▪ Democratisation is when the policymakers avail information in a non-linear communication to communities through legislation, institutions and regulations regarding participation during climate change policy formulation and implementation. ▪ Characteristics of democratisation includes: non-linear interaction and communication in an open system of governance.	▪ Repeated interaction could increase community participation.	▪ Democratisation facilitates indigenous knowledge systems through allowing communities to make specific decisions regarding the values, norms, indigenous knowledge and culture about climate in a nonlinear communication.	▪ PRA – helps a community to deliberate on indigenous knowledge systems. ▪ Consensus building – helps a community to make decisions as a collective. ▪ Focus groups – help a community to come together to deliberate and agree on certain decisions regarding indigenous knowledge systems ▪ Interviews – help a community to give perspectives regarding specific indigenous knowledge systems. ▪ Public hearings – give a community an opportunity to respond to official statements concerning indigenous knowledge systems.

	Management of power dynamics	Management of power dynamics is when policymakers empower communities, just like any other actors, to give perspectives about indigenous knowledge systems to add to scientific information available during climate change policy formulation and implementation.	Management of power dynamics helps communities to build trust in the climate change policy formulation and implementation.	Management of power dynamics recognises indigenous knowledge systems as distinctive and equally valuable information, just like scientific information.	- Management of the plural actors. - Diagrams, e.g. Venn diagrams, flow and causal diagrams – help a community to draw diagrams that depict indigenous knowledge systems. - Seasonal calendars – increase community interaction with other actors.

Sources: Creighton (2005:85-102); Agrawal and Perrin (2009); Ensor and Berger (2009:232); Narayanasamy (2009); Cochran et al. (2014:53); Cozzetto et al. (2014:73); Gautam et al. (2014:88); Lynn et al. (2014:38); Voggesser et al. (2014:109); Wildcat (2014:4); De Vente et al. (2016:2); Aben (2017); Karim and Thiel (2017); Dang (2018).

3.3.1.3 Shortcomings of using indigenous knowledge systems in climate change policy formulation and implementation to facilitate community participation in climate governance

It is a very difficult task to point out specific limitations that could arise because of using indigenous knowledge systems in climate change policy formulation and implementation to facilitate community participation in climate governance. There seems to be several arguments in the literature showing positive impacts of using indigenous knowledge systems in climate change policy formulation and implementation to facilitate community participation in climate governance (Adger et al., 2012; Ajani et al., 2013; Makondo and Thomas, 2018; Reed et al., 2018; Ahearn, 2019). There is a link between community participation in climate change policy formulation and implementation and climate governance in general (United Nations, 2015; Wamsler et al., 2020). Climate change is largely related to other environmental (deforestation, desertification, biodiversity) and socio-economic issues (livelihoods and health) (Pinkse and Kolk, 2012:177; Ukwandu, 2018). Therefore, in participating in climate change policy formulation and implementation, communities may want to solve various other issues related to environmental management and sustainable development (Peters, 2010; Pinkse and Kolk, 2012). Again, indigenous knowledge systems are many and diverse. What constitutes indigenous knowledge systems may vary from one study to another, depending on the community under study (Egeru, 2012; Anton and Lawrence, 2014; Diver, 2017; Etchart, 2017). Indigenous knowledge systems are not a unified community system that can motivate action in a consistent direction (Swidler, 1986:277) but are diverse and sometimes conflicting between one member and another within the same community (Dang, 2018:11). Factors such as wealth, family and religion affect individual community members but also limit collective community decisions regarding participation in climate change policy formulation and implementation. Therefore, individual community members and groups could act differently in similar circumstances because of wealth, power, family and religion (Samaddar et al., 2019). In this section, the limitations of using indigenous knowledge systems in climate change policy formulation and implementation to facilitate community participation in climate governance are discussed in respect of the effectiveness of governance, perceptions about science versus indigenous knowledge, values versus policy implementation, the influence of norms over science, reluctance to follow known indigenous knowledge and the potential of culture to limit community members' freedom of choice in decision making that pertains to independent choices.

The effectiveness of using indigenous knowledge systems in climate change policy formulation and implementation to influence community participation hinges on governance (Chanza and De Wit, 2016). Several studies, impliedly or explicitly, show that successful community participation in climate change policy formulation and implementation is influenced by effective socio-political governance (Ajani et al., 2013; Ahearn, 2019; Rani and Oelz, 2019). Socio-political governance would be mainly about considering the community's indigenous knowledge systems and how policymakers seek to ensure that community members are included during the considerations. The type of governance applied influences community participation by determining who does what, when and how (Sprain, 2016; Uittenbroek et al., 2019). Each community member is unique and the level of participation in climate change policy formulation and implementation is different (Dang, 2018). Against this background, the use of indigenous knowledge systems during climate change policy formulation and implementation, in some communities, may not automatically facilitate community participation in climate governance (Shepard et al., 2018).

Generally, science is perceived to be more powerful than indigenous knowledge systems (Eden, 1996; Green and Raygorodetsky, 2010:239; Mistry and Berardi, 2016); yet, in some circumstances, community members make decisions about managing climate change solely using indigenous knowledge systems rather than scientific information for different reasons (Egeru, 2012; Jiri et al., 2016; Makondo and Thomas, 2018). Scientific information includes having knowledge about climate change observations, predictions, research and projections (Jiri et al., 2016:157). It may be difficult to merge science and indigenous knowledge systems to motivate participation because of epistemological differences (Mistry and Berardi, 2016:1275). Epistemological differences simply mean that science is perceived as objective and rigorous, while indigenous knowledge systems are qualitative and subjective. Thus, solely using either indigenous knowledge or scientific knowledge would constitute a further shortcoming. Scientific information and indigenous knowledge systems should be used together to complement the weakness of the other. Indigenous knowledge systems are subjective and evolve over time as the climate changes (Reid et al., 2009), whereas science is considered to be rigorous, credible, objective, precise and acceptable (Mistry and Berardi, 2016:1275; IPCC, 2018). However, although science is credited for its advantages, the use of indigenous knowledge systems in climate change policy formulation and implementation acknowledges the power of indigenous knowledge systems in complementing science (Ajani et al., 2013:24; Mistry and Berardi, 2016:1275). It is noteworthy that some communities rely primarily on indigenous knowledge systems to adapt to climate change, although they receive scientific information from the meteorology services (Jiri et al., 2016:158).

If the values of a community are likely to be affected by climate change policy implementation, community members may choose not to support climate change policy formulation. Community values guide community members' individual decisions (Leonard et al., 2013:630). Although Charis and Carmen (2014) claim that place attachment is linked to positive community participation outcomes, the use of values is limited in terms of their influence on community participation in climate change policy formulation if the values of a community oppose the expected climate change policy implementation. Because of values in the case of climate change, a community may choose not to participate in climate change policy formulation and implementation if the consequences go against the values the community members attach to their place (Hess, Malilay and Parkinson, 2008; Charis and Carmen, 2014:451; Letsie, 2015; Mistry and Berardi, 2016; Brink and Wamsler, 2019; Lewickaa et al., 2019). Although climate change usually results in extreme weather events, the community's attachment to a place could lower risk perception (Charis and Carmen, 2014:453). The community will more likely want to stay in the same place despite the climate change risks (Charis and Carmen, 2014:452). Although relocation could be the best possible alternative in some communities where the place is prone to floods, place attachment which is underscored by the values of the community, can hinder a community from supporting climate change policy formulation and implementation if the policy recommends relocation (Charis and Carmen, 2014:452; Dang, 2018). A study by Charis and Carmen (2014:453) found that a community that has previously undergone hard times is usually most attached to their place. If community members feel that the place they are attached to will be threatened by climate change policy implementation, they can choose not to support the policy formulation (Charis and Carmen, 2014:452; Dang, 2018).

Norms, such as agricultural practices, can negatively affect community participation during climate change policy formulation and implementation if a community primarily relies on norms for livelihood strategies and to make decisions

(Ahearn, 2019). Negative effects here simply mean lack of community participation in climate change decision making because of the influence of norms. The IPCC (1990:xiv) points out that the ability of human beings to adjust their agricultural practices will reduce the effects of climate change. However, community members tend to make decisions concerning agricultural practices based on norms (Jiri et al., 2016; Ahearn, 2019). These norms cover rainfall patterns, temperature changes and expected weather conditions, which will guide how a community plants, weeds and harvests crops (Jiri et al., 2016). If not incorporated into climate change policy, such norms could result in the community resisting policy implementation (Sullo et al., 2020). Consequently, the way policymakers consider norms shapes a community's decisions on whether or not to participate in climate change policy formulation and implementation.

Another shortcoming is reluctance of community members to follow known indigenous knowledge systems. Community members may profess indigenous knowledge, which they do not follow. Again, indigenous knowledge evolves over time, causing large variations with regard to the community members' understanding of known indigenous knowledge systems (Jiri et al., 2016:163). Indigenous knowledge regarding climate variability, temperature changes, weather changes and rainfall is passed on from generation to generation and can change over time (Egeru, 2012:219; Jiri et al., 2016). Thus, no generalisations can be made about the use of indigenous knowledge systems (Speranza, Kiteme, Ambenje, Wiesmann and Makali, 2010:298; Jiri et al., 2016). Indigenous knowledge is developed locally over a long period of time because of interactions with the environment. Consequently, in some communities this evolution may cause variations in terms of what norms should be adhered to and how those norms affect community participation in climate governance, which may negatively affect how a community participates.

As a shortcoming, culture limits community members' freedom of choice in decision making that pertains to independent choices because of the element of spirituality and beliefs. Culture limits the individuals' and community's freedom to make independent choices because of governance, religion and gender, among other factors. Indigenous knowledge systems regulate the way community members interact with the environment. In cases where culture protects the environment, for instance, in Mongolia, where digging into the ground is prohibited (Ahearn, 2019:13), governance should facilitate the continuation of such cultural practices to manage adaptation strategies. Nevertheless, although governance plays a big role to ensure the consideration of culture in the climate change policy, the effectiveness of culture is determined by how indigenous knowledge systems are passed on from one generation to another. Instead of being lost or damaged, culture is a process that continuously changes (Kirsch, 2001:168). Beliefs, such as religion, have an effect on how a community member may make decisions that relate to participation in climate change policy formulation and implementation. One's religion could determine the level of participation in climate change decision making. Some community members may be more active than others, depending on their religion (Dang, 2018:11). In China, for example, Catholics and Pentecostals actively participate in environmental matters more than Buddhists and Confucians (Dang, 2018:11).

Further, culture has an element of spirituality that cannot be included in the policy process (Egeru, 2012:219; Jiri et al., 2016:165; Ahearn, 2019:9). Some community members believe in spiritual rainmaking as a solution to climate hazards, whereas others based on their Christianity oppose such an idea (Jiri et al., 2016; Ahearn, 2019). Such differences may

hamper community participation in climate change policy formulation and implementation. Finally, using indigenous knowledge systems about culture to facilitate community participation in climate governance can also be limited by power dynamics, which are gender-based because in some communities women may not be permitted to make decisions (Bryan and Behrman, 2013; Bhattarai, Beilin and Ford, 2015; Eastin, 2018; Swim, Vescio, Dahl and Zawadzki, 2018).

3.4 USE OF POLICY NUDGING BY SOCIO-POLITICAL, ADMINISTRATIVE AND PUBLIC POLICY GOVERNANCE

More than a decade since the publication of a book by Thaler and Sustain (2008), nudging is considered a necessary policy tool for policymakers (Vlaev, King, Dolan and Darzi, 2016; Ewert, 2019:18). Although policy nudging is here acknowledged as a policy tool or policy approach (Kuehnhanss, 2018; OECD, 2018; Ewert, 2019:18), in this study, it will be referred to as a governance activity as conceptualised in Chapter 2. Policy nudging in this study is not discussed as a stand-alone approach but a complementing governance activity that seeks to improve community participation in climate change policy processes (Bhargava and Loewenstein, 2015:399; Room, 2016:9; John and Stoker, 2017:3). Policy nudging is discussed as part of climate change policies because the use of policy nudges in the policy process is not a panacea to complex policy problems such as climate change (John and Stoker, 2017; Ewert, 2019:10). Hence, the need to use policy nudging as a complementing governance activity to socio, administrative and public policy governance. This research agrees with other authors that the application of policy nudges to climate change policy process has challenges (see Section 3.4.5.4) (Room, 2016:9), but also acknowledges that enhancing community participation during climate change policy formulation and implementation requires communities to change behaviour (Carvalho and Gupta, 2012:1; Bhargava and Loewenstein, 2015:399). Thus, the use of policy nudges through socio-political, administrative governance and public policy governance is necessary to address the difficulties that arise with the framing and implementation of policy nudges that target to enhance participation of communities.

Socio-political governance, administrative governance and public policy governance have perspectives on how to model communities' behaviour as part of climate change policies in relation to their context. Hence, the aim is to explore the use of policy nudges, which could be used to influence communities' behaviour regarding the decisions they make to participate in climate change policies. The application of the socio-political, administrative and public policy governance by the political system with policymakers as the facilitating and collaborating actors show the acknowledgement of ethical considerations associated with designing policy nudge choices for the concerned communities (Kuehnhanss, 2018). The reason for linking policy nudging with the policy process and governance is that policy nudging in this context aims to ensure the enhancement of community participation during the climate change policy process that is mainly governed by the political system. Regarding framing and implementation of policy nudges, enhanced community participation during the climate change policy process requires a shared understanding among politicians, public administrators, experts, community representatives and community members on how nudges should inform the policy process. This further alludes to the need for a shared understanding of where, when and how the policy nudges should be used by socio-political, administrative, and public policy governance during the policy process as discussed in the rest of this section (Ewert, 2019:3).

3.4.1 Use of policy nudging through socio-political governance

Nudges are believed to be additional policy tools, to the usual regulations, that may have low costs with high expected benefits, including promoting freedom of choice (Sunstein et al., 2018:2). Communities may be dissatisfied with all the options being offered by the policymakers for various reasons (Room, 2016:2). In designing policy nudges when applying socio-political governance, policymakers will be going beyond incentives, regulations and bans (Moseley and Stoker, 2013:4) to consider social and political factors to determine what is acceptable to a community. Socio-political governance gives communities a voice to define what is right for them in terms of political and social factors that relate to policy nudges to be used (Room, 2016:8). This will assist communities to accept policy nudges, which the policymakers would have deemed right for them.

A major drawback of nudging is its failure to consider social context, yet the social context shapes individual behaviour. In light of this drawback, socio-political governance sheds light on how policy nudging could be used to design nudges for use during climate change policy formulation, implementation and governance. In response to the lack of community participation during climate change policies, socio-political governance encourages bottom-up designing of nudges, together with the community members and not only with policy networks (experts) (Ewert, 2019:5). Consequently, designed policy nudges should be embedded within the climate change policy process with a lot of input (indigenous knowledge systems) from the communities and their representatives (Moseley and Stoker, 2013:4). In applying socio-political governance, the policymakers as choice architects should not simply target to design nudges for communities to comply unconsciously by choosing the default option but should seek to ensure that the communities approve suggested nudges before their use (Ewert, 2019:7). Through socio-political governance, policymakers should understand what needs to be included in the policy nudges concerning indigenous knowledge systems before expecting the successful implementation of policy nudges. Some scholars would call this 'nudge plus' (John and Stoker, 2017:17), while others call it 'nuzzle' or 'budge' (Weber and Stern, 2011:4;6; Room, 2016:4;6).

When the socio-political governance uses nudging, instead of confining the framing of the choices to policymakers, socio-political governance encourages communities to co-produce the choices (various nudges) (John and Stoker, 2017:2). Thus, co-production of nudges means allowing communities to co-plan, co-design, co-implement and co-evaluate nudges. Co-production of policy nudges occurs when the objectives for co-planning, co-designing, co-implementing and co-evaluating policy nudges are clear. Again, power dynamics between communities and other actors (policymakers and experts) should be managed. This brings in the need for policymakers to specify the kind of resources that would be needed to build the capacity of communities to enhance their ability to formulate and implement policy nudges as a way of managing power dynamics. It should be clear how exactly a community could contribute to the formulation and implementation of policy nudges in terms of social and political factors. Therefore, community members should define the appropriate behaviour in relation to their norms, values, culture and indigenous knowledge (Moseley and Stoker, 2013:8) to enable the co-production of the method through which a policy nudge can be used and agree on the behaviour that the nudge seeks to achieve. The perceived legitimacy of policy nudges after consideration of indigenous knowledge systems is determined by how well the the policymakers apply socio-political governance. When applying socio-political

governance, policy nudges should reflect certain specific indigenous knowledge systems such that community members relate their choices to what they believe in (Vlaev et al., 2016:7; van der Heijden, 2019:7). Thus, policy nudges that align with indigenous knowledge systems are likely to be considered and accepted by the majority of the targeted community members if the intended nudges consider the community's shared indigenous knowledge systems (Dang, 2018:5; Sunstein et al., 2018).

However, co-production has its general disadvantages which include, among others, complexity, altered power relations, and the need for additional resources (Section 3.5.1.2.5). As alluded to several times, every form of participation is negatively affected by power dynamics because other actors (policymakers and experts) are formally organised with resources (money, expertise, time and knowledge) compared to a community. A community in this study is a group of people living in a particular area, defined by a common culture, language and beliefs (World Health Organisation, 2002:9; Fraser, 2005).

3.4.2 Use of policy nudging through administrative governance

Administrative governance should take advantage of indigenous knowledge systems to allow communities to develop their own nudges during climate change policy formulation. Social settings such as communities' politicisation, as claimed by the systems Theory, could be valuable to understand the people's understanding and awareness about climate change and climate change policy processes. Nudges in the context of climate change policy should not be a stand-alone policy but rather a governance activity alongside other activities such as co-production, collaboration, deliberation, democratisation and cross-sector collaboration (Section 3.5.1).

Through administrative governance, public administrators should facilitate the co-production (see Section 3.5.1.1.4 for details) of policy nudges. As mentioned in Chapter 2, nudges reflect the method that the policymakers intend to use by designing policy nudges as default choices (Stewart and Ayres, 2001:83-84; Thaler and Sunstein, 2008; Fisher, 2010a:149). Co-production of policy nudges is when communities co-plan, co-design, co-implement and co-evaluate policy nudges together with policymakers (John, Cotterill, Moseley, Richardson, Smith et al., 2011). Simply designing nudges as default choices by public administrators however means that no engagement, using bottom-up approaches, is likely to take place to understand the actual preferences of the communities. Because of this argument, public administrators should therefore not only focus on providing information on climate change aiming to change the way communities think about their behaviour towards exacerbating climate change and lack of willingness to participate in climate change policies, but also to go further and formulate (co-produce) nudges with the concerned actors. Regarding co-production of nudges, administrative governance allows communities to co-plan, co-design, co-deliver and co-evaluate climate change policy nudges during all the stages of the policy process (Ewert, 2019:19). Thus, the public administrator as the governor of administrative governance should coordinate the co-planning, co-designing, co-implementing and co-evaluating of policy nudges through the use of participatory techniques such as facilitation, consensus building, public hearing, workshops, interviews, briefs, media, polls, focus groups, public meetings, public hearings and surveys (Wu et al., 2018:7).

When administrative governance uses policy nudges, collaborative activities on presentation of choices, designing of choices, establishment of nudge units, dissemination of information and education on nudges should take place (Kasdan, 2019). Collaborative activities include jointly working together between policymakers and experts to afford a community the opportunity to co-produce nudges using participatory techniques (Schmidt, 2017; Kasdan, 2019). Through collaborative activities, the communities should be provided with an opportunity and platform to initiate and own nudges that should be incorporated in the climate change policy. The duty of the public administrators would be to facilitate such collaborations. Hence, these collaborations (joint co-production of nudges) would encompass the use of top-down and bottom-up participatory techniques. Therefore, the public administrators can build support for the communities through structures and processes that use PRA techniques, focus groups, meetings and workshops. As argued by other scholars, policy nudging should be more than just nudging communities but also improving the way government departments and ministries, together with the communities, design and implement nudges (Sanders, Snijders and Hallsworth, 2018:14; Ewert, 2019:3). Consequently, during the design and implementation of policy nudges, public administrators bring together traditional actors (politicians, experts and community representatives) and communities as actors who were traditionally left out of the policy process (John and Stoker, 2017:17; Newig et al., 2018:272).

About deliberation (see Section 3.5.1.4 for detailed definition), the public administrator should empower communities during climate change policy nudging deliberations (Room, 2016:11; Schmidt, 2017:411) through using participatory techniques such as PRA, participatory technology and consensus building (Bulkeley and Mol, 2003:150). Policymakers could also empower communities to formulate policy nudges through bottom-up discussion (e.g. bottom-up one way communication or consultation and bottom-up deliberation or co-production) and top-down discussion (e.g. top-down one way communication or consultation and top-down deliberation or co-production) (Howlett, 2018; Ewert, 2019). Policymakers should establish institutions that deliberate on policy nudges, avail information on the formulation and implementation of policy nudges, and open to scrutiny the decision making process concerning nudges to communities. Some scholars argue that policy nudges work best when the targeted actors know that the choice they need to make is right and only need the choice to be made available (Moseley and Stoker, 2013:8; Room, 2016:3). Thus, it helps policymakers to deliberate the policy nudges perceived by a community as legitimate. A good perception about nudges could increase the community's support during the implementation of nudges (Sunstein et al., 2018:5; Tannenbaum et al., 2017). Resultantly, the target communities would have made up their minds and committed to use the intended policy nudges early enough before their implementation.

Democratisation (see Section 3.5.1.5 for details) of the nudging formulation and implementation process by the politicians should not only be in name (Schmidt, 2017). The political system should ensure an open system of governance when framing policy nudge choices (John and Stoker, 2017:17). The policy nudging formulation and implementation could be open if community participation is legislated. Further, institutions could be made available to promote community choices regarding nudges to be used when formulating and implementing the climate change policy (Ly and Soman, 2013). Above all, the objectives for policy nudging should be clearly defined and agreed on by all actors to manage power dynamics to benefit community participation during climate change policy formulation and implementation (Schmidt, 2017). Within the

limits of the law, the policymakers and communities should jointly produce nudges to be used during the climate change policy formulation and implementation. Measures taken should be put in place to ensure that communities can contribute to the policy nudging process through participatory techniques such as presentations to communities, conducting public meetings and hearings, surveys and polls. Therefore, the policy nudging formulation and implementation process and the final nudges will be perceived as legitimate (Sunstein, 2016:117).

3.4.3. Use of policy nudging during public policy governance

Using policy nudging during public policy governance also requires an open system of governance when framing policy nudges (John and Stoker, 2017:17). An open system of governance concerning nudging helps politicians and public administrators gain trust of the communities regarding the nudging process, leading to ultimate acceptance of the nudges (Sunstein et al., 2018). However, the politicians should build the capacities of communities to make choices regarding intended nudges as this would provide a better policy nudge for increased participation (Room, 2016:8). Nudging through public policy governance can occur when politicians create an open system of governance that facilitates the plural actors (experts, community representatives and community members) and cross-sector collaboration.

Nudging for a plural and pluralist (see Section 3.5.1.1 for details) climate change policy process should target not only policymakers, experts and community representatives, but also community members (Sanders et al., 2018:19). The purpose of public governance would be to manage power dynamics because of the plural and pluralist during the designing of nudges. In a pluralist policy nudging (environment), socio-political, administrative and public policy governance guide plural actors on how to interrelate, interact and interdepend to co-produce nudges (Ewert, 2019:19). Politicians, public administrators and communities interrelate, interact and interdepend to collaborate (jointly doing nudging activities e.g. designing choices, education, presentation of choices, making regulations and incentives) and deliberate (discuss nudging) on the intended nudges (Schmidt, 2017). Communities should give permission for regulatory nudges selected to be part of the climate change policy (Sunstein et al., 2018:4), and politicians should not undermine the communities' autonomy to make decisions regarding regulatory nudges (Sunstein et al., 2018). Instead, the communities' influence should be acknowledged when the politicians design policy nudges in a transparent (mandatory disclosure of relevant information) way to avoid unsuccessful implementation (Schmidt, 2017:411; Sunstein et al., 2018:5). Given the opportunity by the politicians, the experts can partner with communities to develop nudges that are tailored for community needs regarding enhancing participation (Ewert, 2019:19) during climate change policies. Community representatives can also play a role by representing the majority of the community members when designing nudges during situations where all members cannot be present (Schmidt, 2017:412).

Politicians should monitor cross-sector collaboration (see Section 3.5.1.6 for details) within government departments and ministries (Crosby et al., 2010:201) to assist public administrators to adhere to policy nudging guidelines and training (Ewert, 2019:12). Consequently, this will benefit (active involvement) communities and the climate change policy implementation. By using policy nudges, the public policy governance empowers communities to legitimise the role of politicians as legislators of policy nudges. It is the duty of politicians to ensure the creation of institutions and management

of power dynamics. Through the regulation of the nudging process, objectives for co-operations and partnerships can be made clear. Instead of assuming that the communities lack the knowledge to process complex nudges, what politicians choose as policy nudges should be co-produced (Moseley and Stoker, 2013:5; John and Stoker, 2017:17). Cross-sector collaboration may result in division of labour and sharing of expertise and resources on whatever matter that pertains to the formulation and implementation of policy nudges. However, cross-sector collaboration that seeks to increase community decisions indesigning policy nudges may blur lines of accountability because of power imbalances (Bertana, 2020).

Public policy governance and process transparency should occur for the democratisation of community participation during the formulation and implementation of policy nudges to occur (Howlett, 2018). The duty of public policy governance is to create institutions which lead community participation in the policy nudging process and regulate community participation in the formulation and implementation of policy nudges (Alemanno and Spina, 2014; Schmidt, 2017). Democratisation of community participation in the formulation and implementation of policy nudges shows the when and how to gain community input. A community will have an opportunity to choose preferences and priorities concerning policy nudges to be used. Public policy governance ensures that power dynamics are managed (Alemanno and Spina, 2014). Any measures taken to include a community in the formulation and implementation of policy nudges should be perceived as acceptable and fair by the communities (Vlaev et al., 2016:7). Democratisation should result in input legitimacy (equal considerations of decisions), procedural legitimacy (a fair process of formulating and implementing policy nudges), and output legitimacy (acceptance of policy nudges during the formulation and implementation of the climate change policy formulation and implementation) (Kuehnhanss, 2018). However, democratisation is complex in that its success is based on how far politicians are willing to give decision making powers regarding policy nudges to a community (Alemanno and Spina, 2014). Against this background, Table 3.5 gives a summary of the discussion on how socio-political, administrative and public policy governance use policy nudging.

Table 3.5: Socio-political, administrative and public policy governance using policy-nudging

How to use policy nudging to enhance community participation during climate change policy formulation and implementation		
Socio-political governance	Administrative governance	Public policy governance
▪ Goes beyond incentives, regulations and bans to consider a community's social and political factors ▪ Uses the bottom-up designing of policy nudges ▪ Co-produces (with concerned actors) various policy nudges to legitimise the policy nudging process	▪ Allows communities to develop own nudges. ▪ Allows communities to co-produce nudges with other actors. ▪ Collaborates the nudging process. ▪ Empowers communities to influence the nudging deliberation process. ▪ Ensures an open system of governance (transparent nudging process that is open to scrutiny by the communities).	▪ Open system of government through inclusive nudging process when framing nudges. ▪ Manages power dynamics by allowing communities to legitimise regulated nudges. ▪ Enables politicians to ensure that public administrators, experts and community representatives adhere to regulated nudges.

Source: Stewart and Ayres (2001:83-84); Thaler and Sunstein (2008); Crosby et al. (2010:201); Fisher (2010a:149); Room (2016); John and Stoker (2017); Schmidt (2017:411); Dang (2018); Kuehnhanss (2018); Sanders et al. (2018:19); Sunstein et al. (2018); and Wu et al. (2018:7); Ewert (2019:12); van der Heijden (2019:7)

3.4.4. Shortcomings of using policy nudging

Despite policy nudging being a good governance activity for enhancing community participation during climate change policy formulation and implementation, its use has shortcomings. Communities may negatively react to policy nudges being offered by the policymakers for various reasons (Room, 2016:2), including lack of trust in the policymakers, experts and the community representatives involved (Room, 2016:2; Sunstein et al., 2018:3). Despite attempting to give communities a voice during the nudging process when applying socio-political, administrative and public policy governance (Room, 2016:8), communities may reject policy nudges, which the government would have deemed right for them. This is termed reactance. Reactance, as defined by Sunstein (2016:119), is when people negatively react to orders by doing the opposite of what is required. Thus, shortcomings regarding policy nudging will be discussed in relation to arguments about transparency, perceived effectiveness, context and the use of socio-political, administrative and public policy governance to frame nudges versus the traditional surveys.

Schmidt (2017:408) argues that nudges cannot be transparent and still be effective because nudging targets to exploit people's biases towards their choices. Further, if people are aware of their biases, this defeats the whole purpose of nudging (Schmidt, 2017:408). However, Schmidt (2017:408) argues that chances are high that the person being nudged can accept the nudge, which considers one's preferences if the process of framing nudges is transparent (Sunstein et al., 2018; van der Heijden, 2019:7). Nevertheless, some people may still reject the nudge despite it being aligned with their preference (Schmidt, 2017:408). Other scholars argue that nudges can be transparent in terms of mandatory disclosure of relevant information regarding framing policy nudges and still be effective (Schmidt, 2017:408; Bruns, Kantorowicz-Reznichenko, Klement, Jonsson and Rahali, 2018; Sunstein et al., 2018:2) because the way (e.g. co-production and deliberation) the policy nudges are presented to the people influences their choices (Sunstein et al., 2018).

Perceived effectiveness of transparent versus non-transparent policy nudges may also affect the implementation of policy nudges because of the ethical issues (Sunstein et al., 2018:3). The ethical issue concerning transparency is about how people feel concerning nudges that educate about choices as opposed to nudges that steer choices (Sunstein et al., 2018:5; Tannenbaum et al., 2017). The dilemma of implementing such policy nudges (transparent and non-transparent) is to maintain freedom of choice while making nudges effective. The policymakers should pay attention to and respect the needs (allowing process transparency of formulating and implementing nudges) of the communities regarding the use of policy nudges to overcome this ethical issue (Sunstein, 2016:117). Again, one of the proponents of the use of nudges argues that only approaches that improve the welfare of the intended beneficiaries should be adopted (Sunstein, 2016:118).

Context is key when using policy nudges (Bäckstrand and Lövbrand, 2015; Sunstein, 2016:120; van der Heijden, 2019). A number of studies have been conducted in countries such as Qatar, Germany, Canada, Ireland, Australia, the Netherlands, Mexico, United States and Denmark, which used policy nudges within their contexts (Sunstein et al., 2018:2). Sunstein (2016:120) believes that successfully embraced policy nudges in these countries provide insights into the basic principles regarding how nudging should be done and that divergences may be relatively minor in other contexts (Sunstein

et al., 2018). However, it can be argued that contexts are different and can produce different results. This raises the need to empirically explore how to use policy nudging in different contexts.

Generally in the literature, surveys are shown to be a useful way to find out the preferences of people about policy nudges (Sunstein, 2016; Benartzi et al., 2017; Bruns et al., 2018; Sunstein et al., 2018; Tannenbaum et al., 2017). This raises questions of whether the use of socio-political, administrative and public policy governance may produce intended results. Socio-political, administrative and public policy governance is marred by complexity and diversity because of interdependence, interactions and interrelationships among plural actors (Mols, Haslam, Jetten and Steffens, 2014). The non-linear interactions exacerbate the already complex relations between policymakers and communities. In addition to complex interactions, socio-political, administrative and public policy governance require resources such as money, human and time to collaborate, co-produce, deliberate, democratise and cross-sector collaborate during the nudging process (Kuehnhanss, 2018). The need for more resources presents the challenges of socio-political, administrative and public policy governance over the usual surveys (Bruns et al., 2018). Empirical studies should determine how socio-political, administrative and public policy governance should be applied during policy nudging if ever it is possible (Pyhälä et al., 2016:10).

3.5 NATURE OF COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION

Indeed, the growing worldwide call for increased community participation in climate change policy formulation and implementation shows that community participation underpins successful climate governance (Wengert, 1976; Brundtland et al., 1987; The Rio Declaration on Environment and Development, 1992; Lemos and Agrawal, 2006; Drexhage, 2008:3; Reed, 2008; Pinkse and Kolk, 2012; UNECE, 2015; Reed et al., 2018:1). As noted in Chapter 2 of this thesis, problem definition, agenda setting, policy formulation and policy adoption are considered as interrelated and are sometimes referred together as policy formulation (Anderson, 2003:80). Likewise, policy implementation refers to policy implementation and policy evaluation blurred together, unless specified. Nevertheless, all stages combined together constitute the policy process (Anderson, 2003). To say community participation underpins climate governance, here, it simply means that one cannot talk of climate governance without community participation. In practice and in theory, the concept community participation is very broad and vague in terms of its conceptualisation (Few et al., 2007:53; Samaddar et al., 2019:357). In the literature, community participation seems to be a web of things (e.g. information, consultation, deliberation, co-production, participatory techniques, governance, policy nudging and facilitation) that are supposedly applied at once (Arnstein, 1969; Reed et al., 2018; Samaddar et al., 2019).

Community participation in climate change policy formulation and implementation is also dependent on the capacity (e.g. resources, willingness, attitude, political support and skills in facilitation etc.) of multiple actors (politicians, public administrators, experts and community representatives) to lead community participation (Wu et al., 2018). However, the nature of community participation during climate change policy formulation and implementation has no consensus on the extent of the actors' (politicians, public administrators, experts and community representatives) contribution to improve

direct active community participation in climate change policy formulation and implementation (Samaddar et al., 2019:356). It may be worth noting how multiple actors (politicians, public administrators, experts and community representatives) facilitate community participation at every stage of the climate change policy formulation and implementation (Samaddar et al., 2019:358). To determine the nature of community participation in climate change policy formulation and implementation (Objective v), the research question now is how does community participation underpin the climate change policy process and climate governance?

According to the Cambridge Dictionary (2020), the word nature is described as the basic or inherent features, characteristics or qualities of something. Nature is being used here to describe the characteristics of community participation during climate change policy formulation and implementation in a plural and pluralistic environment. The plural and pluralist environment in which community participation during policy formulation and implementation is discussed is in relation to multiple actors (politicians, public administrators, experts, community representatives and communities), multiple processes such as governance (socio-political, administrative and public policy governance), setting of objectives, participatory techniques and policy nudging at every stage of the climate change policy. The purpose of discussing the nature of community participation during each policy stage is to understand concepts that can be applied to improve community participation in practice in a plural and pluralist climate change policy process.

Plural, referring to multiple actors and pluralist that refers to the multiple processes, are an important link between a community and policymakers (politicians and public administrators) during climate change policy formulation and implementation (Eden, 1996:186; Creighton, 2005; Driessen et al., 2012; Burton and Mustelin, 2013; Glucker et al., 2013; Sprain, 2016; Dang, 2018; Katsonis, 2019; Uittenbroek et al., 2019). This research argues that community participation during climate change policy formulation and implementation is largely dependent on the policymakers' understanding, willingness, capacity and skills to effectively apply socio-political, administrative and public policy governance in a plural and pluralist environment. In this plural and pluralist environment, the communities participate through co-production, collaboration, deliberation, democratisation and cross-sector collaboration as previously excluded actors to express and share their ideas, add knowledge, reach new understanding, take command of the plans and learn through experiences (Chambers, 1994:1443; Ensor and Berger, 2009:231; Piccolella, 2013:27; Pyhälä et al., 2016:10). The rest of this section conceptualises community participation through co-production, collaboration, deliberation, democratisation and cross-sector collaboration within a plural and pluralist environment of climate change policy formulation and implementation. Later, the community participation's plural and pluralist nature during climate change policy formulation and implementation is discussed.

3.5.1 Co-production, collaboration, deliberation, democratisation and cross-sector collaboration within a plural and pluralist environment

In a plural and pluralist climate change policy process, multiple interdependent actors (politicians, public administrators, experts, community representatives and communities) and multiple processes (socio-political, administrative and public policy governance) inform climate change policy formulation and implementation. The inter-dependence stresses putting

into practice the principles of co-production, collaboration, deliberation, democratisation and cross-sector collaboration (Innes and Booher, 1999; Callahan, 2007; Gupta, 2007; Vangen and Huxham, 2010; Homsy and Warner, 2013; Brink and Wamsler, 2019). A critical question about co-production, collaboration, deliberation, democratisation and cross-sector collaboration is how each concept occurs in a plural and pluralist environment of a climate change policy process. Co-production, collaboration, deliberation, democratisation and cross-sector collaboration as well as the plural and pluralist environment are analysed as concepts of socio-political, administrative and public policy governance using Walker and Avant's (2005) concept analysis method. In analysing each concept, the concept analysis presents the aim, definition, uses of the concept and defining attributes. Further, the analysis explores antecedents, consequences and empirical referents, after which a model case, contrary case and borderline case are identified to clarify the concepts in the context of climate change policy formulation and implementation. Later, the use of the concepts (co-production, collaboration, deliberation, democratisation and cross-sectors collaboration) by socio-political, administrative and public policy governance in the context of climate change policy nudging is discussed.

3.5.1.1 Plural actors and pluralist environment within climate change policy formulation and implementation

In practising climate change policy formulation and implementation, plural actors and pluralist processes are considered an integrated whole. Co-production, collaboration, deliberation, democratisation and cross-sector collaboration are critical concepts when applying socio-political, administrative and public policy governance during climate change policy formulation and implementation. Co-production, collaboration, deliberation, democratisation and cross-sector collaboration are discussed in the context of multiple processes (socio-political, administrative and public policy governance) and multiple actors. Pluralist in this study refers to a web of socio-political, administrative and public policy governance processes embedded together. In the context of climate change policy formulation and implementation, socio-political, administrative and public policy governance open the decision making process not only to politicians, public administrators and experts, but also to communities and their representatives. Communities demand a robust participation during the implementation of adaptation measures and in planning mitigation measures (Reed, 2008; Armeni, 2016). Therefore, in a pluralist climate change policy formulation and implementation, more stakeholders contribute to the policy process (Atkinson and Coleman, 1992; Smyth, 2008; Shepard et al., 2018). Each group (politicians, public administrators, experts, community representatives and communities) of actors gives ideas on specific issues during all stages of the policy process. The participation of multiple actors during the policy process will then be called democratisation (Bulkeley and Mol, 2003).

3.5.1.1.1 Uses of plural actors and pluralist environment of climate change policy formulation and implementation

The uses of the concept plural actors and pluralist processes during climate change policy formulation and implementation are discussed in respect of i) administrative functions of government, ii) interrelationships and interdependencies, iii) complex interrelationships and iv) interactions. Firstly, plural actors and pluralist processes are generally understood from the administrative functions of government. The Public Administration (PA) theories and paradigms explain the evolution of PA as a discipline and practice (Waldo, 1968:443). The development of public administration both as a discipline and practice was prompted by the inefficiency of the spoils system, incompetence, nepotism and corruption that prevailed in

the US in the late 19th century (Gruening, 2001:3). The American public administration played a role in shaping the PA discipline and practice. As a result, in search of public interest and the desire to improve community participation in policy formulation, adoption or legitimisation, implementation, evaluation and/ or termination, several theories have been proposed. This prompted the discipline of PA to be dichotomised (1887-1926) from politics (Oyedele, 2015:3). New Public Management (NPM) (1970 onwards) seeks to specify the functions of government bodies by emphasising service delivery, borrowing the idea of market-driven desire to move away from central planning and allow economic liberalisation, privatisation of public enterprises and change of the management of government (OECD cited in Gruening, 2001:2; Hughes, 2003:256; Osborne, 2006:379; Barabashev, 2016:8). Among theories and paradigms, the plural actors and the pluralist processes emerged under the NPG theory. The NPG proposes the plural nature of policy formulation and implementation. Thus, the purpose of plural actors and plural processes during policy formulation and implementation is to structure participation in a way that includes communities, as previously excluded members, in policy decision making (Bulkeley and Mol, 2003:144; Moynihan, 2003:164-165).

Secondly, plural actors in the context of NPG are used to describe a complex system of interrelationships and interdependence for resources among multiple actors during policy formulation and implementation (Osborne, 2010a). Plural means more than one in number (Cambridge Dictionary, 2020). No group of actors is significant by itself, but obtain the significance through interrelationship, interdependence and interaction in a nonlinear manner within the climate change policy formulation and implementation environment (Jagers and Strippel, 2003; Bäckstrand, Kuyper, Linnér and Lövbrand, 2017; Jänicke, 2017; Di Gregorio, Fattorelli, Paavola, Locatelli, Pramova et al., 2019). Politicians regulate plural actors' interactions and interrelationships through creating legislation, institutions and regulations (Swyngedouw, 2005:2003; Carvalho and Gupta, 2012; Katsamunská, 2016:135). Public administrators, as part of the plural actors, have many traditional responsibilities. The responsibilities include, among others, building support for policy implementation through creating supportive structures (e.g. use of participatory techniques) and processes (e.g. collaboration) for inclusive policy implementation (Crosby et al., 2010:203). Public administrators co-ordinate co-production (Measham et al., 2011; Funder et al., 2017; Brink and Wamsler, 2019). Co-production includes facilitating co-planning, co-designing, co-implementation and co-evaluation of the climate change policy (Wu et al., 2018:7). Another role of public administrators is to facilitate collaboration to assist actors in making commitments regarding how they wish to contribute to climate change policy decisions (Crosby and Bryton cited in Osborne et al., 2010:200). The public administrators also manage cross-sector collaboration to increase co-ordination within government ministries and experts. The public administrators facilitate two-way dialogue and communication among all actors (politicians, experts, community representatives and communities) (Flynn, 2009; Reed et al., 2018). Lastly, the public administrators facilitate policy nudging to encourage community participation (Swyngedouw, 2005:2003; Katsamunská, 2016:135). Concerning experts, their role is to promote interrelationships and interdependence for resources among actors (Theys, 2002:223; Boedeltje and Cornips, 2004). Community representatives are a link (gatekeepers) to communities (Taylor, 2007:312; McFadyen and Rankin, 2016; Samaddar et al., 2019). Communities participate as equal decision makers and beneficiaries of the climate change policy.

Thirdly, 'pluralist processes' is used to describe a complex system of interrelationships of the socio-political, administrative, and public policy governance (Osborne, 2010a). There are five main pluralist processes in a pluralist environment identified by Osborne (2010a:8): socio-political, administrative, public policy, network and contract governance. It is noteworthy that network and contract governance are beyond the scope of this thesis. The governance processes are very broad with many activities that work as drivers. The drivers of these pluralist processes specific to this study include, among others, collaboration, co-production, democratisation, deliberation, cross-sector collaboration and policy nudging.

Fourthly, 'pluralist processes' is used in a climate change policy formulation and implementation scenario that shows high frequent dynamic interactions, which are nonlinear (Jagers and Strippel, 2003; Bäckstrand et al., 2017). The plural actors and pluralist processes work as a system (open and closed). The effect of an activity (collaboration, co-production, democratisation, deliberation, cross-sector collaboration and policy nudging) feeds back into the system. The system in this context is the interrelationship of the internal environment and the external environment. The internal environment encompasses politicians, public administrators and experts, institutions, legislation, regulation and other factors within government, which steer participation. Other factors within the internal environment include management of power dynamics, co-governance, democratisation and policy nudging. The external environment encompasses community representatives and communities, institutions, power structures and other factors from outside government. Other factors in the external environment include, among others, indigenous knowledge systems, economy, personality, ecology and demography.

3.5.1.1.2 Defining attributes – Plural actors and pluralist processes

The defining attributes for a plural and pluralist environment of climate change policy formulation and implementation include multiple actors (politicians, public administrators, experts, community representatives and communities), multiple processes, interdependence, interrelationships and interaction between the internal environment and the external environment (Berkes et al., 2007; Jung, 2010; Woodford and Preston, 2013; Katsamunskas, 2016; Sprain, 2016). Without these attributes, a plural and pluralist environment for climate change policy formulation and implementation cannot occur. For socio-political, administrative and public policy governance purposes, the politicians, public administrators, experts, community representatives and communities come together to interrelate, interact and interdepend (see Section 3.5.2.4 for details) for resources with a goal of making policy decisions together, instead of doing it alone (Ansell and Gash, 2007:3). The interrelationships, interactions and interdependencies will lead to co-production, collaboration, deliberation, democratisation and cross-sector collaboration among multiple actors during climate change policy formulation and implementation (Innes and Booher, 1999; Alonso, Andrews, Clifton and Diaz-Fuentes, 2019; Samuel, 2019; Ruiz-Mallén, 2020).

3.5.1.1.3 Cases: Model case, borderline case and contrary case - Plural actors and pluralist processes within climate change policy formulation and implementation

The study by Reed (2008), 'Stakeholder participation for environmental management: a literature review', is used as a model case to show the plural and pluralist nature of community participation during the climate change policy formulation

and implementation. Reed (2008:2419) acknowledges that environmental problems are complex and uncertain. The participation process involves plural actors and plural processes. Therefore, Reed (2008) offered a typology for participation which noted eight 'best' practices for participation in a plural and pluralist climate change environment. The practices are i) replacing the 'tool kit' to emphasise participation as a process, ii) empowering actors to make decisions, to promote co-production, iii) actors participate at every stage of the policy process, iv) clear set objectives for participation, v) promoting facilitation, vii) each actor contributes uniquely, for example, the inclusion of indigenous knowledge systems and viii) the importance of socio-political, administrative and public governance during the interactions, interrelationships and interdependences for resources (Reed, 2008).

The study by Ojha, Ghimire, Pain, Nightingale, Khatri et al. (2016), "Policy without politics: technocratic control of climate change adaptation policy-making in Nepal", is used to show a contrary case of plural actors and pluralist climate change policy formulation and implementation. This Nepal case study is used as a contrary case for a plural and pluralist climate change policy formulation and implementation because the policy decisions have been shaped through experts and policymakers, avoiding political contestation and not promoting deliberation processes (Ojha et al., 2016:1). The study offers useful points that show a biased plural and pluralist climate change policy formulation and implementation by critiquing the ways in which politics of representation and climate science are framed and pursued in climate change policy formulation and implementation (Ojha et al., 2016:1). The study explored how politics negatively affected inclusive community participation in pluralist climate change policy formulation and implementation. Using the National Adaptation Programme of Action (NAPA) and the Climate Change Policy in Nepal as examples, Ojha et al. (2016) examined how politics violated the rules of plural and pluralist climate change policy formulation, which mainly seeks to open up the democratic space for communities to contribute to the climate change policy decisions equally.

A study by Kehewa et al. (2013) is used for showing a borderline case for plural and pluralist climate change policy formulation and implementation. The study titled, "Formulating and implementing climate change laws and policies in the Philippines, Mexico (Chiapas), and South Africa: a local government perspective" analysed the climate change policies in these three countries. Although the climate change policies in Philippines, Mexico and South Africa sought an inclusive (including communities) plural and pluralist climate change policy, the policies were formulated mainly through a consultative method among the politicians, public administrators and the experts, which is top down one way communication (Kehewa et al., 2013:724). The study is purposefully selected because it is an example of a study that shows how public administration in a plural and pluralist climate change policy formulation and implementation process seeks to enhance community participation (Kehewa et al., 2013:724). A borderline case for a plural and pluralist climate change policy formulation and implementation is a situation where decisions are mainly top-down without regarding community input through public administration that represents the interests of the communities.

3.5.1.1.4 Antecedents – Plural actors and pluralist climate change policy formulation and implementation

Antecedents for a plural and pluralist climate change policy formulation and implementation are discussed in respect of the management of power dynamics, objectives of collaboration and the occurrence of socio-political, administrative and

public policy governance. For a plural and pluralist climate change policy formulation and implementation to occur, power dynamics should be managed, objectives for collaboration should be specified, and socio-political, administrative and public policy governance should occur. In a plural and pluralist climate change policy formulation and implementation, no group of actors is allowed to dominate the process; hence, it is critical to manage power dynamics. Politicians continue to take the central lead in decision making through adopting the policy to become a legislation, but consensual agreement of some sort will still be required. Policy decisions concerning climate change are made through consensual agreements and not outside collaboration processes (Innes and Booher, 1999). The public administrators play traditional roles, such as building support for policy implementation, co-ordinating co-production, facilitating collaborating, managing cross-sector collaboration and facilitating policy nudging discussed in Section 3.4.1.1.1 (Rhodes, 1996; Osborne, 2010a). The work of politicians, public administrators, experts and community representatives during the climate change policy process is to facilitate community participation (Mees et al., 2019; Rosen and Painter, 2019). Therefore, power dynamics is managed by ensuring that each group of actors has influence, capacity (resources) and is autonomous in playing its facilitative role.

The objectives for collaboration should be clear for plural and pluralist climate change policy formulation and implementation to occur. In this regard, clarity on the nature of interrelationships when carrying out joint activities is necessary for a plural and pluralist environment that seeks to enhance community participation during the policy process (Innes and Booher, 1999; Shergold, 2008; Vangen and Huxham, 2010; Ingold and Fischer, 2014). Plural and pluralist nature during the policy process involves interdependence of multiple actors and multiple processes. Actors concerned are expected to increase interactions, negotiate and reach a consensual agreement regarding what to include in the policy. Consequently, the entire climate change policy process is required to be iterative in that problems of climate change and solutions are framed together during each policy stage (Mees et al., 2019). Thus, policy implementation would then be expected to succeed (Bulkeley and Mol, 2003:151). Clarification on the issue of interaction and interdependence for resources and details of other actors involved should be clear to communities (Huxham and Vangen, 2008; Glucker et al., 2013; Uittenbroek et al., 2019).

In a plural and pluralist climate change policy formulation and implementation, socio-political, administrative and public policy governance must occur to enable communities to make decisions in the climate change policy. Governance guides the rules of collective-decision making among multiple actors (Ansell and Gash, 2007:3). It is important to outline how actors should be guided in their interactions and interdependence by socio-political, administrative and public policy governance (Kooiman, 2010). Socio-political governance provides principles and standards, for example, on how to include indigenous knowledge systems in the climate change policy. Administrative governance facilitates collaboration, co-production, cross-sector collaboration, deliberations, policy nudging and building support for policy implementation. Public policy governance provides a framework that defines parameters (legislation, institutions and regulations) within which all forms of governance (socio-political and administrative) are required to operate (Kooiman, 2010:81). Further, it could help to determine the participatory techniques to be used during these governance interactions to enhance collaboration. The socio-political, administrative and public policy governance components have different functions to guide

plural and pluralist climate change policy formulation and implementation, but they complement each other. Again, it should be clear how each actor could contribute in terms of resources (Kooiman, 2010:82).

3.5.1.1.5 Consequences of a plural and pluralist climate change policy formulation and implementation

The consequences of plural and pluralist climate change policy formulation and implementation are discussed in terms of diversity, complexity and dynamics of interactions. Diversity, complexity and dynamics of interactions occur because of plural and pluralist climate change policy formulation and implementation. Diversity of actors and processes involved during the plural and pluralist climate change policy formulation and implementation improves the content and quality of the climate change policy. Diversity is defined as consisting of many different elements (Cambridge Dictionary, 2020). There are mutual benefits to actors regarding resources because of high interdependence (Osborne, 2010a:8; Guthiga and Newsham, 2011; Egeru, 2012). The different actors build networks of communication to make climate change policy decisions. Politicians, public administrators and experts work together to develop joint activities, jointly manage the activities, bring actors together, benefit community participation and learn new ways of doing things (Vangen and Huxham, 2010). Every group of actors seeks to sustain the joint action. Resultantly, all actors equally contribute to climate change policy decisions. Nevertheless, as Kooiman argued (2008:176), diversity also carries the danger of allowing conflicts to arise.

Plural and pluralist climate change policy formulation and implementation results in interactions that are complex. The plural and pluralist climate change policy formulation and implementation is complex because the aims are sometimes not clear, actors sometimes overlap and sometimes the end result does not please all actors (Lorenzoni et al., 2007; Bauer et al., 2012). It is difficult to explicitly note down aims in plural and pluralist climate change policy formulation and implementation. Some aims may be deliberately made unclear (Huxham and Vangen, 2008:31; Vangen and Huxham, 2010:166). Some representatives may input their views instead of the organisations they represent (Huxham and Vangen, 2008:36; Ojha et al., 2016). Actors in various groups (politicians, public administrators, experts, community representatives and communities) are not necessarily exclusive to a group they may have been allocated. Some members may overlap as members of other group(s) (Huxham and Vangen, 2008:36). This makes participation sensitive in that an individual's roles are expected to change depending on the group of actors to which one belongs. Some authors argue that in a plural and pluralist environment, the end result rarely pleases all the actors involved (Huxham and Hibbert, 2008:48). Communities are at a disadvantage because they participate as stakeholders who have other important issues (e.g. livelihood), whereas other actors (politicians, public administrators and experts) participate in the policy process as formally organised groups.

There are significant constraints to community participation in plural and pluralist climate change policy formulation and implementation because of dynamic interactions. In a plural and pluralist climate change policy formulation and implementation, actors (politicians, public administrators, experts, community representatives and communities) interact, interrelate and interdepend for resources, while keeping some form of independence regarding their roles. In these interactions, compared to other actors, politicians are senior partners by virtue of formal power vested in them (Wengert,

1976). Frequent interactions could lead to some actors, for example, politicians overriding other actors' decisions (Tilly, 2000:3; Bertana, 2020). Rhodes (1996:667) notes that limited access to information is one of the constraints because of dynamic interactions. Public administrators frequently lead and shape interactions during the policy process (Rhodes, 1996:667). However, it remains to be seen how responsibilities could be clear because of political-administrative interface (Demir, 1993; Hughes, 1998:225-241; Thornhill, 2005; Audette-Chapdelaine, 2016; Peters, 2018a). Because of formal power, politicians may limit access to information. Again, conflicts could be present but without being formally accounted for (Rhodes, 1996:667). The groups of actors, politicians, public administrators, experts, communities and community representatives are not heterogeneous; thus, the objectives of participation might be different too. Instead of seeking to achieve one goal, community interests in climate change policy, some actors might be pursuing individualistic objectives (Kehewa et al., 2013; Ojha et al., 2016).

3.5.1.1.6 Empirical referents – Plural and pluralist climate change policy formulation and implementation

Collaboration, co-production, deliberation, democratisation and cross-sector collaboration could be considered empirical referents for plural and pluralist climate change policy formulation and implementation. Collaboration (see Section 3.5.1.3 .5 for details), co-production (see Section 3.5.1.2.5 for details), deliberation (see Section 3.5.1.4.5 for details), democratisation (see Section 3.5.1.5.5 for details) and cross-sector collaboration (see Section 3.5.1.3 .5 for details) as empirical referents demonstrate the occurrence of plural and pluralist climate change policy formulation and implementation. The empirical referents lead to joint activities, inclusive of communities as previously disadvantaged actors (Vangen and Huxham, 2010).

3.5.1.1.7 Implications for the theory of plural and pluralist climate change policy formulation and implementation

Plural and pluralist climate change policy formulation and implementation concepts are used for data collection, as operational definitions and to understand theoretical perspectives. The study argues that plural and pluralist climate change policy formulation and implementation seems to be the most desirable action to promote multiple actors' views in the climate change policy (Jagers and Strippel, 2003; Drexhage, 2008). A clarified meaning for plural and pluralist climate change policy formulation and implementation is used for data collection. The aim for conceptualising plural and pluralist climate change policy formulation and implementation is to contribute empirical data that analyse the relevance of NPG to public administration and climate governance. Further, the data could be used to add knowledge to the ongoing debate about the plural and pluralistic nature of community participation during climate change policy formulation and implementation.

3.5.1.2 Co-production

Co-production dates back to the 1970s (Pestoff, Osborne and Brandsen, 2006:593; OECD, 2011:27). The term has been used in the context of citizen participation as service users during all stages of the public service cycle (Moore, 1995:105; Sicilia, Guarini, Sancino, Andreani and Ruffini, 2016; Biljohn, 2018; Biljohn and Lues, 2019). Co-production is associated with public administration. Co-production in public administration aims to increase citizen participation during co-planning, co-designing, co-implementing and co-evaluating decisions at every stage of the public service decision making. This is

because citizens are users of public goods and services. Instead of considering citizens as passive consumers of goods and services, co-production empowers citizens to be directly involved in influencing the provision of goods and services at every stage of public service decision making (Pestoff et al., 2006; Rosen and Painter, 2019:3). In parallel with NPM, co-production seeks to bring in previously excluded communities to jointly make decisions in issues that affect them. In climate change policy formulation and implementation, the communities participate as service users and policymakers. Co-production could vary from one community to another if the ways of engagement are different (Ruiz-Mallén, 2020:6). As argued by some scholars, it is critical to analyse co-production to define co-production in terms of what it entails and what could be co-produced (Bremer and Meisch, 2017:13; Harvey, Cochrane and Van Epp, 2019:1). The purpose of analysing the concept co-production is to provide an operational definition for the study and to gain an in-depth understanding of the concept from a theory perspective. Consequently, a clarified meaning for the concept co-production is used for data collection for the current study. Co-planning, co-designing, co-implementing and co-evaluating lead to knowledge production between communities and other actors, which is critical for every climate change policy stage.

3.5.1.2.1 Uses of Co-production

The uses of co-production are discussed in terms of situations where a community is given an opportunity to co-plan, co-design, co-implement and co-evaluate the climate change policy decisions. Co-production is in this study defined as empowering communities (allowing communities to co-plan, co-design, co-implement and co-evaluate) to make decisions at every stage (agenda, formulation, adoption, implementation and evaluation) of the climate change policy process (Ruiz-Mallén, 2020; Turnhout, Metze, Wyborn, Klenk and Louder, 2020:17). The Organisation for Economic Co-operation Development (OECD) (2011:27) notes that the term co-production is used to indicate collaboration between citizens and service delivery providers. The concept co-production in this study is used to indicate collaborative activities where communities engage in partnership with policymakers and other actors to plan, design, implement and evaluate climate change policy decisions during climate change policy formulation and implementation (Djenontin and Meadow, 2018; Vincent, Daly, Scannell and Leathes, 2018; Turnhout et al., 2020). It is about how the politicians, public administrators and experts define and practise co-production that could ensure communities and community representatives are included in co-planning, co-designing, co-implementing and co-evaluating the climate change policy decisions at each policy stage. Thus, the role of each actor involved should be defined to balance power dynamics. Balancing power dynamics in this context simply means all contributions are regarded equal despite the group to which an actor belongs.

Co-production is used where co-planning takes place. Co-planning is taking time deliberating on climate change policy decisions to reach consensual decisions (Ross et al., 2016; Jagannathan, Arnott, Wyborn, Klenk, Mach et al., 2020). The decisions referred to are those related to what should constitute the climate change policy agenda, policy formulation, policy adoption, policy implementation and policy evaluation (Berkas et al., 2007; Etchart, 2017:1). Planning involves all forms of participatory techniques to ensure the actors involved share their experiences and perspectives to benefit the climate change policy. Co-production is used where co-designing takes place. Co-designing is a scenario where communities together with other actors, the policymakers, experts and community representatives identify concrete plans that relate to implementation for each policy stage. It is noteworthy that the intended community to benefit from the climate

change policy is the one that should design every policy stage. Co-production is used where co-implementation takes place. Co-implementing is when participation goes beyond just incorporating the knowledge obtained from actors into the climate change policy but also implements decisions that would have been co-planned and co-designed (Uittenbroek et al., 2019). Co-production is used where co-evaluation takes place. Co-evaluation is when communities with other actors make decisions regarding the evaluation criterion. For the purpose of co-production, the evaluation criterion makes it easy for communities and other actors to evaluate decisions co-planned, co-designed and co-implemented for each policy stage. From the discussion of co-production, it is noteworthy that co-planning, co-designing, co-implementing and co-evaluating occurs at every stage of the climate change policy.

3.5.1.2.2 Defining attributes for co-production

Without co-planning, co-designing, co-implementing and co-evaluating the climate change policy decisions, co-production could not be said to have occurred (Arnstein, 1969; Brink and Wamsler, 2019). During co-planning, co-designing, co-delivery and co-implementation, the communities are directly involved to make every decision at every stage of the climate change policy formulation and implementation. Co-production addresses inequalities that characterise climate change policy decision making. Power should be redistributed through legislation, institutions and regulation that guide participation during co-planning, co-designing, co-implementation and co-evaluation (Arnstein, 1969:216). Co-production decentralises power through co-planning, co-designing, co-delivery and co-implementation of the climate change policy decisions made at every policy process stage. Thus, it gives the communities power to influence the decisions as a result of co-planning, co-designing, co-delivering and co-implementing the climate change policy. In practice, co-production embeds co-governance, democratisation, collaboration and deliberation (Alonso et al., 2019:3). Co-production and deliberation are in some studies used interchangeably (Reed et al., 2018:3). In practice, deliberation is related to collaboration but differs in meaning. Collaboration is inclusive of deliberation and co-production, whereas deliberation and co-production are not necessarily collaboration.

3.5.1.2.3 Cases: model case, borderline case and contrary case – co-production

A study by Uittenbroek et al. (2019), "The design of public participation: who participates, when and how? Insights in climate adaptation planning from the Netherlands", is used as a model case for co-production. The study is a model case because it shows evidence of co-planning, co-designing, co-delivering and co-implementing. Uittenbroek et al. (2019) studied three case studies (Rotterdam, Kockengen, and Tiel) in the Netherlands. The study demonstrated how the three communities co-planned (agreed on objectives), co-designed (identified adaptation plans), co-implemented (decided on how to implement), and co-evaluated (decided on the evaluation criterion) the adaptation plans. The study found that the communities in all the three cases explicitly co-planned, co-designed, co-implemented and co-evaluated, which increased the chances of successful implementation of climate change adaptation plans. The study also acknowledges the power of co-production in promoting inclusive climate change adaptation (Uittenbroek et al., 2019:2545).

The study by Arnstein (1969), "The ladder of citizen participation", is used as a borderline case for co-production. The study is well known in the literature for introducing the ladder of citizen participation, which has moved forward the debate

on citizen participation in decision making. The study is used as a borderline case because it offers a typology of eight levels (manipulation, informing, therapy, consultation, placation, partnership, delegated power and citizen control) of participation arranged in a ladder pattern (Arnstein, 1969:217), whose contribution to citizen participation is acknowledged by many scholars (Collins and Ison, 2009; Rosen and Painter, 2019). Arnstein (1969) argued for planners to give citizens the power to influence decisions during planning. Arnstein's (1969) study is considered a borderline case because the extent of citizen control prescribed in the ladder of participation has been contested (Collins and Ison, 2009; Rosen and Painter, 2019). Some scholars argue that citizen power should be translated into real power by considering power imbalance through co-production of decisions and not only implementation, capacity building and consideration of indigenous knowledge systems (Collins and Ison, 2009; Rosen and Painter, 2019:2).

A contrary case for co-production is difficult to identify from empirical studies because most studies show some evidence of co-production despite weaknesses that arise during co-production (Homsy and Warner, 2013). Co-production requires co-planning, co-designing, co-evaluation and co-implementation of policy decisions without which any form of co-production becomes a contrary case (Sprain, 2016; Uittenbroek et al., 2019). In many studies, there is evidence of co-producing climate change policy decisions despite weaknesses (Homsy and Warner, 2013; Adenle et al., 2017).

3.5.1.2.4 Antecedents for co-production

Antecedents or events that must occur before co-production occurs are: having clear objectives for co-planning, co-designing, co-implementing and co-evaluating, management of power dynamics, and capacity building. The plural actors (politicians, public administrators, experts, community representatives and communities) should be aware of the objectives of co-production. Each actor has a distinct role to play at all the stages of co-production. There should be a clear sharing of responsibilities (Ruiz-Mallén, 2020:8). Co-production emphasises the idea of doing things as a collective rather than individual group(s) of people. The leadership by politicians, public administrators and experts is required to allow communities to participate as experts in their rights, whose knowledge, preferences, needs, capacity and priorities are equally considered valuable compared to the traditional decision makers (politicians, public administrators, experts and community representatives) in climate change policy formulation and implementation (Ruiz-Mallén, 2020). The public administrators build support for co-production through mobilisation, co-ordination of co-planning, co-designing, co-implementation and co-evaluation (Measham et al., 2011). In addition, the public administrators collaborate in joint activities (Measham et al., 2011; Ryan, 2012:317). The experts, for example, could mobilise support for climate change policy formulation and implementation, facilitate interactions among the communities, community representatives and policymakers, and facilitate interrelationships.

Power dynamics in terms of how plural actors should co-produce climate change policy decisions should be managed for co-production to occur (Rosen and Painter, 2019; Jagannathan et al., 2020:26; Turnhout et al., 2020). Co-production manages these power dynamics by considering both indigenous knowledge systems and scientific knowledge equal (Homsy and Warner, 2013:294). Thus, co-production gives the communities power to influence the decisions as a result of co-planning, co-designing, co-delivering and co-implementing, as well as the final climate change policy. Power

dynamics could be managed by prior acceptance that communities have the right to contribute towards the co-planning, co-designing, co-implementation and co-evaluation of the climate change policy decisions at every stage of the climate change policy process (Bulkeley and Mol, 2003; Ryan, 2012:319). Pluralist co-production involves co-planning, co-designing, co-implementing and co-evaluating that involve plural actors (politicians, public administrators, experts, community representatives and communities). Each group of actors is involved to a certain degree in influencing climate change decisions at every stage of co-production. This kind of government arrangement is complex in terms of how community decisions could be accepted as equally valuable as the views of other actors formally organised (Turnhout et al., 2020:17).

There is a need to build community capacity for co-production to occur. Capacity building is the intentional effort to improve communities' skills, knowledge and technical abilities to empower them to influence the co-production of climate change policy decisions (Rosen and Painter, 2019). Capacity building challenges the economic and political power of actors involved to influence co-production equally (Homsy and Warner, 2013). The idea of capacity building for communities during co-production is to balance the economic and political power of actors involved during the co-production of climate change policy formulation and implementation.

3.5.1.2.5 Consequences of co-production

The consequences of the occurrence of co-production are mainly two, generation of decisions that are 'nonscientific' from communities and democratisation (opening up of decision making process to previously excluded actors) (OECD, 2011:35; Jagannathan et al., 2020:23). Regarding the use of indigenous knowledge systems, communities involved in co-production increase co-production of knowledge about the climate change policy, increase in knowledge of climate change formulation and implementation, increase community understanding and awareness about climate change (see Section 3.3 for details). Consequently, co-production leads to successful adaptation (Jagannathan et al., 2020:24). Co-production could help tackle the challenges of policy implementation by bringing in the voices of the communities during the climate change policy process (Uittenbroek et al., 2019).

The negative consequences of co-production include, among others, complexity, negative change of actors' relations and the need for additional resources. Pluralist co-production is complex because of multiple processes that involve co-planning, co-designing, co-implementing and co-evaluation by plural actors (politicians, public administrators, experts, community representatives and communities). Each group of actors is involved in influencing climate change decisions at every stage of co-production. However, influencing decisions by a community may be a challenge considering power dynamics (competing with formal organised groups to influence decisions). Further, co-production can negatively change the actors' relations. The negative change of relations could hamper community participation in future because of past negative experiences. Again, the need for additional resources such as money and time because of the pluralist process (co-planning, co-designing, co-implementing and co-evaluating) of co-production is a disadvantage of the occurrence of co-production (OECD, 2011:94).

3.5.1.2.6 Empirical referents for co-production

Empirical referents for co-production are redistribution of power, deliberation (see Section 3.5.1.4.5 for details) and collaboration (see Section 3.5.1.3.5 for details) (Henstra et al., 2020; Sullo et al., 2020). The measurable ways to demonstrate the occurrence of co-production is the presence of power redistribution, deliberation and collaboration during co-planning, co-designing, co-implementation and co-evaluation of climate change policy decisions. Redistribution of power enhances community participation by giving the needed power to enable a community to make decisions (Arnstein, 1969; Collins and Ison, 2009; Homsy and Warner, 2013; Mistry and Berardi, 2016). Deliberation increases community participation during co-production because of increased interaction and high interdependence for ideas to make decisions (Mees et al., 2019). Collaboration enhances community participation by ensuring that joint activities conducted throughout the co-production are consensual (Brink and Wamsler, 2019).

3.5.1.2.7 Implications for the theory of co-production during climate change policy formulation and implementation

Co-production offers a new way of advancing community participation during climate change policy formulation and implementation. This is because co-production is interactive, deliberative, collaborative and democratic (Bremer, Wardekker, Dessai, Sobolowski, Slaattelid et al., 2019). This study argues that co-production is a general principle applicable to climate change policy formulation and implementation (Nabatchi, Sancino and Sicilia, 2017:768). Co-production is evolving and its application does not produce a specific outcome. Thus, the purpose of analysing the concept co-production is to provide an operational definition for the study and to gain an in-depth understanding of the concept from a theory perspective (Bremer and Meisch, 2017:13). Jagannathan et al. (2020) claim that a few research assessments are available in the literature about co-production, which reveal the outcomes of co-production and how co-production varies under different conditions. Therefore, theoretically, the concept co-production should be operationally defined to test empirical data (Rosen and Painter, 2019). Consequently, a clarified meaning for the concept co-production is used for data collection. As for data collection, the aim is to contribute empirical data that analyse the relevance of NPG to public administration and climate governance.

3.5.1.3 Collaboration

According to Wanna (2008), collaboration was originally used during industrialisation in the nineteenth century. The reason for turning to collaboration was to ensure division of labour. Collaboration replaces managerial and market form of governance (Ansell and Gash, 2007; Vangen and Huxham, 2010:163). The emergence of collaboration was a reaction to counter NPM failures. Through joint activities, collaboration brings politicians, public administrators, experts, community representatives and communities together to make climate change policy decisions during all the policy process stages. However, collaboration is often 'messy, cumbersome and slow' (Hügel and Davies, 2020:12). In the field of policy formulation and implementation, collaboration emerged as a result of NPG. The NPG requires more engagement of multiple actors, particularly the marginalised, during policy formulation and implementation to feed into a policy (Ansell and Gash, 2007:7-8; Wanna, 2008). Nevertheless, the uses of collaboration during the policy process seem not to be consistent nor complementary. Of course, some uses are complementary but others are mutually exclusive. Unless specified,

collaboration referred to here are joint activities by multiple actors including politicians, public administrators, experts, community representatives and communities.

3.5.1.3 .1 Uses of collaboration

The uses of collaboration are discussed with respect to the dictionary meaning, use of participatory techniques and the presence of co-production during climate change policy formulation and implementation. According to the dictionary, collaboration means to work jointly on an activity with individuals, groups of people or organisations to achieve something (Wanna, 2008:3; Cambridge Dictionary, 2020). The Merriam-Webster Dictionary (2020) dictionary provides three definitions of collaboration. First, collaboration is defined as working jointly with others in an intellectual endeavour. Second, it is to co-operate with or willingly assist an enemy of one's country, especially an occupying force suspected of collaborating with the enemy. Third, it is to co-operate with an agency with which one is not immediately connected. In this study, collaboration is defined as a governing arrangement and joint activities where multiple actors (e.g. politicians, public administrators, experts, and community representatives) engage communities to collectively make formal and consensual decisions during the policy process (Ansell and Gash, 2007:2).

Collaboration is used in scenarios where participatory techniques are used when making decisions. The participatory techniques are critical because they put collaboration into practice (Samaddar et al., 2019:359). Each technique differs in terms of how it promotes community participation among policymakers, experts, community representatives and communities. The techniques used determine the level (top-down or bottom-up participation) of community participation during the climate change policy formulation and implementation.

Collaboration is mostly used where there is evidence of co-production. As pointed out by Wanna (2008:3-4), the uses of collaboration are depicted where multiple actors jointly work together through co-operation, negotiations, facilitation (either bottom-up or top-down or both) and engagements to co-produce decisions (Innes and Booher, 1999; Wanna, 2008; Vangen and Huxham, 2010). Collaboration is used to show co-operation to implement adaptation measures (Armeni, 2016; Diver, 2017; Kurniawan, 2018; Teder and Kaimre, 2018; Weber, 2018). Collaboration is used to describe participation where multiple actors are jointly working together to produce a climate change policy (Bulkeley and Mol, 2003).

3.5.1.3.2 Defining attributes

The defining attributes for the concept collaboration are joint activities, use of participatory techniques and the evidence of co-production during climate change policy decision making (Armeni, 2016; Diver, 2017; Kurniawan, 2018; Teder and Kaimre, 2018; Weber, 2018). Without joint activities, use of participatory techniques and co-production during climate change policy formulation and implementation, collaboration cannot be said to have occurred. Collaboration and deliberation are closely related in terms of uses. In practice, deliberation is related to collaboration but has a different meaning (see Section 3.5.1.4 for the meaning) (Nabatchi, 2010). Collaboration includes deliberation and co-production. However, deliberation and co-production are not necessarily collaboration (Njoroge, Ratter and Atieno, 2017).

3.5.1.3 .3 Cases: model case, borderline case and contrary case

The study by Samaddar et al. (2019), "Stakeholders' perceptions on effective community participation in climate change adaptation," is selected as a model case for collaboration. The study critically conceptualised collaboration among plural actors (politicians, public administrators, experts, community representatives and communities) within a pluralist climate change policy formulation and implementation environment. Samaddar et al. (2019) identified perspectives on effective ways, steps and factors to enhance community participation in climate change adaptation using Wa West district of Northern Ghana. The study identified how plural actors should work together using participatory techniques to co-produce climate change policy decisions. According to Samaddar et al. (2019), real collaboration includes co-operation, negotiation and facilitation within pluralist climate change policy formulation and implementation to avoid communities to rubber stamp decisions made by policymakers and experts.

A study by Measham et al. (2011), "Adapting to climate change through municipal planning: barriers and opportunities", is selected as a borderline case for collaboration. The study is considered a borderline case because there is an attempt to work together jointly and evidence of co-production but Measham et al. (2011) found that collaboration between communities and policymakers did not succeed because of lacking proper leadership, specific information and resources. How the policymakers facilitate collaboration matters. The success of collaboration depends largely on the facilitators (policymakers and experts) of community participation (Mees et al., 2019).

A study by Bertana (2020), "The role of power in community participation: relocation as climate change adaptation in Fiji", is purposefully selected as a contrary case of collaboration during climate change policy formulation and implementation within a plural and pluralistic environment. The study argues that there should be a balance between environmental justice and collaboration during policy formulation and implementation. The study examined the role of power in the climate change adaptation plan of Vunidogoloa local government and other national government stakeholders. Although the reasons (coastal erosion and shoreline flooding) for relocation seemed valid, the study is considered a contrary case because it shows no collaboration in relocating the community.

3.5.1.3.4 Antecedents for collaboration

Process transparency, balancing power dynamics, incentives and trust influence whether or not collaboration occurs within the plural and pluralist environment of climate change policy formulation and implementation. The transparency of the collaboration process, balancing of power dynamics, incentives and trust must occur before collaboration could take place. The term process transparency is used to show that a community feels confident and perceives the joint activities conducted during collaboration as transparent. In such circumstances, the collaborative activities are not a cover up for already made decisions (Ansell and Gash, 2007:557). Balancing of power relations is ensuring that a community is empowered to a possible satisfactory extent to participate on an equal footing with the politicians, public administrators and experts (Arnstein, 1969; Ansell and Gash, 2007:9; Hügel and Davies, 2020:12). To balance power dynamics, issues to do with skills, expertise and time should be dealt with by the facilitators before collaboration begins because they influence the level of community collaboration. Unlike politicians, public administrators and experts who are organised,

measures should be put in place to ensure the less powerful voices of the community members are represented (Ansell and Gash, 2007:9). During collaboration, facilitators should recognise the community's knowledge, expertise, skills and understanding regarding climate change despite literacy level during climate change policy formulation and implementation.

Incentives are things such as the use of governance and the use of participatory techniques to reach consensual decisions, which should be considered to motivate community participation during climate change policy formulation and implementation. Consideration to motivate community participation could be needed because issues to do with governance are largely voluntary (Ansell and Gash, 2007:10). There is a need to incentivise participation because community members are sometimes concerned about other commitments, such as livelihoods. Nevertheless, it is noteworthy that the incentives to participate, to some extent, depend upon the communities' expectations and perceptions about collaboration processes. The choice of a participatory technique depends on the target community, indigenous knowledge systems and the degree of involvement intended. Participatory techniques (e.g. PRA, public hearing, focus groups etc.) used could be an incentive for communities to participate (Wanna, 2008:543; Vangen and Huxham, 2010). Participatory techniques practically put collaboration into practice. Therefore, to support a practical process of collaboration, targeted participatory techniques should be determined before collaboration. As an incentive to enhance community participation, the level of collaboration and objectives for joint activities should be defined.

Trust is critical for collaboration to occur. Vangen and Huxham (2010:168) note that trust is a pre-condition for successful collaboration. Policymakers and experts should build trust with a community to enable community members to take risks and agree to participate during the policy process. The politicians, public administrators, experts, community representatives and communities should agree on the objectives of participation as a way of building trust in the collaboration process (Smyth, 2008:51; Vangen and Huxham, 2010:165). It is necessary for policymakers and experts who will participate as facilitators to agree with communities on the aims of jointly participating during the climate change policy process (Huxham and Vangen, 2008:30). Actors have different reasons for involvement during community participation. Agreeing on the objectives of community participation minimises certain group(s) of actors from controlling community participation to their advantage at the expense of the communities (Ojha et al., 2016). This, in turn, could increase the community's trust in the collaboration process. However, in some instances, instead of building trust, other actors' objectives of participation may cause confusion, conflicts and misunderstandings to communities that wish to be part of the climate change policy process (Ojha et al., 2016).

3.5.1.3.5 Consequences of collaboration

The consequences of collaboration are co-production of climate change decisions, saving time and costs, mutual learning and shared experiences. Collaboration promotes co-operation and sharing of responsibilities among communities, politicians, public administrators and experts because of co-production of decisions that pertain to the climate change policy (Ansell and Gash, 2007:12). Although collaboration requires time (Wanna, 2008:11), it may save time and costs during policy implementation (Ansell and Gash, 2007:563). Collaboration enhances mutual learning and shared

experiences as politicians, public administrators, experts, community representatives and communities put together resources (e.g. money, time, human) in a co-operative and complementary manner (Eden, 1996; Guthiga and Newsham, 2011; Ingold and Fischer, 2014).

However, collaboration may trigger conflicts because of power dynamics, lack of buy-in into the collaboration activities and lack of consensual agreement in relation to who, when and how could collaboration activities be conducted. There has been a rise in incidences of conflicts, for instance, protests and marches, because of a lack of clear co-ordinated collaboration in climate change policy implementation and formulation (Dang, 2018; Warren, 2019; Hügel and Davies, 2020:12). While acknowledging public governance's role in forming new institutions and legislation that mandate collaboration, community participation is typically voluntary. It could be difficult to ensure community buy-in in collaboration activities, particularly when participating is not a priority. Community members may show little interest, especially if participating does not bring food to the table. People are concerned more about their livelihoods. Generally, it is evident in this discussion that collaboration between communities and other actors works best when responsibilities on collaboration activities are clear (Vangen and Huxham, 2010). Nevertheless, collaboration that includes multiple actors and multiple processes may not succeed in reaching consensual decisions because of conflicts during power struggles to control collaboration activities (Ansell and Gash, 2007:547).

3.5.1.3.6 Empirical referents for collaboration

The empirical referents for collaboration are joint activities, the use of participatory techniques to make climate change policy decisions, and co-production of climate change decisions at every stage of climate change policy formulation and implementation. The use of inclusive participatory techniques, evidence of joint activities and co-production of the climate change policy decisions are measurable ways to demonstrate that collaboration within plural and pluralist climate change policy formulation and formulation has occurred to benefit community participation (Guthiga and Newsham, 2011; Bitterman and Koliba, 2020; Ruiz-Mallén, 2020). The details of how the empirical referents could be explained are in Section 3.4.1.3 .1.

3.5.1.3.7 Implications for the theory of collaboration during climate change policy formulation and implementation

Collaboration could enhance community participation during climate change policy formulation and implementation if systematically conceptualised. However, there should be a systematic conceptualisation of collaboration as the concept could be used in various scenarios. Having such theoretical concepts increases the ability to generate evidence based recommendations for the study. The conceptualisation of collaboration in this study seeks to guide data collection, interpretation and analysis. Collaboration is a central concept for community participation during climate change policy formulation and implementation. Therefore, for policymakers and experts to ensure the success of collaboration by facilitating the joint activities that enable communities to make decisions in climate change policy formulation and implementation, collaboration should be conceptualised. More empirical research (qualitative and quantitative), such as the study conducted by Hamilton and Lubell (2018), may be needed to examine how collaboration is promoted to enhance

community participation and the influence of collaboration on behaviour change towards community participation during climate change policy formulation and implementation.

3.5.1.4 Deliberation

Deliberation is a non-hierarchical approach (comprise bottom-up and top-down approaches) to decision making (Reed et al., 2018). To deliberate is to engage in a long and careful consideration (Nabatchi, 2010). Decisions are reached as a result of dialogue and interaction. Currently, there seems to be no universally agreed criterion to assess a successful deliberation process. Maybe, this is because deliberations vary from context to context (Newig et al., 2016).

3.5.1.4.1 Uses of deliberation

The uses of deliberation are adapted from Reed et al. (2018) and are discussed in relation to bottom-up (bottom-up one way communication or consultation and bottom-up deliberation or co-production) and top-down (top-down one way communication or consultation and top-down deliberation or co-production) discussions. Deliberation is defined as careful discussion and examination of the reasons for and against a measure (Cambridge Dictionary, 2020). Deliberation is used where discussions to make policy decisions are top-down (top-down one way communication and top-down co-production) and bottom-up (bottom-up one way communication and bottom-up co-production). Deliberation is used in the literature when community participation during climate change policy formulation is top-down one way communication or consultation (Arnstein, 1969:219; Reed et al., 2018:3). Top-down one way is when the policymakers make decisions after consultation or communication. The policymakers inform communities of their climate change policy decisions (Taylor, 2007). The problem with top-down one way communication is that there is no co-production of climate change policy decisions. This type of deliberation works well in situations where decisions are already made, but still need to be communicated (Reed et al., 2018:3).

The second use of deliberation in the literature is when policymakers initiate participation through top-down deliberation or co-production (Lundin and O'berg, 2013; Reed et al., 2018:3). As for a top-down deliberation or co-production scenario, the policymakers should initiate decisions to discuss with communities and experts (Ayers, 2011). The policymakers retain the responsibility to implement the decisions co-produced. As for top-down co-production, the communities that participate during the decision making on the climate change policy only co-produce decisions but do not get frequent feedback about how their contribution is used to make the climate change policy decisions (Lundin and O'berg, 2013).

Deliberation is also used in situations where there is bottom-up one way communication or consultation and bottom-up deliberation or co-production (Brink and Wamsler, 2019:12; Reed et al., 2018:3). For bottom-up one way communication or consultation, policy decisions are initiated and led by communities (United Nations, 2009:12). The communities have the power to influence decisions. About bottom-up deliberation or co-production, the communities initiate dialogue to policymakers and experts. During the dialogue, decisions are co-produced with other actors (Armeni, 2016; Ertiö and Bhagwatwar, 2017).

3.5.1.4.2 Defining attributes of deliberation

The defining attributes for deliberation are the use of top-down (top-down one way communication or consultation and top-down deliberation or co-production) and bottom up (bottom-up one way consultation and bottom-up one way co-production) discussions to make climate change policy decisions. Deliberation and co-production are in some studies used interchangeably (Reed et al., 2018:3). In practice, deliberation is related to collaboration and co-production but different in meaning. Without bottom-up and top-down discussions to engage a community to decide on the climate change policy, deliberation cannot be said to have occurred (Ayers, 2011; Lundin and O'berg, 2013; Reed et al., 2018:2). A bottom-up approach is any form of engagement initiated or led by communities, whereas a top-down approach is any form of engagement led or initiated by policymakers to empower communities with less power to have a say towards final climate change policy decisions (Reed et al., 2018:2). Engagement means the process of encouraging communities to be interested in community participation (Cambridge Dictionary, 2020). While it remains a fact that policymakers have the formal power to adopt the policy, a two-way discussion between the communities and any other actor involved should take place before making the final climate change policy decisions.

3.5.1.4.3 Cases: model case, borderline case and contrary case for deliberation

The cases used to describe deliberation within the context of a model, borderline and a contrary case are empirical studies purposefully selected to demonstrate the occurrence of the concept. The study by Armeni (2016), "Participation in environmental decision making: reflecting on planning and community benefits", is used as a model case to show the occurrence of deliberation. A model case is a scenario where communities are given the opportunity to make climate change policy decisions through bottom-up and top-down engagement. The study reflected on the conceptual nature of participation (the distinction between models of engagement to enhance participation and public acceptance). Armeni (2016) analysed two major wind projects in England and Wales to explore the need for community-led mitigation measures. The study found that community participation during climate change policy formulation and implementation is considered a democratic right and the idea behind deliberation is to improve the legitimacy (quality and effectiveness) of decisions (Reed, 2008:2419; Reed et al., 2018). Armeni (2016) acknowledges that one way top-down communication or consultation can limit community participation. Instead, the use of top-down and bottom-up approaches have the potential to improve the legitimacy of policy decisions (Irvin and Stansbury, 2004:2). The study concurs with the Theory of Participation in Environmental Management that both deliberation approaches (top-down and bottom-up) should be used, depending on the context (Reed et al., 2018).

The study by Carvalho and Gupta (2012), "State commitment to promoting public participation: the UNFCCC and citizens' roles in climate change politics", is purposefully selected to show a borderline case for deliberation. A borderline case that shows deliberation is a situation where communities are afforded the opportunity to make climate change policy decisions either through bottom-up or top-down approaches (Reed et al., 2018:4). The study acknowledges the importance of two-way discussions on climate change but explicitly discusses top-down deliberation or coproduction. In this borderline case, Carvalho and Gupta (2012) focus on top-down deliberation or co-production. Policymakers and experts initiate climate change decisions to engage communities during climate change policy formulation and implementation. The study is

selected as a borderline case because it leaves out other defining attributes of deliberation such as the bottom-up approach (the bottom-up co-production and bottom-up one way communication or consultation) (Carvalho and Gupta, 2012:1).

An example of a contrary case for deliberation used is a study by Njoroge et al. (2017), "Climate change policy-making process in Kenya: deliberative inclusionary processes in play". A contrary case is when climate change policy decisions are neither made through a bottom-up nor top-down approach. The study notes that although the climate change policy process was inclusive of communities and other actors (politicians, public administrators and experts), the final policy's contents were based on 'experts' reports'. The experts validated the climate change policy in the absence of communities (Njoroge et al., 2017:545). The study clearly shows the importance of managing power imbalances during the deliberations to avoid communities' perspectives, priorities, preferences and knowledge being side-lined by formally organised actors.

3.5.1.4.4 Antecedents for deliberation

An open system of governance, institutionalisation of deliberation, availability of information about climate change and climate change policy could be antecedents for deliberation. Thus, an open system of governance, institutionalisation of deliberation and availability of information about climate change and climate change policy must occur for deliberation to take place (Bulkeley and Mol, 2003). For deliberation to be democratised to benefit community participation, setting up an open system of governance which promotes frequent top-down and bottom-up interactions is required (Jagers and Strippel, 2003; Wamsler et al., 2020). The open governance system democratises deliberations between communities and other actors. The democratisation is in the sense that the community's previously marginalised perspectives (e.g. indigenous knowledge systems) could be incorporated into the climate change policy (Blue, 2015:154).

Institutionalisation of the deliberation process and the community understanding and awareness of climate change and climate change policy must occur for deliberation to take place. From the beginning of deliberations, the policymakers should determine through legislation, institutions and regulations the types of deliberations (Armeni, 2016). It may be critical to determine the institutions and regulations that govern deliberation. The determination of institutions and regulations guides the deliberation process (Swyngedouw, 2013). The participatory techniques to be employed matter.

Again, the availability of information on climate change and climate change policy is critical for deliberation to occur. Community understanding and awareness of climate change and climate change policy is needed for deliberation during climate change policy to occur (see Section 3.2 for details) (Australia. ACT Government, 2014:53). The communities need to understand the anthropogenic nature of climate change and why climate change is a public policy problem (Blue, 2015:152). Information regarding the how part of participation should be clear to communities regarding their contribution to the climate change policy. This brings in indigenous knowledge which allows communities to frame climate change as they perceive and experience it (Egeru, 2012).

3.5.1.4.5 Consequences for deliberation

The consequences of deliberation are discussed with respect to the legitimacy of the climate change policy and support for policy implementation. The climate change policy co-produced as a result of deliberations is perceived as legitimate and this perception is likely to aid support for policy implementation (Irvin and Stansbury, 2004:2). In a bottom-up approach, the community's knowledge is valued for what it is (Mistry and Berardi, 2016). The communities have the opportunity to influence climate change decisions (Arnstein, 1969:216). The bottom-up approaches tend to democratise the process of climate change policy formulation and implementation, which makes the adopted policies legitimate in the eyes of the community (Armeni, 2016:422). As argued by De Vries (2007:145), communities are more likely to co-operate during policy implementation if they are involved in making decisions in the policy process than when decisions are dictated. Neglecting deliberations during the policy process may result in resisted policy implementation (Shepard et al., 2018).

3.5.1.4.6 Empirical referents for deliberation

Empirical referents, which are the measurable ways to demonstrate the occurrence of deliberation are mainly the presence of top-down and bottom-up discussions (Reed et al., 2018). The empirical referents noted here are top-down one way communication (consultation), top-down two-way communication (co-production), bottom-up one way communication (consultation) and bottom-up deliberation (co-production) (Reed et al., 2018:4-5). Top-down and bottom-up deliberations are characterised by reasoned arguments, synergies and co-production of decisions to produce the climate change policy. Top-down one way communication is when the policymakers and experts initiate decisions that relate to the climate change policy, but retain the power to make final decisions (Newig et al., 2016). Top-down deliberation is when the policymakers and experts initiate decisions about the climate change policy but allows for co-production of ideas (Carvalho and Gupta, 2012). As for the bottom-up one way communication, the communities initiate decisions about climate change and persuade the policymakers to include their decisions. Bottom-up deliberation (co-production) is when the concerned communities initiate dialogue to co-produce climate change policy decisions with other actors (politicians, public administrators and experts) (Quilligan; Hamilton and Lubell, 2018).

3.5.1.4.7 Implications for the theory of deliberation during climate change policy formulation and implementation

In order for deliberation to enhance community participation, this study recommends that deliberation should systematically be conceptualised in theory to have a basis upon which a successful deliberation could be measured. The deliberation theory would imply that deliberation does not only happen during policy formulation and implementation but also when designing the participation strategy (Reed et al., 2018). Again, the deliberation focus should be on communities and the public administrators who facilitate the deliberation process (Henstra et al., 2020). However, deliberation in practice may vary across communities. The reason for conceptualising deliberation in this study is to use the concepts to provide empirical data that could add knowledge to the debates on deliberation during climate change policy formulation and implementation. Because of deliberation, climate change policies are normatively regarded as legitimate. Deliberation allows climate change decisions to be made consensually (De Vries, 2007). As such, climate change policy implementation is expected to succeed (UNECE, 2015; UNEP, 2015; UNESCO and UNFCCC, 2016).

3.5.1.5 Democratisation

Democratisation is when policymakers consider decentralisation in decision making and setting up legislation, institutions and regulations that enable communities to have a voice during the climate change policy process (Funder et al., 2017). In other words, democratisation is making the decision-making process democratic (open to scrutiny) (Burnell, 2012). Democratisation is a question of what is desirable or possible to provide ways through which a community could contribute to decision making. Ways to democratise community participation during climate change policy formulation and implementation include, among others, an open decision making process, legislating community participation, availing institutions that promote deliberations and regulating community participation to manage power dynamics (Aben, Friis-Hansen, Agea and Okiror, 2017; Hügel and Davies, 2020:12).

3.5.1.5.1 Uses of Democratisation

The identified uses of democratisation are from the dictionary and the literature. The uses of democratisation are discussed in terms of dictionary meaning, openness of the decision-making process, legislating community participation, availing institutions that promote community decisions, and regulating community participation to manage power dynamics. Democratisation is used in situations where the community participation process during climate change policy formulation and implementation is open. In an open system of governance, decisions are made through bottom-up and top-down deliberation (Reed et al., 2018).

Democratisation of community participation during climate change policy formulation and implementation is used in a scenario where community participation is legislated (Armeni, 2016:425). The legislation regarding how actors could contribute to decision making is usually decentralised by politicians to lower level public administrators to enable communities to have a voice during the climate change policy process (Funder et al., 2017; Reed et al., 2018:7). Actors are given clear responsibilities to avoid power imbalances during decision making. Further, democratisation of community participation during climate change policy formulation and implementation is used in scenarios where institutions are created to increase community decision making power (Swyngedouw, 2005:2003; Katsamunskas, 2016:135).

3.5.1.5.2 Defining attributes for democratisation

The defining attributes that best describe democratisation of community participation during climate change policy formulation and implementation are openness of the decision making process, legislation (at the general level e.g. national) to guide community participation, availability of institutions that promote community decisions, and regulation (specific to community participation) that seeks to manage power dynamics (refer to Section 3.5.1.5.1 for details) (Swyngedouw, 2005:2003; Katsamunskas, 2016:135). In this case, the uses of democratisation are the same as the defining attributes. Democratisation requires transparency of the decision-making process. Communities need to access information regarding climate change and climate change policy formulation and implementation to enable their participation (Bulkeley and Mol, 2003:148; Sprain, 2016; Brink and Wamsler, 2019:94).

3.5.1.5.3 Cases: model case, borderline case and contrary case for democratisation

A study by Bulkeley and Mol (2003), "Participation and environmental governance: consensus, ambivalence and debate", is used as a model case for democratisation. A model case for democratisation is a study which shows the attributes of democratisation, such as transparency in making climate change policy, formulation and implementation of legislation that guides community participation, and regulation of community participation to manage power imbalances (Woodford and Preston, 2013). The study by Bulkeley and Mol (2003) mentions defining attributes identified in Section 3.4.1.5.2 to describe the democratisation of community participation during climate change policy formulation and implementation (Bulkeley and Mol, 2003:149). The defining attributes include the availability of information on how and when a community could participate and the establishment of institutions that promote bottom-up approaches when co-producing policy ideas (Bulkeley and Mol, 2003:149).

A study by Aben et al. (2017), "Local political processes and the management of the Awoja watershed in Eastern Africa", is used as a borderline case for democratisation. The study is a borderline case because it focused on the roles of traditional leaders, local government officials and community members in the management of the Awoja watershed. The study looked at the challenges of plural actors during policy implementation governance. Despite the decentralised governance of climate change adaptation, public administrators, experts, community representatives and the community were given space to make decisions. Consequently, instead of moving policy implementation forward, the power relations among the actors negatively affected policy implementation.

A study by Funder et al. (2017), "Climate change adaptation and decentralisation politics: the case of local governments in rural Zambia", is used as a contrary case for democratisation. Democratisation gives the politicians legitimate power to empower other actors to make decisions through legislation, institutions and regulations. However, in the case of Zambia, the district councils perceive a major disconnect between the national-sector policies and the de facto needs of councils in implementing climate change adaptation, yet public administration facilitates community participation between politicians and experts during climate change policy formulation and implementation (Funder et al., 2017:39;44). Thus, public administration facilitates climate change policy formulation and implementation, and represents local communities in carrying out their duties. Despite public administration representing the interests of the local communities, Funder et al. (2017:45) noted that the central government of Zambia has been reluctant to devolve and relinquish de facto control over decision making and finance to the councils. The political-administrative interface exhibited in Funder, et al. (2017) study makes it to be a borderline case because it shows how the political-administrative interface negatively affects democratisation.

3.5.1.5.4 Antecedents for democratisation

Public policy governance and process transparency could be considered as antecedents of democratisation. Public policy governance and process transparency of democratisation must occur before democratisation occurs (Carvalho and Gupta, 2012; Swyngedouw, 2013). Public policy governance is required to formulate legislation, create institutions and regulate community participation during climate change policy formulation and implementation. Democratisation emphasises

enabling communities to participate in climate change policy formulation and implementation and ensure that community participation influences the final climate change policy (Rydin and Pennington, 2000:154; Callahan, 2007:1180). The communities are given an opportunity to articulate their preferences, priorities and knowledge (Rydin and Pennington, 2000:154). Ultimately, the climate change policy should reflect and represent the views of the community. Community participation is a right and decisions made by communities should not be overruled by scientific knowledge (Mistry and Berardi, 2016). The public policy governance has to promote high level interactions in an open system of governance (Carvalho and Gupta, 2012). The level of interactions are promoted through institutionalisation. The politicians through legislation and regulation should define the nature of interactions, for example, defining the roles of politicians, experts, community representatives, and communities during the interactions, agreeing on the language to be used during interaction, making it clear how conflict could be solved and defining the rules to guide interdependence (Rydin and Pennington, 2000:163). The interactions among actors should be characterised by linear and nonlinear interactions (Easton, 1957; Carvalho and Gupta, 2012; Biljohn and Lues, 2018). Above all, public policy governance should manage power dynamics to ensure communities' decisions are considered as part of the climate change policy.

Process transparency of democratisation must occur for democratisation to occur (Aben et al., 2017). Process transparency in this context simply means whatever measures to democratise community participation during climate change policy formulation and implementation should be perceived as acceptable and 'fair'. The democratisation process should be open to scrutiny to ensure legitimacy of the climate change policy and compliance during policy formulation and implementation. Process transparency concerns the openness of the democratisation process by which climate change decisions are made (Gupta and Mason, 2015). The openness of the democratisation process should include bottom-up and top-down discussions, equal contribution of actors to decisions and accessible information.

3.5.1.5.5 Consequences for democratisation

The consequences for democratising community participation during climate change policy formulation and implementation are input oriented legitimacy, procedural legitimacy and output legitimacy (Boedeltje and Cornips, 2004; Karlsson-Vinkhuyzen and McGee, 2013; Newig et al., 2016:1000). Input oriented legitimacy is the legitimacy of the climate change policy that would come because concerned communities' decisions are equally considered part of the policy (Samaddar et al., 2015; Diver, 2017). Procedural legitimacy is the perception that the decision making process regarding climate change policy formulation and implementation was fair. Fairness in this context simply means that decisions made were monitored and consented to by the concerned communities despite their indirect participation. Output legitimacy is the acceptance of the climate change policy decisions (e.g. policy adoption and implementation) because of a transparent climate change policy process. The legitimacy of the climate change policy could be useful for successful climate change policy implementation (Hamilton and Lubell, 2018; Hileman and Bodin, 2018). However, legitimacy is not tangible or cannot be touched or seen but is based on perceptions. Democratisation of community participation may not guarantee legitimacy for various reasons such as lack of trust in the policymakers, experts and climate change policy formulation and implementation (Burnell, 2012:833).

3.5.1.5.6 Empirical referents for democratisation

Availability of information regarding participation, availability of legislation that governs community participation, availability of institutions (Conway and Schipper, 2011) that facilitate community participation and regulations to support the community's decision making power are empirical referents of democratisation. Availability of information occurs when policymakers encourage communities to participate during climate change policy formulation and implementation through allowing access to information (Woodford and Preston, 2013:371). In terms of available legislation, democratisation could be said to have occurred if the available legislation provides a clear space for the communities to make climate change policy decisions equally. The institutions and regulations that guide community participation should, to a certain degree, be accepted by the communities and be regarded as supporting community participation during climate change policy formulation and implementation.

3.5.1.5.7 Implications for the theory of democratisation during climate change policy formulation and implementation

Concerning this study, the conceptualisation of democratisation is done to bridge the gap between theory and practice by using the concepts for collecting empirical data for the current study. The empirical data is used to analyse democratisation of community participation during climate change policy formulation and implementation. Democratisation should be systematically conceptualised because it has everything to do with democracy. Policies that effect a community should be supported by the same community (De Vries, 2007:145). Therefore, seeking community support during climate change policy implementation enhances direct involvement during the policy formulation (UNECE, 2015; UNESCO and UNFCCC, 2016). Democratisation should be systematically conceptualised by international organisations, such as the UNFCCC to provide leadership to nations and states with regard to climate change decisions if policymakers believe that communities are not only policy implementers, but also influencers of climate change decisions.

3.5.1.6 Cross-sector collaboration

Cross-sector collaboration refers to joint activities between government ministries and departments with policymakers and formal non-state actors (e.g. local and international) (Wanna, 2008:3-4; Adenle et al., 2017:198). The formal non-state actors are in this study referred to as experts. Climate change and community participation are by nature 'wicked problems' that require plural actors across-sectors to engage in policy formulation and implementation jointly. Cross-sector collaboration includes the engagement of various government ministries and departments and non-state actors to facilitate community participation during climate change policy formulation (Adenle et al., 2017:198; Bäckstrand et al., 2017). Cross-sector collaboration occurs among plural actors (politicians, public administrators and experts) within the pluralist environment of climate change policy formulation and implementation to increase community participation (Jänicke, 2017). During cross-sector collaborations, each actor (politicians, public administrators and experts) performs own functions with the aim to enhance community participation.

3.5.1.6.1 Uses of cross-sector collaboration

The uses of cross-sector collaboration are discussed with respect to institutionalisation, sharing of responsibilities, jointly working together across government ministries and departments together with experts and communities capacity building. Cross-sector collaboration is used in scenarios where there is institutionalisation. Institutionalisation is a specification of how cross-sector collaboration could be conducted through legislation in institutions to enable the facilitation of community contribution in climate change policy formulation and implementation (Woodford and Preston, 2013:356; Shen and Steuer, 2017:350). There should be an institutional arrangement regarding how institutions should collaborate. Consequently, for cross-sector collaboration to occur, institutions should have objectives for collaboration and identified techniques through which institutions conduct cross-sector collaboration.

Cross-sector collaboration is used where plural actors share responsibilities to ensure that politicians, public administrators, and experts (national and international) facilitate the formulation and implementation of the climate change policy by communities (Bauer et al., 2012). A transparent sharing of responsibilities (e.g. facilitation roles and resource mobilisation) must occur for cross-sector collaboration to be said to have occurred. The democratic sharing of responsibilities is used to show the evolution of public administration functions of government from old public administration to NPG where, the politicians as the central actors move away from hierarchical relations to create space for the roles of other actors such as experts, government departments and ministries during climate change policy formulation and implementation. The experts define their own ground rules and objectives for cross-sector collaboration rather than being dictated by the policymakers (Innes and Booher, 1999:37). Whatever responsibility is shared, it should empower communities to input contributions into the climate change policy.

Cross-sector collaboration is used where government departments and ministries jointly work together with experts. Jointly working together means there is some form of partnership, co-operation, co-facilitation and negotiations to make cross-sector collaboration a success within pluralist climate change policy formulation and implementation (Innes and Booher, 2005:34). Partnership is when politicians, public administrators and experts jointly work together to enable community participation during climate change policy formulation and implementation (Bauer et al., 2012). Co-operation is when politicians, public administrators and experts jointly work towards increasing direct community participation in climate change policy formulation and implementation (Bitterman and Koliba, 2020). Co-facilitation is when politicians, public administrators and experts lead deliberations, collaborations and co-production processes to assist communities to make decisions during the climate change policy formulation and implementation (Betts and Schroeder, 2015). Negotiation is when the politicians, public administrators and experts attempt to reach agreements by discussing community participation in climate change policy formulation and implementation.

Cross-sector collaboration is used where policymakers and experts put resources (e.g. finance and time) together to build the capacity of communities to enable their participation during climate change policy formulation and implementation (Jänicke, 2017). Cross-sector collaboration is used in circumstances where the policymakers and experts use their sectors to collectively create a conducive environment for community participation during climate change policy formulation (Innes

and Booher, 1999:30). Under cross-sector collaboration, the government ministries and departments in collaboration with experts interdepend for resources to increase community capacity to contribute during climate change policy formulation and implementation (Innes and Booher, 1999:30). The interdependence is because policymakers and experts have interests and expertise in enhancing community participation in climate change policy formulation and implementation (Bäckstrand et al., 2017).

3.5.1.6.2 Defining attributes for cross-sector collaboration

Collaborations, partnerships, interactions and co-facilitation could best describe cross-sector collaboration between government ministries and departments with experts. Without the characteristics mentioned above, it is difficult to say cross-sector collaboration occurred. Cross-sector collaboration is used to describe multi-level governance between experts and intergovernmental sectors, ministries and department collaborations (Jänicke, 2017). Again, cross-sector collaboration is sometimes associated with network governance (Kapucu, 2014). Cross-sector collaboration is more or less collaboration in that it is still collaboration (Bryson, Crosby and Stone, 2015; Di Gregorio et al., 2019). However, the difference between cross-sector collaboration and collaboration is that cross-sector collaboration is jointly working together by government ministries and departments with experts, whereas collaboration includes jointly working together of all stakeholders (Bäckstrand et al., 2017).

Cross-sector collaboration is said to have occurred if intergovernmental ministries and department collaborations with experts exist to increase community participation in climate change policy formulation and implementation (Shen and Steuer, 2017:350). Collaboration within government ministries and departments with experts shows the occurrence of cross-sector collaboration (Innes and Booher, 1999:37; McNamara et al., 2020). What exists in these intergovernmental ministries and departments and experts are ideas from individuals of authority. The ideas are brought together to influence community participation through the facilitation of collective community action in climate change decisions (Di Gregorio et al., 2019). The working relationships among intergovernmental ministries and departments, and experts seek to advance one policy purpose that creates opportunities for a community to make climate change decisions (Jagers and Strippel, 2003). The government departments and ministries and experts have useful resources, which are co-ordinated to bring together a community into collective decision making (Jänicke, 2017).

Cross-sector collaboration is said to have occurred if partnerships exist between government ministries and departments together with experts that seek to promote community decisions in climate change policy formulation and implementation (Hahn and Pinkse, 2014). Partnerships in cross-sector collaborations are joint activities conducted among sectors of government ministries and departments with experts to facilitate inclusive participation of plural actors during climate change policy formulation and implementation (Forsyth, 2010). Partnerships address climate change policy implementation challenges and allow experts to invite the previously excluded actors (communities) to contribute to the climate change policy (Forsyth, 2010:684).

Cross-sector collaboration is said to have occurred where there is interaction between politicians, public administrators and experts (Shen and Steuer, 2017). The interactions happen through the opening up of spaces that were traditionally controlled by the government (Shen and Steuer, 2017:350). The policymakers disclose information. The role of the politicians is to regulate practices by experts. However, the international experts also provide general guidelines to politicians' practices collectively, that relate to community participation during climate change policy formulation and implementation (UNFCCC, 1992; Paris Agreement, 2015).

Cross-sector collaboration is said to have occurred if there is co-facilitation of community participation during climate change policy formulation and implementation (Price, 2018). Co-facilitation is when the government ministries and departments in collaboration with experts combine skills, capacities (resources) and expertise to move community participation forward (Jänicke, 2017). The different actors build communication networks to make climate change policy decisions (Bauer et al., 2012). The politicians, public administrators and experts work together to initiate joint activities and to jointly manage the activities to benefit community participation. Every group of actors seeks to sustain joint action where all actors equally contribute to climate change policy decisions. Co-facilitation would then occur among plural actors within the pluralist environment of climate change policy formulation and implementation (Jänicke, 2017). Each group of actors performs their own functions to enhance community participation.

3.5.1.6.3 Cases: model case, borderline case and contrary case for cross-sector collaboration

A study by Jagers and Strippel (2003), "Climate governance beyond state", is used as a model case for cross-sector collaboration. The study supports the defining attributes of cross-sector collaboration noted in Section 3.4.1.6.2. Cross-sector collaboration is best described by the existence of collaborations, partnerships, interactions and co-facilitation within government ministries and departments with experts to benefit community participation. Consequently, cross-sector collaboration deals with purposeful mechanisms and measures aimed at facilitating community participation during climate change policy formulation and implementation (Jagers and Strippel, 2003:385).

A study by Di Gregorio et al. (2019) "Multi-level governance and power in climate change policy networks", is used as a borderline case because the study identified major barriers to cross-sector communication and collaboration between national and sub-national levels in climate change mitigation and adaptation policy processes in Brazil and Indonesia (Di Gregorio et al., 2019). The study found evidence of major barriers to cross-sector collaboration because of political institutional constraints. The constraints were due to power imbalances within government ministries and departments. The study found that the most powerful network community in Brazil and Indonesia had limited collaboration ties (e.g. partnerships, interactions and co-facilitation) with other actors (Di Gregorio et al., 2019:71). The study by Di Gregorio et al. (2019) is also used as a contrary case for cross-sector collaboration because it lacks what it takes to improve cross-sector collaborations. Power dynamics hamper cross-sector collaborations.

The challenges noted by Gupta (2007:136), in the study "The multi-level governance of climate change" are purposefully selected as a contrary case of cross-sector collaboration. The case studies used by Gupta (2007) reveal that most cross-

sector collaborations in Italy and France about climate change did not show clear responsibilities for government ministries, government departments and experts. Cross-sector collaboration which does not occur in a pluralist environment is not institutionalised and decentralised to government ministries and departments, and experts. Under such circumstances, the case depicts a contrary case of cross-sector collaboration (Gupta, 2007:136). The politicians under cross-sector collaboration should find ways to collaborate community participation through regulation to conduct joint activities, partner, interact and co-facilitate with the experts and public administrators (Shen and Steuer, 2017:350).

3.5.1.6.4 Antecedents for cross-sector collaboration

Partnerships, clear objectives for collaboration, co-operations, management of power dynamics, and trust could be antecedents for cross-sector collaboration. Antecedents determine whether or not cross-sector collaboration occurs. Partnerships (Australia. ACT Government, 2014:53), co-operations (Jagers and Strippel, 2003), managed power dynamics (Di Gregorio et al., 2019) and trust should occur first for cross-sector collaboration to occur. In this study, partnership means the state of being partners (government ministries and departments, together with experts) and to work together to increase community decisions in the climate change policy (Betts and Schroeder, 2015). Working together as partners increases the chance of tackling the usual barriers of community participation in climate change policy formulation and implementation (Lorenzoni et al., 2007). These barriers include non-effective socio-political, administrative and public policy governance (Friis-Hansen, 2017b).

Cross-sector collaboration needs actors to set objectives of collaboration and plan how to achieve them (Gardner, Dowd, Mason and Ashworth, 2009:6; Clar, Prutsch and Steurer, 2012). The facilitators of collaboration should be clear about the actors involved during community participation and the context (institutions) within which the collaboration would occur. The roles of experts should be clear whether they will enhance community participation as activists who raise awareness on climate change and climate change policy formulation and implementation, be mediators who bring politicians and public administrators together with communities during climate change policy formulation and implementation and be stirrers of new mechanisms that increase direct community engagement during policy implementation (Betsill, 2015:251). In some cases, using already existing collaborative activities might help to achieve collaboration. Some actors may not understand their roles, resist facilitation and fear to diminish power because of cross-sector collaboration (Gilley, 2012).

The occurrence of cross-sector collaboration is when leaders (politicians, public administrators and experts, both international and local) co-operate to co-ordinate community participation. There are four types of leadership, as identified by Parker and Karlsson (2015:192). These are i) structural leadership, which is having power because of resources, ii) directional leadership is demonstrated when leading by example, iii) idea-based leadership, which is framing and identifying problems for collective solutions, and instrumental leadership, which is taking the lead to solve problems collectively (Parker and Karlsson, 2015:192). In seeking direct community participation during climate change policy formulation and implementation, it should be clear which roles politicians, public administrators and experts will play. The proper definition of leadership roles could reduce problems that are usually caused by the political-administrative interface (Di Gregorio et al., 2019). Consequently, it could be critical for policymakers and experts to create committees, share

responsibilities, select a leading administrative department, establish intra-ministry and intra-department committees to bring together experts and policymakers and establish reporting structures for cross-sector collaboration to occur. The politicians are required to allow considerable autonomy to public administrators and experts to assist with facilitation of community participation during climate change policy formulation and implementation. The politicians lead and determine the interactions through legislation, institutions and regulations (Shen and Steuer, 2017). However, it remains to be seen how co-ordination could be clear because of the issue of political-administrative interface.

Management of power dynamics must occur for cross-sector collaboration to occur (Di Gregorio et al., 2019). Power dynamics could be managed by stipulating the rules of interaction (UNFCCC, 1992; Paris Agreement, 2015; UNEP, 2015). As for cross-sector collaboration, the power dynamics manifest through the use of formal decision making power. A group of actors with formal decision making power has the power to affect collaboration activities through legislation, institutions and regulations (Carvalho and Gupta, 2012). Experts are required to comply voluntarily with collaboration activities jointly carried out with politicians and public administrators to carry out community-based adaptation and mitigation activities. The international experts also wield power to a certain extent through conventions and protocols and politicians should manage this through public policy governance (Ingold and Fischer, 2014:89).

Trust must occur for cross-sector co-ordination to occur (Ingold and Fischer, 2014:89). Trust is essential for co-ordination during cross-sector collaboration. Trust holds government ministries, government departments and experts, together. Trust is built over time because of interactions between the politicians, public administrators and experts. Trust causes politicians, public administrators and experts to fulfil their obligations, offer support (e.g. money), communicate openly and work harmoniously. The public policymakers should address the issue of distrust that usually results because of the dominance of politicians, public administrators and experts in climate change policy formulation and implementation (Jänicke, 2017). The inputs of politicians, public administrators and experts into climate change policy formulation and implementation are usually regarded as objective and rigorous compared to community inputs (Mistry and Berardi, 2016). Again, politicians usually control the whole climate change policy formulation and implementation process because of the formally vested power. This view often leads communities to distrust in the climate change cross-sector collaborations, as evidenced in the formulation and implementation of NAPAs in Africa (Adenle et al., 2017). Ultimately, the ability of cross-sector collaboration to enhance community participation during climate change policy formulation and implementation hinges on how politicians, public administrators and experts facilitate participatory community participation to enable community ideas to be incorporated in the climate change policy.

3.5.1.6.5 Consequences of cross-sector collaboration

Division of labour, sharing of expertise and resources, blurring of lines of accountability and power imbalances could occur because of the occurrence of cross-sector collaboration. The aforementioned are consequences of cross-sector collaboration. Cross-sector collaboration can encourage division of labour in terms of who should do what, when and how to avoid duplication of duties for the benefit of the communities (Crosby et al., 2010; Mees et al., 2012; Kapucu, 2014). Cross-sector collaboration at the international level requires international experts to provide principles and norms, for

example, distribution of costs and benefits when tackling climate change issues. In cross-sector collaborations, experts share experiences and expertise on a voluntary basis, which may be a problem if there are other issues preferred to solve to community participation (Wanna, 2008). Experts may disrupt community participation because accountability is mainly emphasised to politicians who represent the communities who elected them into office (Mees and Driessen, 2018).

However, cross-sector collaboration may blur lines of accountability and may trigger conflicts because of power dynamics. Cross-sector collaboration could blur the lines of accountability because traditionally, politicians are accountable to communities through elections, while public administrators are accountable to communities through bureaucracy (Wengert, 1976). Arguably, the traditional mechanisms for accountability could not suffice because of the shift from government to governance (Mees and Driessen, 2018:4). Cross-sector collaboration between multiple skilled actors within government ministries, government departments and experts could blur lines of accountability (Wanna, 2008:10). When the expectations of communities are not met, politicians, public administrators and experts may play the blame game to evade accountability for their actions. It is critical that the objectives of collaboration are clearly agreed upon and allocated. Otherwise, unclear objectives for cross-sector collaboration may result in evaded accountability (Mees and Driessen, 2018:6).

Power imbalances concerning decision making could occur because of cross-sector collaboration (Kapucu, 2014:4). In cross-sector collaboration, the politicians remain the most powerful actors because of the formal power vested in them (Jänicke, 2017:113). Politicians tend to have more centralised power compared to other actors (e.g. public administrators and experts). Public policy governance plays a central role in making regulations, institutions and legislation that support cross-sector collaboration (Swyngedouw, 2013). Cross-sector collaboration within government ministries, government departments and experts may be politicised. Thus, conflicting strategies and diverging solutions may stall progress when facilitating community participation. Negative unanticipated consequences may also happen. Thus, cross-sector collaboration could result in difficulties in getting buy-in of well organised and resourced experts (Wanna, 2008).

3.5.1.6.6 Empirical referents for cross-sector collaboration

Partnerships, co-operation, resource mobilisation, cross-sector co-ordination and co-facilitation are the measurable ways (empirical referents) to demonstrate the occurrence of cross-sector collaboration. For cross-sector collaboration to be a success, partnerships, co-operation, resources mobilisation, cross-sector co-ordination and co-facilitation should occur. In relation to community participation during climate change policy formulation and implementation, partnership is the interactor co-operative working relationships to establish what needs to be done by policymakers and experts, where and how, over a specified period (McQuaid, 2010:128). Co-operation is the process of politicians, public administrators and experts working together to ensure active community participation during climate change policy formulation and implementation (Jänicke, 2017). Resource mobilisation increases the resources (e.g. money, expertise, knowledge) brought together by policymakers and experts to promote community participation (Betsill, 2015). Cross-sector co-ordination is concerned with one actor among the policymakers and experts leading, managing and facilitating other actors

on broadly agreed objectives (Smyth, 2008). Co-facilitation is jointly taking the lead to manage community participation during climate change policy formulation and implementation (Smyth, 2008).

3.5.1.6.7 Implications for the theory of cross-sector collaboration during climate change policy formulation and implementation

The implications of analysing cross-sector collaboration in the current study is to use the concept for data collection, analysis, and interpretation of the results. Cross-sector collaboration could build capacity and enable politicians, public administrators and experts to facilitate community participation during climate change policy formulation and implementation (De Vries, 2007). Cross-sector collaboration has been widely studied (Shergold, 2008; Ingold and Fischer, 2014; Betsill, 2015; Hileman and Bodin, 2018). However, a standard conceptualisation of cross-sector collaboration could help tackle the challenges of community participation during climate change policy formulation and implementation within a pluralist climate change policy formulation and implementation environment. Thus, a standard description for cross-sector collaboration could be critical to guide interactions among politicians, public administrators and experts to benefit community participation to formulate and implement climate change policy. Cross-sector collaboration is about politicians, public administrators and experts coming together to partner, collaborate, interact and co-facilitate community participation during climate change policy formulation and implementation (Jänicke, 2017). It is about who does what, when and how to facilitate inclusive climate change policy formulation and implementation (Lövbranda, Hjerpeb and Linnér, 2017). This study acknowledges the available scholarship on cross-sector collaboration which explains the concept (Shergold, 2008; Ingold and Fischer, 2014; Betsill, 2015; Hileman and Bodin, 2018). However, the study adds on to the debate of cross-sector collaboration to support the development of a coherent theory of cross-sector collaboration for future research and practical cross-sector collaboration during climate change policy formulation and implementation.

In concluding the discussion about co-production, collaboration, deliberation, democratisation and cross-sector collaboration within plural and pluralist climate change policy formulation and implementation, what is noteworthy is that the concepts partially overlap and partially differ. The main purpose of conceptualising co-production, collaboration, deliberation, democratisation and cross-sector collaboration is to attempt to reach some kind of theoretical understanding regarding the use of these concepts in the context of plural and pluralist climate change policy formulation and implementation. Deliberation, collaboration and co-production are in some studies used interchangeably. In practice, co-production, deliberation, collaboration, deliberation and democratisation are related but different in meaning (Innes and Booher, 1999:37; Fischer, 2015:437). Co-production includes collaboration, deliberation, democratisation and cross-sector collaboration, but it is noteworthy that the concepts are not necessarily the same. Above all, co-production, collaboration, deliberation, democratisation and cross-sector collaboration occur within a big environment called plural and pluralist climate change policy formulation and implementation. Table 3.6 gives an overview of all the discussed concepts.

Table 3.6: Co-production, collaboration, deliberation, democratisation and cross-sector collaboration within a plural and pluralist climate change policy formulation and implementation

Concept	Uses	Defining attributes	Antecedents	Consequences	Empirical referents
Plural and pluralist climate change policy formulation and implementation	To describe: ▪ administrative functions of government. ▪ interrelationships and interdependencies. ▪ complex interrelationships. ▪ interactions.	▪ Multiple actors (politicians, public administrators, experts, community representatives and communities). ▪ Multiple processes. ▪ Interdependence. ▪ Interrelationships. ▪ Interaction.	▪ Management of power dynamics. ▪ Clear objectives for collaboration. ▪ Occurrence of socio-political, administrative and public policy governance.	▪ Diversity. ▪ Dynamics of interactions. ▪ Complexity.	▪ Collaboration. ▪ Co-production. ▪ Deliberation. ▪ Democratisation. ▪ Cross-sector collaboration.
Co-production	▪ Co-plan climate change decisions for each policy stage. ▪ Co-design the co-planned climate change policy decisions for each policy stage. ▪ Co-implement the co-planned and co-designed climate change policy decisions for each policy stage. ▪ Co-evaluate the co-planned, co-designed, co-implemented climate change policy decisions for each policy stage.	▪ Co-plan the climate change decisions for each policy stage. ▪ Co-design the co-planned climate change policy decisions for each policy stage. ▪ Co-implement the co-planned and co-designed climate change policy decisions for each policy stage. ▪ Co-evaluate the co-planned, co-designed, co-implemented climate change policy decisions for each policy stage.	▪ Having clear objectives for co-planning, co-deigning, co-implementing and co-evaluating. ▪ Management of power dynamics.	▪ Generation of decisions that are 'non-scientific' from communities ▪ Democratisation (opening up of decision making process to previously excluded actors). ▪ Negative change of actors' relations. ▪ The need for additional resources.	▪ Redistribution of power. ▪ Deliberation. ▪ Collaboration.
Collaboration	▪ Where there is evidence of joint activities. ▪ Where participatory techniques are used. ▪ Where there is presence of co-production.	▪ Jointly working together. ▪ Use of participatory methods and techniques. ▪ Evidence of co-production.	▪ Process transparency. ▪ Balancing of power dynamics ▪ Incentives. ▪ Trust	▪ Co-production of climate change decisions. ▪ Saving time and costs. ▪ Mutual learning. ▪ Shared experiences.	▪ Jointly working together ▪ Use of participatory techniques to make climate change policy decisions

				▪ Conflicts because of power dynamics. ▪ Lack of buy-in into the collaboration activities. ▪ Lack of consensual agreement.	▪ Co-production of climate change decisions
Deliberation	▪ Bottom up discussion (e.g. bottom-up one way communication or consultation and bottom-up deliberation or co-production). ▪ Top-down discussion (top-down one way communication or consultation and top-down deliberation or co-production)	▪ Bottom-up discussions ▪ Top-down discussions	▪ An open system of governance. ▪ Institutionalisation of deliberation. ▪ Information about climate change and climate change policy.	▪ Perceived legitimate climate change policy. ▪ Support for policy implementation.	▪ Bottom-up one way communication or consultation ▪ Bottom-up deliberation or co-production) ▪ Top-down one way communication or consultation ▪ Top-down deliberation or co-production
Democratisation	▪ Where there is openness of the decision-making process. ▪ Where there is legislation for community participation. ▪ Where institutions are available that promote community decisions. ▪ Where community participation is regulated to manage power dynamics.	▪ Openness of the decision making process. ▪ Legislation (at the general level e.g. national) to guide community participation. ▪ Availability of institutions that promote community decisions. ▪ Regulation (specific to a community) that seeks to manage power dynamics.	▪ Public policy governance. ▪ Process transparency.	▪ Input oriented legitimacy. ▪ Procedural legitimacy. ▪ Output legitimacy.	▪ Availability of information regarding participation. ▪ Availability of legislation that governs community participation. ▪ Availability of institutions.
Cross-sector collaboration	▪ Where there is institutionalisation. ▪ Where there is sharing of responsibilities among politicians, public administrators and experts	▪ Collaborations. ▪ Partnerships. ▪ Interactions. ▪ Co-facilitation.	▪ Clear objectives for collaboration. ▪ Partnerships. ▪ Co-operations.	▪ Division of labour. ▪ Sharing of expertise and resources ▪ Blurring of lines of accountability	▪ Partnerships. ▪ Co-operation. ▪ Resource mobilisation. ▪ Cross-sector co-ordination.

	▪ Where there is working together across government ministries and departments, together with experts. ▪ Where there is capacity building for communities.		▪ Management of power dynamics. ▪ Trust.	▪ Power imbalances	▪ Co-facilitation.

Sources: Arnstein (1969); Moore (1995); Innes and Booher (1999); Jagers and Strippel (2003); Pestoff et al. (2006); Ansell and Gash (2007); Callahan (2007); Gupta (2007); (Huxham and Vangen, 2008); Wana (2008); Crosby et al. (2010); (Forsyth, 2010); Vangen and Huxham (2010); Carvalho and Gupta (2012); Homsy and Warner (2013); Ansell (2016); Bäckstrand et al. (2017); Brink and Wamsler (2019); Reed et al. (2018); and Samaddar et al. (2019)

3.5.2 The plural and pluralist nature of community participation in climate change policy formulation and implementation

Undoubtedly, including communities during climate change policy formulation and implementation is inevitable due to the plural and pluralist nature of the climate change policy process. Nevertheless, there seems to be little detail in the available literature about how exactly community participation in practice could be structured at every stage of the climate change policy process (Burton et al., 2004:263; Runhaar, 2009; Burton and Mustelin, 2013:411; Wright et al., 2014:323; Uittenbroek et al., 2019:2530). Conceptual understanding of what constitutes the roles of policymakers in facilitating multiple processes, such as co-production, collaboration, deliberation, democratisation and cross-sector collaboration to enhance community participation during climate change policies, is still limited (Hegger et al., 2017; Mees et al., 2019:199; Uittenbroek et al., 2019). Arguably, enhancing community participation requires policymakers to invest more in understanding how community participation should be structured at every stage of the climate change policy process. Thus, this study focuses on the conditions under which communities can meaningfully contribute during the climate change policy formulation and implementation in a plural and pluralist environment (summarised in Table 3.3 and Figure 3.2). Therefore, this section will discuss the characteristics of community participation in each policy stage, the relevant NPG components, multiple actors (politicians, public administrators, experts, community representatives and communities), and multiple processes. After the discussion for each policy stage, a synthesis is given. Lastly, the shortcomings of community participation in a plural and pluralist environment are pointed out.

The shortcomings of community participation in a plural and pluralist environment are discussed for every policy stage in the context of a 'wicked problem'. A wicked problem in this study is defined as a complex policy problem involving multiple actors and multiple processes in non-linear interactions (Peters, 2017:385). The policy problem may have serious consequences if not addressed 'properly' (Peters, 2017:385). Because of the multiple actors (plural) and multiple processes (pluralist), community participation during climate change policies is described as a 'wicked problem' (Osborne, 2010b; Sprain, 2016). Resultantly, the characteristics of a wicked problem are presented here as shortcomings of community participation in climate change policy formulation and implementation. According to Rittel and Webber (1973), every 'wicked problem' could be described using ten characteristics. The characteristics of a 'wicked problem' include (i) difficult to define, (ii) no stopping rule (community participation is vague and broad), (iii) solutions are not true or false, but good or bad, (iv) no immediate test for solutions, (v) all attempts to solve the problem may have irreversible effects or consequences, (vi) no clear solutions, (vii) essentially unique, (viii) may be a symptom of another problem, (ix) multiple explanations, and (x) the policymaker 'has no right to be wrong', no chance to make mistakes because effects can matter a great deal to the communities (Rittel and Webber, 1973:161-166; Head and Alford, 2015; Peters, 2017:388). A more detailed narrative and insightful discussion on the characteristics of wicked problems than is discussed here is provided by Rittel and Webber (1973:161-167); and Peters (2018a).

3.5.2.1 Stage 1 – Agenda setting

During climate change agenda setting, co-production seems to be the dominating characteristic that improves the level of community participation. Co-production during agenda setting involves communities participating as co-decision-makers,

co-planners, co-designers and co-evaluators of the climate change policy agenda. In other words, the climate change policy agenda should predominantly be led and developed by community members through interacting, collaborating and deliberating with other actors (politicians, public administrators, experts and community representatives) (Mees et al., 2019:200; McNamara et al., 2020). A community identifies causes, risks and impacts of climate change and decides the policy agenda together with other actors (Samaddar et al., 2019:357). What constitutes climate change causes, risks and impacts should be defined from the communities' perspectives. Hence, in applying socio-political governance during agenda setting, the co-production of the causes, risks and impacts considers the community's values (e.g. participation values, level of wealth and family), norms, indigenous knowledge and culture in a way that a community relates with their environment (Adger et al., 2012:5; Oxford English Dictionary, 2017:5; Dang, 2018; Brink and Wamsler, 2019). The community's interaction with other actors (politicians, public administrators, experts and community representatives) is necessary for, amongst others, obtaining inputs and demands for climate change policy agenda (Easton, 1957:384).

Administrative and socio-political governance are the main components of NPG that influences politicians, public administrators, experts and community representatives regarding how they can facilitate communities to contribute to the climate change policy agenda. The relevance of administrative governance during agenda setting is that it specifies how plural actors within a pluralist environment should facilitate communities to define the climate change policy agenda (Brink and Wamsler, 2019; Reed et al., 2018:5-6; Mees et al., 2019). It is noteworthy that the pluralist actors are brought together to benefit community participation through the co-ordination by public administrators (Di Gregorio et al., 2019). Also, socio-political governance is relevant to the policy agenda because it specifies to the actors the direction of transition from hierarchical and market forms of governance to the use of indigenous knowledge systems as a way of robust involvement of communities during the definition of a policy problem (Smyth, 2008; Adger et al., 2012; Ahearn, 2019). Applying socio-political governance and administrative governance during agenda setting ensures that a single group of actors does not dominate the climate change agenda but rather includes other groups of actors as well (Egeru, 2012; Chanza and De Wit, 2016; Ahearn, 2019). Every actor has a role to play to influence the climate change agenda that is community based (Sprain, 2016:63). The techniques used to set the climate change agenda dictate the intensity and expected outcomes of community participation (Creighton, 2005; Reed, 2008; Samaddar et al., 2019:359). Regarding the roles of actors, politicians publicise the climate change policy agenda and the short and long term benefits of community participation (Anderson, 2010:85; O'Faircheallaigh, 2010:20). Both politicians and community representatives make preliminary efforts to meet or communicate with a community, explaining what the climate change policy agenda setting entails and encouraging community members to participate to build the trust and legitimacy of the climate change policy process (Fosbenner, 2009). The public administrators ensure that the community to be affected by the climate change policy and their community representatives are included during agenda setting (Few et al., 2007:56). The public administrators are expected to co-ordinate the co-production, facilitate deliberations and manage cross-sector collaborations to ensure that the views of community members are considered from their perspectives during climate change agenda setting (Wu et al., 2018:7).

The experts mainly promote interaction and collaboration between communities and other actors for an inclusive contribution to the climate change policy agenda (Jung, 2010:351). Globally, international experts set obligations and standards of behaviour as a way to enable collective action for communities (Meakin, 1992; UNFCCC, 1992:17; Oberthür et al., 2017:2). The obligations and standards are set through international organisations, international treaties and transnational arrangements to signal guidance to governments to pursue a certain policy trajectory that assists to synchronise and stimulate community participation in the climate change policy process (Klijn and Koppenjan, 2000:7; Oberthür et al., 2017:2). Unlike the international experts who signal guidance, the local experts should reach out to marginalised community members who may have little power in pre-existing community decision-making for their inclusion in the climate change policy agenda setting (Few et al., 2007:53). The local experts facilitate collaboration between policymakers and marginalised community members who could be reluctant to use their time and knowledge to discuss the climate change policy agenda (Few et al., 2007:56). The community representatives legitimise the climate change agenda setting process by consenting to it. In some communities, community members may refuse to participate in climate change agenda setting without the community representatives' consent to the policy agenda (Samaddar et al., 2019:366). If the agenda setting is perceived to be legitimate, the community representatives, who overlap as community members, together with the policymakers and experts, mobilise support for easy agenda setting (Samaddar et al., 2019:364).

During agenda setting, multiple processes are those that involve administrative governance, socio-political governance and policy nudging, which guide the behaviour of the politicians, public administrators, experts and community representatives on how to ensure community input in the climate change agenda (Brink and Wamsler, 2019; Mees et al., 2019). Communities are required to engage with policymakers at all stages of the policy process considering the nature of community participation in the climate change policy process (Carvalho and Gupta, 2012:1; Uittenbroek et al., 2019). During co-production, deliberation, collaboration and interaction to formulate a climate change policy, changes in community behaviour towards climate change and climate change policy process is inevitable (Carvalho and Gupta, 2012:1; Brink and Wamsler, 2019). Community behaviour may lead to action or inaction regarding community participation during the climate change policy formulation and implementation (Sprain, 2016:72). Thus, policy nudging becomes a necessity to enhance community participation at every stage when making the climate change policy (Ewert, 2019). The interaction and collaboration of these multiple actors should result in interdependence for resources to increase community co-production of the climate change policy agenda. Through socio-political governance, the roles of the policymakers, experts and community representatives encourage communities to participate as equal decision makers and social learners (by sharing indigenous knowledge systems) (Glucker et al., 2013:2532; Newig et al., 2018; Uittenbroek et al., 2019). Because of administrative governance, the politicians are required to democratise the agenda setting to promote co-governance to involve the communities in the climate change policy agenda actively.

During the interactions, collaborations and deliberations, the actors could use participatory techniques, which include the following: PRA techniques (Creighton, 2005:126; Green and Raygorodetsky, 2010; Piccolella, 2013), participatory technology (Creighton, 2005:126; Rask, 2013; Uittenbroek et al., 2019:2534), consensus building (Innes and Booher, 1999; Creighton, 2005:109), facilitation (Creighton, 2005:111), focus groups (Patton, 2002:385-386; Halfacre, 2009),

interviews, (Oppenheim, 1966:2; Creighton, 2005:128), public hearings (Creighton, 2005:130) and workshops (Creighton, 2005:134; Dumar, 2010:756; Bartels et al., 2013). However, politicians should manage power dynamics through formulating regulations that enhance community participation despite literacy level. The public administrators are required to build support (putting in place the objectives for collaboration and deliberation), facilitate climate change agenda collaboration, interaction and deliberation processes that promote community contribution in climate change agenda setting (Berry, Koski, Verkuijl, Strambo and Piggot, 2019:3). The processes followed whether administrative or socio-political governance and techniques used determine the extent of community influence during the climate change agenda setting.

Finally, the plural and pluralist nature of community participation during agenda setting is synthesised. The contribution of communities' ideas in climate change agenda setting depends on the governance methods used, participatory techniques used and the actors facilitating their participation among plural actors in a pluralist agenda setting (Brink and Wamsler, 2019; Mees et al., 2019). The discussion of climate change policy agenda setting in respect of the pluralist nature of community participation mainly focuses on the characteristics, such as co-producing climate change policy agenda, through applying the processes of socio-political and administrative governance (Armeni, 2016). Through interactions, deliberations and collaborations facilitated by other actors (politicians, public administrators, experts and community representatives), communities participate as co-decision-makers, co-planners, co-designers and co-evaluators of the climate change policy agenda (Reed, 2008; Glucker et al., 2013; Uittenbroek et al., 2019). During the co-production process of the climate change agenda, the public administrators act as co-ordinators, community participation managers, cross-sector managers, facilitators of deliberations and facilitators of collaboration, while the politicians promote co-governance through democratisation of the climate change policy agenda (Bulkeley and Mol, 2003; Escobar, 2017). As for the experts and community representatives, they work alongside public administrators to promote community interaction and collaboration with the politicians, public administrators and community representatives (Fosbenner, 2009). The interaction of the external actors (consisting of communities and community representatives) with the internal actors (politicians, public administrators and experts) is necessary for, amongst others, obtaining inputs and demands for agenda setting (Easton, 1957:384). Resultantly, the interaction, collaboration and deliberation should lead to co-production of the climate change policy agenda (Sprain, 2016).

3.5.2.1.1 Shortcomings of plural and pluralist during climate change agenda setting

Shortcomings presented by the plural and pluralist environment of climate change policy agenda are difficult to define, attempting to solve a problem may have consequences, the policy agenda sometimes has multiple explanations regarding what would be believed to be causing the problem, and the facilitators have no chance to make a mistake in identifying the policy agenda because effects may matter a great deal to communities (Jennings, 2009; Weber and Stern, 2011; Adger et al., 2012; Shepard et al., 2018; Ahearn, 2019; Kamara, Agho and Renzaho, 2019). These shortcomings are relevant to climate change policy agenda setting because they indicate the complexity of the agenda setting process. The complexity of agenda setting relates to power dynamics in defining the agenda because of plural actors. A problem may attract interest from the communities, community representatives, experts, public administrators and politicians, whereas

other problems may only attract the attention of public administrators and politicians (Anderson, 2003:102; Dickinson, Crain, Yalowitz and Cherry, 2013). Community participation during climate change agenda setting is 'wicked' because there is no room for communities to participate through trial and error; the amount of time used significantly affects people's lives (Rittel and Webber, 1973:163). Again, defining the climate change agenda is difficult (Rittel and Webber, 1973:161). The climate change policy agenda is difficult to define in terms of what programmes could be embarked on to adapt to and mitigate climate change. This is because climate change problems are linked to many other policy problems such as health and development (Ebi and Semenza, 2008; Hawkins and Wang, 2012).

The influence of community participation during agenda setting depends on 'effective' application of socio-political and administrative governance, co-production and policy nudging (Takao, 2012; Dang, 2018; Di Gregorio et al., 2019). According to the systems theory, it is wrong for policymakers to function exclusively by producing policies in the form of sanctions or rewards (Easton, 1957:398) as this will result in failed implementation (Dang, 2018). To Easton (1957:398), support of policies by plural (multiple actors) is necessary for any government to continue functioning. Methods of eliciting support could be through consented objectives for participation, use of participatory techniques and use of indigenous knowledge systems to promote community awareness and understanding of climate change and climate change policy processes (Gautam et al., 2014:77; Aben, 2017:91-92). Further, socio-political and administrative governance also requires that communities be engaged and represented through increased bottom-up approaches to complement top-down approaches during climate change policy formulation and implementation (Osborne, 2010a). Thus, climate governance as a process and activity offers communities an opportunity to be directly involved in agenda setting processes through governance, co-production and policy nudging, despite the associated shortcomings (Sprain, 2016; Dang, 2018:63).

However, enhanced community participation during agenda setting is determined by how socio-political and administrative governance manages power dynamics in relation to the participatory techniques used and management of power dynamics during the interactions, deliberations and collaborations of multiple actors (Di Gregorio et al., 2019:65). Participatory techniques used should deal with the problem of power dynamics because communities may have limited resources such as finances, expertise and time, compared to other actors (politicians, public administrators, experts and community representatives). This, gives politicians, public administrators and experts a chance to impose their own preferences regarding the contents of the policy at the expense of the communities' preferences (Wanna, 2008:3). Also, there are issues of powerful community members, for example, chiefs' kin and other dominant groups of people, may have the power to influence decisions (Samaddar et al., 2019:369). Hence, community members concerned should be present during agenda setting. However, community representatives can represent other community members in situations where not all members can participate. The objectives for participation should be defined, clear and real in relation to the community's societal and political factors.

3.5.2.2 Stage 2 – Policy formulation

During climate change policy formulation, co-production, deliberation, collaboration and interaction seem to be the nature of community participation (Innes and Booher, 1999; Berkes et al., 2007; Brink and Wamsler, 2019). Communities participate as co-producers of the policy alternatives. Previously, policy formulation used to focus on politicians, public administrators and experts (Bauer et al., 2012; Chan, Brandi and Bauer, 2016; Newig et al., 2018:272). Currently, during climate change policy formulation, deliberations and collaborations, communities self-initiate climate change policy alternatives. This is because what constitutes planned adaptation responses varies from one community to another, depending on what the community members consider as problems that are caused by climate change (Sprain, 2016; Mees et al., 2019; Uittenbroek et al., 2019). As for promoting community participation through interaction, the focus should be on improving the power relations on all actors (politicians, public administrators, experts, community representatives) involved (Anderson, 2003:474). Community participation during policy formulation may not guarantee action (adoption of the formulated policy proposals by the communities) by the policymakers (Runhaar, Wilk, Åsa, Uittenbroek and Wamsler, 2018). However, to enhance community participation through co-production of policy proposals, deliberation, collaboration and interaction, the preferred policy alternatives from the community members should be adopted as a policy.

Administrative and socio-political governance are the main components that enhance community's contribution towards selecting policy alternatives during climate change policy formulation. The relevance of administrative governance during policy formulation is its ability to guide actors on how to facilitate communities to develop acceptable alternatives to deal with climate change (De Vries, 2007:146; Etchart, 2017; Brink and Wamsler, 2019b; Mees et al., 2019). Socio-political governance guides the actors on how the communities' indigenous knowledge systems could be formulated as policy alternatives (Etchart, 2017; Ahearn, 2019). The indigenous knowledge systems (refer to 3.3 for details) of a community influence climate change policy decisions, perceptions about climate change and behaviour towards participation in climate change policy formulation (Adger et al., 2012). Hence, the multiple actors' (politicians, public administrators, experts and community representatives) objectives for community participation during the policy formulation stage are guided by administrative and socio-political governance (Brink and Wamsler, 2019). Administrative and socio-political governance requires the politicians to enhance community participation by making the climate change policy formulation process open to the communities (Anderson, 2003:474; Carvalho and Gupta, 2012; Sprain, 2016). Again, politicians oversee other actors (public administrators, experts and community representatives) regarding their objectives that seek to promote community's self-initiatives of policy alternatives that explain what constitutes adaptation measures (Kuhn and Zhang, 2014). Public administrators facilitate interrelationships, collaborations, deliberations and interdependence for resources among politicians, experts and community representatives to benefit community participation (Woodruff and Stults, 2016; Mees et al., 2019). The public administrators' duties would be to continuously stimulate community initiatives as would have been proposed during climate change agenda setting through facilitating collaboration and deliberation of the community's policy alternatives, while coordinating cross-sector collaborations (Friis-Hansen, 2017b). The experts are required to influence the policymakers to bring together the communities and other actors to link, in some way, to exchange information, expertise, trust and other policy resources (Wu and Knoke, 2013:154). Community representatives mobilise support for community participation in the formulation and selection of policy alternatives (Samaddar et al., 2019:364).

Pluralist during climate change policy formulation are multiple processes that involve policy nudging (for explanation refer, to section 3.4 and 3.5.1.1), administrative and socio-political governance. Enhancing community participation through socio-political and administrative governance by the politicians, public administrators, experts and community representatives encompass facilitation of collaboration and interdependence for resources (Ahearn, 2019). Socio-political and administrative governance as a process and activity facilitates collaboration, co-ordinates co-production of policy alternatives, manages cross-sector dynamics (e.g. power relations and resources), facilitates deliberation and applies policy nudging among the plural (Adger et al., 2012; Egeru, 2012; Ahearn, 2019). Administrative and socio-political governance creates an opportunity for consensus building of the climate change policy alternatives through participatory techniques that include PRA, participatory technology, public hearings, facilitation, interviews, meetings, focus groups, public hearings, workshops and consensus building. Participatory techniques could determine the level of community participation (Hügel and Davies, 2020:12). However, the participatory techniques used determine whether communities participate as leaders of the policy formulation process or not, irrespective of their literacy level. Effective community participation during climate change policies is hampered by lower levels of education (Samaddar et al., 2019:368; Wamsler et al., 2020:245). The level of education for the target community members should be considered in choosing the best participatory tool (Mees et al., 2019:205; Samaddar et al., 2019:369; Wamsler et al., 2020).

Socio-political governance gives guidelines on how actors (politicians, public administrators, experts and community representatives) should consider indigenous knowledge systems during the formulation of climate change policy alternatives. The application of socio-political governance requires that co-production of mitigation and adaptation policy alternatives consider societal factors (values, norms, indigenous knowledge and culture) and political factors (co-governance, democratisation and management of power dynamics) (refer to Section 2.5.1.2 and 3.3 for details) (Kooiman, 1999; Collins and Ison, 2009; Newig et al., 2016; Reed et al., 2018:1). Politicians oversee other actors (public administrators, experts and community representatives) to encourage bottom-up community self-initiatives of policy alternatives regarding climate change adaptation and mitigation (Kuhn and Zhang, 2014). Public administrators and experts promote collaboration, interrelationships and interdependence for resources between the communities and policymakers. Community representatives, who overlap as members of the communities, lead climate change policy formulation deliberation processes (Samaddar et al., 2019:364).

During the pluralist processes of policy formulation, enhanced community participation depends on how administrative and socio-political governance methods are used, the use of participatory techniques, management of power dynamics when using participatory techniques, and the willingness, capacity (including resources such as finance), and the skills of actors who facilitate participation. Whatever happens, the idea of plural actors (e.g. politicians, public administrators, experts and community representatives) and pluralist processes (e.g. administrative and socio-political governance) during climate change policy formulation seeks to ensure communities participate as co-producers of policy alternatives (mitigation and adaptations measures). Deliberation, collaboration and co-production during climate change policy formulation is when actors (politicians, public administrators, experts and community representatives) go beyond consultation and information to give a community a genuine opportunity to discuss climate change policy alternatives (Arnstein, 1969; Few et al.,

2007:56; Armeni, 2016). Consequently, a community co-plans, co-designs, co-delivers and co-evaluates policy alternatives that suit their context in terms of risks, causes and impacts of climate change.

3.5.2.2.1 Shortcomings of plural and pluralist during climate change policy formulation

The shortcomings of the pluralist environment of climate change policy formulation pertain to formulation of policy alternatives that do not have clear solutions because solutions to a policy problem are usually contextual and each solution being essentially unique per policy problem (Hegger et al., 2017; Kurniawan, 2018; Ahearn, 2019; Uittenbroek et al., 2019). These shortcomings seem to apply well to climate change policy formulation (Anton and Lawrence, 2014). Community participation among multiple actors and within multiple processes during climate change policy formulation is 'wicked' because it is contextual; there are no clear universal solutions to enhance community participation during policy formulation (Rittel and Webber, 1973:161; Head and Alford, 2015:712). The disadvantage of context is that whatever multiple processes that may have been followed in one community may not work in another community (Beierle, 2002; Reed, 2008:2425; Smiley et al., 2010:1043). During policy formulation, more time is dedicated to selecting policy alternatives that suit the concerned communities' climate change experiences and realities (Spires, Shackleton and Cundill, 2014; Friis-Hansen, 2017b:15). That said, inclusive policy formulation may be hampered if the communities do not reach an agreement concerning the objectives for the intended climate change policy, objectives for participation, methods of co-producing climate change policy solutions and to select together the best possible alternatives with the other actors. Reed et al. (2018:9) argue that all types of engagement can be used, even though the selection and application should be based on a theoretical understanding of what is likely to work in terms of what is intended to be achieved in a particular place. It can be argued that the theory of participation in environmental management emphasises the importance of context. The theory of participation argues that affected people (communities) are the ones who should develop shared goals and co-produce outcomes to increase the chances of successful implementation (Reed et al., 2018:9). This is not new as other scholars also made a similar recommendation (Eden, 1996:186; Creighton, 2005; Moser, 2009b; Driessen et al., 2012; Burton and Mustelin, 2013; Glucker et al., 2013; Sprain, 2016; Dang, 2018; Katsonis, 2019; Uittenbroek et al., 2019).

Community participation during climate policy formulation is essentially unique and has no exhaustive potential conditions to be followed to ensure that it is enhanced (Rittel and Webber, 1973:164). Collaborations during policy formulation are 'essentially unique' because of plural actors (Rittel and Webber, 1973:164). Different actors (policymakers, experts and community representatives) affect the level of community participation during climate change policy formulation collaboration. The collaboration often makes the participation process slow and cumbersome, giving advantage to formally organised actors, such as experts, over others, such as community members. The plural nature of climate change policy formulation and implementation makes it complex (Peters, 2005:358). Complexity is a situation where too many actors and processes are involved during policy formulation, making it difficult to negotiate agreements on policy alternatives (Byrne, 1998; Peters, 2005:358). Generally, the complexity of climate change policy formulation manifests during interdependency for resources and interrelationships of multiple actors (Kooiman, 2008:176). Traditionally, the climate change policy formulation seemed to be unclear to communities (Easton, 1957). Therefore, communities may not understand or participate in climate change policy formulation (Birkland, 2015:6).

3.5.2.3 Stage 3 – Policy adoption

During policy adoption, enhanced community participation is characterised by high frequency of interaction, nature of collaborations (use of both bottom-up and top-down approaches), equal and distribution of decision-making power and the communities' 'high' level of trust in the adoption process. Communities participate as authors and subjects of the climate change policy (Samaddar et al., 2019). Interactions referred to here are power relations among actors (politicians, public administrators, experts, community representatives and communities) with respect to decision making (Crabb and Leroy, 2012:13). Collaborations during climate change policy adoption are conducted to act on the community's preferred policy alternatives, communicate rejected policy alternatives and communicate modifications being made on the preferred policy alternatives. During these collaborations, communities act as co-producers of the climate change policy (Reed et al., 2018; Ewert, 2019). The equal and distribution of decision-making power during policy adoption refers to a scenario where communities' contribution significantly influences the adopted climate change policy (Anderson, 2003:119; Karlsson-Vinkhuyzen and McGee, 2013:70; Karlsson-Vinkhuyzen, 2016:201; Quick and Bryson, 2016:5). Enhanced community participation during climate change policy adoption is realised when actors fairly (adhere to communities' policy proposals) and reliably (stick to principles of co-production, public policy governance and objectives of community participation) represent communities' policy proposals during the technical (formulation of legislation) process of climate change policy adoption (Reed et al., 2018). Although trust is abstract and difficult to define, communities should, at least, perceive the other actors' (politicians, public administrators, experts and community representatives) behaviour during interactions as open, reliable and fair (Carvalho and Gupta, 2012:1; Friis-Hansen, 2017b:7). Despite the communities' contribution to the climate change policy adoption, it is noteworthy that the formal final authority to adopt a policy rests with the politicians (Anderson, 2003:119). Consequently, through interactions, collaborations and equal distribution of power, the communities are likely to trust the climate change adoption process and consider the adopted policy legitimate (Carvalho and Gupta, 2012:1; Friis-Hansen, 2017b:7; Brink and Wamsler, 2019)

During climate change policy adoption, administrative and public policy governance are the main NPG components, which enhance community participation by guiding how decisions should be made. Administrative governance during the policy adoption is relevant because it indicates how public administrators champion collective decisions to bring together plural actors to enable communities to legitimise the adopted policy (Bulkeley and Mol, 2003; Shergold, 2008:148; Brink and Wamsler, 2019; Reed et al., 2018; Mees et al., 2019). Public policy governance is relevant to policy adoption because it indicates how the politicians, as the main actors, should provide a framework (legislation and institutions) through which community participation could be facilitated in a democratic way to ultimately come up with a legitimate policy (De Vries, 2007; Carvalho and Gupta, 2012:146). The politicians appear to be the main actors, whose role in enhancing community participation is to ensure empowerment of marginalised communities through an open system of climate change policy adoption process (Sprain, 2016; Mees and Driessen, 2018:198; Uittenbroek et al., 2019). During policy adoption, the politicians shift from adopting the climate change policy in a 'black box' towards a collaborative, responsive and transparent policy adoption process (Easton, 1957:398; Mees et al., 2019:198). Because of this interdependency, 'systems-based paradigm', to use Forrester's term (Forrester cited in Stewart and Ayres, 2001:82), would assist politicians to consider interaction when making decisions.

The open system means the government chooses the top down deliberative or co-production approach, simultaneously with the bottom up deliberation/ co-production approach (Biljohn and Lues, 2018:158; Keping, 2018; Reed et al., 2018:4). If the system is closed, it implies that no form of interaction or deliberation occurs between the internal and its external environment. Because of interactions, collaborations and sharing of decision making powers, communities participate as co-decision makers, legitimisers and observers of the climate change policy adoption (Glucker et al., 2013; Uittenbroek et al., 2019:2532). Public administrators facilitate collaborations, deliberations, cross-sector collaborations and co-production of ideas in relation to climate change policy adoption decisions. The support for participation is given through the public administrators' brief to concerned communities, community presentations and the media. The techniques chosen determine whether communities participate as consultants or as deliberators during climate change policy adoption (Arnstein, 1969; Reed, 2008; Reed et al., 2018). The experts observe the policy adoption process and link its activities to communities, while the community representatives represent communities in a clear pre-arranged manner, whenever needed, and in some instances make decisions on their behalf (Escobar, 2017:419). The involvement of the community representatives is likely to legitimise the climate change policy adoption.

Multiple processes during climate change policy adoption are public policy and administrative governance processes that involve decision making and implementation of those decisions. Policy nudging (refer to Section 3.4 and 3.5.1.1 for explanation), public policy and administrative governance during policy adoption seek to guide how climate change policy decisions should be co-produced through pluralist processes during climate change policy adoption, with communities equally having a say in decision making, just like any other actor (politicians, public administrators, experts and community representatives) (Reed, 2008; Sprain, 2016; Reed et al., 2018; Uittenbroek et al., 2019). According to the systems theory, policy adoption is described as a black box. Thus, public policy governance guides different actors on how to co-produce climate change policy decisions together with communities (Easton, 1957; De Coning and Cloete, 2006:40). Public policy and administrative governance mainly influence the actors (politicians, public administrators, experts and community representatives) to promote the co-production of climate change policy decisions with communities in a non-linear interaction (Glucker et al., 2013; Reed et al., 2018; Ewert, 2019; Uittenbroek et al., 2019).

The objectives of community participation determine the techniques to be used. Participatory techniques could be used such as those that can inform (e.g. briefs, media and presentations to communities), enable sharing of decision-making powers (e.g. PRA and participatory technology), inform and extract information simultaneously (consensus building, focus groups, interviews, public meetings, public hearings, workshops) (Mees et al., 2019:200; Uittenbroek et al., 2019:2534). Following the comprehensive rational model theory, the politicians' role in applying public policy governance is to examine the various climate change policy alternatives in terms of costs, benefits and consequences to adopt policy alternatives that resonate with the communities' perspectives (Anderson, 2003:121). Instead of considering personal values or party loyalties, the politicians are guided by the communities' indigenous knowledge systems. However, the politicians retain the decision making power about adopting the climate change policy (Brinkerhoff and Crosby, 2002:54). The public administrators are expected to enhance community participation by ensuring the following: proposed alternatives by the communities are technically sound, the policy alternatives address contextual climate change issues, they estimate the

budgetary costs of implementing the policy, and ensure community's preferred policy alternatives win the political support (Wu et al., 2018:7).

Through plural and pluralist processes during climate change policy adoption, community participation is enhanced by adhering to principles of the used governance methods, use of participatory techniques, management of power dynamics of the used techniques and the ability, capacity (resources e.g. finance) and skills of actors who facilitate community participation (Few et al., 2007; Reed, 2008). Community participation during climate change adoption is about how communities make climate change policy decisions and the definition of a community-based adopted policy (Samaddar et al., 2019). Decisions are made mainly through interactions, deliberations, collaborations and co-production. In interacting and collaborating, the actors (politicians, public administrators, experts, community representatives and communities) are guided by public policy and administrative governance (Friis-Hansen, 2017b; Brink and Wamsler, 2019; Ahearn, 2019; Rani and Oelz, 2019; Semplici, 2019). Finally, the interactions and collaborations should result in a trusted climate change policy adoption process and a legitimately adopted climate change policy (Funder et al., 2017).

3.5.2.3.1 Shortcomings of plural and pluralist climate change policy adoption

Shortcomings presented by the plural and pluralist environment of climate change policy adoption relate to having no stopping rule (Friis-Hansen, 2017b). Having no stopping rule is a shortcoming of policy adoption because community participation during the climate change policy process described in some NCCPs is vague and broad (Friis-Hansen, 2017b; Ministry of Energy and Meteorology, 2017). The nature of community participation during policy adoption is 'wicked' because there is no 'no stopping rule' (Rittel and Webber, 1973:162; Samaddar et al., 2019:358). No stopping rule here simply means community participation is broad and vague, without a universal fixed criterion on how to conduct participation and when to end it (Samaddar et al., 2019:358). Community participation during climate change policy adoption is an objective process, where the success of community members' participation depends on effective public policy governance. In climate change, community participation aims at participation in the policy process and implementation of climate change projects aimed at mitigating and adapting to the risks posed by climate change. Thus, understanding the objectives of participation influences the participation of communities during policy adoption (Samaddar et al., 2015:136). Several studies challenge public governance to ensure that the objectives of community participation in climate change policy formulation and implementation are co-produced and spelt out by actors (Creighton, 2005:62; Driessen et al., 2012:20; Burton and Mustelin, 2013:402; Glucker et al., 2013; Sprain, 2016; Katsonis, 2019; Uittenbroek et al., 2019). Eden (1996:185) suggests that empowering people to participate should be clear on whether it aims only to educate or to ensure active involvement of communities. The nature and scope of community participation during policy adoption should be coordinated and spelt out, differentiating between authority and responsibility, leadership and capacity. Designing a participatory strategy can be argued to be an objective process dealing with questions of who does what? When and How? (Reed et al., 2018). The aim of designing a participatory strategy with community members should be to specify the objectives for participation.

3.5.2.4 Stage 4 – Policy Implementation

Community participation during climate change policy implementation is characterised by co-production, legitimacy, collaboration and policy nudging (see Section 3.4 and 3.5.1.1 for details). To ensure the legitimacy of climate change policy implementation, the communities participate as co-producers of the implementation plan (Reed, 2008; Glucker et al., 2013; Reed et al., 2018; Uittenbroek et al., 2019). Through the facilitation of the public administrators, the communities co-plan, co-design, co-implement and co-evaluate the implementation programmes (Mattijssen et al., 2017). Thus, before policy implementation, the community is part of co-planning and co-designing how to co-implement and how to co-evaluate the programmes and services that will emanate from the policy. Another defining characteristic of community participation during climate change policy implementation is collaboration (Weber, 2018). In this sense, the purpose of collaboration in climate change implementation is to assist communities as a collective to adapt and reduce their vulnerability to climate change (Newig et al., 2016). Through administrative governance, communities are empowered to co-produce climate change policy implementation plans because lack of involvement may hinder the actual implementation (Dang, 2018; Erbaugh, Pradhan, Adams, Oldekop, Agrawal et al., 2020). Unlike the government programmes that aim to empower without quick direct benefits, experts are funded and can easily attract community members for participation (Friis-Hansen and Aben, 2017:368). The experts ensure that the politicians interdepend for resources, interrelate and interact with the communities.

The main component of NPG that dominates the climate change policy implementation is administrative governance. Through public administrators as the main actors, administrative governance is relevant because it guides public administrators on how to champion collective decisions among plural actors within a pluralist policy implementation process (Shergold, 2008; Brink and Wamsler, 2019; Mees et al., 2019). Public administrators bring together diverse plural actors to involve communities to produce implementation programmes together (Mees et al., 2019). The actors' (politicians, public administrators, experts, community representatives and communities) roles are mainly influenced by administrative governance. Actors have roles to play to promote community collaboration, interaction and co-production during climate change policy implementation. First, politicians ensure the availability of funds for promoting community participation (Few et al., 2007:52). Further, politicians raise awareness of climate change policy implementation through, for instance, the media, public meetings and presentations to communities (Kurniawan, 2018:6). Second, as noted in other policy stages in Section 3.5.1.1, public administrators play the role of facilitation. The public administrators facilitate the collaboration process, manage the cross-sector collaboration process and co-ordinate climate change policy implementation programmes (Mattijssen et al., 2017; Mees et al., 2019:203). The public administrators also manage relevant government ministries and departments and manage power dynamics during interactions when politicians, experts and community representatives interdepend for resources with communities (Friis-Hansen, 2017b; Funder et al., 2017). Third, the international experts may enhance transparency and accountability regarding agreed implementation guidelines and advance climate change policy implementation through financial resources, capacity building and technology (Oberthür et al., 2017:2). Further, experts can provide scientific knowledge, for example, the IPCC (1990; 2001; 2007; 2014b; a; 2018), and create platforms for government representatives to share information (Löwbranda et al., 2017; Oberthür et al., 2017:2).

Fourth, the community representatives mobilise collective action in planning policy implementation and monitor the implementation programmes relating to climate change (Samaddar et al., 2019:366).

Multiple processes (pluralist) during climate change policy implementation are those that mainly involve policy nudging (for details, refer to Section 3.4 and 3.5.1.1) and administrative governance. It is noteworthy that administrative governance is synonymous with community participation during policy implementation (Burton and Mustelin, 2013:404). In practising administrative governance, community participation during policy implementation is characterised by broad courses of action (use of participatory techniques), which include different actors (politicians, public administrators, experts, community representatives and communities) and many processes (co-production, management of power dynamics, collaboration, deliberation) at one goal (Reed, 2008; Carvalho and Gupta, 2012; Glucker et al., 2013; Sprain, 2016; Uittenbroek et al., 2019). Therefore, the plural and pluralist nature during climate change policy implementation is characterised by interdependence for resources (Carvalho and Gupta, 2012; Reed et al., 2018:2). The policymakers facilitate policy implementation because of their legal and authoritative power (Anderson, 2003:197). The policymakers have a duty to ensure that they take the lead in co-ordinating financial resources, knowledge exchange, skills and legal advice (Carvalho and Gupta, 2012). During climate change policy implementation, the extent of collaboration, the means through which co-production of implementation programmes is conducted, management of power dynamics and conflicts could hinder or enhance community participation (Di Gregorio et al., 2019:65).

To accomplish the communities' objectives for participating during policy implementation, relevant participatory techniques that suit the communities should be selected. To ensure that community interests are served, policymakers and experts should not favour certain participatory methods when implementing the climate change policy because of their experience or for some other reasons (Peters, 2018b). Participatory techniques such as PRA, workshops, media, participatory technology, facilitation and briefs could be used for implementation planning. Therefore, during policy implementation, communities directly get involved in planning the implementation, together with other actors (politicians, public administrators and experts) who have different forms of expertise (Dhungana et al., 2018:129; Samaddar et al., 2019:129). Enhanced community-based implementation of a climate change policy should aim to go beyond just implementation and plan the implementation using the perspectives of the communities to minimise resisted implementation (Archer, Almansi, DiGregorio, Roberts, Sharma et al., 2014:352; Spires et al., 2014:281; Brink and Wamsler, 2019:90). During multiple processes, the experts collaborate in community activities to co-produce implementation programmes and subsequent implementation (Rhodes, 2017:38), whereas community representatives are gatekeepers of communities, whose role is to understand the implementation plan even as individuals because of their position of power (Samaddar et al., 2019).

Community participation during climate change policy implementation is enhanced through administrative governance and policy nudging. Communities participate as co-planners, co-designers, co-implementers and co-evaluators of the implementation programmes. The issue of power dynamics among actors could be managed through the techniques that are chosen to involve communities (Dhungana et al., 2018:129). The plural (politicians, public administrators, experts and community representatives) work together to ensure that communities are directly involved during climate change policy

implementation. During climate change policy implementation, implementation programmes are negotiated and agreed upon (Diver, 2017; Teder and Kaimre, 2018). Communities are empowered (given authority) by policymakers to make decisions regarding policy implementation (Diver, 2017; Teder and Kaimre, 2018; Semplici, 2019). Administrative governance and policy nudging link the activities of politicians, experts, community representatives and communities during climate change policy implementation (Ewert, 2019).

3.5.2.4.1 Shortcomings of plural and pluralist climate change policy implementation

Shortcomings presented by the plural and pluralist environment of climate change policy implementation pertain to the difficulties of policy implementation. Solutions are not true or false because they are provided per context, all attempts to involve communities to plan for policy implementation may lead to negative consequences, and the facilitators of policy implementation have no opportunity to make mistakes because any mistakes made may hinder participation in future policy processes (Spires et al., 2014; Samaddar et al., 2015; Newig et al., 2016). The nature of community participation during policy implementation is 'wicked' because the actors have no right to be wrong. Policy Implementation is meant to improve the lives of the communities (Rittel and Webber, 1973:163; Evadzi et al., 2018:163). There is no room for trial-and-error community participation when implementing the policy; every attempt counts significantly (Rittel and Webber, 1973:163; Peters, 2017:388). Solutions are either bad or good (Rittel and Webber, 1973:162). The effects of participation may be irreversible and unforgettable to communities (Rittel and Webber, 1973:166; Head and Alford, 2015; Peters, 2017:388). Whatever is done to solve the problem co-occurs to understand the nature of community participation (Rittel and Webber, 1973:162).

Administrative governance plays a significant role during policy implementation to bring all actors together to enhance community participation (Takao, 2012; Spires et al., 2014:281). Although many authors agree about community participation during climate change policy implementation, the studies are limited concerning the theory that informs the implementation stage (Wiseman, Williamson and Fritze, 2010:137). The theoretical guidelines used to inform the enhancement of community participation during climate change implementation should be clearly laid out to benefit communities' participation (Dumar, 2010). During the implementation planning, a focus on community perspectives is necessary because implementation programmes target communities to adapt. Climate change policies usually aim to facilitate community-based adaptation policy programmes. Therefore, the communities' responsibilities during implementation should be clearly defined and agreed upon (Dumar, 2010:755). Again, the objectives for participation during policy implementation should be defined (Few et al., 2007:46). This will effectively produce community programmes and projects that are successfully implemented (Dumar, 2010:755; Brink and Wamsler, 2019:90).

3.5.2.5 Stage 5 – Policy evaluation

Community participation during climate change policy evaluation is characterised by co-production of the policy evaluation decisions that relate to interpretation and release of the evaluation results (Stufflebeam, 2001:62). Communities participate as part of the deliberation process to co-plan, co-produce, co-implement and co-evaluate the climate change evaluation criteria (Carlsson, 2000; Crabb and Leroy, 2012; King, 2013:154; Schoenefeld and Jordan, 2017). During these

deliberations, community views should be represented and significantly included during the climate change policy evaluation (Crabb and Leroy, 2012:153). Further, the issues of power dynamics when choosing the evaluation criteria should be managed to encourage communities to participate as co-producers of the climate change policy evaluation criteria (Samaddar et al., 2015:125). Therefore, through management of power relations, communities significantly influence the policy evaluation criteria. However, community co-production during policy evaluation is wholly dependent on the extent of co-production of the agenda setting, policy formulation, policy implementation and policy adoption (Glucker et al., 2013:2532; Newig et al., 2018; Uittenbroek et al., 2019).

The main component of the NPG that enhances community participation during policy evaluation is administrative governance. Administrative governance is relevant during policy evaluation to specify how plural actors should facilitate community participation to choose the evaluation criteria for the policy (Fosbenner, 2009; Mees et al., 2019). Administrative governance guides the plural actors (politicians, public administrators, experts and community representatives) to put the interests of the communities first when defining the evaluation criteria for the climate change policy (Samaddar et al., 2015). Policy evaluation involves plural actors in that evaluation of the climate change policy is a collective effort of politicians, public administrators, experts, community representatives to inter-dependent for ideas with the communities (Armeni, 2016:427; Fuller and Lain, 2018:13). First, the politicians are required to clearly define the objectives of community participation during climate change policy evaluation through legislation (O'Faircheallaigh, 2010:20). Again, politicians centrally monitor the experts and public administrators' duties to ensure communities are part of the climate change policy evaluation process (Sprain, 2016:66). Second, public administrators facilitate collaboration on climate change policy evaluation to bring together actors (politicians, experts, community representatives and communities) to bargain and co-produce the climate change policy evaluation criteria (Crabb and Leroy, 2012:153; King, 2013). Third, through the permission of the politicians and public administrators, the experts empower communities to evaluate the climate change policy (Carlsson, 2000:205; Kurniawan, 2018; Teder and Kaimre, 2018). Fourth, in every policy stage, community representatives overlap as community members to provide leadership to other community members (Samaddar et al., 2019).

Multiple processes during policy evaluation include co-production, deliberation and cross-sector collaboration that involves policy nudging (for an explanation, refer to Section 3.4 and 3.5.1.1) and administrative governance (Rouillarda, Benson and Gain, 2014:525; Samaddar et al., 2015). In applying administrative governance, community participation is enhanced or hindered when public administrators co-ordinate coproduction of evaluation decisions and facilitate deliberations in relation to climate change policy evaluation among multiple actors (politicians, experts, community representatives) and manage cross-sector collaboration to benefit community participation (Crabb and Leroy, 2012:153; Burton and Mustelin, 2013:404). The public administrators facilitate deliberations and collaborations that relate to climate change policy evaluation among multiple actors to benefit communities to participate as co-planners, co-designers, co-implementers and co-evaluators of the climate change policy evaluation decisions.

Various participatory techniques have been proposed to enable communities to have decision making powers during policy evaluation, some of which apply at all the policy process stages (Samaddar et al., 2019:365). Suggested for policy evaluation are PRA techniques, focus groups, workshops, beneficiary assessment, public hearings, polls and surveys, interviews and public meetings. Beneficiary assessment, as described by Creighton (2005:104), is a consultative methodology (including focus groups and participant observation techniques) used to ensure that the marginalised actors provide insights on how a programme will affect them (Halfacre, 2009). Surveys are a form of interviews that may provide quantitative data. Polls are interviews by a trained interviewer to ask participants the same questions in a pre-arranged order while recording an opinion (Creighton, 2005:129; Carvalho and Gupta, 2012:1), whereas surveys are interviews conducted by a trained interviewer and can be made up of both closed and open questions (Oppenheim, 1966:2; Creighton, 2005:128; Fosbenner, 2009:3).

Overall, numerous studies on community participation in climate change policy blur together climate change policy formulation and implementation without necessarily mentioning policy evaluation (Wengert, 1976; Brundtland et al., 1987; The Rio Declaration on Environment and Development, 1992; Lemos and Agrawal, 2006; Drexhage, 2008; Reed, 2008; Songok, Kipkorir, Mugalavai, Chepkok Kwonyike and Ng'weno, 2011; Pinkse and Kolk, 2012; UNECE, 2015; Sprain, 2016; Reed et al., 2018; Uittenbroek et al., 2019). Hence, the nature of community participation during each stage of a climate change policy process seems not clear (Edwards, Hindmarsh, Mercer, Bond and Rowland, 2008). A few studies focus on evaluation in practice (Samaddar et al., 2015; Fuller and Lain, 2018). According to administrative governance, no single actor should dominate the policy evaluation process (Crabb and Leroy, 2012; Gilley, 2012:153). Administrative governance provides a fair opportunity for communities to make decisions equally, just like other actors (Davidson and Frickel, 2004:473). Decisions are made and accessed by every group of actors. It is noteworthy that a number of factors determine the level of community participation during climate change policy evaluation: (i) the way communities were involved during agenda setting, policy formulation and policy adoption, (ii) the effectiveness of administrative governance when bringing together multiple actors (iii) the participatory techniques used and (iv) policy nudging (Huitema, Jordan, Massey, Rayner, van Asselt et al., 2011:179).

3.5.2.5.1 Shortcomings of plural and pluralist climate change policy evaluation

Shortcomings presented by the plural and pluralist environment of climate change policy evaluation pertain to no immediate test for solutions and revelation of other hidden policy problems. The shortcomings are relevant to policy evaluation because they describe how the evaluation process may identify problems that distract the agenda setting, policy formulation, adoption and implementation (Anderson, 2003:245; Dang, 2018). Consequently, the policy could be terminated instead of being modified and strengthened (Anderson, 2003:245). During climate change policy evaluation, community participation is 'wicked' because it gives birth to new agendas, which may not be central to climate change adaptation and mitigation (Rittel and Webber, 1973:166; Sprain, 2016:72). New policy agendas resulting from community participation during the climate change policy process could show symptoms of other problems, such as existing power dynamics, level of formal education, and the need to prioritise livelihoods over participation in policy process, among others (Rittel and Webber, 1973:165; Sprain, 2016; Peters, 2018b:72). The contribution of the communities to policy decisions

that concern the evaluation criteria matters during policy evaluation. The quality of the evaluation process that includes the communities could be strongly dependent on the nature of the whole policy process that leads to policy evaluation (Dyer, Stringer, Dougill, Leventon, Nshimbi et al., 2014:142). Communities should be involved in all the other stages of the policy process (agenda, formulation, adoption and implementation) to increase the legitimacy of the evaluation process (Wergin, 1976:105; Hendriks, 2012:444; Samaddar et al., 2015:120). Through administrative governance, communities should agree on the following: evaluation programme, objectives for evaluation, defined success and failure of the policy, defined responsibilities and set guidelines to evaluate community participation during the whole policy process (Takao, 2012). This prevents communities from making decisions during evaluation that other actors have already made.

3.5.2.6 Synthesis

In practising community participation during climate change policy formulation and implementation, the outlined specific objectives for each policy stage determine the appropriate participatory method to be used (Table 3.7). In Table 3.7, policy formulation and policy implementation in climate change is plural (includes politicians, public administrators, experts, community representatives and communities) and pluralist (socio-political, administrative and public policy governance) to enhance direct active community participation. Direct active community participation during each policy stage is achieved through governance, co-production and policy nudging. Policy formulation and implementation are linked to enhance community participation. The policy formulation process overlaps with implementation in that policies are 'formulated as implemented and implemented as formulated' (Howlett and Giest, 2013:22). As suggested by Howlett and Lejano (2013:362), a change from 'government to governance' enables communities to plan for implementation during policy formulation for successful policy implementation. Enhanced community participation is determined by the way socio-political, administrative and public policy governance manages power dynamics at every stage of the policy process. To Easton (1957:398), support of policies by plural actors is a need for any government to continue functioning. The systems theory concurs with the Theory of Participation in Environmental Management that government should support the concerned actors' perspectives and the actors should support policies being made by the government (Reed et al., 2018). However, perfect implementation may never occur (Hill and Hupe, 2002:169). Successful implementation in climate policies entails using governance, co-production and policy nudging for legitimate authority to carry out programmes that seek to mitigate and adapt to climate change.

Table 3.7: Nature of community participation during climate change policy formulation and implementation within plural and pluralist environment

Policy Stage	Nature (characteristic(s) of community participation)	Shortcomings of plural actors and pluralist processes	What increases community participation	Multiple processes	Participatory techniques	Expected outcome(s)
Stage 1: Agenda setting	▪ Co-production. ▪ Governance. ▪ Deliberation. ▪ Interaction. ▪ Collaboration. ▪ Policy nudging. ▪ Power dynamics.	▪ Every opportunity used to participate counts to the communities. ▪ Power dynamics.	▪ Involving concerned community members (context). ▪ Ensuring that communities are equally represented in situations where all concerned members cannot be present. ▪ Agreeing on the objectives for participation. ▪ Clear objectives for the climate change policy agenda. ▪ Relating participation to indigenous knowledge systems. ▪ Co-production. ▪ Policy nudging. ▪ Managing power dynamics.	▪ Socio-political governance. ▪ Administrative governance.	▪ PRA. ▪ Participatory technology. ▪ Consensus building. ▪ Facilitation. ▪ Focus groups. ▪ Interviews. ▪ Public hearing. ▪ Workshops.	▪ Agreed climate change agenda. ▪ Agreed defined problem. ▪ Active participation. ▪ Voluntary participation. ▪ Higher number of participants.
Stage 2: Policy formulation	▪ Co-production. ▪ Governance. ▪ Deliberation. ▪ Interaction. ▪ Collaboration. ▪ Policy nudging. ▪ Power dynamics.	▪ Contextual. ▪ Essentially unique. ▪ Power dynamics.	▪ Agreeing on the objectives for participation. ▪ Co-producing climate change policy alternatives. ▪ Selecting together the best possible alternatives. ▪ Considering indigenous knowledge systems. ▪ Considering the community's context. ▪ Using participatory techniques. ▪ Facilitating collaboration. ▪ Managing power dynamics.	▪ Socio-political governance. ▪ Administrative governance.	▪ PRA. ▪ Participatory technology. ▪ Public hearings. ▪ Facilitation. ▪ Interviews. ▪ Meetings. ▪ Focus groups. ▪ Public hearings. ▪ Workshops. ▪ Consensus building.	▪ Active participation. ▪ Voluntary participation. ▪ Communities become willing to participate in future collaborations.

Stage 3: Policy adoption	▪ Co-production. ▪ Governance. ▪ Deliberation. ▪ Interaction. ▪ Collaboration. ▪ Policy nudging. ▪ Power dynamics.	▪ No stopping rule, success depends on effective public policy governance. ▪ Power dynamics.	▪ Empowering communities to participate. ▪ Designing a participatory strategy ▪ Managing power dynamics.	▪ Public policy governance. ▪ Administrative governance.	▪ Briefs. ▪ Media. ▪ Presentations to communities. ▪ Participatory technology. ▪ Focus groups.	▪ Legitimate policy (robust and defensible).
Stage 4: Policy implementation	▪ Co-production. ▪ Governance. ▪ Deliberation. ▪ Interaction. ▪ Collaboration. ▪ Policy nudging. ▪ Power dynamics.	▪ The policymakers have 'no right to be wrong' (no chance to make mistakes). ▪ Implementation of a policy should aim to improve the communities' lives. ▪ No room for trial-and-error, every implementation counts. ▪ Effects of implementation may be irreversible and unforgettable. ▪ Power dynamics.	▪ Clearly defined objectives of implementation. ▪ Clearly defined responsibilities. ▪ Agreeing on the implementation plan.	▪ Administrative governance.	▪ PRA. ▪ Workshops. ▪ Media. ▪ Participatory Technology. ▪ Facilitation. ▪ Briefs.	▪ Active participation. ▪ Voluntary participation. ▪ Successful implementation (minimal negative irreversible and unforgettable consequences).
Stage 5: Policy evaluation	▪ Co-production. ▪ Governance. ▪ Deliberation. ▪ Interaction. ▪ Collaboration. ▪ Policy nudging. ▪ Power dynamics.	▪ Give birth to new agendas which might be a symptom of other problems. ▪ Power dynamics.	▪ Agreeing on the evaluation programme. ▪ Clear objectives for evaluation. ▪ Agreeing on the definition of success and failure of the policy. ▪ Clearly defined responsibilities. ▪ Setting together guidelines to evaluate community participation during and after the whole policy process.	▪ Administrative governance.	▪ PRA techniques. ▪ Focus groups. ▪ Workshops. ▪ Beneficiary assessment, public hearings. ▪ Polls and surveys. ▪ Interviews. ▪ Public meetings.	▪ Active participation. ▪ Voluntary participation. ▪ Responsibility sharing.

Sources: Rittel and Webber (1973); Creighton (2005); Osborne (2010a); Samaddar et al. (2015); Friis-Hansen and Aben (2017); Peters (2017); Peters (2018b); Samaddar et al. (2019); and Wamsler et al. (2020).

In summation, the factors influencing the nature of community participation in the climate change policy process are shown in Figure 3.1, while the nature of community participation during climate change policy formulation and implementation within plural and pluralist environment is explained in Table 3.7. Regarding the factors influencing the nature of community participation in the climate change policy process are shown in Figure 3.1, while the nature of community participation during climate change policy formulation and implementation within plural and pluralist environment is explained in Table 3.7. Regarding multiple actors (Table 3.7) and multiple processes during climate change policy formulation and implementation, the main goal is to interdepend for resources, with communities as equal influencers of the climate change policy process. However, because agreements are made at the international level to guide and operationalise community participation during climate change policy formulation and implementation (UNFCCC, 1992), how participatory objectives are framed could increase or decrease community participation at every stage of the climate change policy process. During the climate change policy process (Table 3.), politicians ensure that they take a central lead through the governance process to give a general direction, but the explicit objectives are left open to be adopted on the basis of consensus among actors (Friis-Hansen, 2017b:16). The public administrators steer devolved governance processes through administrative governance (Peters, 2010:37). Further, the public administrators and experts take a leading role in collaboration, policy nudging, deliberation and co-production to see to it that all the activities are managed accordingly among plural actors (politicians, public administrators, experts, community representatives and communities) and pluralist processes (multiple processes that involve administrative, socio-political and public policy governance). Community representatives become the voice of the communities in situations where it is difficult for all community members to be present (Aben, 2017:91).

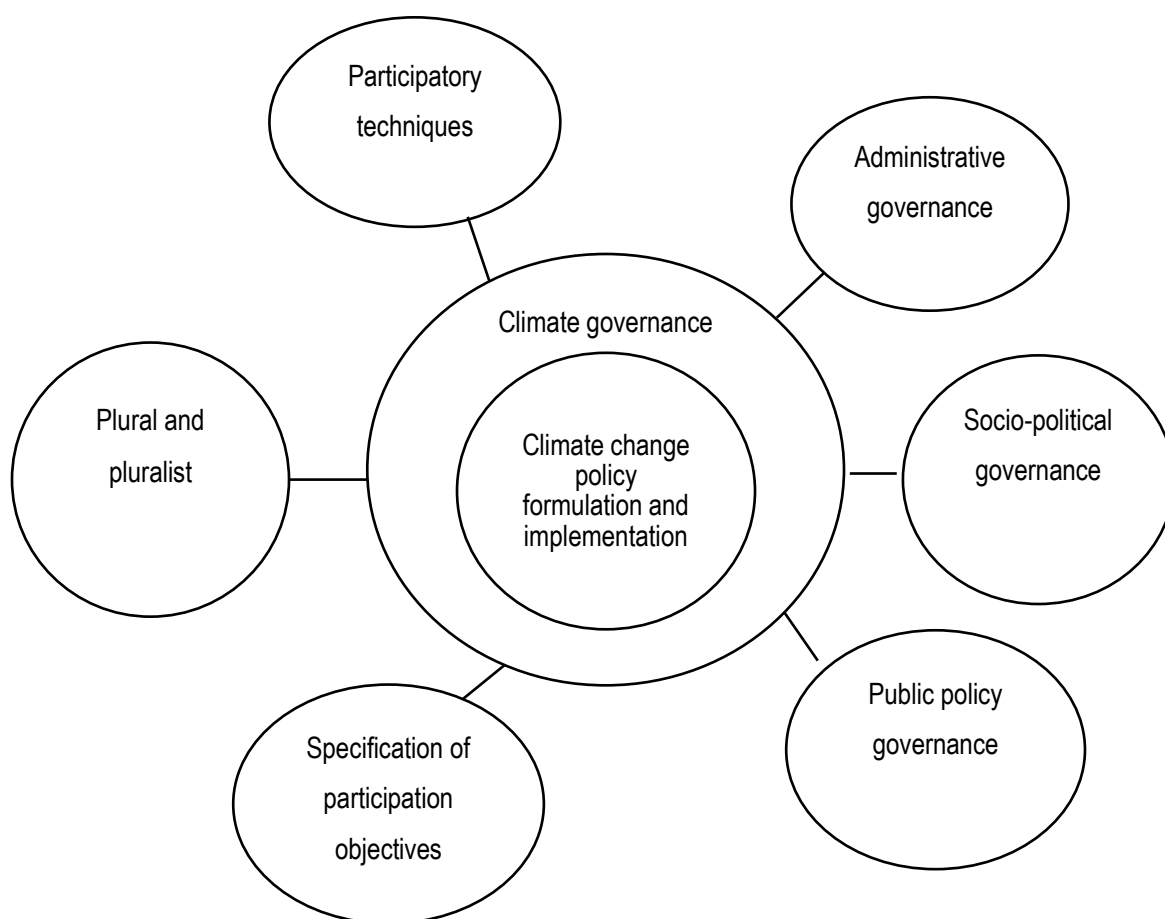


Figure 3.1: Pluralist processes influencing the nature of community participation among plural actors in climate change policy processes

Sources: Rittel and Webber (1973); Creighton (2005); Osborne (2010a); Samaddar et al. (2015); Friis-Hansen and Aben (2017); Peters (2017); Peters (2018b); Samaddar et al. (2019); and Wamsler et al. (2020).

3.6 CONCLUSION

In discussing perspectives regarding climate change and indigenous knowledge systems, community participation in climate change policy formulation and implementation manifests itself as a theory of climate governance (Wengert, 1976:31). Thus, the discussion includes Section 3.1 where, introductory remarks to the chapter are presented. Subsequently, Section 3.2 investigates how community awareness and understanding regarding climate change policy influence their participation in policy formulation. In Section 3.3, the extent to which indigenous knowledge systems can be incorporated into the climate change policy and be used to enhance community participation during climate change policy is discussed. Section 3.4 discusses the use of policy nudging by socio-political, administrative and public policy governance. Lastly, the nature of community participation in climate governance during the stages of the policy process is discussed (Section 3.5). The chapter concludes (Section 3.6). The discussion has shown that implementation planning should be part of policy formulation instead of considering policy formulation and policy implementation as two different and separate stages. This literature review found that community participation during climate change policy formulation and implementation is largely dependent on the policymakers' understanding, willingness, capacity and skills to effectively apply socio-political, administrative and public policy governance. This implies that policy formulation is mapping policy implementation, while policy implementation is executing policy formulation. Despite the process being plural and pluralistic in nature, socio-political, administrative and public policy governance promote co-production and policy nudging for the benefit of all participants involved. Socio-political, administrative and public policy governance thus enable communities to express and share their ideas, add knowledge, reach new understanding, take command of the plans and learn through experiences regarding climate change and climate change policy formulation and implementation, just like other actors (Chambers, 1994:1443; Weber and Stern, 2011:318).

4. CHAPTER 4: RESEARCH DESIGN AND METHODOLOGY

4.1 INTRODUCTION

The research design and methodology employed in this study aligns with the qualitative research approach. Data were collected from documents, fifteen semi-structured interviews and eleven focus group discussions conducted with community representatives, communities, politicians, public administrators and experts. Following an introduction, Section 4.2 validates the selection of the qualitative research approach and Section 4.3 explains the case study design. Within the framework of this research design, its three stages which are conceptual (Stage 1) Section 4.3.1.1), theoretical (Stage 2) Section 4.3.1.2) and empirical (Stage 3) (Section 4.3.1.3) are discussed. Subsequently, the population and sample size are explained in Section 4.4 and the data collection instruments described in Section 4.5, while data analysis is described in Section 4.6. The reliability and validity of data collection instruments are substantiated in Section 4.7. Lastly, ethical considerations for the study are made in Section 4.8.

4.2 PARADIGM AND RESEARCH APPROACH

This study used the interpretivist paradigm and a qualitative research approach. Details of their applicability to this study are explained in Section 4.2.1 and Section 4.2.2.

4.2.1 Interpretivist paradigm

A research paradigm is a framework of established socially accepted views which guides a researcher on how to find scientific solutions using acceptable research methods (Sławecki, 2018). Qualitative research produces findings from real world settings where the research subject unfolds naturally (Sławecki, 2018). The philosophical nature of qualitative research is that it seeks to illuminate and understand. This is why this study used the naturalistic or interpretivist paradigm, thus justifying the use of semi-structured interviews and focus group discussions (Sławecki, 2018). The interpretivist paradigm is about understanding the phenomenon from the perspective that research participants assign to it by focusing on their subjective experiences as they interact, relate and share meaning (Maree, 2020). The study used a humanistic orientation which is an ontological approach to research where the researcher understood the Manonyane case study by obtaining first-hand information from the participants about the phenomenon under investigation. The researcher, who is the interpretivist in this study, believe that reality is socially constructed. Consequently, people have different perspectives and the role of the researcher is to understand, explain and demystify social reality through using the participants' different perspectives (Maree, 2020). The idea was to capture the participants' perspectives (experiences, beliefs and ideas) through a case study design.

4.2.2 Qualitative research approach

Research approaches are plans and procedures that fully outline the steps from broad assumptions to detailed methods of data collection, analysis and interpretation of the results (Creswell, 2014:31). The qualitative research approach, as applied in this study, explores and explains the meaning individuals ascribe to a human social problem (Creswell and Creswell, 2018:41). The first reason for using a qualitative research approach is that it allows the researcher to collect data at the site where participants experience the problem under study (Creswell and Creswell, 2018:257). The researcher had an opportunity for

face-to-face interaction with the participants. Therefore, a single research approach answered the research questions outlined in Section 3.5.

The second reason for using a qualitative research approach is that it enables the study to report multiple perspectives, identifying many factors involved in a situation while sketching the larger picture emerging from the research (Creswell and Creswell, 2018:258). These multiple perspectives were obtained through using multiple sources of data which enabled an in-depth understanding concerning community participation in future climate change policy formulation and implementation processes. These data sources included semi-structured interviews, focus group discussions and documents (qualitative) as methods of data collection. The use of semi-structured interviews and focus group discussions were for seeking detailed information to understand the factors that influence communities' participation in climate change policy formulation and implementation (Creswell and Clark, 2018:108). Further, issues not considered at the design stage of the research emerged during semi-structured interviews and focus group discussions (Section 6.3 and 6.5.2), thereby giving insights into communities' views regarding direct involvement in climate change policy formulation and implementation, as well as suggesting further areas of research (Caruth, 2013:113).

Thirdly, the study used research objectives and questions, not hypotheses. Thus, no quantitative measurement was done but the interpretation of data (Creswell and Creswell, 2018:259). Through content analysis, the data were organised and reported in Chapters 5 and 6. The researcher was the critical instrument in collecting and interpreting data. The researcher did not rely on instruments developed by other researchers. The data collection, analysis and reporting was done by the researcher (Creswell and Creswell, 2018:259).

4.3 CASE STUDY DESIGN

A design is a procedure for collecting, analysing and reporting data (Creswell, Plano Clark, Gutmann and Hanson, 2002:209). Beyond the general qualitative research approach are more specific designs in conducting qualitative research (Creswell and Creswell, 2018:259). Many designs exist, but this study used a case study design. A case study design focuses on one or a few instances of a phenomenon that is studied in-depth (Blatter, 2008:68). Noteworthy is that some authors argue that there is no consensus on the basic characteristics of a case study because of its use in different contexts (Gerring, 2004; Blatter, 2008:68). The selection of this research design was based on three reasons. The first reason was that a case study design assisted the researcher to understand contextual concepts of the Manonyane villagers regarding their participation in climate change policy formulation and implementation (Hafiz, 2008:545). This helped to provide insights and ideas for future research (McKim, 2015:203).

The second reason relates to the fact that the case study design enabled a broader understanding of the topic under study. The case study allowed the study to focus on the aim of the study, which is to explore community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and

implementation processes. Themes are analysed not to generalise beyond the case but to understand the complexity of community participation in climate change policy formulation and implementation (Creswell, 2007:75; VanWynsberghe and Khan, 2007:81). Qualitative data gave a contextual picture of the Manonyane villagers regarding their participation in climate change policy formulation and implementation. This helped to provide insights Section 6.3) and ideas for future research (McKim, 2015:203).

The third reason is that the case study design, through triangulation, enabled the minimisation of bias in investigating the phenomenon of exploring ways of enhancing community participation in future climate change policy formulation and implementation processes. This occurred by analysing data separately and independently for each instrument but allowing the integration of results. This happened when the findings from the first stage (conceptual qualitative stage) and second stage (theoretical qualitative stage) were used to construct the interview schedules and the focus group discussion question schedules. Integration of results consequently resulted in data triangulation. According to Fusch, Fusch and Ness (2018:22), there are four types of triangulation, namely: (i) Data triangulation – examining data convergence within dissimilar settings (different people, space, and time) over time; (ii) Investigator triangulation – where skilled researchers observe the same data and may disagree on its interpretation; (iii) Theory triangulation - when the researcher applies different and contradictory theories to the data, and (iv) Methodological triangulation – the use of multiple sources of data within one design to examine data between methods or across methods in a mixed method study. The current study applied data triangulation, which is often used to minimise bias in investigating a phenomenon (Green, Caracelli and Graham, 2008:123). Data triangulation enabled separate interpretation of data from multiple sources (documents, focus group discussions and semi-structured interviews) to determine the extent of their relationship (refer to Section 4.7.1).

4.3.1 Stages of research design

This section outlines the stages of the case study design. This research design was executed towards achieving the research aim and objectives and answering the research questions for the study as outlined in Figure 4.1 where RO and RQ stands for research objective and research question, respectively.

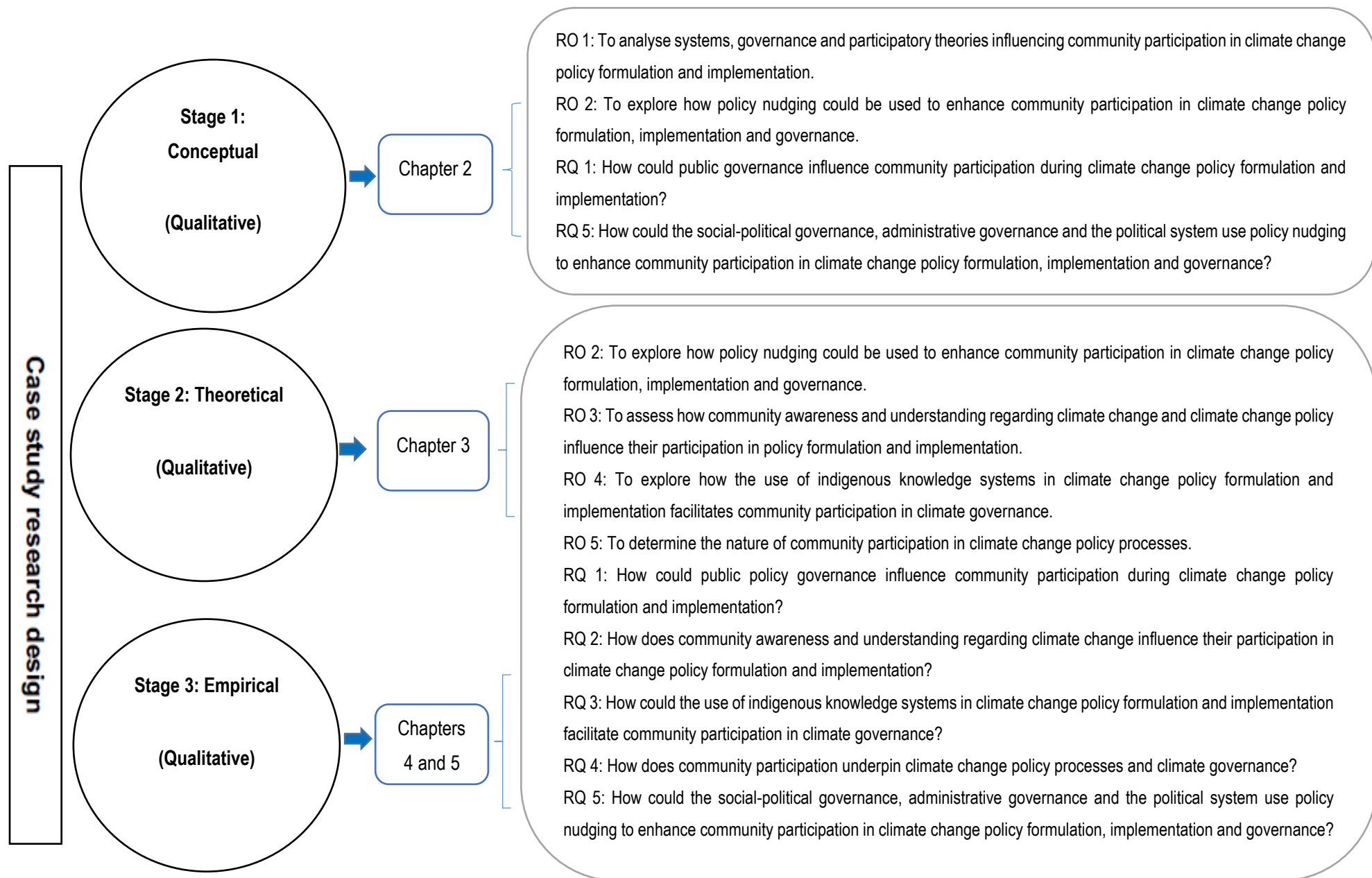


Figure 4.1: Stages of the case study design (Source: Author)

4.3.1.1 Stage 1: Conceptual (qualitative)

During Stage 1 of the research design, a conceptual framework (Chapter 2 of the thesis) was developed through a literature review. This stage was executed in 3 steps, namely (i) literature search (ii) literature analysis, and (iii) literature review.

▪ Step 1: Literature search

A literature search is a planned and organised search to get relevant literature for a topic (Grewal, Kataria and Dhawan, 2016). This literature search was executed through the phrasing of search terms as informed by the research questions (RQ's) and objectives (RO's) applicable for Chapter 2 (Figure 4.1).

During Stage 1, the literature search was completed through the University of the Free State (UFS) and the National University of Lesotho's (NUL) library print and electronic resources, electronic search engines (Google, Aardvark, Ananzi, Altavista), searches in the databases of accredited journals and searches in the databases of EBSCOhost, ScienceDirect, JSTOR, Oxford Journals, SpringerLink and SAePublications. The researcher used resources of the UFS and NUL libraries, the latter of which is defined as comprising a collection of books and periodicals in electronic and print form for borrowing and use. Keywords to conduct the literature search were based on the RO and RQ applicable for Chapter 2 (refer to Figure 4.1). During the literature search, the search terms were adjusted to avoid the exclusion of other relevant sources.

▪ Step 2: Literature analysis

A literature search conducted in Step 1 of Stage 1 led to literature analysis (Grewal et al., 2016; Cooper, Booth, Varley-Campbell, Britten and Garside, 2018). The application of a comprehensive literature search includes using criteria to discard irrelevant documents. The process to discard irrelevant literature is literature analysis (Grewal et al., 2016; Cooper et al., 2018). The first criterion used included not merely treating documents produced through the literature search as precise, accurate, or complete recordings (first criterion) (Bowen, 2009:33). Instead, the relevance of the documents was established in respect of its contribution to the systems theory and governance theory that influence community participation during the stages of the policy process (Chapter 2, Section 2.2), the relationship between (new) public governance and community participation in the stages of the policy process (Chapter 2, Section 2.3), as well as policy nudging and community participation (Chapter 2, Section 2.4) (second criterion). Third, if the second criterion is satisfied, the authenticity, accuracy, credibility and representativeness of the selected document were determined (third criterion). This was done by verifying the publisher of each publication used. Fourth, the document was considered complete and part of the research if it was comprehensive (covering in part or broadly Chapter 2, Sections 2.2, 2.3, and 2.4) (fourth criterion). Lastly, the document was considered if it satisfies the first, second, third and fourth criteria (fifth criterion).

During Step 2, keywords in titles, abstracts and texts of literature were used to categorise literature according to, first, theories influencing community participation during policy processes, and second, conceptualising community participation during policy processes. Once this categorisation was completed, irrelevant literature was discarded (Creswell and Creswell, 2018:70). This step was concluded with an analysis of theories influencing community participation during policy processes

and conceptualisation of community participation during the climate change policy processes to present a conceptual framework for community participation (Chapter 2, Section 2.5).

▪ **Step 3: Literature review – A conceptual framework for community participation in climate change policy formulation and implementation**

A Literature review is described as an examination of current literature to identify data for potential inclusion in the topic under study (Grant and Booth, 2009:97). The literature review in this study was an iterative process of Step 1 (literature search) and Step 2 (literature analysis). The selected data were synthesised in various forms such as tables, graphs and texts to determine its contribution to the conceptual framework. A conceptual framework is defined as an analytical tool, showing an overall picture of the study, which outlines key variables or constructs to be studied and the presumed relationships between them in a narrative or illustration (Miles and Huberman cited in Adom et al., 2018:439). Hence, this step links key constructs and identifies key variables in the research regarding community participation in climate change policy formulation and implementation (see Chapter 2, Section 2.5 and Table 2.9). Thus, during Step 3- towards developing and presenting the conceptual framework, Chapter 2 explored a number of aspects. Literature was reviewed that analysed systems, governance and participatory theories influencing community participation in climate change policy formulation, implementation and governance (Section 2.2). Relevant literature relating to the systems theory (Section 2.2.1), the NPG theory (Section 2.2.2), and the Theory of Participation in Environmental Management (Section 2.2.3) was considered. Subsequently, Section 2.3 examined the relationship between public governance and community participation in the policy process stages. This was followed by exploring how policy nudging could be used to enhance community participation in climate change policy formulation, implementation and governance (Section 2.4). Finally, a conceptual framework for community participation in the stages of the policy process was presented (Section 2.5). This conceptual framework informed Stage 2 of the study and underpinned the development of the qualitative data collection instruments of the study.

4.3.1.2 Stage 2: Theoretical stage (qualitative)

During Stage 2 of the research design, perspectives on climate change and indigenous knowledge systems (Chapter 3) were developed. Similar to Stage 1, Stage 2 was executed in 3 steps which are (i) literature search, (ii) literature analysis and (iii) literature review that are subsequently discussed.

▪ **Step 1: Literature search**

This step commenced with framing research questions and objectives applicable for Chapter 3, as search terms. Subsequently, a comprehensive literature search was executed via the same resources mentioned in Step 1 of Stage 1. By modifying the search terms as required, keywords to conduct the literature search were based on the RO and RQ applicable for Chapter 3 (refer to Figure 4.1).

▪ **Step 2: Literature analysis**

Similar to Stage 1, the first criterion was applied (Bowen, 2009:33). Concerning the second criterion, the relevance of literature was established in respect of its contribution to the following:

- influence of community awareness and understanding regarding climate change on their participation in policy formulation and implementation (Section 3.2);
- indigenous knowledge systems and its incorporation into climate change policy for facilitating community participation in climate governance (Section 3.3);
- use of policy nudging by socio-political, administrative and public policy governance (Section 3.4); and
- nature of community participation in climate change policy formulation and implementation (Section 3.5).

Upon satisfying the second criterion, similar to Step 2 in Stage 1 the third criterion was satisfied. The fourth criterion was satisfied if the document was considered complete and part of the research if covering in part or broadly the topics discussed in Sections 3.2, 3.3, 3.4 and 3.5. After applying this criterion, keywords in titles, abstracts and texts of literature were used to categorise literature according to their relevance to the mentioned sections. After categorisation, irrelevant literature was discarded (Creswell and Creswell, 2018:70). This step was concluded with an analysis of each document selected in relation to the topics discussed in Sections 3.2, 3.3, 3.4, and 3.5.

▪ **Step 3: Literature review findings for Chapter 3**

Having completed Step 2, the findings from the literature review are presented in Chapter 3 of the thesis. Chapter 3 entailed assessing how community understanding and awareness regarding climate change and climate change policy influence their participation in policy formulation and implementation (Section 3.2). Further, Chapter 3 explores how the use of indigenous knowledge systems in climate change policy formulation and implementation facilitates community participation in climate governance (Section 3.3). An analysis was also done on how socio-political governance, administrative governance and the political system use policy nudging to enhance community participation in climate change policy formulation, implementation and governance (Section 3.4). Lastly, the nature of community participation in climate change policy formulation and implementation was determined (Section 3.5).

4.3.1.3 Stage 3: Empirical stage (qualitative)

During Stage 3, the appropriate research approach and design was selected and detailed findings (Chapter 4) were reported and analysed (Chapter 5). Stage 3 therefore comprises 2 steps, namely (i) research methodology, and (ii) reporting and analysis of findings. Given the detailed exposition of Step 1 (Chapter 4), the explanation of Step 1 is not repeated here.

As part of the empirical stage (Step 2), data collection encompassed empirical data collection from 11 focus group discussions and 17 semi-structured interviews. The details of data collection are outlined in Section 4.5. Following data collection, conducted through the qualitative data collection instruments (focus group discussions and semi-structured interviews), the

findings of the empirical stage are presented in Chapter 5. The presentation of the findings is in line with the RQ's and RO's (Section 1.4) of the study (refer to Figure 4.1).

Therefore, Chapter 5 reports data collected from the sample which comprised the Manonyane communities, community representatives, public administrators, politicians and experts. The outline of this chapter includes introductory remarks (Section 5.1) and response results indicating the projected sample as well as the actual samples (Section 5.2). In Section 5.3, the community's perspective concerning their participation in climate change policy formulation and implementation is presented. This is succeeded by the public administrators' (Section 5.4), the politicians' (Section 5.5), and experts' (Section 5.6) perspectives of community participation in climate change policy formulation and implementation. In Section 5.7, a critical evaluation of the findings is presented. This chapter is concluded in Section 5.9. Based on the findings from the empirical stage, the Chapter is concluded with a contextual participatory strategy for future climate change policy formulation and implementation in Chapter 6.

4.4 POPULATION AND SAMPLE SIZE

Community participation in climate change governance, policy formulation and implementation can be understood in the context of a political system and its environment (Easton, 1957). This political system comprises public administrators and politicians, whilst the environment that informs policy formulation, as well as its implementation, comprises experts in climate change and the community. Due to the broad stakeholder participation in climate change policy formulation and implementation, a single perspective would thus not suffice. The population (N) in this research, therefore, comprised participants who would provide a (i) community perspective (MC), (ii) community representative perspective (Manonyane Chiefs), (iii) a political perspective (Manonyane Community Council (MCC), politicians and portfolio committees), (iv) public administrators' perspective (District Administrator and directors of the Lesotho government ministry departments), and (v) expert perspective (experts and professionals in climate change).

The identification of this population was in line with the case study design of the study that supports an in-depth exploration of the research problem and the phenomenon under investigation. The sample selection (n) thus includes samples for qualitative data collection and analysis. The selection of this sample applied the purposive and non-probability (qualitative) sampling. Purposive sampling is defined as selecting individuals, groups of individuals and institutions based on specific purposes associated with answering research study's questions and it allows the research to utilise expert judgment (Sarantakos, 1998; Babbie and Mouton, 2006:2001; Teddlie and Fen, 2008). Against this background, the population and sample is outlined in the remainder of this section.

4.4.1 Political perspective

4.4.1.1 Manonyane Community Council

The MCC is one of the 64 councils in Lesotho (KOL country profile, 2017-2018:114; KOL. Ministry of Local Government and Chieftainship, 2017-2018). Figure 4.2 shows the map of Lesotho (a country completely surrounded by South Africa) with its agro-ecological zones and the 10 administrative districts, as well as the location of Manonyane communities in the district of Maseru. The MCC is also one of the 23 community councils in the Maseru District and comprises 14 wards, approximately 104 village, and has a population of about 25 143 citizens, comprising 12 079 males (48%) and 13 073 females (52%) (KOL. Bureau of Statistics, 2018). A principal Chief, who works with other chiefs (8) leading the main villages, heads the MCC. A main village is a group of sub-villages grouped under one name. A sub-village is a group of households under the leadership of a headman within the main village. Within the jurisdiction (a main village) of the chief are village headmen (still known as chiefs) who head each sub-village. For the purpose of this study, the focus is on the nine main villages of the MCC. These main villages are Boinyatso, Hata Butle, Mafefooane, Mafikeng, Poopa, Popanyane, Roma, Thoteng and Tloutle. The number of sub-villages under each main village are Boinyatso (12), Hata Butle (4), Mafefooane (4), Mafikeng (6), Poopa (5), Popanyane (14), Roma (49), Thoteng (4) and Tloutle (10). Figure 4.3 presents the map of MCC with its villages. The small map in the right top corner of the big map shows the complete map of Lesotho with the blue colour indicating the location of Manonyane.

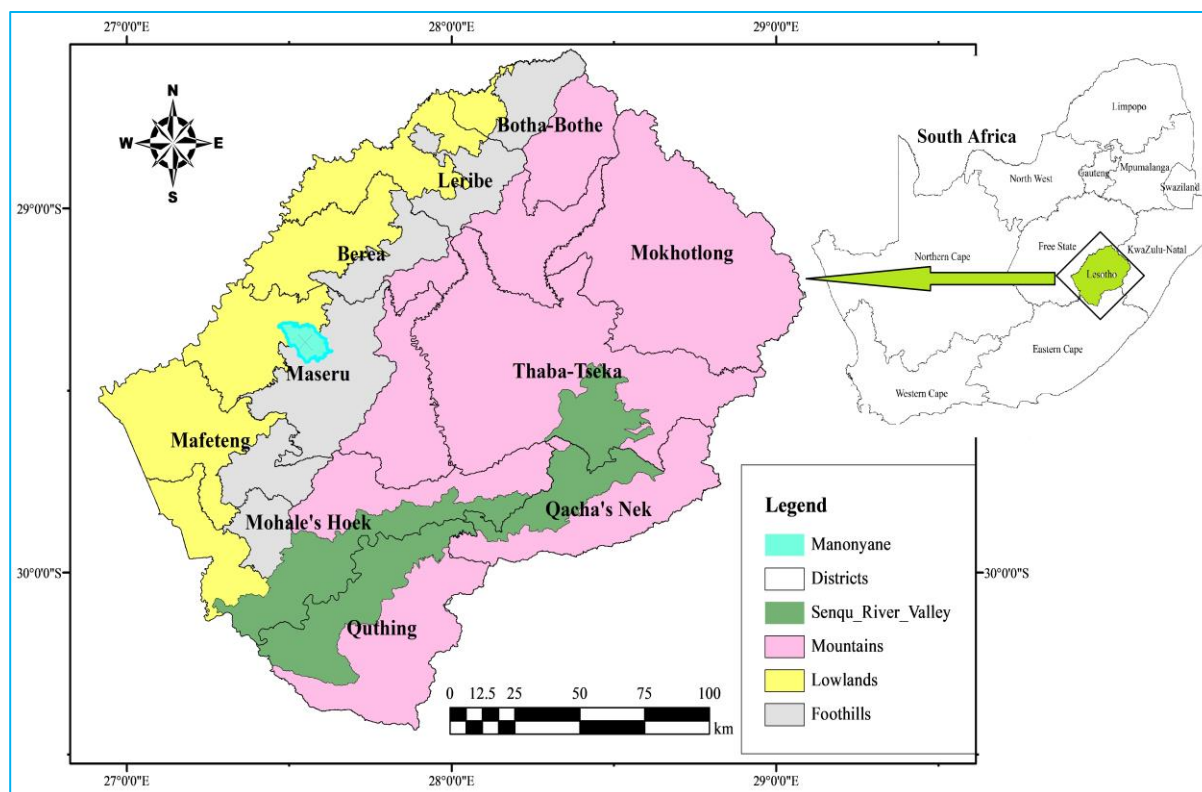


Figure 4.2: Map of Lesotho showing the location of the 10 administrative districts, agro-ecological zones and the Manonyane communities in Maseru District (Source: Author)



Figure 4.3: Map of Manonyane Community Council Area showing the location of the Manonyane communities (Source: Author)

The structure of the MCC comprises councilors from different political parties. The decision-making system applied in the Manonyane is a decentralised system which empowers the councilors to facilitate the development of the MC that they represent (KOL. Department of Environment, 2014:35). This council has the power to make by-laws regarding land and public health, among other responsibilities (KOL. Local Government Act, 1997:411) due to their representative power. The council consists of between nine and 15 elected members. The term of office for the then council members was from 2017 to 2022 when the next elections were held in Lesotho. The projected sample size for the councilors of the MCC was 14 (n) out of 14. Each councilor was expected to participate in either semi-structured interviews or a focus group discussion. The reason for ensuring that each councilor participates was to give them a voice as community representatives who are politically elected. Therefore, the sample was selected using the purposive sampling method, which included semi-structured interviews with two councilors and one focus group discussion with 12 councilors. The councilors were recruited through sending official correspondences to the MCC requesting the contact details of the prospective research participants. Upon receipt of their contact details, the participants were informed of the research by word of mouth, email and telephone. Against this background, Figure 4.4 illustrates the reporting structure of the MCC and chiefs (refer to Section 4.4.2.1) to the central government of Lesotho.

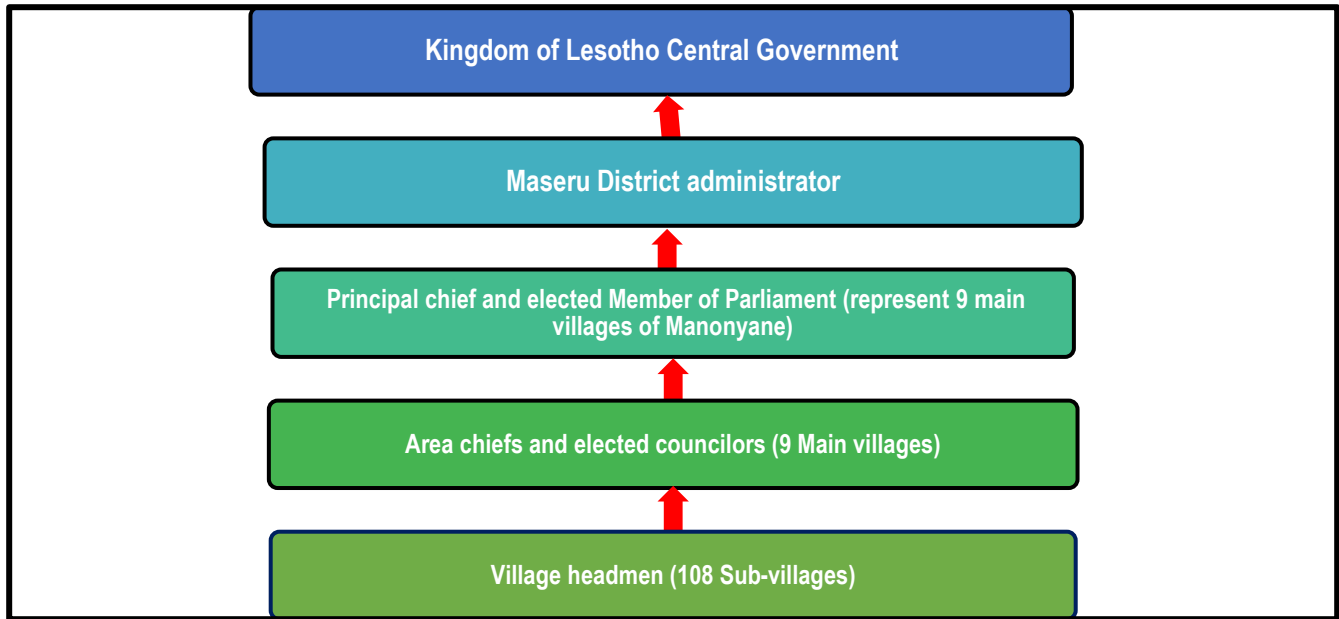


Figure 4.4: Reporting structure of Manonyane Community Council and chiefs to the Lesotho central Government (Source: Author)

4.4.1.2 Lesotho Parliament and Natural Resources, Tourism and Land Portfolio Committee member

Responsibilities of the Lesotho Parliament and Natural Resources, Tourism and Land Portfolio Committee include the oversight of the NCCP's implementation as well as reviewing the legislation supporting the implementation of the NCCP (Ministry of Energy and Meteorology, 2017:41). Given these responsibilities, it was prudent to obtain the committee members' perspective regarding community participation in climate change governance. Of the 21 (N) committee members, the chairperson was interviewed. Thus, the projected sample comprises one(n) committee member who was selected for a semi-structured interview using the purposive sampling method. The chairperson was recruited through the delivery of official correspondences to the office of the chairperson.

4.4.2 Community representative perspective

4.4.2.1 Manonyane Chiefs

The Manonyane communities comprise 30 chiefs, eight of whom are area chiefs and 22 are village headmen who are non-partisan (Principal Chief's Secretary, 2018. Personal Communication. 17 March, Maseru). An area chief is a title given to an overall chief who leads a main village. The reporting structure of these chiefs entails the village headmen reporting to the area chief, and the latter reports to the principal chief (overall head of all the chiefs in Manonyane) (KOL, 1968:6). These chiefs serve the communities for life and are responsible for the welfare and public safety and order of the people they serve (KOL, 1968:6-7). Of the 30 (N) chiefs, the projected sample size for the area chiefs of MCC was eight (n) and included one focus group discussion with all the area chiefs. The purposive sampling method was applied to the selected participants who were recruited by delivering official correspondences to the chiefs.

4.4.3 Community perspective

4.4.3.1 Manonyane communities

Community members residing in Manonyane amount to an estimated population of 25 143, which is spread across the nine main villages (Bureau of Statistics, 2018). Purposive sampling was applied in selecting community members from the nine main villages, who participated in the study through one focus group discussion per main village. In total, nine focus group discussions were conducted with community members. The reason for having nine focus group discussions was to obtain different views of the same experiences from the communities in each of the nine main villages. Each focus group discussion comprised eight to twelve participants. Focus group discussion participants were recruited through formal correspondences to the chief's office to nominate research participants. The chief's recommendation was necessary because of the role they play in communities. Thus, with permission from the chief's office, the researcher notified the nominated participants of their requested participation in the study verbally.

4.4.4 Public administrators' perspective

4.4.4.1 Director Meteorology and Climate Department

The Department of Meteorology and Climate is in the Ministry of Energy and Meteorology. This Department serves as the secretariat of the NCCP, ensuring the implementation of the NCCP and enhances transparency by reporting to the UNFCCC under the Paris Agreement (Ministry of Energy and Meteorology, 2017:41-42). The Department, which was headed by a director, had historical insight and understanding regarding past and current stakeholder engagement as well as community participation in climate change policy formulation and implementation. In light of this, it was thus deemed relevant to obtain the director's perspective. The projected sample constituted the director ($n = 1$) who was selected using the purposive sampling method to conduct a semi-structured interview. Recruitment of the director was through delivering official correspondences to the director's office.

4.4.4.2 Director Department of Environment

The Department of Environment, under the Ministry of Tourism, Environment and Culture (MTEC), was mandated to ensure that Lesotho adopts policies designed to protect and enhance the natural and cultural environment (KOL. Department of Environment, 2018:online). The administrative head of this Department was a director, and due to the Department's role in environmental policy, it was prudent to obtain the director's perspective regarding community participation in future climate change policy formulation and implementation. Hence, the projected sample in this department was the director ($n = 1$) with whom a semi-structured interview was conducted. The director was selected using the purposive sampling method. Recruitment of the director was through the delivery of official correspondences to the office of the director.

4.4.4.3 Maseru District Administrator's Office

The Maseru District Administrator (DA), as the overall District head who oversees the local District committees on behalf of central government, ensured that the NCCP implementation meets the needs of the communities in the District (Ministry of

Energy and Meteorology, 2017:42; KOL. Ministry of Local Government and Chieftainship, 2017-2018:113). As the DA could provide a district perspective regarding community participation in climate change policy formulation and implementation, a projected sample of one (n) DA was interviewed through a semi-structured interview. The purposive sampling method was applied. Recruitment of the Maseru DA was done through delivering official correspondences to the Maseru District Administrator's Office.

4.4.4.4 Director Decentralisation Department

The Department of Decentralisation was one of the central government departments in the Ministry of Local Government and Chieftainship (MLGC). The Decentralisation Department's mandate was to enable local governments to be responsible for service delivery and development within their mandate (KOL. Ministry of Local Government and Chieftainship, 2017-2018:114). Therefore, it was necessary to get the director's perspective, whose role is to ensure that the mandate of the Department is fulfilled. A semi-structured interview was conducted with one (n) director who was purposefully selected. Recruitment of the director was done through delivering official correspondences to the MLGC.

4.4.4.5 Director Chieftainship Department

The Department of Chieftainship was at the central government level in the MLGC. The Department ensured that chiefs and local authorities work in harmony and facilitates the chiefs' participation in the local government decentralisation process (KOL. Ministry of Local Government and Chieftainship, 2017-2018:114). It was deemed important to get a perspective from the Director Chieftainship because of the director's coordinating and leading role in executing the mandate of the Department. Thus, one (n) director was purposefully selected for a semi-structured interview. Recruitment of the director was through delivering official correspondences to the MLGC.

4.4.5 Expert perspective

4.4.5.1 National Climate Change Committee Member

The National Climate Change Committee (NCCC) offered expert advice regarding climate change issues. This Committee also played a key role in enhancing stakeholder participation, coordination and dialogue in respect of climate change policy formulation and implementation. Thus, the NCCP's perspective regarding community participation as stakeholders in climate governance was deemed critical. Of the 27 (N) committee members, representing different institutions (twenty-one Lesotho ministries, one from the National University of Lesotho (NUL), two Non-Governmental Organisations (NGOs), one private sector foundation, one community-based organisation, one faith-based organisation), only the NCCC chairperson was interviewed. Thus, the projected sample constituted one (n) committee member, who was selected for a semi-structured interview using the purposive sampling method. Recruitment of the committee member was through delivering official correspondences to the Lesotho parliament.

4.4.5.2 National University of Lesotho experts

The National University of Lesotho (NUL) is an academic institution in Lesotho with experts in climate change and policy from departments such as the Department of Geography and Environmental Science and the Department of Political and Administrative Studies. The experience, skills and expertise of these anticipated participants formed the basis of their participation in this study. A projected sample of one (n) out of three (N) experts in the Department of Geography and Environmental Science was selected for a semi-structured interview through purposive sampling. Of the four (N) experts in the Department of Public Administration, one (n) was purposefully selected for a semi-structured interview. Recruitment was done through delivering official correspondences to the individual experts.

4.4.5.3 United Nations Development Programme (UNDP) Climate Change Unit Head

An important international body that is concerned with climate change is the UNDP. The UNDP assists many countries, such as Lesotho, to strengthen new frameworks for climate change (UNDP, 2018:online). The Climate Change Unit was under the UNDP Energy and Environment Unit, which is mandated with helping to implement initiated climate change programmes by the Lesotho government ministries and departments. Thus, it was necessary to get the perspective of the Head of this Unit who oversee the implementation of climate change programmes at grassroots level. In implementing these programmes, the Unit did so in collaboration with government ministries and departments. Further, the perspective of the environment project manager (who reported to the Climate Change Unit Head) was deemed important because of the manager's coordinating role in the implementation of UNDP climate change programmes at the grassroots. Semi-structured interviews were conducted with the Unit Head and environment project manager. These participants who constitute a sample of two (n) from the UNDP were selected through the purposive sampling method. Recruitment was done through delivering official correspondences to the Unit Head and project manager.

Against this background, Table 4.1 captures the population and sample sizes, in respect of the five perspectives (community, community representative, political, public administrator and expert), the respondent(s) or participant(s) per perspective, reasons for the sample's selection, the applicable data collection instrument as well as the projected sample size for each perspective. As outlined in Table 4.1, the qualitative data collection instruments included a total of 15 semi-structured interviews and 11 focus group discussions.

Table 4.1: Population and projected sample size

Category	Perspective	Respondent(s) or participant(s)	Reason for selection	Data collection Instrument to be used	Projected Sample size (n)
COMMUNITY PERSPECTIVE	Manonyane communities	Community members	To obtain the community's perspective regarding their participation in climate change policy formulation and implementation.	Focus group discussions	9 focus group discussions with 8-12 people per group.
	Manonyane Chiefs	Chiefs	Chiefs play a very big role in leading people and would have a role to play in providing leadership to communities regarding their participation in climate change.	Focus group discussion	1 group of 8 chiefs
COMMUNITY REPRESENTATIVE PERSPECTIVE				Semi-structured interviews	2
	Manonyane Community Councilors	Councilors	To obtain the council's perspective regarding community participation. This council has the power to make by-laws regarding land and public health, among other responsibilities.	Focus group discussion	1 focus group discussion of 12 councilors.
POLITICAL PERSPECTIVE				Semi-structured interviews	2
	Lesotho Parliament and Natural Resources, Tourism and Land Portfolio Committee	Committee member (chairperson)	Review climate change related legislation (among others) and oversees the implementation of the NCCP.	Semi-structured interview	1
EXPERT PERSPECTIVE	National University of Lesotho (NUL)	Experts in climate change, policy and community participation	Experts in climate change policy and community participation.	Semi-structured interview	2
	UNDP (Lesotho) Climate Change Unit Head and Environment Project Manager	Unit Head and Project Manager	Oversees the climate change programmes implemented through the various Lesotho ministries and departments.	Semi-structured interviews	2
	National Climate Change Committee (NCCC)	Committee member (chairperson)	Advises on climate change related issues. Enhances coordination and dialogue amongst stakeholders on climate change issues.	Semi-structured interview	1

PUBLIC ADMINISTRATOR PERSPECTIVE	Maseru District Administrator's office	District Administrator	Can provide a district perspective regarding community participation in climate change policy formulation and implementation.	Semi-structured interview	1
	Ministry of Energy and Meteorology	Director	Reports on progress to the UNFCCC under the Paris Agreement. Reports to the UNFCCC on the implementation of the convention in Lesotho.	Semi-structured interview	1
	Director Decentralisation Department (MLGC)	Director	Leads a department that enables local governments to be responsible for service delivery and development within their mandate.	Semi-structured interview	1
	Director Chieftainship Department (MLGC)	Director	Leads a department that ensures that chiefs and local authorities work in harmony and facilitates chiefs' participation in the local government decentralisation process.	Semi-structured interview	1
	Director Department of Environment	Director	Mandated to ensure that Lesotho adopts policies designed to protect and enhance the natural and cultural environment.	Semi-structured interview	1

Source: Author

4.5 DATA COLLECTION

In this study, data collection methods as informed by the qualitative research approach included documents, focus group discussions and semi-structured interviews (qualitative). The selection of these data collection methods was based on the need for naturally occurring (documents) and/ or generated (focus group discussions, semi-structured interviews) data to address the research objectives and questions (Bowen, 2009). These data collection methods as elaborated in the rest of this section were executed with consideration of COVID-19 protocols.

In the year 2020, the COVID-19 pandemic and the associated restrictions had a significant impact on the global economy and social life in a world that has become a global village (Chakraborty and Maity, 2020). COVID-19 is a disease that is believed to have originated in Wuhan, China, in December 2019 (Rahmani and Mirmahaleh, 2020). Later, the disease spread throughout the whole world, prompting the World Health Organisation (WHO) to declare it a pandemic. The outbreak of the disease led to mandatory precautionary measures called 'social distancing' or 'physical distancing' to reduce interpersonal interactions that have a potential to increase infections (de Bruin, Lequarre, McCourt, Clevestig, Pigazzani et al., 2020). The education and research sector was not spared from the impact of the pandemic and the subsequent restrictions. The involuntary shift from face-to-face interactions to online interactions had a direct impact on researchers (Rashid and Yadav, 2020). Thus, the current

study was also affected by COVID-19 in terms of data collection. This study considered online data collection as a challenge compared to face-to-face data collection and thus the latter was used. Face-to-face data collection allows the researcher to probe research participants for clarity during interviews and focus group discussions compared to virtual interviews and focus group discussions. Therefore, the researcher conducted semi-structured interviews and focus group discussions while observing and adhering to the COVID-19 regulations (KOL. Government, 2020; WHO, 2020). These COVID-19 measures included precautionary measures and adhering to the COVID-19 protocols, such as social distancing and ensuring the availability of sanitisers during data collection. Further, research participants were reminded of the COVID-19 measures, including wearing masks during data collection.

4.5.1 Documents

Documents assist researchers to gain historical insight concerning the roots of specific issues by indicating the conditions that have an effect on the problem currently under investigation (Bowen, 2009:30; Creswell and Creswell, 2018:262). Documents further provide supplementary research data that inform and provide insights into the phenomenon under investigation (Bowen, 2009:30; Denscombe, 2014:225; Creswell and Creswell, 2018:262). In this study, the use of documents occurred through a literature search, literature analysis and literature review, inclusive of books, journal articles, conference papers, relevant reports, newspaper articles, e-books, internet sites, theses/dissertations, reports and government documents (Feldman, 1981:36; Goddard and Melville, 2001:20; Patton, 2002:4; Matthews and Ross, 2010:94).

4.5.2 Semi-structured interviews

Semi-structured interviews are based on a schedule with questions which are adhered to and which guide the interview (Wilson Rogers cited in Sapsford and Jupp, 2006:95). However, the interviewer remains free to explore, probe and ask questions that were to elucidate the subject or phenomenon through the use of unstructured questions (Patton, 2002:343). The choice of semi-structured interviews in this research was to gain in-depth understanding and knowledge of the interviewee's perspectives, attitudes, knowledge, beliefs and experiences regarding community participation in climate change policy formulation and implementation. Obtaining ethical clearance from the UFS Ethical Committee and informed consent from the relevant authorities (gatekeepers) of the research participants, was inclusive to the protocol for this instrument. The protocol further included obtaining signed informed consent from interview participants, conducting a voice recording of the interview and transcribing the recording verbatim into a transcript for data analysis. Regarding the semi-structured interviews, they were conducted at a venue and time as per the interviewee's convenience.

4.5.3 Focus group discussions

A focus group discussion entails a group of selected people to discuss a given topic in-depth, with the facilitation of a moderator, who is the researcher in this research context. This data collection instrument allows the researcher to obtain in-depth information and understanding of a phenomenon (Patton, 2002:385-386; Nyumba et al., 2017). During a focus group discussion, different participants are also able to hear the responses of other participants and make additional comments

beyond their original responses (Patton, 2002:385-386; Mishra, 2016; Nyumba et al., 2017). The relevance of focus group discussions in this study was to elicit participants' knowledge, experiences, practices, perceptions and knowledge in the course of a discussion as a group (Sarantakos, 1998:180; Patton, 2002:385-386). During the focus group discussion, a Sesotho (native language of Lesotho) translator was used for translation purposes. Obtaining ethical clearance and informed consent from gatekeepers of the research participants was inclusive to the protocol for this instrument. The protocol also included obtaining signed informed consent from research participants prior to the focus group discussion, conducting a voice recording of the focus group discussion and transcribing the recording verbatim into a transcript for data analysis. Two research assistants were used per focus group discussion to assist with, but not limited to, taking notes and recording non-verbal language. Table 4.2 summarises the data collection instruments used in this study, their relevance and applicable protocol.

Table 4.2: Data collection instruments used in the study

Instrument	Relevance	Protocol
Documents	Provide supplementary research data.	▪ Frame research questions as search terms. ▪ Complete a literature review. ▪ Summarise findings from the literature review
Focus group discussions	Elicit in-depth knowledge, experiences, practices, perceptions and knowledge of participants.	▪ Obtain ethical clearance. ▪ Obtain informed consent from gatekeepers and participants. ▪ Obtain signed informed consent from participants to voice record a focus group discussion. ▪ Voice record focus group discussion. ▪ Transcribe audio recording verbatim into a transcript.
Semi-structured interviews	Gain in-depth understanding and knowledge of the interviewee's perspectives, attitudes, knowledge, beliefs and experiences.	▪ Obtain ethical clearance. ▪ Obtain informed consent from gatekeepers and participants. ▪ Obtain signed informed consent from respondent to voice record interview. ▪ Voice recording of the semi-structured interview. ▪ Transcribe audio recording verbatim into transcript.

Source: Author

4.6 DATA ANALYSIS

4.6.1 Content analysis of qualitative data

This study applied content analysis of qualitative data which entails descriptions of manifest content and latent content (Graneheim and Lundman, 2004; Graneheim, Lindgren and Lundman, 2017:30). Manifest content are interpretations that are close to the text being studied, whereas latent content is the interpretation of the underlying meaning (Graneheim and Lundman, 2004; Graneheim et al., 2017:30). Therefore, manifest content includes visible and obvious sign language and latent content are known as distant content (Graneheim and Lundman, 2004; Graneheim et al., 2017:30). Examples of manifest content include, among others, noticed nodding of head, laughter, silence, sighs and other notable gestures (Elo, Kääriäinen, Kanste, Pölkki, Utriainen et al., 2014:5). Content analysis enables systematic coding and thematic analysis of textual information from the transcribed interviews to address the research objectives and questions (Vaismoradi, Turunen and

Bondas, 2013:400). Addressing research objectives and questions for the study include determining the trends and patterns of words used, themes cutting across categories, relationships of themes and assessing the discourses of communication (Vaismoradi et al., 2013:400). A theme is an underlying meaning that regularly occurs and cuts across categories (Graneheim and Lundman, 2004:104; Graneheim et al., 2017:32). Noteworthy is that a theme is always an interpretation (Graneheim et al., 2017:32). Qualitative data are non-numerical data that includes concepts and opinions. Qualitative data analysis refers to a process of examining qualitative data to reveal patterns and themes for the subject under study. Interpretation of data is a process that involves reframing and explaining narratives by participants to make sense of the topic under discussion (Lindgren, Lundman and Graneheim, 2020:2).

Content analysis uses three methodological approaches to empirical qualitative data analysis, which are inductive, deductive and abductive approaches (Graneheim et al., 2017:30). An inductive approach or data driven approach is when the analysis is done through searching for patterns in the data. The patterns searched were in terms of similarities and differences in the data grouped in categories or themes (Bengtsson, 2016:10; Graneheim et al., 2017:30). When using the inductive approach, the researcher conducts analysis from data to a theoretical understanding. A deductive approach or concept driven approach tests the implications of existing theories about a phenomenon under study against collected data (Bengtsson, 2016:10; Graneheim et al., 2017:30). Thus, in using the deductive approach to content analysis, the researcher conducts analysis from a more abstract or general level to a specific phenomenon (Graneheim et al., 2017:30). The abductive approach or complementary approach implies using both inductive and deductive approaches (Graneheim et al., 2017:30). The content analysis in the current study entails a deductive approach or concept driven approach to test the implications of concepts formed in Chapters 2 and 3. When using the deductive approach to content analysis, the researcher tests existing concepts driven from existing theories to analyse the study against collected empirical data (Elo et al., 2014:2; Graneheim et al., 2017:30).

4.6.1.1 Qualitative data organisation

Data organisation is sorting out data for analysis (Bengtsson, 2016:10). The organisation of data involves (i) data storage, (ii) data labelling, (iii) data categorisation, and (iv) transcription, in preparation for content analysis. The process of data organisation was done manually. Data is manually changed from voice recording into a written record, verbatim. First, data storage in the current study means the method of storing data for future use. Later, after the study is complete, interviews will be stored for five years in locked cabinets in the researcher's home. The future use of the stored data will be subject to further Research Ethics Review and approval, if applicable. Second, data labelling refers to attaching labels to interviews according to their categories, such as focus group discussions and semi-structured interviews. Third, the data collected through the semi-structured interviews and focus group discussions were analysed by further categorising the data into already formed categories through interpretation and reasoning (Dey cited in Elo and Kyngas, 2008:111; Babbie and Mouton, 2010:493). Confidentiality of participants is preserved by coding interview and focus group discussion data into already formulated categories and be referred to in this way in the data, any publications, or other research reporting methods such as conference

proceedings. Data categorisation is consistent with data labelling. Nevertheless, the difference here is that data are grouped into a category per research objective and or question. Fourth, data organisation entails interview and focus group discussion transcription. The purpose of transcription is to put the interviews and focus group discussions into text and expressions created to be seen, read and interpreted. It is upon a transcribed interview and focus group discussion that underlying meanings could be analysed (Vaismoradi et al., 2013:401). The credibility of transcription was ensured through peer review (debriefing) (Tobin and Begley, 2004:392; Babbie and Mouton, 2006:277). Transcribed interviews were stored in a password protected computer, while hard copies data were locked in a filing cabinet. Having done qualitative data organisation, deductive analysis was conducted following four stages, namely (i) decontextualisation, (ii) recontextualisation, (iii) categorisation and (iv) compilation, as proposed by Bengtsson (2016).

4.6.1.2 Stage 1: Decontextualisation

Decontextualising is changing the transcribed interviews from the level of direct quotations to categorised individual interviewees' perspectives (Friberg, Dahlberg, Petersson and Öhlén, 2000:39). During decontextualisation (Stage 1), data were categorised through coding, which involves organising segments of the data through the use of a short name that summarises and accounts for each piece of data grouped under a category (Charmaz, 2006:43; Bengtsson, 2016:9). This categorisation of data is according to the research objectives and questions.

Decontextualisation was conducted in three stages, which were selecting meaning units, condensing and coding. The researcher reread through the transcribed interviews to familiarise with data before breaking down the data into meaning units. Graneheim and Lundman (2004:106) define a meaning unit as words, phrases or paragraphs that contain aspects related to each other because of their content and context. In other words, meaning units are statements or paragraphs that relate to the same meaning (Graneheim and Lundman, 2004:106; Bengtsson, 2016:12). During decontextualisation, the researcher first selected meaning units. Selecting meaning units is inductively describing the original data without abstracting the transcribed text (contextualisation) (Lindgren et al., 2020:3). Second, the researcher condensed data (Graneheim et al., 2017:30; Lindgren et al., 2020:4). Condensing is shortening the transcribed text, while preserving the meaning unit (Graneheim and Lundman, 2004:6). It is noteworthy that at every stage of decontextualisation, some degree of interpretation happens. Third, the researcher coded the data. The coding done at this stage involved describing the condensed meaning unit using a code close to the manifest content (Lindgren et al., 2020:4). The meaning units were coded and assigned to community participation, climate change, climate governance, indigenous knowledge systems and policy formulation and implementation.

4.6.1.3 Stage 2: Recontextualisation

The second stage of content analysis after decontextualisation is recontextualisation. Recontextualisation is making sense of the words used and the person who said them (Lindgren et al., 2020:2). Recontextualisation is conducted in four steps, which are (i) sorting codes into sub-themes, (ii) rereading meaning units alongside original data, (iii) identifying deviant themes to put into new categories as new data, and (iv) data interpretation. The first step during recontextualisation is to sort codes into sub-

themes (Lindgren et al., 2020:4). Sorting in this case involved some level of interpretation on groups of codes that were interrelated and different. Second, the researcher verified the meaning units aspects that answer the research objectives and questions (Bengtsson, 2016:12). Verification was done by rereading the meaning units alongside the original data (Bengtsson, 2016:12). Third, after verification, deviant themes were identified. At this stage, the deviant themes that did not fit into the categories were identified and put into new categories as new data (Bengtsson, 2016:12; Lindgren et al., 2020:5). Data in the form of reflexive notes describe aspects noted during the interviews, audiotaping, transcription and analysis to form part of the new data (Korstjens and Moser, 2018:123). Fourth, the data was interpreted (Lindgren et al., 2020:2), where a comprehensive analysis was done by searching the underlying meaning of the verbatim text (Lindgren et al., 2020:2).

4.6.1.4 Stage 3: Categorisation

Categorisation (Stage 3) is putting content that has the same meaning into groups (Graneheim and Lundman, 2004:107). Categorisation included identifying relevant groups of categories, content and themes to aid the organisation of information into categories of meaningful and relevant passages of data. Categories were used to identify and define codes that had the same themes. The categorisation was done in three steps: putting together similar data, condensing meaning units and dividing categories into sub-categories. First, a collection of similar data were put together (Graneheim et al., 2017:32). Second, the meaning units were condensed (Bengtsson, 2016:12). Third, categories were sub-divided into sub-categories depending on the themes being abstracted.

4.6.1.5 Stage 4: Compilation

Lastly, compilation (Stage 4) is the identification and definition of categories that have the same themes (Fusch et al., 2018:27). Compilation was when the selected data were corroborated (give support to or confirm) to a particular theme and gave an in-depth understanding of the themes formed (Fusch et al., 2018:27). The analysis was done from a neutral perspective. Compilation was done in three steps: summarising data under categories and themes, explaining patterns in the data and explaining the reasons for occurrence (e.g., inconsistencies and similarities) and analysis and writing. First, data was summarised under categories and themes to give a quick overview of the pattern shown by the results (Bengtsson, 2016:12). Consideration was done to assess the logic of data and how the findings corresponded to the literature (Bengtsson, 2016:12). Second, patterns in the data were explained. The explanation was done by gathering evidence to compare the empirical study results to the existing body of literature (Chapter 3) and conceptual framework. The patterns of data were shown by highlighting the occurring patterns, reasons for the occurrence of patterns, differences of occurrence of patterns among categories and similarities of patterns among categories (Bengtsson, 2016:12). Third, analysis and writing up of the results took place (Bengtsson, 2016:12). The analysis clarified ambiguities and attempted to discover multiple realities regarding community participation in climate change policy formulation and implementation (Fusch et al., 2018:20).

After comparing evidence, the research questions and objectives were answered by sorting out data to ensure alignment with research objectives. Both manifest and latent analyses were done (Bengtsson, 2016:12). During manifest analysis, the

researcher used the participant's words and referred back to the original interview. The reference was done by sometimes quoting a representative statement from the original interview. During latent analysis, the researcher identified the underlying meaning (Bengtsson, 2016:12). Although it is often difficult for an independent person to familiarise themselves with another's coding and categorisation, in the current study, the validity of the analysis process was ensured by the scientific review committee, study leaders and peers in the field. The analysis of data was concluded by presenting the research findings based on the research objectives and questions. A link was established between the analysed data and the research objectives and questions. Finally, the implications of the findings and areas for future research were stated. Table 4.3 gives a summary in concluding the discussion on content analysis of qualitative data.

Table 4.3: Content analysis of qualitative data, according to Bengtsson's (2016)

Method of data analysis	Steps to be taken
Data organisation	▪ Data storage. ▪ Data labelling. ▪ Data categorisation. ▪ Transcription.
Stage 1: Decontextualisation	▪ Selecting meaning units. ▪ Condensing. ▪ Coding.
Stage 2: Recontextualisation	▪ Sorting codes into sub-themes. ▪ Rereading meaning units alongside original data. ▪ Identifying deviant themes to put into new categories as new data. ▪ Interpreting data.
Stage 3: Categorisation	▪ Putting together similar data. ▪ Condensing meaning units. ▪ Dividing categories into sub-categories.
Stage 4: Compilation	▪ Summarising data under categories and themes. ▪ Explaining patterns in the data. ▪ Analysis and write up.

Source: Bengtsson (2016)

4.7 RELIABILITY AND VALIDITY OF QUALITATIVE DATA COLLECTION INSTRUMENTS

Validity, as defined by Bengtsson (2016:11), means a true reflection of the phenomenon under study, while reliability is when the same results could be obtained if the study is replicated. In respect of qualitative data collection instruments, focus group discussions and semi-structured interviews were utilised to collect data. Assuring the reliability of data collection instruments is important to ensure the integrity of the findings (Gillham, 2005:127-144; Davidson, 2009:41-43; Bengtsson, 2016). The reliability and validity of qualitative data collection instruments are discussed with reference to methodological rigour, triangulation and trustworthiness. Reliability for the current study was ensured through (i) methodological rigour, (ii) triangulation, and (iii) trustworthiness. Validity was ensured by adhering to the principles of trustworthiness, which are (i) credibility, (ii) transferability, (iii) dependability, and (iv) confirmability or conformability. The discussion focuses on the measures taken to ensure the reliability and validity of qualitative data collection methods. First, the measures taken to ensure the reliability of the study are discussed.

Methodological rigour is demonstrating the integrity and competence of the research process by using an appropriate research design using scientific procedures to systematically conduct research, and a well applied data analysis method according to scientific guidelines in the field of study (Tobin and Begley, 2004:390; Mooney-Somers and Olsen, 2017). The research process followed the scientific research guidelines in the field of study to ensure the reliability of the study results. The study design included a scientifically acceptable sampling strategy (Section 4.4), data sources, data collection instruments (Section 4.5) and data analysis methods (Section 4.6) to ensure an appropriate research design. As a systematic procedure in conducting the study, a literature review was carried out to inform the empirical data collection instruments (Section 4.3).

Triangulation is a way of showing the reliability of the study. There are four types of triangulation in literature, namely, data triangulation, investigator triangulation, theory triangulation and methodological triangulation (Pandey and Patnaik, 2014:5748; Fusch et al., 2018:22) (see also Section 4.2). Data triangulation is collecting data from different people on the same phenomena to discover similarities in different settings (Pandey and Patnaik, 2014:5748; Fusch et al., 2018:22). Investigator triangulation is having more than one expert investigator to explore the same data in a study (Fusch et al., 2018:22; Korstjens and Moser, 2018:122). Theory triangulation is using different theories as frameworks to collect the data (Pandey and Patnaik, 2014:5748; Fusch et al., 2018:22). Methodological triangulation is using multiple sources of data within one design or across method (Fusch et al., 2018:22; Korstjens and Moser, 2018:122; Pandey, 2019:5748). One form of triangulation was employed in this study, which was data triangulation. Various perspectives (Section 4.4) were sought on the same phenomenon of community participation in climate change policy formulation and implementation to ensure data triangulation (triangulating data). The study is a case study design that uses multiple sources of data (triangulating data). Thus, data from multiple sources between methods were cross checked to complement each other (Tobin and Begley, 2004:393; Fusch et al., 2018:22). Nevertheless, triangulation may result in contradictory and inconsistent results. The researcher used latent analysis to interpret the contradictions and inconsistencies (Fusch et al., 2018:26).

The trustworthiness of the study is the dependability of the research in terms of being honest and truthful (Tobin and Begley, 2004). Tobin and Begley (2004:392) argue that dependability is achieved through auditing. The researcher is required to ensure documentation of the research process to allow interested people to examine how the research data, methods, results and reporting were documented. Information regarding the research process is detailed in Sections 4.3.1.1, 4.3.1.2 and 4.3.1.3 (stages of the research design). Second, the following principles of trustworthiness were applied: credibility, transferability, dependability and confirmability, to ensure the validity of the data collection instruments (Bengtsson, 2016:13). Credibility is the process of establishing how data and analysis procedures are conducted to ensure the inclusion of the relevant data (Guba and Lincoln, 1994:114; Pandey and Patnaik, 2014:5746; Bengtsson, 2016:13). Transferability or generalisability is the extent to which results may be applicable to other settings (Guba and Lincoln, 1994:114; Pandey and Patnaik, 2014:5746; Bengtsson, 2016:13). Dependability or reliability refers to the extent to which data change over time and the alterations made in the researcher's decision during the analysis process (Bengtsson, 2016:13). For example, coding decisions may be tracked to ensure dependability. Confirmability refers to the objectivity or neutrality of data (Pandey and Patnaik, 2014:14).

Credibility is ensured by a variety of ways. This include the amount of data collected depending on the phenomenon under study, appropriate selection of the meaning unit that answers the research questions and objectives and how well the categories and themes cover data (Graneheim and Lundman, 2004:110). In respect of the amount of data to be collected, the study collected data from 11 focus group discussions and 15 semi-structured interviews. To ensure the selection of an appropriate meaning unit where several paragraphs contain various meanings, a single word(s) could be selected to represent the meaning unit. Representative direct quotations from transcribed interviews were noted to ensure the credibility of the research in terms of showing how well the categories and themes cover data (Elo et al., 2014:7). Credibility was also ensured through peer review (debriefing) and audit trails (Tobin and Begley, 2004:392; Babbie and Mouton, 2006:277; Bengtsson, 2016:12). Peer debriefing is exposing oneself to peers (disinterested in the research) to provide additional voluntary information. In addition, the audit trail should include a self-critical account of the research process (Tobin and Begley, 2004:392).

Transferability was ensured by a 'thick description' where the research attempted to describe a phenomenon in detail to evaluate the applicability of conclusions in other settings and situations with different people (Pandey and Patnaik, 2014:5750; Bengtsson, 2016:13; Korstjens and Moser, 2018:121). The selection of participants, data collection and data analysis procedures are outlined in Sections 4.4, 4.5, and 4.6, respectively, to ensure transferability of the study. However, generalisability in qualitative research is limited because samples are usually small and not representative. Instead, in-depth interviews are the focus of qualitative research (Bengtsson, 2016:13).

Dependability can be ensured by the reliability of the content analysis process (Krippendorff, 1980:72) using a specification to transcribe interviews and keeping an audit trail. About content analysis, refer to Section 4.6.1 for details of how the method was applied. A transcription specification was used to ensure reduced variations of the transcription process to increase the dependability of the content analysis process (Krippendorff, 1980:71). Variations of the transcription process may reduce the dependability of the content analysis. Specifications for procedures in conducting and transcribing (Gillham, 2005:127-144; Davidson, 2009:41-43) all the data collected using the three instruments were prepared prior to data collection to ensure a uniform application of the techniques. Because the interview was conducted with the aid of an interpreter, the researcher used the interpreter's English version for analysis. Training was organised by the researcher for the interpreter as a quality control measure. The transcription was done within 24 hours after the interview. The reason for early transcription was to ensure the transcription follows the same standards set in the transcription specification. In addition, the researcher kept an audit trail to ensure dependability. The audit trail kept documents that describe in detail how data were collected, how categories were derived and how decisions were made throughout the study (refer to Section 4.6.1). This was to ensure that the findings, interpretations and recommendations were supported by the data collected, thus providing an opportunity for examiners and other researchers to challenge the study process and its findings later (Merriam cited in Tobin and Begley, 2004:392; Pandey and Patnaik, 2014:5750).

To ensure confirmability, the researcher used audit trails (record keeping of the study process) (Korstjens and Moser, 2018:121). This was done by keeping all raw data, including (i) written field notes, (ii) theoretical notes, condensed notes and unitised (put together) notes, (iii) themes, definitions and relationships of data as interpreted, (iv) process notes (strategies, procedures and designs), (v) electronic journal (reflexive personal notes and motivations), and (v) expectations (predictions and intentions), as suggested by Pandey and Patnaik (2014:5751). In concluding the subject on reliability and validity of qualitative data collection instruments, Table 4.4 gives a summary.

Table 4.4: Summarising reliability and validity of data collection instruments

Reliability	Validity
▪ Methodological rigour ▪ Triangulation ▪ Trustworthiness	▪ Credibility ▪ Transferability ▪ Dependability ▪ Confirmability

Source: Author

4.8 ETHICAL CONSIDERATIONS

Ethical considerations which applied for the purpose of this study included (i) relevance and value, (ii) scientific integrity, (iii) participant engagement, (iv) fair selection of participants, (v) fair balance of benefits and risks, (vi) informed consent, (vii) participants' privacy and confidentiality, and (viii) research competence and expertise. Refer to Attachments 1-38 for each participant' details on ethical procedures taken for this study. Ethical considerations refer to decisions made to reach conclusions regarding "acceptable and unacceptable behaviour" when collecting, analysing and reporting data (Mikesell, Bromley and Khodyakov, 2013:e7; Rahman, 2015:37). First, regarding relevance and value, the points applicable to this study are discussed in Chapter 5. Second, scientific integrity occurs when a researcher adheres to accepted research standards, professional values and practices of the applicable scientific community (Kretser, Murphy, Bertuzzi, Abraham, Allison et al., 2019:329). Resultantly, the adherence ensures clarity, reliability and validity of the research. Scientific integrity is generally fostered by training researchers on scientific methods, ethics and conduct, scientific oversight (peer review) throughout the research process, and publishing unanticipated results (Sponholz, 2000; Kretser et al., 2019; Shaw, 2019). Research proposal and data collection instruments were tabled before the scientific and ethical committees for approval to foster scientific integrity in the current study.

Third, participant and role player (gatekeeper) engagement refers to identifiable ethical procedures to be followed by a researcher to get access to the participants (Floyd and Arthur, 2012:173). The procedures include, among others, seeking permission from gatekeepers, informed consent and submission of the data collection instruments for ethical approval by the institutional internal ethical and scientific committees for approval. Gatekeeper is a term that refers to an individual or group of individuals, depending on the position of authority, who control or limit the researcher's access to participants (McFadyen and

Rankin, 2016). Concerning participant engagement for the study, an information letter seeking permission and consent was sent out to gatekeepers and participants before the study was conducted. Further, participants voluntarily agreed to participate. Apart from the gatekeepers' permission, consent from the participants was sought before participation. Lastly, anonymity was ensured through securing information obtained from participants (refer to ethical consideration (Section 4.8) on privacy and confidentiality for details on how the information was secured) to ensure participant engagement.

The fourth ethical consideration is fair selection of participants. Bias was minimised through purposive sampling for qualitative data (see Section 4.4 for details of the sample). Fair participant selection is a requirement that should be met to exclude and include participants in a research (Rahman, 2015:37; MacKay and Saylor, 2020:5). Vulnerable participants should perhaps be excluded from the research, simultaneously observing the rule that the selection of participants should be inclusive of underrepresented groups (Navalta, Stone and Lyons, 2019:3; Borgerson, 2020; Iltis, 2020; MacKay and Saylor, 2020:5). Fair participant selection includes the principles of fair inclusion, fair burden sharing, fair opportunity and fair distribution of third party risks (Rahman, 2015; Iltis, 2020; MacKay and Saylor, 2020:5). Fair inclusion is sufficiently justifying the inclusion and exclusion criteria when selecting participants in a population (Iltis, 2020:27-28; MacKay and Saylor, 2020:8). Fair burden sharing is a fair allocation of the expected research burden (Iltis, 2020:27-28; MacKay and Saylor, 2020:8). On burden sharing, it is unfair to ask a few individuals to bear risks of the research to benefit others (Iltis, 2020:27-28; MacKay and Saylor, 2020:8). Fair opportunity is selecting the participants who meet the scientific requirements of the study (Iltis, 2020; MacKay and Saylor, 2020:10). MacKay and Saylor (2020:10) define fair distribution of third party risks as selecting participants in such a way that, if applicable, risks are fairly distributed to participants and third parties. On fair participant selection, complete exclusion or underrepresentation of certain populations is working against the principles of fair representation (Borgerson, 2020; MacKay and Saylor, 2020:7; Schaefer, 2020:20) (refer to Section 4.4 for details of how the sample was selected for this study).

The fifth ethical consideration is the fair balance of risks and benefits. The fair balance of risks and benefits simply means that the researcher is required to ensure that the participants involved are not put at risk because of the research (Table 4.5 and Section 1.7 on the significance of the study). The fair balance of risks and benefits applicable to the current study implies that the content and presentation of study risks and benefits were reasonably fair. The researcher ensured that the interviews were conducted following the COVID-19 protocols (see Section 4.5). Further, data collection occurred at a time convenient for the research participant to mitigate any risks related to loss of work time.

Sixth, informed consent refers to providing valuable information to participants in any research to assist them in making decisions on time about participating in the study (Petrova, Dewing and Camilleri, 2016:5). The process of informed consent involved participants signing consent forms with the understanding that their confidentiality was assured (refer to Attachments 23 - 38). Again, the participants were made to understand that withdrawal from participation may be done freely and at any time if they wish to do so prior to data analysis. In respect of informed consent, the organisations where the proposed respondents and participants were affiliated were provided with formal correspondences outlining the proposed study and

seeking permission for their participation. In this regard, gatekeepers were provided with formal correspondences outlining the study, to obtain permission for the participation of selected participants (refer to Attachments 1-22).

Seventh, confidentiality in research is generally defined as separating identifying information provided by the participants from the data when collecting, analysing and reporting data (Coffelt, 2017:228). The concept of confidentiality and privacy is associated with anonymity. In the current study, privacy and confidentiality refer to respecting obtained participants' private information only for purposes indicated in the gatekeepers' letters and the consent forms (Petrova et al., 2016:4). Anonymity is obtaining participants' data without obtaining personal information (Coffelt, 2017:228). The process of ensuring confidentiality and privacy involves more than merely disguising the identities of research participants and anonymising data (Floyd and Arthur, 2012:177; Morse and Coulehan, 2015; Lancaster, 2016:6). With reference to this study, the privacy and confidentiality of participants was respected by ensuring that the responses obtained from the data collection instruments (focus group discussions, semi- and structured interviews) were anonymous (Floyd and Arthur, 2012:176).

The researcher ensured that the interview recordings (voice) were password protected in a computer. No comments were attributed to individual participants in publications. The identity of participants was not linked to the results of the study. The participants' answers were given a fictitious code number or a pseudonym for reference in the data and any publication (e.g. reports, journal articles, conference presentations) (Coffelt, 2017:228). However, participants were made aware of other people, such as the research supervisor, transcriber, external coder and members of the research ethics and scientific committees (Floyd and Arthur, 2012:176; Coffelt, 2017:30). Assurance was made that every person involved was required to sign the confidentiality form. Lastly, in respecting privacy and confidentiality, data will be destroyed after five years of the study.

Eighth, research competence as an ethical requirement refers to having appropriate research skills and experiences to conduct the proposed research (Prokhorchuk, 2014; Mooney-Somers and Olsen, 2017:129; Navalta et al., 2019). Research competence includes the skills and experiences of persons involved in a study, for example, the experts who supervise the study, the institutional review committee(s) and the researcher(s) undertaking the study (Mooney-Somers and Olsen, 2017:129; Navalta et al., 2019). Consequently, research competence is judged by the methodological rigour of the research, originality of the research, scientific research practices according to the discipline, fair selection of participants, objectivity of the research, funding for the research and proper acknowledgement of others' work (Navalta et al., 2019). Ensuring the research competence and expertise for this study was done through ensuring methodological rigour of the research (Section 4.7.1 and 4.7.2), originality of the research, scientific research practices according to the discipline, fair selection of participants (refer to the fourth ethical consideration for details), objectivity of the research, funding for the research and proper acknowledgement of others' work. In terms of the objectivity of the research, the study used a case study design (Section 4.3). The researcher also attended various workshops on ethical research and qualitative research, to ensure reliability of the research. Finally, the research process was validated by the relevant scientific review committee, ethical committee and the

experts in the field. In summarising the discussion on ethical considerations, Table 4.5 provides a brief description of each ethical consideration.

Table 4.5: A Summary of ethical considerations and how they were achieved in the study

Ethical Principle	Description	How the Ethical Principle was Achieved in this Study
Relevance and value	Refer to Sections 1.7, 6.3, 6.4 and 6.5	Refer to Sections 1.7, 6.3, 6.4 and 6.5
Scientific integrity	- Scientific integrity occurs when a researcher adheres to accepted research standards, professional values and practices of the applicable scientific community. - Scientific integrity ensures objectivity, clarity, reliability and validity of the research. - Scientific integrity is fostered by training researchers on scientific methods, training researchers in ethics and conduct, scientific oversight (peer review) throughout the research process, and publishing of unanticipated results.	- Ensured methodological rigour of the research Section 4.7.1 and 4.7.2). - The research proposal and data collection instruments were tabled before the scientific and ethical committees for review and approval.
Participants and role-player engagement	- Participant engagement refer to the identifiable ethical procedures to be followed by the researcher to get access to the participants. - Participant engagement includes seeking permission from gatekeepers, informed consent, submission of the data collection instruments for ethical approval by the institutional internal ethical and scientific committees.	- Information letter seeking permission and consent was sent to gatekeepers and participants before the study was conducted. - Participants voluntarily agreed to participate. - Consent was sought before participation. - Ensured anonymity when collecting, analysing, and reporting data. - Obtained gatekeepers' permission.
Fair selection of participants	- Fair participant selection is a requirement that should be met in excluding and including participants. - Fair participant selection means the inclusion and exclusion criteria should consider underrepresented groups (see Section 4.4 for details on how the sample was selected for this study). - Fair participant selection includes the principles of fair inclusion, fair burden sharing, fair opportunity and fair distribution of third party risks.	Application of purposive sampling for qualitative data (see Section 4.4 for details on the sample).
Fair balance of risks and benefits.	The fair balance of risks and benefits means the researcher is required to ensure that the participants involved are beneficiaries of the research (see Section 4.8 and Sections 6.3, 6.4 and 6.5 for the significance of the study).	- Adherence to COVID-19 regulations. - Obtained ethical clearance – the process ensured that the data collection instruments were reviewed to maintain a fair balance of risks and benefits.

Informed consent	▪ Informed consent is providing valuable information to participants to assist them in making decisions about participating in the study. ▪ Informed consent involves participants signing consent forms with the understanding that their confidentiality will be protected. ▪ Informed consent requires participants to understand that withdrawal from participation may be done freely and at any time if they wish to do so. ▪ Every person was written to and informed about the interview orally.	▪ Gatekeepers in organisations were provided with formal correspondences on the proposed study, seeking permission for participant's participation. ▪ Every participant was written to and informed about the study. ▪ Every participant was required to sign the consent form and receive study information before the interview was conducted.
Respect for participants' privacy and confidentiality	▪ Confidentiality is defined as separating identifying information provided by the participants from the data when collecting, analysing and reporting data. ▪ Privacy and confidentiality is respecting the participants' private information by being honest (using obtained information only for purposes indicated in the gatekeepers' letters and the consent forms. ▪ Anonymity is obtaining participants' data without obtaining personal information.	▪ Responses obtained from the data collection instruments were anonymous. ▪ Interview recordings (voice) were password protected in a computer. ▪ No comments were attributed to individual participants in publications. ▪ The identity of participants were not linked to the results of the study. ▪ The answers were given a fictitious code number or a pseudonym for reference in the data and any publication. ▪ Participants were made aware of other people (e.g., research supervisor, transcriber, external coder and members of the research ethics and scientific committee. ▪ Assurance was made to the participants that every person involved was required to sign the confidentiality form. ▪ Data would be destroyed after the study.
Research competence and expertise	▪ Research competence refers to having appropriate research skills and experiences to conduct the proposed research. ▪ Research competence includes the skills and experiences of persons involved in a study. ▪ Research competence is judged by the methodological rigour of the research, originality of the research, scientific research practices according to the discipline, fair selection of participants, objectivity of the research, funding for the research and proper acknowledgement of others' work.	▪ Ensured methodological rigour of the research (Section 4.7.1 and 4.7.2). ▪ Participants were fairly selected. ▪ The research process was validated by the relevant scientific review committee, ethical committee and experts in the field of the study. ▪ Attended various workshops on ethics. ▪ Research was supervised by experts.

Source: Adapted from (LaRossa, Bennett and Gelles, 1981); Sponholz (2000); (Floyd and Arthur, 2012); Mikesell et al. (2013); Prokhorchuk (2014); Morse and Coulehan (2015); Lancaster (2016); McFadyen and Rankin (2016); Petrova et al. (2016); (Coffelt, 2017); Mooney-Somers and Olsen (2017); Kretser et al. (2019); (Navalta et al., 2019); Shaw (2019); Borgerson (2020); Iltis (2020); MacKay and Saylor (2020); Rahmani and Mirmahaleh (2020); and Schaefer (2020)

4.9 CONCLUSION

The chapter aimed to explain details of the qualitative research approach used in this study (Section 4.2). Using a case study design (Section 4.3), the three stages (Stage 1) (Section 4.3.1.1), theoretical (Stage 2) (Section 4.3.1.2) and empirical (Stage 3) (Section 4.3.1.3) of the conceptual framework are elaborated on. Subsequently, Section 4.4 provides the details of the population and sample size, while Section 4.5 explains the data collection instruments. Data analysis procedures are presented in Section 4.6. Later, further details are given on the reliability and validity of qualitative data collection instruments in Section 4.7. Towards concluding, Section 4.8 expounded on ethical considerations. Finally, Section 4.9 concludes the chapter on research design and methodology. The ultimate goal of outlining the research methodology is to ensure that the research is conducted in accordance with the required ethical considerations.

CHAPTER 5: CASE OF THE MANONYANE COMMUNITIES, MASERU DISTRICT, LESOTHO

5.1 INTRODUCTION

The chapter presents findings which are in line with the research questions (Section 1.5) and objectives (Section 1.4) of the study. The chapter reports the results obtained from the qualitative data collection instruments (focus groups and semi-structured interviews). It discusses the responses from the Manonyane communities, community representatives, public administrators, politicians and experts. The outline of this chapter includes introductory remarks (Section 5.1) and responses which indicate the projected as well as the actual samples (Section 5.2). In Section 5.3, the community's perspective concerning their participation in climate change policy formulation and implementation is presented. Further, the community representatives' perspectives are presented in Section 5.4. This is followed by the public administrators' (Section 5.5), the political office bearers' (Section 5.6) and experts' (Section 5.7) perspectives of community participation in climate change policy formulation and implementation. In Section 5.8, a critical evaluation of the findings is presented. The chapter is concluded in Section 5.9.

5.2 RESPONSE RESULTS

The population (N) (Table 4:1) in this research comprised participants who provided different perspectives. (i) Out of the projected 108 community members for the nine focus groups, 103 (95%) participated. Of note, is that the village names recorded by the Bureau of Statistics are different from the ones used by the chiefs. Some villages are named after the chiefs who lead them, whereas the Bureau of Statistics uses the electoral divisions boundaries. Against this background, some of the village names used in the proposal were later corrected based on the information from the Principal Chief's office as follows: Boinyatso (to Ha Maliele), Mafefooane (to Ha Tsunyane), Mafikeng (to Ha Lebamang), Poopa to (Nyakosoba) and Roma (to Ha Pasane). This research used information from both the national office and Manonyane Principal Chief's office. Out of the expected 8-12 participants, each main village focus group had the following number of participants: Ha Maliele (10), Hata Butle (12), Ha Tsunyane (12), Ha Lebamang (15), Nyakosoba (11), Popanyane (10), Ha Pasane (12), Thoteng (6) and Tloutle (15). (ii) Concerning community representatives' (Manonyane chiefs) perspective, the projected 8 (100%) chiefs participated in a focus group discussion, while the projected two chiefs (100%) participated in a semi-structured interview. (iii) Regarding the political perspective (Manonyane Community Council (MCC), nine (75%) politicians out of 12 participated, and a portfolio committee member one out of one (100%)) participated. Three councillors did not participate because one of them was no more, while the other two did not turn up on the day of the focus group discussion. (iv) The projected five (100%) public administrators (District Administrator's office and directors of the Lesotho government ministry and departments) participated. (v) Lastly, all the projected five (100%) experts (experts and professionals in climate change) participated. Table 5.1 gives details about the sample.

Noteworthy is that the MCC is the official name for the area covered by the nine main villages. The MCC is the same name used to refer to the community council with 14 official wards. The 14 wards are classified under the nine main villages. Therefore, depending on the context, MCC means Manonyane Community Council (MCC), referring to the approximately 14 councillors in 14 electoral wards or the area covered by the Manonyane communities. Largely, the researcher attributes the high level of participation in focus groups to the MCC Principal Chief, area chiefs and village headmen's support for the study. The Principal Chief welcomed the study and was happy to allow the MCC chiefs to assist the researcher to

conduct the study. The researcher perceived that all the participants were eager to give their views on community participation because, to them, climate change was a very critical issue which was conducted at the right time. Hence, issues of community participation in climate change policy formulation and implementation are still new in Lesotho. The Meteorology and Climate department is still working on strategies and programmes to address adaptation in the communities. Table 5.1 illustrates the response rate.

Table 5.1: Projected sample size for Manonyane Communities, Community representatives, Politicians, Public administrators and Experts.

Participants	Projected	Responses	Response rate (%)
Manonyane communities (focus groups)	108	103	95%
Community representatives focus group	8	8	100%
Councillors focus group	12	9	75%
Community representatives (semi-structured interview)	2	2	100%
Politicians (semi-structured interview)	3	3	100%
Public administrators (semi-structured interview)	5	5	100%
Experts (semi-structured interview)	5	5	100%
Total	143	135	94%

Source: Author

5.3 COMMUNITIES' PERSPECTIVE ON COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION

Section 5.3 gives the communities' responses provided during the focus group discussions (Refer to Attachment 43 with 27 questions). The focus group discussion responses to Section F (question 1 to 3) of Attachment 43 are answered in Chapter 6. The answered objectives and questions in this chapter are according to questions asked in Section A to E of Attachment 43 under the following themes:

Section A: determining the nature of community participation in climate change policy formulation and implementation

Section B: how community awareness regarding climate change and climate change policy influence their participation in policy formulation and implementation

Section C: how community understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation

Section D: how the use of indigenous knowledge systems in climate change policy formulation and implementation facilitate community participation in climate governance

Section E: exploring how policy nudging could be used to enhance community participation in climate change policy formulation, implementation and governance.

5.3.1 Determining the nature of participation in climate change policy formulation and implementation by the Manonyane communities

Question 1 (Attachment 43) investigated how communities participated in the National Climate Change Policy (NCCP) formulation and implementation during agenda setting, policy formulation, policy adoption and policy evaluation. Unfortunately, the focus group discussion participants confirmed that Hata Butle, Ha Lebamang, Ha Maliele, Ha Pasane (St Michaels), Mafefooane – Ha Tsunyane, Nyakosoba, Popanyane, Thoteng and Tloutle communities were not participating in NCCP formulation and implementation during each policy stage. Community members said that they “*hear about climate change on radios and televisions*”. No official communication from the government was taking place in the Manonyane communities. Community members communicated with each other about the heavy rain and putting stones in the fields to avoid floods. “*No people have ever come with the intention to teach us*”. According to the focus group participants in all the Manonyane communities, there was “no one to explain the changes observed after many years and no people led the communities on the *“measures to be taken”*”. The main worry of the participants was the effect of climate change on agriculture because they depend on it. The Manonyane community members unanimously agreed that information about climate change was passed on amongst themselves “*by individuals*”. However, individuals would sometimes spread false information.

Question 2 (Attachment 43) asked if the communities used participatory techniques to articulate preferred courses of alternatives regarding climate change policy formulation and implementation. The participants were asked if they used any of the following participatory techniques: beneficiary assessment, briefs, community presentations, consensus building, focus group discussions, interviews, media, PRA techniques, polls, participatory technology, PRA techniques, public meetings, public hearings, surveys, workshops and others. Of the participatory techniques asked, the focus group discussion participants agreed across the Manonyane communities that they had not used any of the mentioned participatory techniques. Instead, the participants agreed that “*life is not easy for us*” because of climate change. “*The government is saying nothing*” about climate change. The two major issues raised by participants in all the MC focus groups conducted were reduced agricultural production, frequent rain storms, strong winds and insufficient drinking water because of climate change. The focus group participants in all the nine main villages highlighted that they would be glad if the chief calls for “*public gatherings*” to give community members an opportunity to give their views.

The youth who participated in the Hata Butle and Ha Pasane focus group discussions also indicated that they would be happy to receive information through the internet because it is where they “*read false information about what people*” were saying regarding climate change. Outstandingly, the youth agreed that they did not mind using participatory technology, for example, Facebook, WhatsApp and media (radio and television) to participate in climate change policy formulation and implementation. It was mainly the youth, in all the focus group discussions, who supported participatory technology because participants argued that “*some people may have radios and not listen to them, or do not have them, while some are ignorant of them*”. The radio cannot allow the community members “*to ask questions*” because it requires one to buy airtime to call. Regarding cell phones, it was reported that some “*people have phones with no internet, although others can access internet on their phones but do not know how to read and write*”. Above all, many participants showed that “*they do not need long processes. They just need an expert to come and explain to them*” during public gatherings.

Other than public gatherings, house-to-house interviews and surveys were strongly recommended by participants in all the focus group discussions as an option to reach out to communities. However, the participants said that *“there should be a follow-up on this issue so that we are able to know the results of what we talked about during these house-to-house interviews,”* which indicated the importance of feedback. Reference was made to *“people who enter villages conducting house-to-house interviews, getting what they want but the community members never know their ending.”* The participants were implying that the results of the interviews and surveys should be shared with them. The focus group discussion participants for all communities affirmed that *“whatever decisions made by the government, our representatives should be there”*. The response was concerning the use of other participatory techniques such as beneficiary assessment, briefs, community presentations, consensus building, focus group discussions, PRA techniques, participatory technology, PRA techniques and public hearings, which need facilitation.

Question 3 (Attachment 43) probed how communities work with the actors such as councillors, chiefs, experts, politicians, public administrators and others during the climate change policy processes. All the participants who participated in the nine focus group discussions said that none of the councillors, chiefs, experts, politicians and public administrators approached the Manonyane Communities to find solutions regarding climate change. The participants indicated their willingness to work together with the chiefs and experts because of their reliability. One participant said that *“a person who can help us a lot is the chief, not the councillors and politicians. They are far from us.”* The participants raised two main reasons for not trusting politicians and councillors which were that councillors were ignorant of climate change and political affiliation. Further, in agreement, participants indicated that the councillors’ political affiliations may cause them to *“favour members in some communities over the other community members in other village, whereas the chiefs directly work with villagers”*. The chiefs were also noted by participants as reliable, thus, community members said that they *“would love to work with Non-governmental Organisations because when they state that they want to do something, they do it.”* Again, it was reported that experts *“keep communities updated”*.

In question 4, Attachment 43, the communities were asked to elaborate on any challenges they face when participating in community participation in climate change policy processes. No challenges were recorded across the nine focus groups conducted because the participants confirmed that no community was participating in climate change policy formulation and implementation. The participants said that *“there was no such time when we were given the opportunity to participate in climate change issues”*.

5.3.2 How community awareness regarding climate change and climate change policy influence the Manonyane community participation in policy formulation and implementation

Question 1 (Attachment 43) investigated the use of cause and impact diagrams, cultural transects, participatory mapping and vulnerability maps by communities to enhance their awareness of climate change. The focus group participants in the nine Manonyane communities concurred that community members did not use cause and impact diagrams, cultural transects, participatory mapping and vulnerability maps to enhance awareness of climate change. The focus group discussion participants agreed that *“they never saw a time when the community is being approached”*. Communities are only told of *“the decisions that are made,”* thus community members are not *“knowledgeable of such things”*. One

participant emphasised and said that *“nothing at all, we only experience it when it happens”*. The participants in all the focus groups agreed that awareness of climate change was happening *“through personal talking about the rainfall patterns”*. No people have ever gone to the Manonyane communities intending to teach them. In the Popanyane focus group, the participants even believed that there were *“no climate change policies”*.

The second question (Attachment 43) sought to get the community’s knowledge about how they get informed of climate change causes such as air pollution, deforestation, climate variability, industrialisation, poor agricultural practices, ozone depletion, temperature changes, urbanisation, weather changes, wildfires and others. Participants in all the nine focus group discussions consensually said that there is *“no other person informing them of climate change causes,”* but they see it for themselves. *“We look at it (observe) ourselves”* to predict *“hunger and drought”*. Asked what they see for themselves, participants mainly talked about climate variability, temperature changes, weather changes and wildfire. On wildfire, participants said that it is community knowledge that one should not burn grass. Again, participants testified that they had also seen on the Lesotho television when *“the Minister of Agriculture would inform them about the upcoming heavy rainfalls”*. However, community members without radios and televisions reported that they hear the information from their fellow community members *“when they pass it through the word of mouth”*. Of note were participants in the two focus group discussions of Ha Tsunyane and Tloutle who said that they could hear about climate change causes on television and radio. *“Mostly, they speak of air pollution, especially chemical emissions and smoke. We can see that they are the causes as we experience drought and unusual rainfall”*, said one of the participants with other participants nodding their heads in agreement. The Tloutle community members who watched television and listened to radio said that they *“learn about climate change causes through announcements by the Ministry of Agriculture in South Africa”*. In other words these community members watched South African television and listened to different radio stations. In Popanyane, the participants believed that the government was making announcements regarding the climate change issues, but the challenge was that many community members who participated in this focus group had no television.

The third question (Attachment 43) aimed at getting knowledge on how communities get informed of extreme weather events, floods, food insecurity, insufficient access to drinking water, land degradation, loss of biodiversity, loss of rural livelihoods, reduced agricultural production and others. Regarding extreme weather events, floods, food insecurity, insufficient access to drinking water, land degradation, loss of biodiversity, loss of rural livelihoods and reduced agricultural production, some participants in all the nine focus group discussions emphasised that they were not getting information from other sources besides television and different radio stations. However, some community members who participated in the focus group discussions agreed that they only got information from other community members.

The fourth question (Attachment 43) asked how communities get informed of compromised agricultural production, cyclones, drought, floods, health impacts, heatwaves, significant loss of biodiversity and ecosystems, weather insecurity problems, wildfires and other climate change impacts on them and the environment. Generally, across all the nine focus groups conducted, community members unanimously agreed that information was passed on from one community member to the other. The participants said that there was *“no one to explain to us about the changes that we observe after certain years and also there are no people who tell us the measures that we have to take because we are dependent on*

the crops". This implied that there was no one to assist communities with adaptation because they depended on agriculture. Some participants claimed that they get *"information when we are already in the situation"*, citing an example of El Nino drought. The participants who listened to radios, watched television and read on the internet complained that the information about climate change impacts would just say, *'take care, you should expect rain or drought'* without giving measures of what to do. The participants said that they would be having unanswered questions such as *"how do we take care of ourselves?"* In the event of a drought, the participants said that they were not sure of how to sustain their families using the information they would have obtained from the radio and television. Regarding health impacts, the focus group participants reported frequent *"common cold because of the hot and cold weather conditions"*. Although COVID-19 was not the subject of discussion, some participants were concerned about COVID-19 causes, impacts and risks.

5.3.3 How community understanding regarding climate change and climate change policy influence participation in policy formulation and implementation by the Manonyane Communities

Question 1 (Attachment 43) probed Manonyane communities to get their view of climate change impacts. The focus group participants in all the Manonyane communities confirmed the occurrence of persistent droughts because of climate change. Although not related to climate change, the participants pointed out to a lack of roads, lack of jobs and high poverty levels. The participants, in agreement, said that *"there is poverty. We are aware that due to heavy rainfall, agricultural productivity is poor due to climate change. We are already lacking food. The fields harvest is negatively affected,"* yet the communities depend on agriculture. The participants agreed that the *"hail is too much and destructive. This had been happening for years. It affects the peach trees. There are no jobs, we depend on crops."* In the Ha Pasane focus group, some participants believed that *"God is punishing us because of our actions"*. To these participants, *"people are out of control. Girls and boys are not afraid to walk naked in front of elders. God is angry with us"*. The Sesotho New Year begins in August, but participants in the Nyakosoba focus group indicated that planting time has changed to October towards the months of December. The winter was also noted to be beginning in February instead of April towards the end of the month, to July, with cold air blowing from the East of Nyakosoba villages. *"Coldness comes faster (in February), so you will learn that the air comes from the East. The winter season is prolonged to the month of November"*, said a concerned participant.

All the participants reported compromised agricultural production, drought, floods, health impacts, heatwaves and roofs (on houses) blown away by strong winds in their communities which is something that was not happening before. Many participants testified that *"growing up, we had regular rainfall, but this year, I got shocked by the change in rainfall patterns and the drought we experience"*. Trees were also drying up and the reasons for drying up were not clear to participants. The Nyakosoba focus group participants noted recurring thunderstorms and lightning in one of their communities. However, the researcher perceived that some members associated the thunderstorms and lightning to witchcraft after one participant pleaded *"with other participants to put aside the issue of witch craft and consider it as climate change"*. In response, the other participants laughed which made it difficult to note whether many agreed that the thunderstorms and lightning was because of climate change according to participants' beliefs. To give more examples of the participants' views, the Thoteng focus group discussion participants reported unusual heat, dongas and unusual coldness. The Tloutle focus group participants reported insufficient drinking water. *"Drinking water in this village is seasonal"*. There is no *"water in winter. It does not rain in a normal way. It rains in a terrible way such that this issue of climate change causes a lot of*

destruction in the environment.” The Ha Pasane community members indicated that they had a problem of an insect called *lesetlaoko* (*harvester termite* or *Hodotermes mossambicus*) because of climate change.

The purpose of the second question for this section (Attachment 43) was to get the Manonyane community’s understanding of the causes of climate change.

Hata Butle – The Hata Butle focus group discussion participants mentioned environmental pollution in their communities that they attributed it to the injudicious disposal of pampers. The participants said that pampers polluted the environment and caused diseases. Therefore, the participants pleaded with the government of Lesotho to address such problems to clean the environment.

Ha Lebamang – In Ha Lebamang, participants indicated that they had been receiving regular rainfall except in the year 2022. *“The heavy rains washed away all our crops in the fields”*. This is a problem we encountered. We were not able to cultivate due to heavy rains.

Ha Maliele – The participants agreed that *“there are factories in South Africa that emit smoke, that’s climate change. We also have dams here in Lesotho and it is said that they are the ones that cause the rain to fall. When it’s too hot, the water evaporates and turns into clouds resulting in rain”*. Some were in agreement, while other participants looked unsure. However, many participants in the Ha Maliele focus group discussion blamed climate change on COVID-19. Surprisingly, other Ha Maliele focus group participants claimed that the educated people (no description was given) constructed dams in Lesotho. Therefore, according to these participants’ view, the educated people have the power to purposefully stop rain. The Ha Maliele focus group participants holding this view claimed that the formally educated people *“threw something knowingly in the ocean for something to rise up”*. Afterwards, *“the rain will fall”*. *“I am saying that because we have never experienced the rain like this”*.

Ha Pasane – The Ha Pasane focus group participants associated climate change causes to not following traditional practices. According to culture, the mourning attire is put on in January and removed in June. However, it seemed some community members *“choose to remove it in March that is not it”*. Largely, the members who participated in Ha Pasane focus group acknowledged that they *“don’t have any idea”* of what causes climate change. They are dumbfounded because of climate change and *“think it is nature”*.

Ha Tsunyane – The participants in this focus group discussion spoke of air pollution, especially chemical emissions and smoke, agreeing that they cause people to experience drought and unusual rainfall. Nevertheless, the participants emphasised that they needed information from the experts to adapt to climate change.

Nyakosoba – The participants for this focus group showed that they did not have information on what causes climate change. They pleaded in their response that, if possible, they would be glad to have experts guiding them on climate

change to adapt *“and not blame everything on people who were born in the years from 2000”*. Participants also indicated that some believed that *“the world is coming to an end, yet it is the issue of climate change”*

Popanyane – The response from the Popanyane focus group discussion indicated that ever since the cultural practices stopped, the climate conditions had changed too. According to these participants, the crops such as sorghum, wheat and beans are no longer yielding high production.

Thoteng – The researcher noted that two participants in this group explained about emitted smoke from industries which has chemicals causing climate change by *“drying the ozone layer”*. Some participants in the Thoteng focus group discussion kept quiet and did not respond to this question. The researcher perceived that the participants did not have knowledge of climate change or they completely had a different view which they did not, however, share because after two participants contributed to this question, the other participants kept quiet. It was not clear to the researcher if they disagreed or agreed with the two participants who had contributed.

Tloutle – *“Climate change is caused by the building of dams”* was the response given by the Tloutle participants. The Tloutle focus group participants agreed that the constructed dams had caused prolonged cold weather conditions up to the month of December. Participants in the Tloutle focus group discussion agreed that *“the dams were built without consultation to Basotho on how they can survive in these conditions”*. To make matters worse, the participants were concerned that another dam called *“Polihali was under construction”*. The Tloutle focus group participants’ view was that *“after building Polihali, the government built other dams in places such as Mafeteng District.”* One participant attributed the prolonged cold weather conditions to the disappearance of the colourful birds and butterflies in the month of December. To Tloutle participants, *“climate change is caused by built dams”*

In the third question (Attachment 43), communities were asked how they get informed about climate change decision-making processes. The focus group participants in all the nine communities agreed and indicated that *“no government official or anyone was facilitating community participation in climate change policy formulation and implementation.”* There was *“no such a thing”*. The participants *“agreed that they had never been given such an opportunity”*. The Tloutle focus group participants claimed that *“government officials consulted unconcerned people, yet the people who have problems in the rural areas are not asked to hear their perspectives”*. The participants further said that they would go to *“the community council to ask two councillors. Do they say two councillors and three chiefs through the workshops and having nice food” represent community members?”* One participant rhetorically asked, expressing that it is not possible for a few individuals to give their views on climate change and claim to represent other community members. The Tloutle focus group participants reiterated that the chief and councilors are not the communities.

The fourth question (Attachment 43) asked about the community's understanding of climate change risks for themselves and the environment.

Hata Butle and Ha Pasane – Hata Butle and Ha Pasane focus group participants repeatedly said that no one was giving information on climate change to their communities. Details of this response are in Section B, Question 4. The participants agreed that they observed changes in climate on their own and also heard from Lesotho radio and television.

Ha Lebamang – Participants in the Ha Lebamang focus group discussion reported that the risks that were brought by climate change were that after planting their fields, heavy rains fell and washed away their crops in the fields. *“This is a problem we encountered. We were not able to cultivate due to heavy rains. There will be drought.”*

Ha Maliele – Ha Maliele focus group discussion participants reported with concern that whenever they receive a lot of rain, the grass would ultimately be unavailable such that the animals eat soil to survive. Animal rearing forms a source of livelihood and the participants were worried, equating losing an animal to *“losing a child”*.

Nyakosoba – The participants in the Nyakosoba focus group discussion agreed that *“we do not have any information regarding climate change.”*

Thoteng – Participants who participated in Thoteng focus group discussion noted climate change risks such as dongas, unusual heat and unusual coldness. The participants noted with concern that *“as long as the government doesn’t want anything to happen, there is nothing we can do”*.

Tloutle – The main concern of participants in the Tloutle focus group discussion was the house and infrastructural destruction as well as washed away fields because of unusually heavy rainfall.

Lastly, in this section (Question 5, Attachment 43), the communities were asked how they participated using cause and impact diagrams, consensus building, facilitation, participatory technology, PRA techniques, public meetings, public hearings, resources mapping, transects and other participatory techniques to enhance their understanding of climate change. All the participants in the nine focus group discussions confirmed that they had never been involved in any climate change policy formulation and implementation programmes using such participatory techniques.

5.3.4 How the use of indigenous knowledge systems in climate change policy formulation and implementation facilitates Manonyane community participation in climate governance

Question 1 asked focus group participants how the Manonyane communities consider values (community principles) such as cultural values, family, historical information, natural resources (e.g. traditional land, flora, fauna), wealth and others in adapting to climate change (Attachment 43). In response to this question, a common view amongst participants in all the nine focus groups conducted was that they were mainly interested in narrating the practices relating to cultural values. Participants pointed to a lack of adherence to culture as causing climate change. In the participants’ account of practised cultural values, they agreed that *“Basotho believe that a pregnant woman should not sit at the door. A breastfeeding woman should not go outside without wearing something on her head or shoulder. She should not raise her voice”* when talking. Again, the widows *“wearing mourning clothes are expected to remove them on a set agreed time”*, which is usually

during winter. Adding to these beliefs, it was also noted that a corpse is not supposed to leave for the mortuary, collected from the mortuary and buried in the afternoon. Again, in the old days, it was discouraged to fetch water and firewood during the afternoon. Widows were also discouraged from doing laundry and drying them up outside during the day. If the cultural values are not followed, participants agreed that it causes *"drought because crops will be affected by frost (bajoa)"*. Further, participants confirmed that destructive hail and heavy rainfall affected the village when community members fail to adhere to practised cultural values.

The participants agreed that they knew that weeding was only done in the morning until ten o'clock. The Christmas day marked the end of the weeding season. As one participant said that *"by 10 o'clock, people should go home. They are done for the day. But currently people are refusing to do so. They weed all day long, yet when there is hail, they also get affected"*. Another emerging issue was that *"God is punishing us because of our actions (indicating moral decadence), for example, girls practising abortion. Girls and boys are not afraid to walk naked."* However, some participants in all the focus group discussions felt that, *"there has been a great change such that hail destroys our crops even when our traditional doctors assist. The process of protecting ourselves from hail is of no use. We do not see any difference for the past few years, close to about 5 years"*

However, some participants in Ha Tsunyane focus group discussion argued that cultural beliefs do not influence climate change. Some participants echoed this view when they said that *"climate change just comes naturally on its own. Cultural values are meant for respect purposes. They have nothing to do with climate change."* These things are still practised here (referring to rural areas) and not in urban areas, one participant explained. Nevertheless, the majority of the participants did not agree with these statements. Hence, one participant stated that *"rural areas are different from urban areas"* because the rural people depend on agriculture. In agreement with other participants, it was indicated that urban areas are hit heavily by hail, to the extent that it causes destruction to cars and damage to houses because of not respecting culture. However, participants believed that rural areas are protected because of people's adherence to cultural values.

The community members were asked how they use impact diagrams, historical calendars and seasonal calendars (if any) to consider community values in climate change adaptation programmes organised by the government (Attachment 43, Question 2). In all focus group discussions conducted it was reported that the participants had not seen government officials co-ordinating climate change policies in their respective communities. Other responses to this question included, *"to date, there was no such time when we were given the opportunity to participate in climate change issues"*. *"No, we have not heard anything facilitated by the government concerning climate change policy formulation and implementation."*

Question 3 (Attachment 43) focused on the current community climate change adaptation responses and how communities use cattle grazing, cutting trees for firewood and building houses, collecting grass for thatching houses, history about agricultural practices and wildfires as community norms to adapt to climate change. Except in Ha Maliele community, other focus group participants conducted in the Manonyane communities said that their villages were practising rotational animal grazing.

Cattle grazing – The number of months a grazing area would be restricted varied from one community to the other but communities reported from one to 3 months. The participants understood that grazing the animals for a long time in one place exacerbates erosion in the event of heavy rainfall. The focus group participants in Ha Maliele complained that *“stealing of cattle is worse in St. Michaels.”* Therefore, this caused the village not to restrict grazing areas. Interestingly, the focus group participants for all groups attributed damaged roads and sick animals to heavy rainfall. Many concerns were raised about cattle grazing. The focus group participants explained the need for *“a good working relationship between the councillor and the chief. There are no restrictions that made when the chief and the councillor have no good working relationship”*, argued one participant and other participants agreed to the statement. *“The wetlands also existed, but at the moment, they are being destroyed”*.

Cutting trees for firewood and building houses – Regarding tree planting, some participants remembered how they used to plant trees during Prime Minister Jonathan Leabua’s reign. Participants showed that they cherished those days and wished the tree planting day could be taken seriously. It was also confirmed that trees are cut for firewood in all the villages. Other than asking for permission from the chief, participants reported that trees were cut with no replacement. Community members ask *“for firewood from the chief for a funeral or celebration. The chief allocates a portion where one will get the firewood.”* However, participants expressed concerns about exotic trees such as pine trees. *“Unlike the indigenous trees, pine trees do not re-grow when cut down.”* Participants agreed and were concerned that non-indigenous trees consume more water than indigenous trees such that nothing can grow near them. This renders exotic trees *“useless”*, according to participants’ argument.

Collecting grass for thatching houses – The focus group discussion participants agreed that there were rules to be obeyed when a community member was supposed to collect grass for thatching houses. The grass is cut at certain times of the year when a person in need of it is *“allocated a portion to cut”*. The grass is cut *“after a year so that it can grow again. Cutting down the grass on the same land over and over again causes retarded growth and soil erosion,”* reported the participants. In Nyakosoba, for instance, the participants reported the disappearance of two types of grass which were *“seboku (red oat grass – Themeda triandra) and molula” (tough love grass/ fan love grass – Eragrostis plana)*.

History about agricultural practices – On the history about agricultural practices, participants complained about soil erosion as an environmental problem dating to many years ago. For example, one participant said that *“we are negatively affected by soil erosion,”* which is an old national problem.

Wildfires – In all the focus group discussions, the participants agreed that they *“are not allowed to burn grass because it pollutes the environment. Burning of grass is indeed against the law. We no longer burn at all because that would be destroying seeds that have to grow there”*.

The fourth question (Attachment 43) was about how communities use participatory techniques (if any), for example, seasonal calendars, timeline and trend analysis to document norms that relate to climate change. The participants, on the whole, in all the focus group discussions indicated that *“no government official or anyone is facilitating community*

participation in climate change policy formulation and implementation.” Other responses included, “to date, there was no such time when we were given the opportunity to participate in climate change issues”.

On the fifth question (Attachment 43), it aimed at exploring how communities use their indigenous knowledge (traditional knowledge) such as behaviour of animals, birds attributed to climate change, observing climate variability, studying the environment, studying weather, type of clouds, vegetation and wind direction in their current climate change adaptation strategies.

Table 5.2: Question 5 Responses by village

Indigenous knowledge	Focus group participants response per village
Behaviour of animals	<i>Hata Butle</i> – It was told that the frogs used to sing too, predicting rain. However, the participants stated that it is “<i>something that is no longer happening</i>”. On the same issue, the participants also said that “<i>mafokotsane (white throated swallow – <i>Hirundo rustica</i>) bird and calves play making noise</i>” to predict the coming of the rain. <i>Ha Lebamang</i> – No specific animals were named in this focus group discussion. <i>Ha Maliele</i> – No specific animals were mentioned because the participants believed that many things had disappeared. <i>Ha Pasane</i> – No animals were mentioned by group participants. “<i>Although of late rainfall is unpredictable due to climate change</i>” according to Mafeoofane Ha Letsoinyane focus group participants, “<i>one other way to predict rainfall is when you see pigs and cattle playing about, just know that we are to have rainfall</i>”. <i>Ha Tsunyane</i> – According to these focus group participants, “<i>one other way to predict rainfall is when you see pigs and cattle playing about, just know that we are to have rainfall</i>”. However, “<i>of late, the rainfall is unpredictable due to climate change</i>” <i>Nyakosoba</i> – No response was given on the behaviour of animals. <i>Popanyane</i> – No response was given for this point. <i>Thoteng</i> – No response was given concerning the behaviour of animals. All the participants said that a lot had changed. It was difficult for them to use the behaviour of animals to adapt to climate change. <i>Tloutle</i> – Group participants mentioned no animal. Everything was blamed on built dams.
Birds attributed to climate change	<i>Hata Butle</i> – The focus group participants in Hata Butle named two birds, “<i>mmanpharoane</i>” (southern rock agama – <i>Agama atra</i>) and white throated swallow as the birds which predicted rainfall. The participants agreed that if the southern rock agama “<i>sing during daylight when it is hot, we knew that rain was definitely coming.</i>” <i>Ha Lebamang</i> – The Ha Lebamang participants named mangangane (hadada ibis or <i>Bostrychia hagedash</i>) and mankabelane (common house martin – <i>Delichon urbicumand</i>) as birds which predict rainfall. The birds were reported to be seen flying in a joyful way to predict rainfall. No other animals were named in this group which predicted the weather. <i>Ha Maliele</i> – The Ha Maliele focus group participants agreed that “<i>in the previous years, common house martin bird would fly</i>” to predict rainfall. After heavy rainfall, a rainbow would appear to signify that the rain was stopping. <i>Ha Pasane</i> – In responding to this question, the Ha Pasane focus group discussion participants focused on birds and insects. The participants established that an insect called nts’itoe (Christmas beetle – <i>Pycna semiclara</i>) which guided community members on planting times, had disappeared. “In the month of December, in previous years, an insect called Christmas beetle would sing when Christmas” is approaching. The Christmas beetle would start singing “<i>around the 25th of November.</i>” “<i>At that time, each and every person would have planted the seeds in the soil to finish planting by Christmas.</i>” The “<i>Christmas time was marked by the presence of the birds. We no longer have such birds.</i>” For example, serobele (house sparrow – <i>Passer domesticus</i>), white throated swallow and kholobolekoe (beetle). “<i>We knew that when the lengangarane (hadada ibis – <i>Bostrychia hagedash</i>) sings, it would rain.</i>”

	<i>Ha Tsunyane</i> – The Ha Pasane focus group participants claimed that the disappearance of hadada ibis was attributed to climate change. The bird used to predict rainfall. <i>Nyakosoba</i> – The Nyakosoba focus group discussion participants mentioned the birds named “<i>leholosiane</i> (cattle egret – <i>Bubulcus ibis</i>) and <i>litsoere</i> which were seen when the grass has grown”, whilst the cattle egret predicted hot conditions. The white throated swallow bird and <i>kokobele</i>” (termite – <i>Odontotermes badius</i>) insect also appeared when it was raining, according to the participants. Unfortunately, such birds and insects were reported by participants to have disappeared. Thus, the participants claimed that they were “<i>unable to tell what kind of weather to expect</i>”. <i>Popanyane</i> – Likewise, Popanyane focus group participants reported the disappearance of the bird called white throated swallow. The white throated swallow would “<i>fly in flocks, to predict rainfall.</i>” <i>Thoteng</i> – The same answer on the behaviour of animals was given here. According to participants, a lot had changed. <i>Tloutle</i> – No response was given. The blame was on drought which was said to cause birds to disappear.
Observing climate variability	<i>Hata Butle</i> – Climate variability was observed through the behaviour of animals, type of clouds, vegetation and wind direction. <i>Ha Lebamang</i> – Climate variability was observed through the behaviour of animals, type of clouds, vegetation and wind direction. <i>Ha Pasane</i> – Admittedly, the Ha Pasane focus group discussion participants said that they got weather forecasts from “<i>people providing weather conditions</i>”, unlike in the past when a bird such as the hadada ibis and white throated swallow would assist people to predict weather conditions. <i>Ha Tsunyane</i> – Climate variability was explained through changes in animal behaviour, the disappearance of vegetation, wind direction, type of clouds and changes in rainfall patterns. <i>Nyakosoba</i> – The Nyakosoba focus group participants expressed disappointment regarding how they currently observe climate variability, study the environment and study the weather compared to the past. They agreed that “<i>it is confusing because when it was about to rain, we would see it from the direction of Popanyane. We could tell the amount</i>” of rainfall. Lately, the participants observed that rainfall “<i>comes from the East direction</i>” of Nyakosoba. The participants were concerned that they were unable to predict the amount of rainfall from the East. Further, the participants highlighted that “<i>it rains without any sign.</i>” <i>Popanyane</i> – No response was given for this point but participants agreed that a lot had changed. <i>Thoteng</i> – A concerning issue for the participants was about strong winds which blew away the roofs. <i>Tloutle</i> – The built dams such as Metolong were emphasised as the ones causing climate variability.
Studying the environment	<i>Hata Butle</i> – The environment was observed through the behaviour of animals, type of clouds, vegetation and wind direction. <i>Ha Lebamang</i> – The environment was observed through the behaviour of animals, type of clouds, vegetation and wind direction. <i>Ha Maliele</i> – Like other participants, a common view among the Ha Maliele focus group participants was that they observed climate change over time using their experiences. <i>Ha Pasane</i> – The answer given to studying the weather was the same as here. <i>Ha Tsunyane</i> – The participants noted that a lot had changed. Like other participants in other focus group discussions, the environment was reported to be studied through observing changes in animal behaviour, disappearance of vegetation and wind direction. <i>Nyakosoba</i> – The participants agreed that a “<i>lot had changed</i>”

	<i>Popanyane</i> – The focus group discussion participants in Popanyane combined their responses on observing climate variability, studying the environment and weather, and wind direction. In agreement, the participants contented that “<i>we would experience windy conditions on the eighth and the ninth month, but lately we experience harsh windy conditions at any time</i>”. <i>Thoteng</i> – No response was given for this point. <i>Tloutle</i> – The blame was put on built dams.
Studying weather	<i>Hata Butle</i> – Climate variability was observed through the behaviour of animals, type of clouds, vegetation and wind direction. <i>Ha Lebamang</i> – The weather was observed through the behaviour of animals, type of clouds, vegetation and wind direction. <i>Ha Maliele</i> – Participants study the weather through the behaviour of animals, type of clouds, vegetation and wind direction. <i>Ha Pasane</i> – The participants said that they “<i>are guided by the English calendar</i>”. One participant claimed that “<i>we no longer use the intelligence that we have been given by God on His nature</i>”. Showing that people have given up on using indigenous knowledge to study the weather and environment, participants agreed with the statement that “<i>for some of us, we no longer trust the moon at all, we concentrate to God only. During his perfect timing, he will give us whatever he wants.</i>” <i>Ha Tsunyane</i> – “<i>When a new month begins either today or tomorrow it would rain but lately it does not happen.</i>” Participants noticed that sometimes “at the beginning of the month it does not rain and yet later on during the month, it rains heavily. We still have months where we do not expect rain only to find that later on in that month we experience heavy rainfall such that rivers wash away our fields.” <i>Nyakosoba</i> – The participants agreed that a “lot had changed” and it was confusing to predict weather . <i>Popanyane</i> – The participants concurred that the weather had changed such that it was unpredictable. <i>Thoteng</i> – “They are not there anymore”. When Christmas was approaching, you would find beautiful white colorful Christmas butterflies. This was the participants’ response to observing climate variability, studying the environment and studying weather. <i>Tloutle</i> – The Tloutle focus group participants agreed that they had observed changes in the climate. In general, the Tloutle focus group discussion participants unanimously agreed that birds, grasshoppers and butterflies had disappeared because of climate change. Many participants blamed climate change on built dams. “<i>These dams are the ones that caused a lot of things to disappear. We don’t have water due to the dams.</i>”
“Type of clouds	<i>Hata Butle</i> – The destructive clouds were described in all the focus group discussions. Particularly revealing was that the clouds were “<i>black and rolling over going up and down</i>”. About clouds that bring in rain, many participants said that they did not know how to predict the weather because things had changed. <i>Ha Lebamang</i> – The Ha Lebamang participants echoed the same sentiments with other participants in other focus group discussions that destructive clouds are easy to see. The participants were observing climate variability, studying the environment and studying weather through observing the changes in rainfall patterns, types of clouds, prolonged seasons and drought. Like in many focus group discussions, the terms climate variability, studying the environment and studying the weather were difficult to separate. <i>Ha Maliele</i> – The participants said that they were able to foretell hail or heavy rainfall by “<i>looking at the clouds</i>. Some clouds prompt action “<i>so that hail cannot fall down.</i>” <i>Ha Pasane</i> – The Ha Pasane focus group discussion participants were unanimous in their response on using clouds to adapt to climate change. The participants agreed that “<i>there is no sign. We just see when it is to rain.</i>” Sometimes “<i>we will be informed by people providing weather forecast. In the past years, we knew that there will be a bird which will be singing called hadada ibis</i>”. The participants also indicated that black clouds were a sign of rainfall with hail and causing floods.

	<i>Ha Tsunyane</i> – The Mafeofane <i>Ha Tsunyane</i> focus group discussion participants did not respond to this question. All they said was that a lot had changed in the environment. <i>Nyakosoba</i> – In Nyakosoba, participants concurred that a long time ago, they “<i>had knowledge on the appearance of clouds. For example, certain clouds symbolised death, some hail and some rain, but now we see heavy rains. When a dark cloud appears, we need to take precautions,</i>” said one participant indicating that dark clouds could bring bad weather. <i>Popanyane</i> – No response was given here. <i>Thoteng</i> – No response was given for this point. <i>Tloutle</i> – Regarding clouds, participants revealed that they no more see clouds which foretold various events. All the participants agreed that “<i>we used to know clouds that bring rain, snow and death, but we don’t see them anymore</i>”.
Vegetation	<i>Hata Butle</i> – Regarding vegetation, a variety of plants that were reported to have disappeared were named by participants in their respective focus group discussions. These were monakalall (sedges – <i>Cyperus</i> sp.). <i>Ha Lebamang</i> – Ha Lebamang participants cited plants such as “<i>setimamollo</i> (broad-leaved pentanisia – <i>Pentanisia prunelloides</i>), <i>khoara</i>, <i>ralikokotoana</i> (<i>Euclea coriacea</i>) and <i>hloenya</i> (fever bush/ stomach bush – <i>Dicoma anomala</i>) that were <i>no longer available</i>”. Concerns regarding people who travelled from Maseru to Ha Lebamang to dig plants for medicine were raised. Hence, the participants blamed the Maseru people for depleting the plants in Ha Lebamang. One participant noted, “<i>We no longer have those natural resources because of people coming into our communities without consulting the chiefs to ask for permission to dig such.</i>” <i>Ha Maliele</i> – No specific plants were mentioned in this focus group discussion. <i>Ha Pasane</i> – Similarly, the Ha Pasane focus group discussion participants were concerned that the plants were disappearing and none was appearing for the first time to replace the disappeared ones. “<i>In the previous years, there were plants such as mantsokoane</i> (Humped Turret-flower – <i>Asclepias gibba</i>), <i>mmankilini</i> (daily cartwheel – <i>Asclepias multicaulis</i>) and <i>lioel-lioetla</i> (yellow carpet bean – <i>Tragopogon dubius</i>). <i>They are no longer available.</i>” “<i>Apparently, people uproot plants, thereby making them to become extinct, for example, sehala-hala sa matlaka, (wild rosemary or Eriocephalus tenuifolius) which we give cattle as medication when they are not well (nyoko). It has been depleted. We only buy it in Maseru now. People come from Maseru to get it from here. They are depleting it by uprooting it.</i>” This statement on plants was agreed upon by the participants. <i>Ha Tsunyane</i> – The Mafeofane Ha Letsonyane focus group discussion participants did not directly respond to this question. All they said was that a lot had changed in the environment. <i>Nyakosoba</i> – The Nyakosoba participants together revealed that “<i>summer plants called thepe</i> (pigweed or <i>Amaranthus thunbergii</i>), <i>seruae</i> (goosefoot or fathem – <i>Chenopodium album</i>) and <i>papasane</i> (<i>Rorippa nudiuscula</i>) <i>do not grow anymore</i>”. <i>Popanyane</i> – In Nyakosoba, participants agreed that there was a “<i>new foreign flower (monna palesa) in the fields</i>”. The flower “<i>ruins whatever plant is being planted</i>”. Concerning wind, the participants asserted that “<i>sometimes it gets very windy and that triggers clouds. That is what we have noticed</i>”. <i>Thoteng</i> – The Thoteng participants pointed out that consumable “<i>plants such as papasane, leharasoana</i> (<i>Lactuca inermis</i>), <i>mopetsana</i> (fairy bell-flower – <i>Wahlenbergia krebisii</i>), <i>motsikilane</i> (common gazania or <i>Gazania krebisiana</i>), <i>mokiling</i> (daily cartwheel – <i>Asclepias multicaulis</i>) and <i>moetsa-oa –pere</i> (yellow goat’s beard – <i>Tragopogon dubius</i>) <i>are not there anymore</i>”.

	<i>Thoutle</i> – The Thoutle participants believed that wild animals were extinct because community members killed and ate them. The same concern was raised by the participants concerning plants. The participants alleged that community members uprooted the plants and did not replant them. The heavy rains were also blamed for having eroded the fertile soil for wild plants. The wild plants were used for vegetables and medication. Insufficient water was also reported to be the cause of the disappearance of some plants.
Wind direction	<i>Hata Butle</i> – Participants in Hata Butle focus group discussion said that the wind that took away the house roofs was red in colour and they did not know its mixture. It was also reported that <i>“the wind which appeared from the East usually brings rain”</i>. <i>Ha Lebamang</i> – No response was given on wind direction by the participants in this group. <i>Ha Maliele</i> – No response was given for this section. <i>Ha Pasane</i> – Concerning wind direction, it was believed that the wind which brought rainfall came from the “East but the rain comes from the West”. The participants also asserted that sometimes the wind which comes from the East, <i>“brings a storm. It is the one that will take away house rooftops”</i>. Participants said that they knew the 8th month (August) as the windy month, <i>“but nowadays it is in December”</i>. <i>Ha Tsunyane</i> – The Mafeoofane Ha Letsonyane focus group discussion participants did not directly respond to this question. All they said was that a lot had changed in the environment. <i>Nyakosoba</i> – The wind that brings rain comes from the East. <i>Popanyane</i> – No response was given for this point. <i>Thoteng</i> – The wind which blows away houses was reported to be coming from the East by the Thoteng focus group participants. The issue of houses being blown away by the wind was a serious concern expressed by the participants such that all of them remembered that “on the first of December 2019, more than 12 houses (pointing to the East of the village) were blown way.” <i>Thoutle</i> – Dams were a major concern to Thoutle participants. They were implicated in climate change.

Question 6 asked communities on how they use indigenous knowledge to make decisions about the appropriate crop mix, appropriate farming methods and forecast expected rainfall when adapting to climate change (Attachment 43). Table 5.3 captures the Manonyane communities’ responses to Question 6.

Table 5.3: Responses to Question 6, Section B

Indigenous knowledge	Community responses per focus group discussion
Appropriate crop mix	<i>Hata Butle</i> – The Hata Butle participants concurred that they <i>“planted maize and sorghum”</i> although <i>“the production is not the same as before.”</i> The participants said that <i>“in September, we plant sorghum, and October we plant maize.”</i> <i>Ha Lebamang</i> – <i>“Sorghum is the one that is high in productivity during heavy rains because it is drought resistant and also accepts heavy rainfall”</i>, according to the focus group discussion participants in Ha Lebamang. However, the participants said that they <i>“plant potatoes”</i>. In another response, participants also indicated that because of changing seasons, they are unable to grow peas any longer <i>“only a few different farmers have them”</i>.

	<i>Ha Maliele</i> – Despite noticing climate change, the Ha Maliele focus group discussion participants emphasised that they still practise agriculture because they depend on it as a source of livelihood. <i>“We cannot prevent it. As you can see, the fields are ploughed and that is useless because the crops are swimming in water. Some fields were not ploughed at all, while some were not cultivated”</i>, said one participant. <i>Ha Pasane</i> – The Ha Pasane focus group discussion participants complained that <i>“the seeds from other nations have taken our status”</i>. Traditional maize seeds such as <i>“borotho”</i> no longer exist. <i>Ha Tsunyane</i> – No information was given. <i>Nyakosoba</i> – The Nyakosoba participants pointed out that they used to grow <i>“sorghum”</i>. It was not clear how much harvest they would get. Nevertheless, participants reported that <i>“currently, we can’t plant it because we usually plant it during the sixth month. If we are to plant sorghum during the tenth or eleventh month, we are unable to harvest it. We have planted maize and beans expecting a good harvest. However, maize will not be of good quality. We think that beans will be of quality. Had we been aware of the weather change this year, we would have planted potatoes.”</i> The participants’ responses showed that they were unsure of the weather changes. <i>Popanyane</i> – <i>“We plant maize, sorghum, wheat and beans. Most of them are no longer harvested in bulky due to climate change.”</i> This was a response by Popanyane focus group discussion participants. <i>Thoteng</i> – The Thoteng focus group discussion participants indicated that they <i>“don’t plant white things”</i> anymore. One participant said, <i>“We used to plant white maize, but now we don’t plant it anymore because it cannot withstand drought. Instead, we plant yellow maize and brown beans”</i>. The participants further agreed that <i>“due to heavy rainfall, when you plant butternut and pumpkin, it withers. We don’t know what to plant anymore.”</i> <i>Tloutle</i> – The main issue was on built dams. Everything was blamed on dams.
Appropriate farming methods	<i>Hata Butle</i> – On appropriate farming methods, the participants had earlier indicated in question one that no one approaches the communities to assist. Farming is done traditionally the way people are taught from generation to generation. <i>Ha Lebamang</i> – Like many other focus group participants, it was acknowledged that agriculture is the sector most impacted by climate change. In agreement, the participants said <i>“there is a huge change within agriculture. August was our planting month in previous years. We would cultivate the land and plant crops such as wheat.”</i> The participants lamented about the use of fertiliser saying that <i>“although it seemed that agriculture is improved to produce high yields because seeds planted take a short time to grow, fertiliser destroyed our soil. It becomes useless without fertiliser.”</i> <i>Ha Maliele</i> – Regarding appropriate farming methods in Ha Maliele, the participants said that <i>“we still plant the way we used to, in August and September; we haven’t changed”</i>. Nevertheless, the participants bemoaned too much heavy rain which hindered them from planting on time. Instead of giving specific ways in which farming was practised, the participants <i>“claimed that community-based cooperation (matsema) was destroyed. A lot of people are experiencing hunger because we longer have money to buy the tractors and fertilisers. We should be allowed to go back to our ways; we shouldn’t be told that manure does this and that. As Basotho, we should go back to our roots. We should let go of things from other cultures.”</i> <i>Ha Pasane</i> – Regarding appropriate farming methods, no information was given by the participants but they noted that everything was done traditionally. <i>Ha Tsunyane</i> – <i>“Also, we practise crop rotation to avoid erosion. They even have the trees that we say are not indigenous that consume more water. So nothing is able to grow near them. The trees that are not indigenous are not useful to us at all”</i>. <i>Nyakosoba</i> – No information was given

	<i>Popanyane</i> – No response was given. <i>Thoteng</i> – No response was given but the participants indicated that everything was done traditionally with no agricultural extension officers to assist. <i>Tloutle</i> – The main issue was on built dams. Everything was blamed on dams.
Forecast expected rainfall	<i>Hata Butle</i> – The participants agreed that the summer season had changed. The participants said that “<i>we used to plant in August but nowadays people plant in November or December or some time in January due to lack of rainfall. The grass is no longer seen because the rainfall pattern is different from the previous years. It is only this year (2022) when we have seen heavy rainfall which ended up destroying our crops,</i>” implying that it is usually drought with no rainfall. <i>Ha Lebamang</i> – The Ha Lebamang participants observed that “<i>for many years, the weather has changed due to climate change.</i>” According to the participants, “<i>crops are planted in October, November and December</i>”. The participants indicated that they don’t know what to plant but they plant for the sake of planting, “<i>due to scarcity of rainfall</i>”. “<i>It is not raining as it used to before, in previous years.</i>” <i>Ha Maliele</i> – Instead of responding to how they forecast rainfall, the participants alleged that “<i>the government does not offer people jobs.</i>” <i>Ha Pasane</i> – The participants said that they “<i>are experiencing cold weather during all the seasons</i>”. With the exception of 2021/2022 rain season, it was reported that there was scarcity of rainfall. <i>Ha Tsunyane</i> – The Ha Tsunyane focus group participants said that it was difficult for them to forecast rainfall because of climate change. All participants in agreement, one participant said that “<i>when a new month begins, it would rain but lately it does not happen. At the beginning of the month it does not rain and yet later on during the month, it rains heavily. We still have months where we do not expect rain only to find that later on in that month we experience heavy rainfall such that rivers wash away our fields.</i>” <i>Nyakosoba</i> – The participants acknowledged that they just observe using the direction of rainfall and the wind direction. <i>Popanyane</i> – No response was given. <i>Thoteng</i> – No information was given. <i>Tloutle</i> – The main issue was on built dams. Everything was blamed on dams.

Question 7, Attachment 43 probed how communities use participatory techniques (if any) such as focus group discussions, impact diagrams and mapping to ensure indigenous knowledge is part of climate change adaptation strategies. In all the focus group discussions, the participants reported that government officials did not facilitate community participation. Therefore, the participatory techniques mentioned for this question were not used by the participants.

Question 8, Attachment 43 asked the communities' beliefs regarding the use of culture (set customs and beliefs) such as art, collective community achievements, identity, physical things meanings, rituals and stories to adapt to climate change. Other than the stories and rainmaking rituals mentioned in Question 1, Section D, there were no reported community achievements, art, identity and physical things used to adapt to climate change in all the focus group discussions conducted. Of note concerning physical things given meanings was a snake that *"was referred to as masumu (rinkhals/ Spitting cobra or Hemachatus haemachatus). When hail was failing, it stood with its tail, it spit everywhere with the intention of stopping that hail but such snakes "are no longer available"* This was an account by Ha Pasane focus group discussion participants. In Ha Lebamang, participants spoke of stones *"called mahakoe which are still there, although they are now very scarce". Undeniably, the participants acknowledged that such stones are not used"* as before, yet *"these things we knew them from our childhood"*. Another reported problem by the participants in Mafeoofane Ha Letsonyane was that *"some of the natural things used to predict weather conditions are no longer there. They have died. Some lived in wells and other water sources, but because of drought and changes in the weather conditions, we do not have such wells where the creatures were found."*

Further, Question 9, Attachment 43 investigated how communities use institutions, new legislation and regulations to inform government officials about community indigenous knowledge systems (values, culture, norms and indigenous knowledge). Concerns regarding the lack of facilitation in climate change policy processes by government officials were widespread in all the focus group discussions across Manonyane. A common view among the participants was that they had never participated in climate change policy processes, although all of them indicated that they were willing to do so because climate change is negatively impacting their livelihoods.

The last question for this section asked communities how they contribute to climate change adaptation programmes facilitated by government officials in phases of co-production that include co-planning, co-designing, co-implementing and co-evaluating (Question 10, Attachment 43). A recurrent response from the nine focus group discussion participants for this question was that participants agreed that they were not participating in climate change policy processes. No government official was approaching the communities on climate change issues.

5.3.5 Exploring how policy nudging could be used to enhance Manonyane community participation in climate change policy formulation, implementation and governance

Only one question (Attachment 43) was asked on the communities' view on using education, feedback, incentives and information as nudges to motivate them to participate in climate change decisions and implementation. The overall response

in all the focus group discussions conducted indicated that *“education can be important if beginning at the level where we are raising our children so that they grow up with that knowledge. They will be able to spread it to the community at large. As a result, when it is like that, it will be for the growth of children than when we get such information through public gatherings or getting it from the radios”*. Some participants in Hata Butle showed that they needed agricultural extension officers (*basupisi*) to guide community members on agriculture. Other participants also wished that *“If there is a way of giving out seeds so that we can plant to support ourselves”* they would appreciate it.

Regarding incentives, participants were divided because of different views in all the focus groups conducted. Some participants dismissed incentives while others needed them. Some participants said that *“we can do it without incentives, but if we are given money we can accept it because we are Basotho. If they use money and food to make us participate we will accept it because we are hungry.”* Other participants concurred that *“we need deep education on the issues of climate change so that we can know how we can be involved to prevent things that can be harmful to us such as smoke interfering with the ozone layer. For example, let’s say if the road is destroyed, we can fix it. It is our road. We don’t need to be paid to fix our road.”* The researcher noted that in Ha Lebamang, for instance, the participants who discouraged incentives were critical that incentives divided the community members if not well distributed. One participant said that *“sometimes, some of us plant and that aid is not given to us. Aid will be given to a person who doesn’t even plough. If there is a way of giving out seeds so that we can plant to support ourselves, give us such money so that we can improve our lives”*.

5.4 COMMUNITY REPRESENTATIVES’ PERSPECTIVE ON COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION

The responses given in this section are community representatives’ perspectives recorded in the 38 questions asked during the the focus group (refer to Attachment 41 –focus group question schedule for the Manonyane chiefs) and semi-structured interviews (refer to Attachment 42 –semi-structured interview schedule for the Manonyane chiefs). The responses to Section F (Questions 1 to 3 for the focus group discussion and Questions 1-6 for the semi-structured interview) are presented in Chapter 6. The sections in the interview schedule are as follows:

Section A: determining the nature of community participation in climate change policy formulation and implementation

Section B: how community awareness regarding climate change and climate change policy influence their participation in policy formulation and implementation

Section C: how community understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation

Section D: how the use of indigenous knowledge systems in climate change policy formulation and implementation facilitate community participation in climate governance

Section E: exploring how policy nudging could be used to enhance community participation in climate change policy formulation, implementation and governance.

5.4.1 Determining the nature of participation by the Manonyane communities in climate change policy formulation and implementation

Many questions were asked to community representatives (chiefs in this study), to determine the nature of participation by the Manonyane communities in climate change policy formulation and implementation. Question 1 asked chiefs, “How do your communities participate in the NCCP formulation and implementation during the policy stages – agenda setting, policy formulation, policy adoption, policy implementation and policy evaluation” (Attachment 41). Participants of the focus group discussion agreed in their response that *“it has never happened”* in their villages that government officials facilitated community participation in climate change policy formulation and implementation processes. Therefore, no community participation in climate change policy formulation and implementation took place in the Manonyane communities according to the chiefs who were part of the focus group discussion.

Similarly, the semi-structured interview Question 1 (Attachment 42) interviewed chiefs on how the Manonyane communities participate in government programmes aiming to define climate change problems using participatory techniques such as consensus building, facilitation, focus group discussions, interviews, participatory technology, public hearings, PRA techniques and workshops. The chiefs responding to the semi-structured interview question indicated that they did not remember seeing government officials visiting communities to facilitate community participation using the mentioned participatory techniques, according to their *“knowledge”*. Hence, the chiefs’ response confirmed what was said by the focus group discussion participants that *“it has never happened”*. One chief said that *“chiefs work on instructions from Maseru (central government)”*. The chiefs who participated in a semi-structured interview confirmed that if community members from their village of jurisdiction participated in climate change policies, they said that they *“would have known about their involvement”* because they are *“community representatives”*. The researcher understood their response because chiefs are also gatekeepers in Lesotho. According to the chiefs, the mentioned participatory techniques were not used by the Manonyane community members in relation to climate change policy formulation and implementation. The chiefs reported that they worked under instruction from the central government.

Regarding the used participatory techniques by the Manonyane communities, Question 2 for the focus group discussion (Attachment 41 - Question 2) combined all the participatory techniques together. It asked participants, “Which of the following participatory techniques: beneficiary assessment, briefs, community presentations, consensus building, facilitation, focus group discussions, interviews, media, participatory technology, PRA techniques, public meetings, public hearings, surveys and workshops, are used by the Manonyane communities to articulate their preferred courses of alternatives regarding climate change policy and its implementation? The chiefs said that they were willing to assist policymakers to co-ordinate the participation of communities in programmes facilitated by the government. All they needed was negotiations. The focus group

participants' response to this question was that community participation *"can only happen if communities sit down with the government to explain climate change"*. In a way seemingly disproving interviews, the participants said that *"government should not just come to ask questions because we believe that we are people living at a higher altitude. It is important if negotiations are done."*

Through a semi-structured interview Question 2, the chiefs were also asked, "During policy formulation, which of the following participatory techniques: consensus building, facilitation, focus group discussions, PRA techniques, public hearings and workshops, are used by your community to articulate preferred courses of alternatives regarding climate change adaptation measures?" (Attachment 42). Because all the participants for the semi-structured interviews agreed that there was no community participation in climate change policy formulation and implementation in their communities, Ha Lehloba and Ha Mokuoe (Mafekeng), the question asked the interviewees about their view on the listed participatory techniques that could be used during climate change policy formulation. One chief said that if there could be such an opportunity to involve communities, *"public gatherings were simple and best. Internet is something that many people don't have access to and don't know."* Thus, one chief said that *"information can be passed on to community members without challenges through public gatherings"*. Contrastingly, one chief did not believe that communities should participate in climate change policy formulation and implementation because *"policies are formulated by the central government"* according to this interviewee.

Sequentially (Attachment 42), the following questions were posed during a semi-structured interview. During policy adoption, how does your community participate in choosing alternative courses of action regarding climate change decisions using the following participatory techniques: briefs, community presentations, consensus building, focus group discussions, interviews, media, participatory technology, PRA techniques, public meetings and public hearings? (Question 3). During policy implementation, elaborate on how your community participates in the implementation of policy programmes using the following participatory techniques: briefs, facilitation, media, participatory technology, PRA techniques and workshops? (Question 4). Using the following participatory techniques: beneficiary assessment, focus group discussions, interviews, polls, PRA techniques, public meetings, surveys and workshops, how does your community participate during policy evaluation? (Question 5). The outlined semi-structured interview Questions 3 to 5, in Attachment 42, did not have responses because it was stated by the chiefs that there was no community participation in the Ha Lehloba and Ha Mokuoe communities. The interviewed chiefs recommended public gatherings if such an opportunity was to be availed to community members.

The last two questions in Section A of Attachments 41 (focus group discussion) and 42 (semi-structured interview) had no responses from the participants because there was no community participation to talk of, according to focus group participants and interviewees. These questions were, "To ensure communities are part of the climate change policy processes, how do you work with actors such as councillors, experts, politicians and public administrators? (Questions 3 and 6, respectively). Lastly, the chiefs were asked to elaborate on challenges (if any) they faced when co-ordinating community participation in climate change policy processes (Question 4 and 7, respectively).

5.4.2 How community awareness regarding climate change and climate change policy influence participation of the Manonyane communities in policy formulation and implementation

The questions in this section explored how community awareness regarding climate change and climate change policy influence participation of the Manonyane Community Council in policy formulation and implementation. The participants in the semi-structured interview were asked the question, “Do you believe that adequate awareness of climate change can lead to communities feeling motivated to participate in future climate change decision making and implementation?” The question had a “no”, “yes”, “not sure” and “other” as options for participants to choose their preferred response (Question 1, Attachment 42). One of the chiefs interviewed believed that if the community members *“have the knowledge”* about climate change, they could participate in climate change policy formulation and implementation. One chief’s response pointed out the need to have a government policy on climate change. To this interviewee, the role of government in facilitation was critical. Without the central government’s support, this chief said that nothing was to be successful.

The focus group discussion Question 1 for Section B investigated how the Manonyane communities use participatory techniques, for example, cause and impact diagrams, cultural transects, participatory mapping and vulnerability maps to enhance their awareness of climate change (Attachment 41). Similarly, Attachment 42 asked a semi-structured question (Question 2). The chiefs who participated in the focus group discussion and the semi-structured interview agreed that there *“was no such a thing”*. The participants said that the chiefs themselves *“have no idea about climate change”* and the communities either *“do not have knowledge”* on climate change. *“Climate change was never talked about”* through the facilitation of government in the Manonayne communities. The researcher perceived that responses from both the focus group discussion participants and semi-structured interviewees implied that there was a lack of community awareness of climate change in the Manonyane communities. No activities were done by the government to make the Manonyane communities aware of climate change.

Questions 2 and 3 of Attachments 41 (focus group discussion) and 42 (semi-structured interviews), respectively, examined how the Manonyane communities got informed about the following climate change causes: air pollution, deforestation, climate variability, industrialisation, poor agricultural practices, ozone depletion, temperature changes, urbanisation, weather changes and wildfires. The focus group discussion participants and semi-structured interviewees concurred that the causes of climate change were not talked about through the facilitation of government officials. The participants and interviewees agreed that, where possible, community members listened to the South African television and radios. One participant in the focus group discussion said that communities *“are told not to burn things like plastics and many others which will cause climate change”*. Therefore, this participant said that community members *“are advised to dig holes to put plastics in there to avoid unnecessary smokes”*. Many focus group discussion participants did not agree with this view saying that only those with radios and televisions were accessing such information. On deforestation, the interviewees said that community members *“cut down trees. No precautionary measures are taken.”* The chiefs said that firewood is used in Lesotho as a source of energy whenever needed, for example, during funerals. Regarding climate variability and temperature changes, community members observed

that crops such as maize had decreased in yield production. “There was no production due to heavy rains.” Ozone depletion and urbanisation was not talked about. The researcher had understood that no facilitation was taking place in the Manonyane Communities. Therefore, the chiefs gave views on climate change causes which were relevant to their communities.

The chiefs were asked how the Manonyane communities got informed of the following climate change risks: extreme weather events, floods, food insecurity, insufficient access to drinking water, land degradation, loss of biodiversity, loss of rural livelihoods and reduced agricultural production (Attachment 41 – focus group discussion, Question 3 and Attachment 42 – semi-structured interview Question 4). The focus group discussion participants agreed that information regarding climate change risks was passed onto communities through the *“television and radio stations”* which informed communities *“if there is a possibility of drought”* and *“excessive snow”*. Other than that, the participants highlighted that there were no times the Manonyane community members *“met for pitsos to discuss climate change”*. The participants indicated that there were no initiatives happening in the villages regarding climate change. In the words of one participant, *“such a thing does not exist”*.

Lastly, focus group discussion Question 4 (Attachment 41) and 5 semi-structured interview question (Attachment 42) explored how the Manonyane communities get informed of climate change impacts for them and the environment, such as compromised agricultural production, cyclones, drought, floods, heatwaves, health impacts, significant loss of biodiversity and ecosystems, weather insecurity problems and wildfires. Some of the focus group discussion participants admitted that information about climate change impacts is spread to community members through Lesotho radio and television. The participants said that *“we hear on the radio about drought and heavy rain but not in detail regarding how we will be affected. We are told that the rivers are washing away people crossing Mohokare. This kind of information doesn’t concern us at all. It will not motivate us to do something.”* One chief said that climate change issues are talked about at the radio and television presenters’ *“convenience, not realising that they are helping us when communicating”*. One chief believed that *“climate change is political language, it is not a language communities can speak”*. Because of this response, the researcher understood that the chief was saying that climate change is the politicians’ duty and there was no need to involve communities. However, except for this chief who had a different view, the majority of the participants maintained that such information was not readily accessible in the Manonyane communities. Therefore, the majority of the chiefs agreed that they would be happy and willing to help if an opportunity is availed to their communities to participate in climate change policy processes.

5.4.3 How community understanding regarding climate change and climate change policy influence participation of the Manonyane communities in policy formulation and implementation

The chiefs who participated in the focus group discussion were asked of their view of climate change impacts (Attachment 41). The focus group discussion participants did not explain their views on their understanding of climate change in respect of impacts, causes, decision-making processes and risks. The focus group discussion participants said that the communities *“did not know anything about climate change. We have never talked about it.”* The researcher perceived that the lack of the chiefs’ explanation was attributed to the Manonyane communities not participating in climate change policy formulation and

implementation facilitated by the government. Again, the chiefs explained climate change using indigenous knowledge systems (refer to the explanation in Section D under community representative perspectives). A semi-structured interview Question 1 (Attachment 42) asked the chiefs about the knowledge their communities have about the likelihood and severity of expected climate change impacts. The chiefs who participated in the semi-structured interview had different views about community knowledge on the expected climate change impacts. One chief said that community members *“did not have the knowledge because many of them did not understand climate change. They take action when they hear people talk through the radios.”* *“However, that does not mean that community members understand.”* One chief pointed out a totally different view. This chief said that Roma (an umbrella name for villages located in the Roma valley such as Ha Lehloba and Ha Mokuoe) was a different village in that *“each and every household has water and electricity in Roma. Roads and network are also good in Roma.”* Thus, this chief said that *“Roma residents have nothing to worry about”*. Further, this chief suggested that, maybe, *“weather changes”* could be applicable to the Roma community members considering their level of infrastructural development.

The focus group discussion Question 2 (Attachment 41) asked chiefs about their understanding of the causes of climate change. In the same way, the semi-structured interview Question 2 (Attachment 42) interrogated the chiefs' view on community understanding of the causes of climate change. On one hand, the focus group discussion participants did not explain their understanding of climate change causes. The researcher linked the focus group discussion participants' lack of explanation to their response in Question 1, Section B where they said that both the chiefs and the Manonyane community members had no idea of climate change because it was not talked about. On the one hand, the semi-structured interviewees indicated that *“expertise is needed”* to teach communities on climate change *“because when (community members) experiencing high temperatures, they think “that it is just heat”*. This chief said that experts could help in making community members know the *“causes of such things and what it is that communities can do”* to adapt to climate change. According to one chief, *“to some Basotho, the climate change problem is not affecting them but it is affecting other communities”*. One chief who participated in the semi-structured interview indicated that community members *“know that climate change is something that causes heavy rainfall”*.

Both focus group discussion participants and semi-structured interview participants were asked to give their view on how communities they work with get informed of climate change decision-making processes Attachments 41 and 42, respectively. The chiefs who participated in both the focus group discussion and the semi-structured interview agreed that there *“is no one talking about climate change”*. Therefore, community members did not understand climate change. One chief said that some community members *“know that climate change is something that causes heavy rainfall. Other than that community “knows nothing”* about climate change. The emphasis of chiefs was that experts were needed to teach communities about different *“weather changes because of climate change”*. Thus, all participants believed that community participation in climate change policy formulation and implementation was possible if the central government is included in taking action on the issue of climate change.

Question 4 probed chiefs on how communities understand climate change risks for themselves and their environment (Attachments 41 and 42). The chiefs who participated in a focus group discussion and semi-structured interview concurred that the Manonyane communities were not participating directly in climate change programmes organised by the government, indicating that *“it has never happened in our country”*. One chief who participated in a semi-structured interview said that community members “just see” that something is changing. Further, this chief said that sometimes community members with radio and television *“hear about climate change from the neighbouring country, South Africa”*.

The last question for Attachments 41 (focus group discussion Question 5) and 42 (a semi-structured interview Question 5) interrogated chiefs on the participatory techniques used by communities to participate in enhancing their understanding of climate change. The participatory techniques poised for this question were cause and impact diagrams, consensus building, facilitation, participatory technology, PRA techniques, public meetings, public hearings, resources mapping and transects. The focus group discussion participants and interviewees highlighted that it was *“mostly through radios and television”*. Of all the participatory techniques asked on this question, participants indicated that they had not used them in the Manonyane communities to talk about climate change facilitated by the government. Some of the Manonyane community members heard about climate change through South African television and radio. Hence, the participants could not explain the participatory techniques used by the Manonyane communities to understand climate change because they had not used them.

5.4.4 How the use of indigenous knowledge systems in climate change policy formulation and implementation facilitate the participation of the Manonyane communities in climate governance

Attachments 41 (focus group discussion Question 2) and 42 (a semi-structured interview Question 1) assessed how the Manonyane communities consider climate change values (community principles), such as cultural values, family, historical information, natural resources (e.g. traditional land, flora and fauna) and wealth to adapt to climate change? Much information was said concerning cultural values and historical information. The chiefs who participated in a semi-structured interview agreed that –

“Community members were able to stop” violent rainfall and whirlwind using *“traditional sticks called litharisa”*. Ha Ralejoe and Ha Lebamang and their surrounding villages were mentioned as communities traditionally following the conditions for the use of *“litharisa”*. The chiefs said that *“people go outside the house and throw swords in the direction of the whirlwind”*. The hail would stop.

Community members were able to see and identify *“destructive clouds. They are black, turning around and running very fast.”* *“Initiation schools are affected by climate change because men are circumcised during certain times; in a specific manner in a forest”*. However, because of climate change, forests are depleted which was a source of firewood for the initiation school. *“Fire is a requirement for the initiation school.”*

Pregnant mothers *“should not go outside without putting on something on the head. Although beneficial to us, we no longer practise this because there are no courts of law that can enforce punishment on people who are not abiding by the rules”*.

“Community members should not put clothes on the washing line during the day, but some community members still put clothes on the line during the day because there are no courts of law that can enforce punishment on people who are not abiding by the rules. This causes rain not to fall”.

However, one chief who participated in a semi-structured interview bemoaned the extinction of a traditional practice called “masokoana” (cooking sticks), blaming it on White colonialism. This chief reported that *“the rain used to fall when asked to do so when the girls played masokoana”*. Again, one chief said that “community members knew that one was not supposed to go to the fields until 12 o’clock”; it caused hail. According to the historical information given by one chief, this was no longer followed. Contrastingly, some chiefs who participated in a focus group dismissed the above mentioned cultural values as “myths” stating that they did not cause climate change and were not related. Concerning natural resources, one chief who participated in a focus group discussion said that *“there are sponsors who are providing cooking stoves such as paola (a type of a stove which uses cow dung)”*. The stove cooks easily and does not produce smoke. The participants and interviewees did not say something related to family and wealth to adapt to climate change. The researcher perceived that the lack of responses on these climate change values was because the chiefs were happy to talk more about cultural values compared to family and wealth.

The chiefs who participated in the focus group discussion and semi-structured interview (Attachments 41 and 42, respectively) were questioned on the participatory techniques used by the Manonyane communities to consider community values in climate change adaptation programmes organised by the government. Examples of participatory techniques asked were impact diagrams, historical calendars and seasonal calendars. Both the focus group discussion participants and interviewees corresponded that the Manonyane communities had not participated in programmes relating to climate change formulation and implementation. Participants said that *“it never happened”*. *“There is no such a thing”*, referring to community participation organised by the government. *“No public gatherings have been held to explain climate change policy”* in the Manonyane communities.

Question 3, Attachments 41 (focus group discussion) and 42 (semi-structured interview) inquired from the chiefs how the Manonyane communities used community norms, such as cattle grazing, cutting trees for firewood and building houses, collecting grass for thatching houses, history about agricultural practices and wildfires to adapt to climate change. Firstly, the Manonyane communities practised rotational cattle grazing, which dates back to King Moshoeshe’s time, according to the chiefs who participated in the interviews. Animals (e.g. cattle and sheep) *“graze for three or four weeks and move to another place to give the grazed place time to grow grass”*. The chiefs reported that when the animals graze for a long time, it depletes the grass because there is no rotational grazing. The chiefs who participated in both interviews acknowledged that rotational animal grazing was done under the supervision of the chief. Councillors rely on chiefs to ask for permission from the chief before addressing community members on issues regarding making restrictions on grazing lands in the Manonyane communities. The participants agreed that chiefs were responsible for managing the Manonyane communities when cutting

trees for firewood and building houses and collecting grass for thatching houses. Trees are cut down for use during funerals. *“Community members listen to chiefs only”*. Community members do not plant new ones because there is no one who persuades them to do so”. On grass for thatching houses, one chief who gave views during a semi-structured interview lamented the depletion of grass used for roofing houses (mohlomo) in urban areas. Concerning agricultural practices, the Manonyane communities earned a living through subsistence agriculture. *“We always cultivate the soil.”* The participants from the focus group discussion agreed that communities are taught not to burn the grass. *“We should stop burning the grass.”* However, one chief saw no problem in burning the grass arguing that *“there is no law that doesn’t allow the burning of grass. Basotho believe that, after burning the grass, it grows again”*

Question 4 of Section D explored how the Manonyane communities use participatory techniques such as seasonal calendars, timeline and trend analysis (if any) to document norms that relate to climate change (Attachments 41 and 42, Question 4). Both participants for the focus group discussion and semi-structured interview confirmed that participatory techniques which required facilitation had never been used in the Manonyane communities. One chief emphasised that whatever happened in the Manonyane communities, was a result *“of the central government policies”*. This chief’s statement implied that chiefs as community representatives, *“work on the instructions from Maseru (central government)”*. One chief said that *“there is no one who asked us to do so regarding giving views in climate change policy”*. *“There is no such a thing. The government has not come before to call for public gatherings (pitsos) for people to explain climate change.”*

The chiefs were asked of their view on using community indigenous knowledge (traditional knowledge), for example, behaviour of animals, birds attributed to climate change, observing climate variability, studying the environment, studying weather, type of clouds, vegetation and wind direction in their climate change adaptation strategies (Attachments 41 and 42, Question 4). The participants mentioned a number of “birds which have disappeared due to climate change and human action”. The disappeared birds used to assist them to observe weather changes. The birds mentioned were *“lirobebe (house sparrow – Passer domesticus), mekotatsie (white stork – Ciconia ciconia), molepe (long-tailed widow bird – Euplectes progne), makhoaba, likhaka (helmeted guinea fowl – Numida meleagris), mangangane (hadada ibis – Bostrychia hagedash), mmamasianoke”*, *“These birds used to stay in the forests and rivers. The rivers are no longer available, instead there are only dongas. Community members hunt down to kill birds”*. On predicting the rain, the participants said that mankabelane birds *“predict the coming of the rain when flying more often”*. Again, participants said that domestic *likhants’l* (goose – Branta sp.) if they fly they predict rainfall. One participant also said that the singing of *“mehakajoane”* birds predicted rainfall.

About observing climate variability, studying the environment, studying weather and type of clouds – the chiefs concurred that the Manonyane community members studied the environment, weather, type of clouds and direction of wind to explain climatic changes. The participants agreed that the Manonyane community members were able to observe *“clouds which bring hail”* and *“wind which brings hailstorm”*. The chiefs reported that *“litharisa”* were used to block violent hailstorm. *“Litharisa are sticks which stop hailstorms and lightning”*. It is applied with medicines from *“snakes”*. On plants which disappeared, *“lipilo-pilo”*

(Peruvian Zinnia – *Zinnia peruviana*), “*hloenya*” (fever bush/ stomach bush – *Dicoma anomala*) and “*sepaile*” (traditional vegetables) are no longer available. Lipilo-pilo made beautiful flowers to predict rainfall. *Hloenya* used to grow on top of the mountain. On the other hand, one chief reported that “*khoara* (pelargonium or *Pelargonium sidoides*) and *mahlokoana a tsela* are *disappearing little by little*.” This chief explained that “*koara*” is a type of medicine that cures diarrhoea of any kind. “*It works in animals*”. The chief further said that “*koara is found in mountainous areas*”. Further, “*phate ea ngaka*” is a medicinal plant which cures flu. Again, there are some plants that have grown for the first time which are “*monna-ponto*” (common cocklebur – *Xanthium strumarium*) and “*monna-palesa*”. Their presence reduces the availability of others.

Question 6 Attachments 41 (focus group discussion) and 42 (semi-structured interview) probed how the Manonyane communities made climate change projections regarding appropriate crop mix, appropriate farming methods and forecast expected rainfall. On appropriate crop mix, the chiefs mentioned sorghum, beans and maize as the popularly grown crops. Of importance, according to chiefs, was sorghum “*because it is not affected by drought*”. One chief stated that “*production* (of sorghum, beans and maize) *is higher than before because of fertilisers being used*”. One chief also said that communities used to plant Sesotho maize called “*silver king*”. However, the chiefs said that “*Sesotho maize grows slowly and does not get ready quickly because of the changing weather conditions*” which are no longer the same as in the past years. Regarding farming methods, one chief said that fields “*are slope in the mountains. In such places, grass (lenkorota) and crops are left in a line alternating*” when planting to protect crops from soil erosion. Nevertheless, one chief claimed that the “*Manonyane communities are lacking in policies to guide community members on how to reduce soil erosion*”. According to this chief, “*people no longer observe good agricultural practices because they want the government to hire community members through fato-fato (road construction by villagers)*” which pays the hired people on this programme. Therefore, “*the level of soil erosion in many areas is too much because there is no one responsible for such issues*”. This chief pleaded for the central government’s intervention in this matter. Thus, one chief purported that people “*no longer practise*” appropriate farming methods because they want the government to hire them through “*fato-fato*”. Regarding forecasting expected rainfall, the participants said that except in the year 2022, the rainfall was not coming at the expected time for a very long time.

Regarding the use of participatory techniques facilitated by the government to involve the MC in climate change policy formulation and implementation, the chiefs agreed that it “*has never happened*”. The response to this question was a consensual agreement by participants. The question asked was, “How does the Manonyane communities use the participatory techniques such as focus group discussions, impact diagrams and mapping to ensure indigenous knowledge is part of climate change adaptation strategies?” (Attachments 41 and 42, Question 7).

Attachments 41 and 42, Question 8 explored the Manonyane community’s beliefs about using the following cultural aspects (set customs and beliefs): art, collective community achievements, identity, physical things given meanings, rituals and stories to adapt to climate change. This question was not responded to after many focus group discussion participants indicated in Question 1, Section D, that many beliefs were “*just a myth*” and were not related to climate change. As indicated in Question

1 of Section D, litharisa (traditional sticks) were physical sticks given meaning used in the MC to stop hailstorms. However, one chief lamented that the problem with community members was that *“we no longer abide by our cultural values despite encouraging people to follow them. The medicines work when you follow the rules.”* About community achievements and identity, no explanation was given to these examples of beliefs. One chief told a story about breastfeeding mothers who no longer follow the tradition of putting something on their shoulders when going outside before three months passed. The chiefs who participated in the semi-structured interviews said that the rain used to fall after a ritual was performed by the elders with the girls playing *“masokoana* (cooking sticks)”. This is no longer done. The participants said that it is not raining as before because such rituals are no more performed.

The participants for both the focus group discussion and the semi-structured interview agreed in their response to Question 1 of Section A that the Manonyane communities were not participating in climate change policy formulation and implementation facilitated by the government. Therefore, no details were explained by participants on Questions 9 to 13 (Attachments 41 and 42). Thus, Questions 9 to 13 probed chiefs on how different participatory techniques were used by the Manonyane community members to co-produce the climate change policy. Question 9 of the semi-structured interview investigated participatory techniques such as consensus building, interviews, presentation to communities, public hearings, public meetings and PRA technique used by the Manonyane communities to talk about community culture which assists in climate change adaptation. This was followed by Question 9 (focus group discussion) and Question 10 (semi-structured interview) which inquired how the Manonyane communities used institutions, new legislation and regulations to inform government officials about community indigenous knowledge systems (values, culture, norms and indigenous knowledge). Later, Questions 10 (focus group discussion) and 11 (semi-structured interview) explored how the Manonyane communities contribute to climate change adaptation programmes facilitated by government officials in the following co-production phases: co-planning, co-designing, co-implementing and co-evaluating. Further, the chiefs were also asked (Question 12) about the participatory techniques, for example, beneficiary assessment, briefings, community presentations, consensus building, facilitation, focus group discussions, interviews, media, participatory technology, polls, PRA techniques, public hearings, public meetings, surveys and workshops used by Manonyane communities to co-produce climate change adaptation strategies with government officials?

Lastly, semi-structured interview Question 13 (Attachment 42 – Chiefs) sought an explanation on the challenges which were faced by the Manonyane Communities when using indigenous knowledge systems to adapt to climate change. The semi-structured interview participants agreed that indigenous knowledge systems, for example, the use of *“litharisa”*, burning grass and rotational animal grazing were working for the communities which is why community members followed them. Nevertheless, the chiefs highlighted the problem of community members who were no longer abiding by cultural values despite being encouraged to follow them. Some practices such as *“litharisa work when you follow the rules”*.

5.4.5 Exploring how policy nudging could be used in Manonyane Community Council to enhance community participation in climate change policy formulation, implementation, and governance

The first question in Section E (Attachments 41 and 42) surveyed the views of chiefs on using nudges such as education, feedback, incentives, information and persuasion to encourage the Manononyane communities to participate in climate change decisions and implementation. Participants' view on education, feedback and persuasion was the same. One chief said that *"it is important that learners should be taught about climate change starting from primary level until they go to next levels of education"*. The majority of the chiefs expressed concern over *"fato-fato"* (road works construction funded by the government) which the chiefs equated to nudges. One chief indicated that some community members had gone to the point of waiting for *"fato-fato"* to work on roads getting into their community. Under such circumstances, one chief reported that community members *"only take action under fato-fato"*; yet, *"if one family member is hired, it will take five years to register for fato-fato again"*. While acknowledging that *"fato-fato"* was critical, the chiefs' concern was that the programme *"could not hire all the community members at the same time"* which was the fear of chiefs regarding incentivised participation. It was reported that in some cases, it happens that *"someone will take a year without being hired while others are repeatedly hired"*. The focus group discussion participants concurred that *"food parcels and money spoil community members"*. The chiefs insisted that education should be *"provided to the nation"*. The chiefs also agreed that *"pitsos"* were of great help to teach and train community members. The chiefs pledged that they would be glad to assist in calling for such public gatherings. To some chiefs, if available money could *"be provided only for degraded places and to remove plants such as lihalahala (Chrysocoma ciliata)"*. However, the chiefs who participated in a semi-structured interview suggested that experts from Non-Governmental Organisations (NGOs) could help by giving such incentives to motivate participation. The chiefs who participated in the semi-structured interviews supported incentives, giving an example of blood donation. One chief said that he used *"to go and donate blood to get money in return"*. On the one hand, the government would ask people to donate blood but people did not go. *"Instead, we went to a place where we were given money."*

5.5 PUBLIC ADMINISTRATORS' PERSPECTIVE ON COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION

The responses given in this section are public administrators' perspective recorded in the questions asked during the semi-structured interviews (refer to attachments 45 (Meteorology and Climate Department), 46 (Environment Department), 47 (Maseru District Office), 48 (Decentralisation Department) and 49 (Chieftainship Department)). The responses to Section F (Questions 1 to 6) are presented in Chapter 6. The sections in the interview schedule which are according to research questions and objectives are as follows:

5.5.1 Section A: determining the nature of community participation in climate change policy formulation and implementation (Questions 1-7 for Attachments 47, 48 and 49 and Questions 1- 8 for Attachments 45, and 46).

5.5.2 Section B: how community awareness regarding climate change and climate change policy influence their participation in policy formulation and implementation (Questions 1-5 for Attachments 45, 46 and 47 and Questions 1- 4 for Attachments 48 and 49).

5.5.3 Section C: how community understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation (Questions 1-3 for Attachments 45 and 46 and Questions 1 - 2 for Attachments 47, 48 and 49).

5.5.4 Section D: how the use of indigenous knowledge systems in climate change policy formulation and implementation facilitate community participation in climate governance (Questions 1-12 for Attachments 45 and 46 and Questions 1- 11 for Attachments 47, 48 and 49).

5.5.5. Section E: exploring how policy nudging could be used to enhance community participation in climate change policy formulation, implementation and governance (Questions 1-4 for Attachments 45, 46, 47 and 48 and Questions 1- 3 for Attachment 49).

5.5.1 Determining the nature of community participation in climate change policy formulation and implementation facilitated by public administrators

Question 1 asked public administrators how the departments (Chieftainship, Decentralisation, Environment and Meteorology and Climate) and the Maseru District Office facilitate community participation in the National Climate Change Policy (NCCP) formulation and implementation during the agenda setting, policy formulation, policy adoption, policy implementation and policy evaluation. The response to this question showed that there is action being taken at the national level by the Environment and Meteorology and Climate departments to address climate change, but not every department is directly and consistently working with the communities during each policy stage. Public administrators stated that these departments oversee other government ministries and departments carrying out specific community climate change programmes. It appears there is no co-ordination among public administrators concerning who does what, when and how to facilitate community participation in each climate change policy stage. One participant said, *“this side, we are working on the environmental management programme. There is this misunderstanding, I think up to now, as to what is it that we do or we can do”*.

Rather than involving communities during each policy stage, some public administrators could relate community participation through the 2017 NCCP and the currently running Local Climate Adaptive Living (LoCAL) programme. The LoCAL is a pilot programme started in 2018 to test a framework for assessing climate change adaptation to monitor the extent to which LoCAL country programmes contribute to increased resilience and capacity building for adaptation. The programme is piloted in the District of Molepolole's Hoek in Khoelenya, Lithipeng, Qhoasing and Senqunyane community councils. The overall roles of public administrators in co-ordinating community participation in such a specific national policy and programmes were reported as co-ordination, cross-sector collaboration and administration. Overall, there is a lack of community participation during each climate change policy stage. The public administrators suggested many reasons for the lack of community participation in the national climate change policy process. Some of the reasons include, among others, that community participation is still new to Lesotho, climate change strategies are being crafted, the only policy formulated to date is the NCCP, and communities are not aware of the decision making processes on climate change. Further, the Department of Meteorology and Climate is co-ordinating climate change issues, but there is no central co-ordination among the public administrators of the interviewed

departments. Some departments, such as Chieftainship, Decentralisation and the District office assist individuals and organisations to access the communities. One participant said, *“my office is dealing with administration on the district and not on the project or directly working with communities on the ground.”* Currently, there is a lack of community participation during the formulation of the climate change policy.

The second question (Attachments 45 – 49, semi-structured interview) (Meteorology and Climate Department, Environment Department, Maseru District Office, Decentralisation Department and Chieftainship Department) sought to hear the views of public administrators on how departments use consensus building, facilitation, focus group discussions, interviews, participatory technology, PRA techniques, public hearings, workshops and other participatory techniques to facilitate community participation during agenda setting to define climate change problems. It was established that *“environmental officers are available in the districts to advise local councils”* in the case of the Environment Department. Admittedly, the Environment Department *“used to have workshops, radios, web forum, a free line, and used PRA”* to assist communities to establish *“own botanical gardens”*. However, because of lacking financial resources, one public administrators said that, *“it’s not as effective as we would want it primarily because of resources”*. Regarding agenda setting of the NCCP, the Meteorology and Climate Department used interviews, questionnaires and workshops *“to gather solutions from the communities”*. Other than that, there is currently no community involvement through consensus building, facilitation, focus group discussions, interviews, participatory technology, PRA techniques, public hearings and workshops outside the LoCAL project. Concerning the Chieftainship and Decentralisation Department and Maseru District office’s working relations with other government ministries and departments, *“when the ministries are to do some things on the grassroots, they have to tell the Ministry of Local Government so that the ministry will inform chiefs in advance”* because *“the best way to relate to the communities is to engage the local structures that are already in place”*. Generally, *“every government ministry should report to the Ministry of Local Government and Chieftainship”* before involving any community. Thus, there is no consensus building, facilitation, focus group discussions, interviews, participatory technology, PRA techniques, public hearings and workshops to refer to because the public administrators’ view is that specific methods were used for specific projects and the NCCP. Other than that, there is a lack of community participation in climate change policy formulation and implementation happening at the community level.

The third question in a semi-structured interview schedule of Attachments 45 – 49 probed to hear the public administrators’ views on the use of consensus building, facilitation, focus group discussions, PRA techniques, public hearings and workshops to ensure communities articulate their preferred courses of alternatives regarding climate change mitigation and adaptation measures during policy formulation. The public administrators’ responses to the first question indicated that there was no community participation during each climate change policy stage but on specific projects such as LoCAL. The public administrators noted that *“issues of climate change are new to Lesotho”*. The nation of Lesotho is *“still trying to come out with modalities on how to tackle”* climate change when involving communities hence, the reference to the LoCAL programme by the public administrators. The LoCAL programme, was introduced *“to test where Lesotho is and how communities can actively*

participate in making decisions regarding their livelihoods in relation to climate change". *"The lessons learnt"* would then be used to assess community participation in climate change implemented programmes. However, *"that has not yet happened because the programme is still ongoing"*.

Question 4, Section A in the semi-structured interview schedule in Attachments 45 – 49 elicited the views of public administrators on how their departments use briefs, community presentations, consensus building, focus group discussions, interviews, media, PRA techniques, participatory technology, public meetings and public hearings to ensure communities articulate their preferred courses of alternatives regarding climate change adaptation measures during policy adoption. Question 5 (Attachments 45 – 49) intended to hear the views of public administrators on how their departments use briefs, facilitation, media, participatory technology, PRA techniques and workshops to facilitate community participation during policy implementation. Lastly, the public administrators' views were asked in Question 6 (Attachments 45 – 49) on how their departments facilitate community participation using beneficiary assessment, focus group discussions, interviews, polls, PRA techniques, public meetings, surveys and workshops during policy evaluation. For all these three questions, it was found that no community participation is happening at any policy stage. Some public administrators viewed their departments as gatekeepers of other ministries, particularly the district office and Chieftainship and Decentralisation departments under the MLGC. The *"office is dealing with administration in the district and not on the project or directly working with communities on the ground. Basically, it co-ordinates all the land ministries that operate within the district"*. The interviews also established that the departments of Environment and Meteorology and Climate were known by public administrators as overseers of other departments. *"The Department of environment is a watchdog on the environment"*. The Department has *"a stake in every key ministry that depends on the environment"*, while the Meteorology and Climate Department is required to formulate climate change policies and implementation strategies at the national level.

The public administrators' views on how they work with actors such as community representative, experts, politicians and public administrators to ensure communities are part of the climate change policy processes were asked in Question 7 (Attachments 45 – 49). Question 7 sought the public administrators' views on how they work with actors such as community representatives, experts, politicians and public administrators to ensure communities are part of the climate change policy processes. Regarding working with community representatives, the public administrators reported that their departments (Chieftainship, Decentralisation and the Maseru District Office) link individuals, other government ministries and departments, and non-governmental organisations such as *"the UNDP to the grassroots"*, that is, the communities. The procedure is to go through the MLGC to *"be introduced to the district administrator or to the office of the principal chief directly"* to access communities they would want to work with. Overall, one participant explained the general roles of community representatives (chiefs). It was understood that chiefs know that it is their primary duty, according to the Chieftainship Act of 1968, to give permits for grazing lands to avoid overgrazing and to protect wetlands. The chiefs' *"responsibilities is not even on the issue of policy, because before these laws get implemented, ministries go to the chiefs or the councillors to hear their views"* because *"they were the ones implementing"*. Traditionally, chiefs have been ensuring communities adhere to issues relating *"to soil*

conservation, protection of wetlands, forestry, vegetation and whatever is affected by this issue of climate change” a long time ago before the emergence of climate change issues. Regarding how experts work with public administrators, public administrators unanimously perceive them to *“have the financial muscle to reach people”* compared to the government. Therefore, experts provide money for specific climate change projects. The public administrators, in their views, indicated that public administrators and politicians work according to their departments’ mandates independently on specific climate change projects, if any. For example, the agricultural sector is working with the Department of Environment on specific *“climate change challenges,”* including *“food security, water supply and rangelands”*. The Meteorology and Climate Department focused on the NCCP and LoCAL. However, it appears that instead of complementing each other, the Department of Environment and Meteorology and Climate were each at some point involved with communities to participate in climate change decisions.

In an attempt to explain the public administrators’ relationship with politicians across government ministries and departments, it was told that the Department of Decentralisation is not co-ordinating climate change issues. The Planning Department is the one co-ordinating LoCAL. Of note is that all these departments are within the Ministry of Local Government and Chieftainship. Currently, one officer from the Decentralisation Department is involved in the LoCAL programme. The LoCAL is co-ordinated by the Planning Department with the involvement of the Meteorology and Climate Department, the lead department in the NCCP. Each ministry has *“its unique mandate of formulating policies”*. The ministry is required *“to direct, co-ordinate and facilitate”* related policies and their implementation. For example, *“the Ministry of Energy, when devolving power regarding climate change issues”*, they are required to make policies. *“Each ministry is required to do that”*. The central government, through the Ministry of Local Government and Chieftainship, *“will have to solicit resources to ensure that these policies that are transferred to the local level are implemented”*. *“Finally”*, the concerned *“ministry will have to monitor to see that the standards they have set are being adhered to”*.

Lastly, in Section A, Question 8 (Attachments 45 – 49) wanted public administrators to elaborate on *any challenges they face when co-ordinating community participation in the NCCP processes*. About the challenges of co-ordinating NCCP, it was reported that people are reluctant to attend public gatherings (pitsos) because of *“politics”*. Politicians promise food parcels whenever they call for public gatherings. *“If those things are not there, they don’t go”*. This is *“a challenge when intending to pass climate change message”* and other issues. Resultantly, communities do not attend public gatherings because they are tired of political promises. Community members come in numbers to attend a public gathering if experts come to address them. *“They can even sleep there (public gathering place)”*. Nevertheless, *“that issue only happens in urban areas. In rural areas, whenever a chief calls for a pitso, they all go because they are fines and punishment if you don’t go to that meeting”*. Despite the public gathering starting early morning, *“the community will come”*.

In elaborating on the challenges, *the public administrators face when co-ordinating community participation in the NCCP processes*, one public administrator bemoaned the overlapping of duties across government departments. One department is working on the *“environmental management programmes”*, while another department on climate change. *“What is it that can*

be done by the Environment Department that is different from what a climate change strategy would do?" One participant quizzed. The differences in roles between the Environment and Meteorology and Climate departments are not harmonised. Further, it is not easy for a mere Environment Department to play a watchdog role over other government ministries. In one public administrator's view, it is *"just a parallel conflict"*.

The public administrators highlighted the lack of community understanding of climate change as hampering their participation. *"Some of them say it's witchcraft, until we are on the same level with them, fitting ourselves into their own shoes not fitting them into our shoes"* active participation may be hampered. *"Some of them say it's the white men's thing"*, while some points to misbehaviour and the anger of the ancestors. Another challenge alluded to was that *"the National Climate Change Committee (NCCC) has no direct link to the communities"*. Meanwhile, the Committee functions on the basis of *"gentlemen's agreements"*. Thus, *"a bill is being crafted to establish it legally"*. The intention of the *"bill is to have the NCCC working alongside the District Climate Change Committees (DCCC) whose members will be represented in the NCCC"*. Committees will be at different levels.

5.5.2 How community awareness regarding climate change and climate change policy influence their participation in policy formulation and implementation

What is your view of community awareness of climate change? This was the opening question for Section B, Attachments 45 and 46, in a semi-structured interview. The research wanted to find out how the two concepts, awareness and understanding, are operationally used. One public administrator's view was that *"technically the concepts may be different, but in practice that does not matter because the ultimate goal is for communities to know what the problem is, what causes it and how they can adapt to climate change"*. The view of these public administrators was that *"if the communities understand the problem, they are likely to know the solution"* and how they can stop the problem. In response to Question 1, the public administrators' view was that *"the communities are aware of climate change. Communities are aware of the shift in its seasons, but not everybody links it to climate change. Those who do, they would say, somebody says it is climate change. Some would say it is because it is the end of time"*. Further, some community members would say climate change is because of moving away from the traditional ways of doing things, while other communities think *"it is a foreign thing from the whites"*.

Question 1 in Attachments 47 – 49 and Question 2 in Attachment 45 and 46 investigated how departments used the following participatory techniques to enhance community awareness of climate change: cause and impact diagrams, cultural transects, participatory mapping and vulnerability maps. The public administrators acknowledged that they are not currently using cause and impact diagrams, cultural transects participatory mapping and vulnerability maps. There were three reasons for not using the participatory techniques, which differed from one public administrator's view to another. First, the Meteorology and Climate Department is still drafting the communication strategy. Without giving details, it was noted that different community approaches had been proposed to be used in the national strategy. The second reason for the lack of use of these participatory techniques by the Chieftainship, Decentralisation and the Maseru District office is that the departments are not directly working

with communities. They work with individuals, organisations, government departments and ministries to assist them to access communities. The Environment Department has structures or channels, for example, environmental officers and an education division established to involve communities in climate change decision-making processes. However, *“they are not alive in a way that is required primarily because of lack of resources, such as money.”*

Attachments 45 and 46, Section B, Question 3 and Attachments 47 – 49, Question 2 was posed to understand how departments ensure communities are informed of air pollution, climate variability, deforestation, industrialisation, ozone depletion, poor agricultural practices, temperature changes, urbanisation, weather changes and wildfires. None of the public administrators could explain how communities are informed of climate change causes for each example. The researcher perceived that the lack of explanation for each climate change cause stated was because no community participation is currently taking place in the national climate change policy except for the specific projects already mentioned in Section 5.4.1. One participant referred to a biosafety policy which focuses on agriculture and biodiversity. The policy is yet to be adopted. The policy is drafted by the Environment Department but will be used by the Ministry of Agriculture and Food Security (MAFS) because the Department of Environment plays an oversight role. About deforestation, one public administrator reported that a lot had been invested in forestation not deforestation because Lesotho is a grassland. The participant noted that the people *“did not play ball with that”*. This meant that the communities did not see value in the project. The forestation was not sustainable. For a very long time, every year, there is a day when trees are planted through the co-ordination of the Ministry of Forestry, Range and Soil Conservation (MFRSC), which is mandated to plant trees; still there are no trees. The participant suggested that the lack of co-operation by the communities could be because communities do not believe in forestation, particularly with exotic trees. It was suggested that *“indeed”* the public administrators *“have to get down to the truth as to how we should do these things”*. One public administrator recommended planting woodlots instead of exotic trees and suggested the *“importation of foreign evergreen grasses because Lesotho is a grassland”*.

In the same Section B, the public administrators were probed on how their departments ensure communities are informed of climate change risks such as extreme weather events, food insecurity, floods, insufficient access to drinking water, land degradation, loss of biodiversity, loss of rural livelihoods and reduced agricultural production. The question is on Attachment 45 and 46 (Section B), Question 4 and Attachments 47 – 49, Question 3. The Environment and Meteorology and Climate departments conducted awareness campaigns and education on climate change in the past. Currently, there is no running programme. It is something that was done when the funds were available. Thus, two of the public administrators emphasised the lack of funds as contributing to the lack of community participation in climate change policy formulation and implementation. The Department of Environment used to have outreach programmes through the education division, which had the purpose of going out to talk to the nation. In addition, the Environment Department once used radio, television and forum-web to reach out to communities. The community involvement in climate change decisions by the Environment Department led to the establishment of botanical gardens. Despite making such a stride, in community involvement, the establishment of a botanical garden could not establish its objective of planting back into the habitat where resources have been depleted.

The last question in Section B, Attachment 48 and 49, Question 4 and Attachment 45 – 47, Question 5 asked, “What is done by your department to ensure communities are informed of the following climate change impacts on them and the environment: compromised agricultural production, cyclones, drought, floods, heatwaves, health impacts, significant loss of biodiversity and ecosystems, water insecurity problems and wildfires?” The MAFS is the one that reaches out to the nation to do research when there is drought as one interviewee. However, it is not consistent. One participant suggested that climate change is talked about when the prime minister meets with other countries concerning climate change. They start talking about climate change. However, *“it is not consistent”*. As for informing communities about the other impacts, it is not being done by the concerned departments. Only the Department of Environment has environmental officers. The public administrators cited lack of funds as one of the major factors that hinder community participation in climate change policy formulation and implementation. Noteworthy is that the Chieftainship and Decentralisation departments and Maseru District office do not directly work with communities other than being community gatekeepers. The Environment and Meteorology and Climate are understandably two departments that had campaigns for raising awareness and education on climate change in the past. It was not clear when the campaigns were conducted but no programme is currently running.

5.5.3 How community understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation facilitated by public administrators

Generally, the public administrators acknowledged that *“communities are aware of climate change, but not understanding what is really happening”*. It was argued that communities do not understand what is happening in relation to industrialisation, ozone depletion and urbanisation. Turning to Section C, Attachments 45 and 46 the question was, *“How do you use the concepts community awareness of climate change, community understanding of climate change, community understanding of environmental issues, and public understanding of environmental issues in relation to your department’s mandate?”* In response to the question, one participant said that, *“What is it that is different from what we are doing because the recommendations and the practices that we adopt in addressing environmental issues definitely are entrenched on averting the negative impacts of climate change.”* The participant believed that “climate change policy and strategy” is not different from the environmental management, suggesting that the terms may sound different, but working to achieve the same aim. The other participant’s view was that *“technically they may be different, but the ultimate goal is for communities to know what the problem is, what causes it and how to adapt to it”*. The participant’s view seemed to imply that the terms should not be of concern. Rather, the “community’s understanding of the problem and knowing the solution” makes it easier to come up with the *“required mitigation and adaptation”*. Along with the climate change challenges, their understanding should include *“food security, water supply and rangeland, among others”*.

Attachment 47 and 48, Question 1 and Attachment 45 and 46 (Question 2) investigated how departments ensure communities understand climate change causes, impacts, decision-making processes and risks for themselves and their environment regarding climate change. Unfortunately, the public administrators said that no interaction was taking place with the communities as far as their departments were concerned. Three of the five public administrators suggested community

participation *“through pitsos in the rural areas except in urban areas where they access radios and social media platforms”*. Further, another participant’s view was *“to move away from media to use leaflets and billboards”*. It was reported that the District Office, Chieftainship, and Decentralisation departments fall under the Ministry of Local Government and Chieftainship, which plays the gatekeeper role. It is within the Ministries’ mandate such as Agriculture to assist communities on instances of low rainfall and agricultural issues. As such, in agriculture, they talk about the impact of climate change on farming. The *“MFRSC and Ministry of Water focus on the impact of climate change on the issue of water scarcity”*. Hence, the two ministries encourage communities to protect rangelands. The Ministry of Water and MFRSC have the same mandate on climate change issues but with different ministries. Thus, the Ministry of Water focuses on wetlands and the MFRSC focus on rangelands. The ministries are doing their best to ensure that *“people understand the protection of the wetlands because if they don’t protect, they end up not having water and good rangelands”*.

The other question in Attachments 45 and 46, Question 3 and Attachments 47 – 49 probed on the participatory techniques used by departments to enhance community understanding of climate change (Question 2). The participatory techniques were cause and impact diagrams, consensus building, facilitation, participatory technology, PRA techniques, public meetings, public hearings, resources mapping and transects. The participatory techniques were not being used. However, there is a national strategy, which was not yet operational at the time of the interview. In the national communication strategy, *“they are different community participatory approaches proposed to deal with the awareness”*. The Departments in the Ministry of Local Government and Chieftainship play the gatekeeping role, which is, linking communities to experts and government departments and ministries. If an opportunity to use the participatory techniques is available, the public administrators supported public gatherings as the preferred participatory technique, especially in rural areas. *“In the rural areas, it’s strictly adherence to the issue of public gatherings (pitsos) to talk about issues”*.

5.5.4 How the use of indigenous knowledge systems in climate change policy formulation and implementation facilitate community participation in climate governance

Attachments 45 – 49, Question 1, Section D, semi-structured interviews sought to solicit the views of public administrators on how communities are co-ordinated to document climate change values (community principles) for inclusion in climate change policy formulation and its implementation. The values included, among others, climate change cultural values, family, historical information, natural resources (traditional land, flora, and fauna) and wealth. Instead of explaining how community values are being documented, the public administrators admitted that it was not yet done through their departments. Although not yet done, public administrators agreed that community values should be considered when making climate change decisions. The public administrators even took their time to explain rotational grazing and grazing societies as some of the values followed in communities. It was reported that communities practise rotational grazing. *“In winter animals come home but in summer, they go to the cattle posts.”* The animals *“used to go to the cattle posts in November and come back around April”*. *“Lately, things have changed. They go to the cattle post in December or in January to spend only four months instead of 6 months”*. The public administrator’s view was that this is because *“the quality of yield has deteriorated. It cannot feed the animals for six*

months anymore.” It was suggested that *“land degradation, which is probably caused by climate change”* is a cause for yield decline. Concerning co-ordinators of such values, historical information, natural resources and animals which are regarded as a form of wealth, it was noted that *“the Ministry of Agriculture through the Wool and Mohair Promotion Project (WAMPP) did the demarcations of the grazing zones into Zone A, Zone B and Zone C. The district office is always in communication to have an update of experiences on the ground”*. Further, there are *“grazing societies on the ground which among others function to see that the land is properly managed”*. Managing the land includes regulating the harvesting of grass and cutting down of trees, and preventing wildfires. The grazing societies also educate shepherds about the dangers of wildfires. Regarding the documentation of such practices, it was established that WAMPP has a component specifically focusing on that.

The public administrators agreed on including community values in the climate change policy. *“The world is recognising that the old ways are the best ways, for example, organic food”*. This brings *“the concepts of circular economy and green economy which simply says let’s go back to the basics”*. *“How communities have lived over the years was in harmony with nature”*. Indigenous knowledge systems should be treasured or be adapted alongside new ways of living. One public administrator argued that changes in the environment also *“changes daily livelihood, traditions and norms about certain things”*. For example, it is known in Sesotho that the year starts in August (Phato) because the month is the ploughing season but that that has changed. August might remain the beginning of the year but things that were associated with it have changed.

On historical information, two points were noted, which are a change in the way houses are built and acknowledgement of chiefs as custodians of community values. On family, it was also noted that significant events such as initiation schools and funerals require the use of firewood by their nature. It was established that *“the way of building houses has changed”*. The old house plans considered *“topography, weather and climate patterns”*. Summer seasons are very hot and winters are very cold. Currently, people are building big houses with a slab and ceramic tiles that are freezing in winter. About family, significant events such as initiation schools and funerals require cutting down of trees for firewood by their nature. Hence, many trees are cut down for firewood during such events. The participant suggested a balance between valuing traditional family practices and restoring the environment. Of note, chiefs are custodians of such issues. In future, a workable solution should be agreed on with the chiefs and their communities.

There is a programme called Early Warning Systems at the national level to obtain and communicate information on climate change risks. Women ending the mourning period, women wearing trousers, a sign of the end times and political interference were cited as community values that need consideration in answering Question 1, Attachments 45 – 49. It was indicated that the Early Warning Systems enable communities to get accurate information in time. Using the early warning signs, will assist in studying *“indigenous knowledge and compare with scientific knowledge on issues of climate change”*. Currently, *“that is the first step, to know what communities understand”* about climate change at the national level. Ultimately, this is done to link science and indigenous knowledge. The public administrators pointed out the community values that relate to climate change as *“women are now putting on trousers”*. *“It has not been the culture”*. *“Women are ending the mourning period for their late*

husband anytime and that has impacted the weather". In Sesotho culture, *"it has to happen in winter"* after one year. To some communities, such norms are linked to climate change because people are moving away from tradition. There is also religious understanding by Christians. They have their own understanding that *"it has been prophesised that in the last days they will be problems like climate change"*. *"This is a sign of the end days"*. *"Some communities will be saying this is happening because they have seen so much and God is angry with the people"*. *"Another dimension is political"*. When *"unsupported politicians"* talk about climate change, what they say is taken politically. Even fellow politicians criticise such issues. If politicians present climate change information to communities, *"it's not taken as a national issue"*. Communities *"politicise"* if information *"is coming from a certain political party and not their party"*. Giving a solution to such challenges, the participant's view was that religious society, traditions and politicians should be engaged to bring together the divergent views for a common understanding.

The second question in Attachments 45 – 49 asked public administrators about the use of historical calendars, impact diagrams and seasonal calendars by their departments to enable the consideration of community values in their current climate change decision making process and implementation (Question 2, semi-structured interview). Departments do not use historical calendars, impact diagrams and seasonal calendars to enable the consideration of community values. However, communities are aware of seasonal changes using historical information on rainfall patterns and other changes. *"Climate change consequences are talked of"* in the communities by observing the changes in the seasons and using historical calendars. The public administrators agreed that communities testify that seasons are overlapping. The chiefs and their communities know such a community history of seasonal changes. *"The issue of chiefs is a cultural embroilment."* In the case of formulating the national climate change policy, it was confirmed that communities noticed changes in rainfall patterns and witnessed drought and temperature changes during the interviews, surveys and workshops. Regarding the causes of those notable changes, the public administrators said that communities believed it is because of values that are not followed.

Still answering Question 2 of Section D, the public administrators perceived a public gathering as a vibrant participatory technique currently used. It was noted that chiefs are custodians of indigenous knowledge systems. Whoever needs to work with the communities is required to go to the chief for permission. For that reason, *"government ministries and departments contact the Ministry of Local Government for the ministry to inform chiefs in advance"*. The Ministry of Local Government, through the Chieftainship Department, contacts the chiefs to assist other ministries whenever they have to involve the communities in specific climate change projects. Because of lacking funds, information is passed on during the chiefs and councillors' monthly meetings. Sometimes information is passed through the area chiefs to pass on to village head men (also known as chiefs). This is done for climate change issues and any other issue to be passed on to the communities for information or their participation.

In your current climate change decision making processes, how do you use community norms to promote bottom-up mitigation and adaptation responses? The norms are cattle grazing, collecting grass for thatching houses, cutting down trees for firewood and building houses, history about agricultural practices and wildfires (Question 3, Attachments 45 – 49). The public

administrators' view was that chiefs are custodians of issues that relate to cattle grazing, collecting grass for thatching houses, cutting down trees for firewood and building houses, agricultural practices and wildfires. Chiefs give guidelines on where, when and how communities can use grazing land, *"collect thatching grass for building"*, cut down trees for funerals and building houses. The public administrators acknowledged the importance of chiefs in following the norms to promote adaptation to climate change. The Decentralisation, Chieftainship, Environment, and Meteorology and Climate departments, and the Maseru District Office had no written down guidelines to use community norms to promote bottom-up mitigation and adaptation responses. Reference was made to grazing societies and community groupings to manage rangelands. One public administrator said that *"we should have a law by now governing veld fires because it destroyed our rangeland. We used to have a fire system, because of resources, we are not managing it"*. All the community norms noted for this question are followed under the leadership of the chiefs. If one has a funeral, a corpse should be buried in the morning or after lunch. The belief is that failure to follow such norms will bring hailstorm. However, not all community members believe in those cultures.

In answering Question 4, participants agreed that seasons had changed and participatory techniques are not used because of lacking financial resources. The fourth question in Section D determined how departments used participatory techniques such as seasonal calendars, timeline and trend analysis to document community norms for use when making climate change decisions and during the implementation of those decisions (Attachment 45 – 49). The public administrators admitted that no such participatory techniques were used by different departments such as Environment, Decentralisation, Meteorology and Climate, Chieftainship and the Maseru District Office. Nevertheless, the public administrators have an understanding that, of late, seasons overlap. *The Sesotho traditional first month of the year (August) has changed*. Repeatedly, the public administrators pointed out lack of funding as one of the major issues that hinder the use of specific participatory techniques. *"We do not have resources. For the past 10 years, our budget has been dwindling. I can equate it to zero budget because no other programme you can do except projects. Projects are tagged. You don't do whatever you need with them"*.

In the fifth question of Section D, Attachments 45 – 49, explored how departments use indigenous knowledge such as behaviour of animals, birds attributed to climate change, observing climate variability, studying the environment, studying weather, the direction of wind, type of clouds and vegetation in their current national climate change decision making and implementation to form part of climate change projections. Unfortunately, on this question again, the public administrators admitted that departments have not yet explored indigenous knowledge regarding the examples given for this question as part of climate change for various reasons. The public administrators gave their knowledge of what is happening in the communities. One participant noted the dandy lion flower's disappearance. It was noted that *"there used to be a lot of dandy lion flowers in December"*. Dandy lion is a flower that used to be there during the month of December. The dandy lion flower was colourful and beautiful. Further, an insect would be seen in December, thus, the Sesotho name for December was named after the insect tsitoe). There is also another bird reportedly seen recently that is green and yellow. The public administrators believed that community members had more information on indigenous knowledge based on their experience and information. Information on the behaviour of animals, birds attributed to climate change, observing climate variability, studying the

environment, studying weather, the direction of wind, type of clouds and vegetation formed part of the community's indigenous knowledge. The public administrators confirmed that, although not using the information for national climate change policies, communities use the information to make climate change projections. It was also reported that communities know the direction at which the rain and the wind that brings rain comes from. Concerning the behaviour of birds, for example, *Mamasianoke*, *"It is believed that if the bird is heard singing by the riverside, it predicts the coming of the rain"*. Again, a lot of frogs quacking predict the coming of the rain. Public administrators' view of plants (traditional medicine) was that much of them have disappeared, but they did not know of any new emerging plants.

The sixth question in Section D asked public administrators how their departments use focus group discussions, impact diagrams and mapping participatory techniques to ensure community indigenous knowledge is part of climate change decisions and implementation (Attachments 45 – 49), semi-structured interview Question 6). The public administrators' response to this question was that these methods are not currently being used because of lacking funds. Resultantly, messages are passed on to the communities through public gatherings and monthly meetings. However, if funds would permit, the public administrators supported the idea of focus group discussions, impact diagrams and mapping; arguing that *"there is nothing like interacting having one on one, or face-to-face interaction with people"*. The methods will complement public gatherings where many people come to *"stand quiet which you don't know whether they are going to beat you up or something"*.

How does your department use art, collective community achievements, identity, physical things given meanings, rituals and stories in their current climate change decision making process and implementation programmes. This was Question 7 Attachments 45 – 49), Section D of the semi-structured interview schedules. No department was using any of these in the current climate change policy formulation and implementation. None of the participants gave examples on art, collective community achievements, identity and rituals. The researcher perceived that the public administrators live in town and not the rural communities where they practise such things. The public administrators narrated the different stories they know about Sesotho culture that relates to physical things given meanings. One of the participants said that one of the villages he once visited a long time ago had a valued cliff, which when the shadow got to it, clothes were supposed to be removed from the washing line *"because that will cause storms"*. *"People already know that they have to do this by a certain time after which we will have to stop."* *"The villagers felt the need to document that because it has proven to be true up to date"*. Regarding stories, the public administrators pointed out that communities believe that *"putting clothes on the washing line during the day causes hail storm"*.

Which of the following participatory techniques: consensus building, interviews, PRA techniques, presentation to communities, public hearings and public meetings, are used by the department to incorporate community culture in the NCCP and its implementation? The question was on number 8, Section D of a semi-structured interview, Attachments 45 – 49. The public administrators noted that consensus building, presentations to communities and public meetings were mostly used because of lacking funds. *"The Ministry of Local Government will always say there is no money to go to every chief or do a training*

where government employees can sleepover". Thus, if there is a message to be passed on to communities, the public administrators reported that it is passed on to the chiefs and councillors' monthly meetings to pass on to community members. *"Every time after those monthly meetings with the principal chiefs, it is expected that the chief will go and convene public gathering(s) to report to their subjects what has been discussed. The chiefs also convene a public gathering (pitso) when government ministries and departments come to make presentations on different issues, not only climate change"*. The public administrators repeatedly referred to lacking funds to use, among other participatory techniques, the PRA techniques.

Attachment 45 – 49, Question 9 determined how departments and the Maseru District Office promote the incorporation of indigenous knowledge systems (values, culture, norms and indigenous knowledge) into the NCCP using institutions, new legislation and regulations. The public administrators stated that they *"don't have such. "Certain ministries do that when working on specific projects, for example, the Ministry of Agriculture and the Wool and Mohair Promotion Project (WAMPP). Other than that, the chiefs normally have committees responsible for initiation and all its aspects, development in the village and protection of wetlands. The committees report to the chief. That's how the chief administers the village through different committees"*. Because councillors have specific duties; chiefs are overseers. However, on paper, chiefs and councillors play different roles, yet in practice, *"the chiefs and councillors' duties overlap"*. Overall, the Ministry of Local Government oversees individuals, experts and government departments and ministries involving communities in their specific climate change projects. Of note is that the Maseru District Office and the Decentralisation Department are not directly involved in community participation in climate change policy. According to the Department of Meteorology and Climate, Plans are underway for a national project that aims to understand the indigenous knowledge systems called Improving adaptive Capacity of Vulnerable and Food and Insecure Populations of Lesotho.

Concerning co-planning, co-designing, co-implementing and co-evaluating, the public administrators' views were asked on the *role of departments in climate change policy co-governance processes to facilitate community participation to produce the NCCP (Question 10, Section D, Attachments 45 – 49 semi-structured interviews)*. *The public administrators' view was that no such processes are happening*. This is because chiefs are trusted to lead the people whenever there is need for such processes on specific projects. It was explained that *"it is known as their traditional role"*. The public administrators are living in communities headed by chiefs. It was noted that the Department of Environment has environmental officers who work in district structures to advise local councils. The environmental officers seek support from the Environment Department on some of the topics that they have to discuss with different community groups, for instance, herd boys. There is also an outreach and education division in the Department, which talks to the nation about good or appropriate management practices the Department requires. Some public administrators' view suggested that the lack of co-governance in the national climate change policies was attributed to climate change issues being new. Lesotho is still coming up with ways to approach climate change. *"Coming up with policies on who does what, when and how between local and central government as we call it"*. The central government (Ministry of Local Government and Chieftainship) is required to solicit resources to ensure that climate change

programmes, for example, LoCAL is implemented. The responsibility to make climate change policies and programmes remains with the Ministry Meteorology and Climate.

Which of the following participatory techniques are used by your department to encourage community co-governance in the NCCP formulation and implementation: beneficiary assessment, briefings, community presentations, consensus building, facilitation, focus group discussions, interviews, media, polls, PRA techniques, public hearings, public meetings, surveys and workshops. The question was on number 11 (Attachments 45 – 49), in a semi-structured interview schedule. The response to Question 11 was the same with the one for Question 10 on Section D for all the public administrators. None of the public administrators explained the use of these participatory techniques to incorporate indigenous knowledge systems. All issues to do with indigenous knowledge systems are dealt with by chiefs at a community level because it is their traditional role.

Attachments 45 and 46, semi-structured interviews for public administrators had one more extra question, Question 12, which read, “Elaborate on any challenges you face when using indigenous knowledge systems in the NCCP formulation and implementation”. One public administrator acknowledged the existence of the use of indigenous knowledge systems in the communities. To this participant, it is “*public knowledge that is out there which the ministries, particularly dealing with the environment and climate change have not yet formally considered into climate change decision making*”. It was explained that “*even the University (National University of Lesotho) did it for academic purposes, not to fill a policy gap*”. This is why the participant said that nobody uses the indigenous knowledge systems for climate change policy and implementation. In the case of formulating NCCP, the public administrator explicated that the issues were there about how communities understand the cause of the climate. The community understanding was different from scientific explanation. “*The team that was developing the climate change policy gave more weight on the scientific explanation where they were contradictions because the Department of Meteorology and Energy is science based*”. However, the participant highlighted that to minimise such biases in future, “*it is critical to start engaging with the communities on indigenous knowledge systems of climate change*”. Admittedly, the participant gave an example of Basotho’s way of predicting the weather as one norm which aligned with scientific knowledge. “*In Sesotho, there are seasons used as indicators. If it is too hot during the day, that will tell you that thunderstorms will fall. Scientifically, it is like that. When there is too much heat energy, you will have a lot of convection and it will be thunderstorms*”.

5.5.5 Exploring how policy nudging could be used to enhance community participation in climate change policy formulation, implementation and governance

Section E began by questioning public administrators about how their departments use policy nudging during the NCCP formulation and implementation (Attachments 45 – 49). It was revealed that the Maseru District Office plays the gatekeeping role to government ministries and departments which involve communities on specific climate change projects. On policy nudging, it was asserted that “*there is no such a thing*”. The public administrators emphasised that community involvement is done per specific climate change project. When there is a project that is when the public administrators visit a radio station.

Many radio talk shows on climate change have been conducted, but that is not well-documented to note what is done. In 2015 and 2016, the Department of Meteorology and Climate “*encouraged journalists to write about climate change in the newspapers through climate media awards*”. At the year-end, examiners assessed the journalists’ publications. The programme ran for two years. However, “*in general, there is a very big gap in terms of climate change awareness. It is one of the things planned to be done in future. It is one element I can say we are working on*”.

The public administrators’ view on Question 2, (Attachments 45-48) and Question 1 (Attachment 49) semi-structured interview, probed their view on the use of nudges, such as education, information, feedback, incentives and persuasion to encourage communities to participate in climate change decisions and implementation. Undoubtedly, the public administrators agreed on the use of education, information, feedback and persuasion. While it is true that the concept of nudging is not yet used, the public administrators showed a lot of interest in the concept. One participant said that “*life is moulded by things we consciously choose or are forced to choose through generic changes around us. If Basotho are to accept the severity of climate change impact, we should be adopting this policy nudging. We need to trigger people to start changing certain behaviour*”. On education, it was suggested that “*the government could introduce at primary, high school and tertiary level this issue of climate change through the Ministry of Education. If students can be taught, they will know when they are old the consequences of not burning grass and protecting wetlands*”. Formal and informal education “*means we can teach so many people within a short period of time with just one curriculum which can be introduced. Apart from that, radio stations and organisations can be engaged to go and teach climate change to communities*.” This is because having a programme on radio is only for a short period. “*People would just say, “We heard about that thing, then later they forget about the thing.”* In supporting formal education on climate change, it was proposed that “*even if students do not write an examination on this issue; knowledge will be passed on*”. Regarding incentives, some public administrators supported the idea, while some did not. *Everyone “will participate because they know that there will be a prize*”. Community members “*will be telling each other about this issue*” because “*people are busy with bread and butter issues*”. If something monetary can be availed for people to teach all these issues, it will help”. Community members can start coming on their own because “*of incentives involved*”. For, instance, If there is a competition, each district must compete with the other on the issue of climate change. On persuasion, one participant suggested district competitions on climate change. The competition was suggested to focus on teachers of climate change. The one who is “*more persuasive enough will get a certain prize*”. Resultantly, positive results are likely to be witnessed. Other issues that continuously popped up were related to poverty, development, lack of funding and unemployment.

What is your view on using regulations such as bans, compliance rules and restrictions to ensure communities are involved in climate change policy formulation and implementation? The semi-structured interview question is on Attachments 45 – 48 (Question 3) and Question 2, Attachment 49 semi-structured interview. In response to this question, the public administrators supported the idea of bans, compliance rules and restrictions. Nevertheless, the public administrators advocated for less harsh laws to balance changing behaviour and availing choices for people to choose what they could not have chosen without those choices. The argument was that dictating certain things to people may not work. People will do things for the government, yet

the main issue is for communities to understand climate change for adaptation and mitigation. If, for example, people are paid to police each other in their community, it may help. No one will sleep because they will be on a look out to see people who break the rules. Letting community members to police each other may assist to change community's behaviour rather than having restrictions, bans, or compliance rules. *"Laws usually do that because if you cross a line, you are punished"*. The public administrators emphasised on restrictions, bans and compliance rules using non-monetary incentives such as *"bi-laws which encourage communities to adhere to good agricultural practices that best protect the environment to receive free fertiliser or discounted fertilisers."* However, *"it shouldn't be just about incentives, but realising the likely dangers in not doing certain things"*. The other public administrator emphasised on information dissemination when he said that *"hammer them, sensationalise them such that they ask what is this?"* Bans, restrictions and compliance rules *"should be the issue of adherence not for people to feel oppressed and punished"*. The public administrator's reasons for defending non-monetary incentives is the understanding that there are certain things done by people as the last option for a living, but these things exacerbate climate change. *"For such, they should be alternatives that are accessible to the community before they are forbidden. For example, the issue of using trees for cooking. If there is no other form of energy that a person can use"*, then forbidding the cutting of trees will be destroying a community's means of survival. One participant proposed that *"for every tree cut, one can be required to plant two. The people will still use firewood and reforest"*. Bans can be used on certain things when sure that it will heavily snow to stop people from travelling to the mountains.

Lastly, in this section, Question 4, (Attachment 45 – 48, semi-structured interview) and Question 3 (Attachment 49) of a semi-structured interview asked about the public administrators' view on using participatory techniques such as briefs, consensus building, interviews, facilitation, focus group discussions, media, polls, public hearing and surveys to ensure communities are involved in climate change decisions and their implementation. Of all these participatory techniques, briefs, consensus building, interviews, facilitation, focus group discussions, media, polls, public hearing and surveys, the public administrators continuously mentioned public gatherings as a viable participatory technique. For some public administrators, complements could be done using all these other participatory techniques, but public gatherings remained a possible way. In the case of the 2017 NCCP, workshops, questionnaire and interviews were used.

5.6 POLITICIANS' PERSPECTIVE ON COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION

The responses given in this section are politicians' perspective recorded in semi-structured interviews (Attachment 40 for the Manonyane councillors) with 32 questions and Attachment 44 for the Parliament and Natural Resources, Tourism and Land Portfolio Committee with 26 questions. Further, the responses discussed are also from the politicians' focus group (Attachment 39 for the Manonyane councillors). The responses to Section F (Questions 1 to 6 Attachments 40 and 44) and questions 1-3 (Attachment 39) are presented in Chapter 6. The sections in these interview schedules are as follows:

Section A: determining the nature of community participation in climate change policy formulation and implementation

Section B: how community awareness regarding climate change and climate change policy influence their participation in policy formulation and implementation

Section C: how community understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation

Section D: how the use of indigenous knowledge systems in climate change policy formulation and implementation facilitate community participation in climate governance

Section E: exploring how policy nudging could be used to enhance community participation in climate change policy formulation, implementation and governance.

5.6.1 Determining the nature of community participation in climate change policy formulation and implementation

Responses from participants for the first question to the politicians was asked during semi-structured interviews and a focus group discussion. The first question (Question 1, Section A, Attachment 40 of the councillors' semi-structured interview asked politicians how the Manonyane communities participated in government programmes aiming to define climate change problems using consensus building, facilitation, focus group discussions, interviews, participatory technology, public hearings, PRA techniques and workshops. The other question (Section A, Attachment 44) of a semi-structured interview questioned the Parliament and Natural Resources, Tourism and Land Portfolio Committee member about the role of politicians in ensuring community participation in the NCCP formulation and implementation during agenda setting, policy formulation, policy Adoption, policy Implementation and policy evaluation. Further, Question 1 (Section A, Attachment 39) for the Manonyane councillors' focus group discussion asked how communities participated in NCCP formulation and implementation during the agenda setting, policy formulation, policy adoption, policy implementation and policy evaluation stage.

In responding to Question 1 of the councillors' semi-structured interview, they said that there was no community participation in climate change policy formulation and implementation during agenda setting. No government official "visited" the MCC to involve community members in climate change policies. Regarding the participatory techniques asked, one participant expressed disapproval of public gatherings, consensus building, facilitation, focus group discussions, interviews, public hearings, PRA techniques and workshops, arguing that the community members would not come "*unless food was to be given to attendees*". For this participant, the use of "*participatory technology*" could work. To a greater extent, the politicians concurred that community members were likely to be motivated to participate in climate change policy agenda if given food as benefit of participation. Concerning the workshops, the councillors suggested that workshops could work if organised for leaders to share with community members. In addition, one politician narrated how the government gave donations to communities through the Disaster Management Authority. One interviewee said that the MCC communities were "*given maize meals, beans, peas and cooking oil*" in cases of disasters. Conversely, one councillor was silent about how communities define their climate change

problems during agenda setting. Instead, the participant narrated *"the problems of climate change such as unemployment, hail and too much wind which blew community houses away"*.

With reference to Question 1 (Attachment 44), the Committee member acknowledged that honorable members of parliament through the Parliament and Natural Resources, Tourism and Land Portfolio Committee *"have time to interact with the communities"*. However, this was done *"when there are bills which require public participation"*. The norm is that communities are *"invited to come to Parliament or the Committee goes to the villages"*. It was established that, usually, community participation was done within *"specific time frames"*. In this response, it was highlighted that the Parliament and Natural Resources, Tourism and Land Portfolio Committee had not yet established structures to be in constant touch with the Ministry of Energy and Meteorology. For example, the Committee member said that there was no *"legal framework which will deal with the climate change issues."* The Parliament and Natural Resources, Tourism and Land Portfolio Committee *"refers to protocols, treaties and other agreements which have been signed by the country from the international meetings"*. The researcher perceived that there was no clear agreed working plan to bring the committee and the Ministry of Energy and Meteorology into a working relationship on how to involve communities in participation. The committee member said that they *"used to visit the communities on different agendas"* and included the issue of climate change although they would have visited the communities on different agendas. For example, the committee monitors the Water and Sanitation Policy to ensure the *"Ministry of Water complies with the policy."* In the committee member's accounts of how the Parliament and Natural Resources, Tourism and Land Portfolio Committee works, it *"allows the community to express their views"* on such matters whenever needed. The Parliament and Natural Resources, Tourism and Land Portfolio Committee *"invites relevant ministries to come before the committee to explain the policies they would like to implement"*. Regarding ensuring community participation during each policy stage, it was established that the committee had no clear structures in place to ensure that communities participate. The policy adoption stage was singled out by the committee member as the stage *"where the committee goes back to communities to inform them about amendments,"* if any, relating to a tabled bill or policy before it.

The views of the councillors during a focus group discussion, Attachment 39, Question 1, highlighted that *"they know nothing about climate change"*. *"No meetings have been held since they were elected as councillors"* in 2017. The councillors also said that no *"public gatherings"* were held for the Manonyane community members. The councillors confirmed that it was their first time *"to hear about climate change"* on the day when the focus group discussion was held. On the very same day of the focus group discussion, the government officials spoke to the MCC councillors about climate change issues. The participants said that *"the researcher was the second person talking about climate"* on the day when the focus group discussion was held. In other words, the Manonyane councillors confirmed during the focus group discussion that there was no community participation during climate change policy formulation and implementation facilitated by the government in any of the policy stages.

A semi-structured interview Question 2 (Section A, Attachment 40 for councillors was posed to find out the participatory techniques used by the Manonyane communities to articulate their preferred courses of alternatives regarding climate change

adaptation measures. The participatory techniques were consensus building, facilitation, focus group discussions, PRA techniques, public hearings and workshops during policy formulation. Because of the response to Question 1, Section A Attachment 40, it was established that no one had ever engaged the MCC to articulate their preferred courses of alternatives on climate change adaptation measures. Concerns regarding the effects of climate change were more widespread in the councillors' responses. There was a sense of being neglected amongst the councillors citing that some houses were blown away by strong wind. Some councillors felt that no one assisted the MCC to solve climate change related impacts. Whilst the majority of councillors agreed that no facilitation was happening in the MCC, one councillor said that a workshop was held at the Manonyane Community Council for councillors. Moreover, this councillor claimed that the Government officials visited the Manonyane communities to conduct interviews. In addition, this councillor said that there are committees in the villages working with people. Upon further interviewing for clarification, the councillor later said that there was no community participation through consensus building, facilitation, focus group discussion, PRA techniques, public hearings and workshops. Concurring with other councillors, this councillor agreed that climate change issues were only discussed amongst the Manonyane community members.

Attachment 44 (semi-structured interview) asked politicians the following question, "How does the committee ensure communities have influence and capacity (resources) when participating during the NCCP formulation and implementation in relation to the concepts of community participation which are collaboration, co-production, cross-sector collaboration, deliberation, democratisation and others? Unfortunately, it was noted that there was nothing tangible which the participants could point out. Nevertheless, communities were said to be welcoming to engagement opportunities whenever available. In fact, communities "*do wait for*" government officials to come.

Regarding policy adoption, Question 3, (Section A, Attachment 40) asked the Manonyane councillors how the communities participate to choose alternative courses of action regarding climate change decisions, using briefs, community presentations, consensus building, focus group discussions, interviews, media, PRA techniques, participatory technology, public meetings and public hearings as participatory techniques. The politicians corroborated that no community participation was taking place in the MCC. Therefore, the participatory techniques asked in this question were not used by the community members.

Regarding policy implementation, politicians were asked (Question 4, Section A, Attachment 40) to elaborate on how communities participate in the implementation of policy programmes using briefs, facilitation, media, participatory technology, PRA techniques and workshops as participatory techniques. In this semi-structured interview, the participants indicated that no community participation was taking place in the MCC. Thus, the participatory techniques asked in this question were not used.

The focus group discussion Question 2, (Section A, Attachment 39) asked councillors about the participatory techniques used by the Manonyane communities to articulate their preferred courses of alternatives during climate change policy

implementation. These participatory techniques included beneficiary assessment, briefs, community presentations, consensus building, facilitation, focus group discussions, interviews, media, participatory technology, PRA techniques, public meetings, public hearings, surveys and workshops. The Manonyane councillors reported that none of the participatory techniques mentioned in Question 2 of the focus group discussion were used. The councillors professed that it had not happened. As one councillor put it, if it happened, they would have known because they are “*community representatives*”. It would have been their duty to “*pass on the information to people they represent in their communities*”. Other similar responses to this question include, “*No one assisted communities*” or “*the politicians on climate change issues*”. Rather, all the councillors agreed that the MCC community members only got “*information on what was being said on radios and in newspapers*” where they were told about climate change. For instance, the councillors agreed with the statement that “*community members only heard that they were being told about climate change without understanding the importance of education about climate change. Communities believe that it had nothing to do with them. Resultantly, people end up polluting the air due to lack of knowledge. Hence, the MCC community members did not know that they were involved in sessions concerning climate change through radios and newspapers.*”

Question 6 (Section A, Attachment 40) of the semi-structured interview asked the Manonyane councillors how they worked with actors such as chiefs, experts, politicians and public administrators to ensure communities are part of the climate change policy processes. Because the participants had pointed out that no community participation was taking place, the councillors were asked about how they could work with chiefs, experts, politicians, public administrators and others. The Manonyane councillors as a whole agreed that the chiefs had an important role to play for one to access the community. This view was echoed by the councillors when they said that plans from the MCC for the Manonyane communities were implemented through the chief. Thus, all the Manonyane councillors emphasised that public gatherings were called together with the chief whenever needed. As a suggestion, one councillor proposed that chiefs and councillors should attend workshops to share the information with community members. On working with experts, the councillors unanimously approved their working relationship with experts based on the perception that “*experts do their work compared to public administrators and politicians*” whom they did not trust. Despite being elected officials, the councillors exonerated themselves claiming that they had never seen elected political bearers visiting the Manonyane communities. Other responses to support this claim included all the councillors acknowledging that the researcher was the first person to visit the Manonyane community to hear the community members' views on climate change issues.

The focus group Question 3 in Section A, (Attachment 39) required councillors to give information on how politicians ensured the Manonyane communities were part of the climate change policy processes when working with chiefs, experts, politicians and public administrators. In responding to the question, the councillors emphasised that no one “taught” them about this issue of climate change. A recurrent theme amongst the councillors in this focus group discussion was that “*no people were taught about climate change*”. Instead, the councillors indicated that they would appreciate if the strategies to engage the Manonyane communities were clear to ensure “*community knowledge of climate change*”. Therefore, because no one was reaching out to

communities, it was told that communities adapted to climate change using the indigenous knowledge systems. *"Things are still done in a normal way, the way they used to do them."*

In Section A, Attachments 40 and 44 (semi-structured interviews) and Attachment 39 (focus group discussion), Questions 7, 4 and 4, respectively, asked the same question. The politicians were required to elaborate on any challenges they faced when co-ordinating community participation in climate change policy processes. Some politicians were reluctant to discuss the challenges claiming that there was a lack of community participation in climate change policy formulation and implementation. Instead, one councillor said that the Manonyane community members were hungry. Despite planting in the fields, the councillors agreed that there was no anticipation of having a bumper harvest because of the hail. The councillors who were part of the focus group discussion suggested that clear strategies should be put in place to ensure community participation in climate change policy formulation and implementation. Despite a lack of community participation in climate change policies, it seemed the councillors did not trust other politicians. Without specifying, one councillor in agreement with other councillors acknowledged that it was challenging to co-ordinate community participation in climate change policy formulation and implementation because some politicians negatively influenced community members. Resultantly, the councillors indicated that community members did not trust politicians because of such influence. The communities that would have been misled would not be interested in participating. It was also indicated that the Parliament and Natural Resources, Land and Portfolio Committee faced financial problems in funding committee members to travel to the communities. Besides that, the committee is guided by the line ministries on when to involve communities depending on the bill tabled before it. The committee then visits the intended beneficiary of the bill. However, the Portfolio Committee member indicated that sometimes community members are invited to Parliament sessions during bill debates, but *"it's a big problem because some are scared to talk"*.

5.6.2 How community awareness regarding climate change and climate change policy influence community participation in policy formulation and implementation

In exploring how community awareness regarding climate change and climate change policy influence community participation in policy formulation and implementation, a number of questions were asked to politicians. Question 1 (Section B, Attachment 40) aimed at understanding the politicians' belief regarding adequate awareness of climate change and its influence in motivating communities to participate in future climate change decision making and implementation. Question 1 in Section B, Attachment 44 asked the Parliament and Natural Resources, Tourism and Land Portfolio Committee member's view of community awareness of climate change. In answering this question, the councillors and Portfolio Committee member agreed that adequate awareness through education could motivate communities to participate in climate change policy formulation and implementation. Contrastingly, the Manonyane councillors said that they only witnessed someone talking about climate change when they saw the focus group discussion conducted by the researcher. Moreover, the councillors pointed out the Manonyane communities' problems caused by climate change such as *"crops washed away resulting in a desert, enlarged dongas because of heavy rains and destroyed bridges."* The councillors indicated that no one was helping the MC to adapt to these climate change problems, yet the Manonyane communities were facing food shortages. Two problems emerged from

the councillors' responses. One councillor, in agreement with other participants, said that the Manonyane communities did not understand the climate change context even when advised to listen to "*the radios and read newspapers to get informed of the weather*". Talking about this issue, the councillors agreed that community members "*do not believe in that*". Nevertheless, contrary to the Manonyane communities' view, one of the councillors believed that community members trusted politicians more than "*government officials*" because politicians were elected. Unfortunately, the Parliament Natural Resources, Tourism and Land Portfolio Committee, which has the opportunity to engage communities, only did so when a bill was tabled before it for amendments. Once the amendments are done, the community participation will be over. Thus, according to the Portfolio Committee member, "*the community members do not understand policies or bills*".

In the same section B, Question 2, Attachment 40 probed the politicians' views on how communities used participatory techniques such as cause and impact diagrams, cultural transects, participatory mapping and vulnerability maps to enhance their awareness of climate change. The same question (Question 2) for Attachment 40 was posed to the Manonyane councillors during the focus group discussion (Attachment 39, Question 1, Section B). All the councillors agreed with the statement, "*that it had not happened*". The government had not done something in that regard according to the councillors' response. Thus, the councillors considered the researcher as the first person to be seen by the participants asking about the community's views on climate change issues. The councillors unanimously agreed that no one had involved the Manonyane communities in participation in climate change policy processes.

The third question of a semi-structured interview (Section B, Attachment 40) and second question, Attachment 39, Section B of a focus group discussion interviewed councillors on how communities get informed of the following climate change causes: air pollution, deforestation, climate variability, industrialisation, poor agricultural practices, ozone depletion, temperature changes, urbanisation, weather changes and wildfires. In responding to this question, the councillors said that the officials (referring to policymakers) "*are silent. Community members know nothing*" about climate change facilitated by the government. Impliedly, the Manonyane communities had not officially heard about the mentioned climate change causes. According to the politicians, Manonyane communities did not know the causes of climate change as outlined in Question 3 of Attachment 39 (focus group discussion for councillors). For example, one councillor said that community members pollute the environment even if the policymakers claim to be holding "sessions on climate change on radios and through reading newspapers".

The second question in Section B, Attachment 44 probed the politician on how they ensured that the ministries accountable to them keep communities informed of the climate causes. The committee member stated that Parliament Natural Resources, Tourism and Land Portfolio Committee did not, in practice, have mechanisms to monitor government ministries and departments on climate change issues. Instead, this committee member highlighted that the committee meets with government ministries and departments at workshops upon invitation. Hence, the committee member said that it was difficult for the committee to work with communities directly "*from time to time*" on bills and policies because of time limits given to amend bills. The committee member confirmed that some "*ministries are working with the communities, but because of not being part*

of the activities, the Parliament and Natural Resources, Tourism and Land Portfolio Committee was not receiving reports of what government ministries and departments deal with in terms of climate change. The committee member said that the committee “only goes to the people when there is an issue set before It”, such as a “bill or a policy”.

Fourth, the semi-structured interview Question 4 (Section B, Attachment 40) and the focus group discussion Question 3 (Section B, Attachment 39), inquired on how the Manonyane communities got informed of the following climate change risks: extreme weather events, floods, food insecurity, insufficient access to drinking water, land degradation, loss of biodiversity, loss of rural livelihoods and reduced agricultural production. Similarly, Question 3, Section B, Attachment 44 asked the committee member how politicians ensure that ministries accountable to the Parliament and Natural Resources, Tourism and Land Portfolio keep communities informed of climate change risks. Some councillors reported that the Manonyane communities heard of climate change risks from the televisions and radios if there was something happening, for instance, drought. The Manonyane councillors had said that they had never seen people “visiting” their communities regarding the climate change issue. Admittedly, the councillors acknowledged that not all information is received through the radio and television. The councillors agreed that, in some cases, the Manonyane communities had to see it for themselves that there was insufficient access to drinking water “*when the water tanks which supply the communities get dry*”, said one councillor. Regarding the Parliament and Natural Resources, Tourism and Land Portfolio Committee, one main issue which emerged from the data was that the committee had not established structures to monitor departments and ministries working with communities.

Fifth, Question 5, Section B, Attachment 40 of the semi-structured interview and Question 4 for the councillors’ focus group discussion (Attachment 39) probed how communities got informed of the following climate change impacts: cyclones, drought, floods, heatwaves, health impacts, significant loss of biodiversity and ecosystems, weather insecurity problems, wildfires and compromised agricultural production on them and the environment. Similarly, Question 4, Section B, Attachment 44 sought to understand how politicians ensure that ministries accountable to the Parliament Natural Resources, Tourism and Land Portfolio Committee keep communities informed of the climate change impacts for them and the environment. The councillors claimed that community members in the MCC did not have knowledge of these climate change impacts because “*no one*” had visited the villages while the Committee member confirmed the councillors’ claim by saying that the Committee did not have mechanisms to follow-up on the activities of other ministries. As the committee member puts it, their mandate was to work on tabled bills or policies.

5.6.3 How community understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation

Councillors were asked during a semi-structured interview about the Manonyane communities’ knowledge on the likelihood and severity of expected climate change impacts (Question 1, Section C, Attachment 40). The councillors’ response was consistent with what they had said earlier on community understanding and participation in climate change policy processes. In the councillors’ response, some Manonyane communities did not understand climate change for various reasons. However,

the councillors' response support the Manonyane communities' views in Section 5.3.4 on indigenous knowledge systems which said that community members noticed a change in the seasons of the year. Consequently, the councillors concurred that it was difficult to plough because of the way the seasons had changed. Because of this observation, the councillors' response highlighted that the communities' understanding attributed failure to plough to heavy rains.

The semi-structured interview on Question 2, (Section C, Attachment 40) and focus group discussion Question 1 (Section A, Attachment 39), wanted councillors to give their view of what they thought was the community's understanding of the causes of climate change. Generally, the councillors' responses agreed that communities did not understand the causes of climate change. The community's understanding was described in relation to indigenous knowledge systems. In comparison, the participants for semi-structured interviews did not give details on this question because they linked the responses to indigenous knowledge systems. Likewise, participants for the focus group discussion also reported that things were done "*in a normal way*" (referring to indigenous knowledge systems) by community members. It appeared that some councillors understood that burning grass pollutes the air. In the Manonyane communities, community members are told "*not to burn the grass*", but they "*would still do*". "*It was very difficult to stop*", remarked one councillor. Another problem mentioned in the councillors' responses was that the community members burnt grass at the beginning of the year, believing the green grass would grow. The councillors confirmed that such actions by the Manonyane communities had led to "*the grass being depleted*". Ultimately, the "*land will end up being a desert with no grass*", said the concerned councillors. Some councillors regarded climate change as religious, suggesting that climate change was revealed in the Holy Bible that there would be pandemics. Therefore, councillors who shared this view said communities expected all these things to occur.

In Question 3, Section C, Attachment 40 of a semi-structured and Question 2, (Section C Attachment 39) of a focus group discussion interview schedule, councillors were requested to give their view on how communities they work with get informed of climate change decision-making processes. All councillors confirmed that no government official engaged the Manonyane communities regarding climate change. The councillors reported that community members did not understand "*bills and policies*". "*No action was taken to teach people*".

The fourth semi-structured interview question (Question 4, Section C, Attachment 40) and Question 3, Attachment 39 of a focus group discussion interview schedule explored the councillors' opinion regarding community's understanding of climate change risks for themselves and their environment. The councillors only accentuated that communities did not understand climate change. No details were provided by politicians who participated in semi-structured interviews because this question was linked to indigenous knowledge systems in Question 4, Section B, Attachment 40. The issue of lacking education was referred to in many responses by the politicians who participated in the focus group discussion. Councillors agreed that they did not understand what was required of them and alluded that both politicians and community members were not taught about climate change. Some community members "*did not understand the need to plant trees after cutting down the trees for firewood*".

A semi-structured interview on Question 4 (Section C, Attachment 40) and a focus group discussion on Question 4 (Section C, Attachment 39) explored the participatory techniques such as cause and impact diagrams, consensus building, facilitation, participatory technology, PRA techniques, public meetings, public hearings, resources mapping and transects used by communities to participate to enhance their understanding of climate change. In the councillors' response, the communities had used none of these participatory techniques because there was no community participation in climate change policy formulation and implementation (see the response to Question 1, Section 5.6.1).

Another semi-structured interview Question 1 (Section C, Attachment 44) investigated how politicians used the concepts such as community awareness of climate change, community understanding of climate change, community understanding of environmental issues and public understanding of environmental issues in relation to the committee's mandate. The concepts were not used, according to the interviewed committee member. Parliament Natural Resources, Tourism and Land Portfolio Committee involved the communities when a bill or policy was tabled before it.

Lastly, in Section C, (Attachment 44) Question 2 of the semi-structured interview probed the committee members' view on the oversight role of the Parliament and Natural Resources, Tourism and Land Portfolio Committee in ensuring the ministries accountable to it facilitate community understanding of climate change causes, impacts, decision-making processes, and risks for themselves and their environment. The responses given to Question 1 and Question 2 of Section B, Attachment 44 was repeated for this question emphasising that the committee did not monitor other government departments and ministries working with communities on climate change issues.

5.6.4 How the use of indigenous knowledge systems in climate change policy formulation and implementation facilitates community participation in climate governance

Attachment 40 (semi-structured interview) and Attachment 39 (focus group discussion), Question 1 probed how communities consider cultural values, family, historical information, natural resources (e.g. traditional land, flora, fauna) and wealth as climate change values (community principles) to adapt to climate change. Simultaneously, Question 1, Attachment 44, sought the politicians' view on including the community values in the NCCP and its implementation. The politicians bemoaned some community members' lack of adherence to indigenous knowledge systems. It was established that community members are discouraged from putting clothes on the washing line during the day because it causes hail storms. Further, the participants agreed that the deceased's clothes should not be put on the washing line all day to avoid hailstorms. In addition, participants concurred that if a breastfeeding mother goes outside before three months, it would cause a hailstorm. It was reported that breastfeeding mothers "*walk as they please*" without adhering to the indigenous knowledge system practices ("*wearing a hat or putting a cloth on the shoulders*" when going outside). Instead of wearing the mourning clothes for 12 months, women were removing them "*before the fourth month*" and this was believed to cause hailstorm. Another politician did not believe in cultural beliefs about breastfeeding women, sprinkling medicine to stop hail and avoiding putting clothes on the washing line during the day. Contrary to the participant's beliefs, the community in which the participant lives follow the practices. In responding to

the idea of including cultural values in the NCCP, one politician disproved cultural values arguing that the cultural beliefs are “a big problem” because they are unreliable. The politician challenged the beliefs such as believing that washing during the day caused thunderstorms suggesting that the community members should forget about such “mentalities”.

Attachment 40 (councillors) (semi-structured interview) and 39 (focus group), Question 2 questioned how communities use impact diagrams, historical calendars and seasonal calendars to enable consideration of community values into climate change adaptation programmes organised by the government. Related, a semi-structured interview Question 2 on Attachment 44 interrogated if politicians recommended historical calendars, impact diagrams and seasonal calendars to enable consideration of community values in their current climate change decision-making process and implementation. It was noted that participatory techniques such as historical calendars, impact diagrams and seasonal calendars had not been used because there was a lack of community participation in the villages. These participatory techniques require assistance from skilled facilitators. Admittedly, the politicians confirmed that no facilitator had engaged the communities on climate change policies using “a clear programme”. Nonetheless, the participant acknowledged that a means to enhance community participation in climate change policy formulation and implementation is needed.

Again on Section D, Question 3 for Attachments 40 (semi-structured interview) and 39 (focus group), probed how communities used community norms such as cattle grazing, cutting trees for firewood and building houses, collecting grass for thatching houses, history about agricultural practices and wildfires to adapt to climate change in their current climate change adaptation responses. Concurrently, Attachment 44, Question 3 (semi-structured interview) inquired how the current climate change decision-making processes promote the use of community norms such as cattle grazing, collecting grass for thatching houses, cutting trees for firewood and building houses, history of agricultural practices and wildfires to promote bottom-up mitigation and adaptation responses. In responding to Question 3 of Section D, one politician noted that their village did not make restrictions on grazing lands. *“This is because when the chief had made restrictions on the grazing lands, some community members graze their animals on restricted grazing lands”*. Chiefs call for a public gathering to inform people of the restricted area. Despite the announcement, some community members *“graze their animals on restricted grazing land without the knowledge of the chief”*. In another community, it was established that there were no laws to guide the cutting down of trees for firewood and building houses and collecting grass for thatching houses. Planting trees happened in the past years when community members were told to plant a new tree after cutting one. However, *“it was no longer happening”*. *“In previous years, the tree planting day was marked and turned into a holiday which the participants knew very well as learners. Currently, the norm no longer exists and some participants believed that it had caused their environment not to have trees. Trees are depleted”*. The *“forests longer exist”*.

Conversely, individuals were not allowed to burn grass especially in the cemeteries. One councillor explained that the councillor and chief put restrictions on grazing lands. Animals are *“restricted to a certain place for two or three months, January and February up to the third or fourth month, depending on the availability of grass. Grass does not grow big because of cold*

weather. In April or May, animals go to the mountains where there is a lot of grass. Such places are called remote grazing areas.” On cutting down trees for firewood for the initiation school, for example, it was indicated that new trees were provided by the MAFS to plant. Noteworthy is that *“no one knows what happens at the initiation school”*. In the practice of collecting grass for thatching houses, *“community members are allocated a place to cut after which you move to another place, just like the rotational grazing for cattle”*. This participant indicated that sorghum is no longer growing well, but it was also reported that beans, potatoes, vegetables, beetroot, carrots and onion are growing well, just like in the old days.

A semi-structured interview Question 4 of Attachment 40 and a focus group discussion Question 4 for Attachment 39 sought to understand how communities use the following participatory techniques: seasonal calendars, timeline and trend analysis, to document norms that relate to climate change. In contrast, Attachment 44, semi-structured interview Question 4 questioned politicians if they recommended participatory techniques such as seasonal calendars, timeline and trend analysis to ensure community norms are documented for use when making climate change decisions and during the implementation of those decisions. Participants had already indicated in Section B, Questions 2 and 4 that no one was seen in the village facilitating community participation in climate change. The participatory techniques listed for these questions required facilitation. Therefore, the politicians contended that no clear programme was available for use to engage communities on indigenous knowledge systems.

A similar question in Attachment 40 for councillors’ semi-structured interview and Attachment 39 (focus group discussion), scouted the councillors’ view on using community indigenous knowledge (traditional knowledge) including behaviour of animals, birds attributed to climate change, observing climate variability, studying the environment, studying weather, type of clouds, vegetation and wind direction in their current climate change adaptation strategies (Question 5). Comparable, Attachment 44, Question 5 (semi-structured interview) was poised on how politicians promote using indigenous knowledge in the current NCCP and its implementation to form part of climate change projections. The politicians said that if they *“hear frogs quacking in different ways, that predicts heavy rainfall”*. *“When the calf plays around, it also predicts rainfall”*. There are birds which are referred to as (mmamaholosiane) cattle egret or *Bubulcus ibis*, which are *“blackish in colour, that fly in a group and are small in stature”*. They too, if seen, predict rainfall. The birds such as *“mankabelane (common house martin – Delichon urbicum), mamasianoke, and lengangane “*(hadada ibis – *Bostrychia hagedash*) and insects such as *“likholoboleko”* or *kokobebe* (termites – *Odontotermes badius*) predicted rain. *“mankabelane”* (common house martin – *Delichon urbicum*) should fly in groups in a certain way to predict rain. *“Lengangane”* (hadada ibis – *Bostrychia hagedash*) was known for singing to predict rain. The *“likholoboleko”* (termites – *Odontotermes badius*) insect is known for tossing the waste around as a way of showing the coming of the rain. Although not related to climate change, it was reported that *“when an owl sings during the night, it means “someone passed away in the village”*. It was also told that there is a special type of clouds from the East side of the MCC which *“bring rainfall with lightning and hail”*. This behaviour of animals and birds, which was associated with the rainfall, was observed by communities on their own over the years. Nonetheless, one councillor acknowledged that the Disaster

Management Authority provided information and issues warnings regarding climate change hazards; for example, *“they issue warnings about snow in the mountains, in Mokhotlong and Thaba-Tseka, if roads would be impassable because of snow”*.

Regarding wind direction, the councillors stated that the wind from the South of Manonyane was destructive. At the time of the interview, it was reported that *“some families had no shelter”* because of the wind which comes from the South of Manonyane. It blew away the houses leaving some families homeless. Concerning the use of vegetation, one participant pointed out that *“there was nothing”*. Implying that the vegetation was depleted. Plants like *“hloenya (fever bush/Stomach bush – Dicoma anomala) “(It looks like it has thorns)”, mohlomo, and qoqa, a thatching grass and African potato (Hypoxis hemerocallidea) are no longer available”*. In fact, the vegetation has been depleted because of climate change. Currently, some politicians reported that if the gumtree blooms at a certain time of the year, it predicts good rainfall. Failure to be green is a sign of less rainfall. Likewise, Attachment 44, Question 5 (semi-structured interview) probed how politicians promote using indigenous knowledge in the current NCCP and its implementation to form part of climate change projections. The Natural Resources, Land and Portfolio Committee did not have a provision to promote indigenous knowledge in the NCCP and its implementation to form part of climate change projections, according to the interviewed committee member. To this participant, the committee engages the community when a bill or policy is tabled before it.

Further, in the same Section D of Attachment 40 (semi-structured interview) and 39 (focus group discussion), Question 6 asked politicians on how communities make climate change projections regarding appropriate crop mix, appropriate farming methods and forecast expected rainfall. Having asked that, Attachment 44 of the semi-structured interview Question 6 explored what politicians did to ensure that community indigenous knowledge was part of the NCCP and its implementation. The councillor had indicated that there was no community participation taking place in the Manonyane communities. Therefore, this question was not answered. Instead, the councillor narrated the impacts of climate change on agriculture. *“The seeds are expensive to buy, but do not grow as expected. This has been happening for the past five years or two years since the beginning of Covid-19 in 2020. This is causing drought and food shortages because not everyone can afford to buy maize meal”*. Regarding the response of the committee member to Question 6, it was responded that *“nothing was done”* by the Parliament Natural Resources, Tourism, Land and Portfolio Committee to ensure community indigenous knowledge is part of the NCCP and its implementation.

Councillors were interviewed on how their communities used focus group discussions, impact diagrams and mapping to ensure indigenous knowledge was part of climate change adaptation strategies (Attachment 40 (semi-structured interview) and 39 (focus group discussion), Question 7). The politicians agreed that communities had not used focus groups, impact diagrams and mapping. There was no *“clear programme”* to reach out to communities to talk about indigenous knowledge systems.

Simultaneously, Question 8 on Attachment 40 (semi-structured interview) and 39 (focus group discussion) for councillors, intended to find out the politicians' view on communities' beliefs about using the culture, for example, art, collective community

achievements, identity, physical things meanings, rituals and stories (set customs and beliefs) to adapt to climate change. Contrarily, Attachment 44, Question 7 (semi-structured interview)) probed how politicians promote the use of culture, for example, art, collective community achievements, identity, physical things given meanings, rituals and stories in the current national climate change decision-making process and implementation programmes. One councillor noted that no celebrations are held to pay a traditional doctor to stop hail. Undeniably, this councillor acknowledged that ceremonies used to be held, but not anymore. Community members *“used to pay a traditional doctor to stop hail, but it is no longer happening in some Manonyane communities. In the old days, the aged took mud, poured it in a pot, and cooked it on the fire”*. This was done to bring rain. In one councillor’s narration, the soil would boil until the ceremony ended before it rained. *“After completing the ceremony, the pot was taken off from the fire. The rain was only expected to fall after the pot was out of the fire. It would rain afterwards, but the ceremony would have been completed.”* Other things such as art, collective community achievements, identity and physical things given meanings, were not used to adapt to climate change in the MCC and the national climate change decision making processes. No information was gathered in this regard. Thus, no community achievements, art or physical things given meaning were recorded. The politicians mainly talked about rituals and stories.

The politicians said that there was no community participation in climate change policy formulation and implementation. The participants agreed that no such participatory techniques were used to assist communities to talk about community culture relating to climate change. This was in response to Question 9, (Attachment 40) (semi-structured interview) which asked, “Which of the following participatory techniques are used by your communities to talk about community culture, which assists in climate change adaptation: consensus building, interviews, presentation to communities, public hearings, public meetings and PRA techniques? Likewise, Attachment 44, Question 8 aimed to find out if participatory techniques were used to incorporate community culture into the NCCP formulation and implementation. The politician admitted that government departments and ministries were *“operating in silos”*. The response implied that many government departments and ministries were working on climate change issues while engaging communities. Nonetheless, it was told that *“some are operating there, others are operating there”*. Thus, It was suggested that various government ministries and departments should *“sit together”* to agree on how to approach communities. Government ministries and departments claimed to work with the communities. Ultimately, the communities said to be involved may not understand how they were participating in climate change issues such that if asked, the community would be ignorant about the people who engaged them. Therefore, the participant suggested that relevant actors should *“break the barriers to allow government departments and ministries to work together”*.

How do your communities use institutions, new legislation and regulations to inform government officials about community indigenous knowledge systems (values, culture, norms and indigenous knowledge)? The question was asked in Section D, Attachment 40 (semi-structured interview), Question 10 and Attachment 39 (focus group discussion), Question 9. Alternatively, Question 9, Attachment 44, inquired from politicians about how they promote the incorporation of indigenous knowledge systems (values, culture, norms and indigenous knowledge) into the NCCP using institutions, new legislation and regulations. There were no well-known institutions, new legislation and regulation through which the Manonyane communities could use to

inform government officials about indigenous knowledge systems. No “*clear programme*” was available to promote the incorporation of community indigenous knowledge systems in the NCCP.

Attachment 40 and 44 (semi-structured interviews) and 39 (focus group discussion) Questions 11, 10 and 10, respectively, asked politicians on how communities contribute to climate change adaptation programmes facilitated by government officials in the co-production phases – co-planning, co-designing, co-implementing and co-evaluating. The politicians attested that there was no co-planning, co-designing, co-implementing and co-evaluating climate change programmes with the Manonyane communities. One of the reasons for lacking this co-production was that climate change was new to Lesotho. The government ministries and departments worked on specific programmes. The climate change implementation strategy was in the process of being drafted. However, the politicians agreed that communities were ready for co-governance, suggesting that the communities needed facilitation.

Of the following participatory techniques: beneficiary assessment, briefings, community presentations, consensus building, facilitation, focus group discussions, interviews, media, participatory technology, polls, PRA techniques, public hearings, public meetings, surveys and workshops, which ones are used by your communities to co-produce climate change adaptation strategies with government officials? The politicians responded that none of the asked participatory techniques had been used to co-produce climate change adaptation strategies (Attachment 40 – semi-structured interview Question 12). Further, Question 11 asked (Attachment 44) about the recommended participatory techniques by politicians to encourage community co-governance in the NCCP formulation and implementation. Regarding the Parliament Natural Resources, Tourism, Land and Portfolio Committee, there was no use of co-planning, co-designing, co-implementing and co-evaluating because the Committee engaged communities when a specific bill or policy was tabled before it.

Lastly, for Section D, politicians responded to the question, “Are you aware of any challenges your communities face when using indigenous knowledge systems as a way of adapting to climate change?” Some of the politicians testified that indigenous knowledge systems were “very helpful” in adapting to climate change, implying that there were no challenges in using them (Attachment 40, semi-structured interview Question 13). Correspondingly, Attachment 44, Question 12 requested politicians to elaborate on any challenges they face when using indigenous knowledge systems in the NCCP formulation and implementation. On the contrary, one participant highlighted that indigenous knowledge systems might cause problems if community members fail to adjust to climate change. Giving an example, the herd boys used to go to the remote grazing areas in December. It is difficult to stop them from going because it has been a tradition. This politician further explained the danger posed by climate change on remote grazing. Unlike before, it is snowing in December because of climate change. Snowfalls posed a danger to the herd boys and animals because they would become inaccessible. “*This exposes them to harsh cold weather and a lack of food*”, said one politician.

5.6.5 Exploring the views of politicians on how policy nudging could be used to enhance community participation in climate change policy formulation, implementation and governance

Attachment 40 and Attachment 44 (semi-structured interviews) and Attachment 39 (focus group discussion) in Section E asked politicians similar questions which were Question 1, 3 and 1, respectively. What is your view on using nudges such as education, feedback, incentives, information and persuasion to encourage communities to participate in climate change decisions and implementation? On education, the politicians emphasised the need to workshop councillors and chiefs to share the information with the community members. According to the councillors, various experts can be invited to talk on different topics, for example, “*water and trees*”. Incentives topped the list, with participants saying that community members will be happy to get food items such as “*apples, maize meal and bread flour*”. In this regard, the councillors agreed that community members would be glad to attend if information on the public gathering is shared early enough. According to politicians, “*no one will be left behind*” to attend the public gathering. Nevertheless, some politicians challenged the idea of incentives arguing that it would not help “*to get incentives for people to participate in climate change policy formulation and implementation*” because “*it is an individual’s responsibility. Climate change affects everyone, whether given a gift or not. What can motivate people is how education is provided to people. Good education is critical to have an understanding of climate change issues*”,

How does your committee use policy nudging during the NCCP formulation and implementation? This was Question 1 for Attachment 44 (semi-structured interview) in Section E. Question 1 was said to be beyond the Parliament National Resources, Tourism, Land and Portfolio Committee’s mandate by the interviewed politician. The participant further acknowledged that the question was asked with the expectation that the committee should be using policy nudging. The politician said that working with communities was not easy despite their willingness to ensure community participation in their activities. It is only possible for the committee to work with communities when there is a “*specific bill, policy, or gazette tabled before it*”. The committee also played an oversight role on ministerial projects. The committee checks the progress of the projects initiated by the relevant ministry. Under such circumstances, the committee does not engage communities because a specific ministry would drive the project.

What is your view on using regulations such as bans, compliance rules and restrictions to ensure communities are involved in climate change decisions and their implementation? (Attachment 44, Section E, Question 3). One participant disagreed with the issue of bans, compliance rules and restrictions. Participants suggested that “*anything of that nature should be communicated to community members before implementation*” because community members will not agree to such. In summation, the politicians liked the idea of education, feedback, incentives, information and persuasion compared to bans, compliance rules and restrictions. “*There is something called Community Owned Vulnerability Assessment and Capacity Assessment (COVAC). If the proposal in that document can be taken into consideration, I will fully support that community should be given incentives. They can be met halfway if vulnerable. There should be strategies or provision of education to make people aware of climate change so that communities can own climate change programmes.*”

Section E's last question sought the politicians' view on using briefs, consensus building, facilitation, focus group discussions, interviews, media, polls, public hearing, surveys and workshops participatory techniques to ensure communities are involved in climate change decisions and their implementation (Attachment 39 and 44 (semi-structured interviews), Questions 2 and 4 respectively). Mainly, the politicians were in favour of workshops and public gatherings for chiefs and councillors. As long as the facilitators would be able to talk to people face-to-face through public gatherings, the councillors considered that as one of the best method to reach out to community members.

5.7 EXPERTS' PERSPECTIVE ON COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION

The responses given in this section are experts' perspective recorded in the 38 questions asked during the semi-structured interviews (refer to Attachments 50 (NUL Geography and Environmental Science Department), 51 (NUL Political and Administrative Studies Department), 52 (UNDP Climate Change Unit), and 44 (NCCC). The responses to Section F (Questions 1 to 6) for these attachments are presented in Chapter 6. The sections in the interview schedules are as follows:

Section A: determining the nature of community participation in climate change policy formulation and implementation

Section B: how community awareness regarding climate change and climate change policy influence their participation in policy formulation and implementation

Section C: how community understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation

Section D: how the use of indigenous knowledge systems in climate change policy formulation and implementation facilitate community participation in climate governance

Section E: exploring how policy nudging could be used to enhance community participation in climate change policy formulation, implementation and governance.

5.7.1 Determining the nature of community participation in climate change policy formulation and implementation

Undisputable in the experts' view to Question 1 was that "*communities should be in a position to come up with solutions*" during the climate change policy stages (agenda setting, policy formulation, policy adoption, policy implementation and policy evaluation). They argued that the community's views should be heard. This was the experts' response to the first question in Section A which asked, "How do you think communities should participate in climate change policy processes during each of the policy stages?" (Attachments 50 and 51, Question 1). The experts recommended that the government should "*have the means to get down to the communities to find out what can be done and what the communities think can be done*" for every policy stage. Experts claimed that communities "*are not clear on climate change*", but they are aware of climate change happening around them. Farmers, for instance, were noted by experts as a group of people who were aware of climate change

because of its effects on agriculture. Thus, the experts' example emphasised why community members should come up with solutions for every policy stage.

Comparably, Question 1, Attachment 52 asked, "How does the unit facilitate community participation in climate change decision making and implementation during agenda setting, policy formulation, policy adoption, policy implementation and policy evaluation championed by the Lesotho government?" It was reported that the UNDP Climate Change unit mainly involved communities directly in its climate change projects *"through policy implementation"*, but supported government ministries with resources to engage communities at every policy stage, for example, the support given to the Ministry of Energy and Meteorology during NCCP formulation. During the NCCP formulation, the UNDP climate change unit partnered with *"relevant government ministries on specific climate change projects"* whenever needed. The government ministry or department partnering with the UNDP Climate Change unit facilitated the project. Whenever needed to work on a specific project, the unit accessed the communities through the facilitating ministry. Under such circumstances, through the government ministry as the facilitator, the unit directly worked with the communities to identify the *"challenges they are facing to find out the appropriate solutions to address such problems"*. Afterwards, the unit sourced funding for the project. Throughout the implementation of the targeted project, *"the local councils nominated the council secretaries to represent them in the project board"*. On the other hand, the UNDP through its unit gave *"small grants trans-programme funded through the global environmental facility for two years"*. In providing small grants, the unit *"worked directly with communities"* through the *"national steering committee, comprised of a number of institutions (government and non-government organisations) to provide technical leadership"*. Ultimately, decisions made by the national steering committee are done through the targeted community's committee. Of note, the small grants were given to communities which were *"already doing something, for example, land rehabilitation or income generating activities which are nature--based"*. Such community members were eligible to apply for additional funding from the UNDP Climate Change unit small grants trans-programme. Whatever the beneficiaries of these small grants *"did with their money was their decision"*.

In the semi-structured interview schedule Attachment 44, Question 1 sought, "What is the committee's role in ensuring community participation in the NCCP formulation and implementation during the agenda setting, policy formulation, policy adoption, policy implementation and policy evaluation stage? In responding to this question, it was noted that communities had not participated in climate change policy processes at any stage for various reasons. The NCCC *"only visited the communities during policy formulation; that was the time they went to communities. Afterwards, when the policy was in place, it was a matter of outreach for people to understand about the policy"*. Currently, the policy has a Sesotho version, said the NCCC committee member. The NCCC committee member said that the committee's role was to ensure that the *"community understands the purpose of the policy that is being developed and the purpose of what is being done"*. In addition, the NCCC was required to reach out to communities to make communities *"understand climate change?"* In the case of the NCCP, the NCCC aimed to motivate communities to participate with understanding. In support of this claim, the participant said, *"if you don't explain to them clearly, they will have a problem in participating"*.

Question 2 (Attachments 50 and 51) probed the experts' views on the use of participatory techniques such as consensus building, facilitation, focus group discussion, interviews, participatory technology, PRA techniques, public hearings and workshops to facilitate community participation during agenda setting to define climate change problems. Consensus building was recommended through groups within the communities such as *"women, youth and elders who usually visit the chief's place"*. The participant argued that such groups can give the required information compared to mixed groups. Further, focus group discussions (of specific groups) and interviews were also recommended. One participant suggested that having interviews with *"key informants"* such as community leaders, traditional leaders and the elderly could help. Admitting that the *"world is moving in that direction"*, the experts disproved the use of participatory technology by all community members, citing problems such as *"lack of expertise to use gadgets, lack of gadgets and lack of electricity"*. Nonetheless, the youths were cited as a group of people which could use social media. Instead of responding on public hearings, the experts' view was that *"public gatherings could work"* because they have been traditionally used in the communities. To a lesser extent, it was reported that people were of late associating *"pitso with political problems. When the chief calls for a pitso, people are interested in what it is all about? If you talk about climate change, community members may come but not many would."* Again, one participant challenged the use of public gatherings if a community has *"highly influential people"* who can determine the direction of the discussion. It was argued that other community members *"wouldn't like to raise up issues that would be opposing the influential people's views"*.

A semi-structured interview Question 2 for Attachment 52, inquired about how the unit used participatory techniques such as consensus building, facilitation, focus group discussions, interviews, participatory technology, PRA techniques, public hearings and workshops to facilitate community participation during agenda setting to define climate change problems. Depending on the context, the participatory techniques listed in this question were used. *"For example, under the Reducing Vulnerability from Climate Change (RVCC) project, the unit was working with Econet to disseminate messages to extension officers and chiefs"*. Of course, messages were sent to extension workers in areas where they had access to cell phones. In building support for Lesotho government ministries, the unit installed weather stations in some communities for LMS to collect data. The unit also worked with Village Disaster Management Teams (VDMTs) and supported the establishment of inter-council committees. Overall, chiefs and councilors are empowered to manage rangelands.

Lastly, a semi-structured interview Question 2, Attachment 44, explored how the committee ensured that communities had influence and capacity (resources) when participating during the NCCP formulation and implementation in relation to the concepts of community participation which are collaboration, co-production, cross-sector collaboration, deliberation and democratisation. The participant stated that the NCCC *"depended on existing structures to reach the communities"*. Two representatives from the Ministry of Local Government and Chieftainship advised the NCCC on how to reach out to communities. The NCCC committee members pointed out that funds were limited to capacitate communities in relation to co-ordination, collaboration, co-production, deliberation and democratisation. *"The NCCC did not have funds"*. The funds supporting the committee were from the Ministry of Energy and Meteorology. The NCCC was not a standalone board. It

depended on funding from the Ministry of Energy and Meteorology. Regarding cross-sector collaboration, *“the NCCC comprised 29 different government ministries and NGOs, including the Prime Minister’s office, the Disaster Management Authority, Lesotho Council of NGOs (LCN), National University of Lesotho ...”*. The representatives from these different organisations were committee members in the NCCC. Each committee member *“gave advice on issues relating to their expertise when discussed”*. Chairmanship was interchanged between government and NGOs. Every committee member has a role. *“The committee’s main role is to co-ordinate to avoid fragmentation of projects all over the show”*.

A semi-structured interview Question 3 probed the experts’ views *on the use of participatory techniques such as consensus building, facilitation, focus group discussions, PRA techniques, public hearings and workshops to encourage community participation during policy formulation?* (Attachments 50 and 51, Question 3). The experts supported consensus building, facilitation and PRA techniques, saying it is “very good” when government officials and communities do things together, allowing communities to express their climate change problems. The experts said that If the government officials do things for the communities there is a danger that the communities will fold their hands and sit back. Communities would not own climate change adaptation programmes. The experts supported participatory techniques which *“let communities to be in the forefront to do what they say they should be doing”*. In return, the government’s duty is to support the communities. On workshops and focus group discussions, the participants said that they could be used to a certain extent, depending on who is workshoped and participants of the focus group discussion. The participants discouraged government officials from being proud of workshop participants’ numbers without achieving the purpose of the workshop. According to participants, attendees should be clear about the objectives of the workshop. Follow-ups should be done after the workshop.

Accordingly, Question 3 of the semi-structured interview in Attachment 52 explored how the unit used participatory techniques such as consensus building, facilitation, focus group discussions, PRA techniques, public hearings and workshops to facilitate community participation to ensure communities articulate their preferred courses of alternatives regarding climate change mitigation and adaptation measures during policy formulation. *“The UNDP Climate Change unit works with government ministries at all stages of the policy through providing resources to build capacity at the national level”*, said one participant. The relevant ministry goes out to communities to find out their climate change challenges and what they think they could do for them to adapt. The unit would then initiate a specific project to support communities through the actual implementation of climate activities, for instance, wetlands and rangelands protection projects. Depending on a specific project, the unit can use any participatory technique whenever needed.

Similarly, Questions 4, 5 and 6 in Attachment 52 asked the experts how they used various participatory techniques during policy adoption, policy implementation and policy evaluation. Question 4 read, *“During policy adoption, how does your unit use participatory techniques such as briefs, consensus building, focus group discussions, interviews, media, participatory technology, PRA techniques, presentation to communities, public meetings and public hearings to ensure communities articulate their preferred courses of alternatives regarding climate change adaptation measures?”* “How does the unit use the

following participatory techniques: briefs, facilitation, media, participatory technology, PRA techniques and workshops, to facilitate community participation during policy implementation?” Question 5. Lastly, Question 6 in Attachment 52 of the UNDP asked, “During policy evaluation, how does the unit facilitate community participation using beneficiary assessment, focus group discussions, interviews, polls, PRA techniques, public meetings, surveys and workshops?” The unit did not use the listed participatory techniques to directly involve communities during the policy stages because it was emphasised by participants that the unit “*supports the Lesotho government*” in policy formulation and implementation not only for climate change policy but also a “*number of policies at all the policy stages*”. The unit worked directly with communities on specific climate change projects were not necessarily policy issues.

What is your view on the use of the following participatory techniques: briefs, consensus building, focus group discussions, interviews, media, participatory technology, PRA techniques, presentation to communities, public meetings and public hearings, to facilitate community participation during the policy adoption stage? This question explored the experts’ views in a semi-structured interview Question 4, (Attachments 50 and 51. In answering Question 4, the participants said that “*briefs are fine*”. Briefs could be used “*for validation purposes*” during policy implementation. Consensus building was supported because a panel on behalf of communities would reach agreements and make commitments on behalf of the communities. In applying consensus building, the people who make decisions would be community representatives. Again, the experts recommended focus group discussions, presentations to communities, public meetings and public hearings arguing that the participatory techniques provided community members an opportunity to make decisions as a group. Contrastingly, interviews, media and participatory technology were not encouraged. The argument was that whatever participatory technique to be used during policy formulation, it was supposed to bring a consensus agreement from communities. Participatory technology was noted to be partly a problem because of its limitation regarding technical use.

What is your view on the use of participatory techniques such as briefs, facilitation, participatory technology, PRA techniques, media and workshops, to facilitate community participation during policy implementation? The semi-structured interview Question 5 was in Attachments 50 and 51. The participatory techniques recommended by the experts were briefs, facilitation, participatory technology for the youth, PRA and media (not print media). The PRA was singled out as an appropriate participatory technique if the participation involved the less formally educated community members. Nonetheless, workshops were regarded as less effective during policy implementation by these participants.

Question 6 asked, “*What is your view on the use of participatory techniques, for example, beneficiary assessment, focus group discussions, interviews, PRA techniques, polls, public meetings, surveys and workshops to encourage community participation during climate change policy evaluation?*” (Attachments 50 and 51, Question 6). The experts suggested focus group discussions and surveys as appropriate participatory techniques for policy evaluation. Contrastingly, experts disproved polls and workshops, citing that consensual agreements are critical for community participation. Despite being a widely used

traditional participatory technique during community meetings, the experts expressed less interest in using public gatherings, noting the challenges of “*highly influential people*” who could determine the agreements made during the meeting.

Attachments 50 and 5, Question 7 scouted the views of experts by asking the question, “What do you think actors such as experts, community representatives, politicians and public administrators could do to ensure communities are part of the climate change policy processes?” The experts said that trained experts in community participation should interact with communities. The experts also thought that there “*should be structures at a community level that could inform what happens at the national level or council level*. One expert stressed that “*politicians should not use the climate change issue for political purposes. It should be a life matter*”. Politicians should “*come up with good policies, fully budgeted for. Funds should be released specifically for climate change policies. Again, politicians should be taught and know exactly what this climate change is*”.

Further, the participants’ views on Question 7 recommended that experts should “*be doing a lot of awareness raising, making people aware of the climate change causes and what could be done to reduce its impact*”, simultaneously “*making community members have a different mindset to adapt to the situation*” which is a result of climate change impacts, for example, too much rain, drought and lack of drinking water. Another suggestion made by participants was that “*communities should be made aware of the climate change policy and how they should be involved in the implementation of such a policy*”. The experts advised that i) the government should use chiefs as community representatives to settle people in an orderly manner. “*Houses, fields and roads should be planned*”. ii) *There should be structures for two-way communication*” between policymakers and community representatives. The experts were concerned that communication was top-down from institutions to communities and not “*from the communities*”. iii) Politicians should make use of “*existing structures (community councils, constituencies and parliament)*”. Further, the experts recommended that the Department of Meteorology and Climate should collect meteorological data and provide climate change education to communities. Instead of only collecting data, “*the local observers should be trained to inform other community members through word of mouth if there is an imminent drought*”, said one expert. Thus, participants proposed that community members should be trained to observe weather patterns themselves.

The experts’ views on the question, “How do you work with actors such as experts, community representatives, politicians and public administrators to ensure communities are part of the climate change policy processes?” were mainly capacity building and resource mobilisation (Attachment 52), semi-structured interview Question 7. The unit “*built capacity by using existing or available legal frameworks. For example, chiefs and councilors, in their capacity as community leaders were used to lead people to manage natural resources in Litipeng and Thaba Mokhele in Mohale’s Hoek*” district in Lesotho. Communities voluntarily engaged in land rehabilitation to “*remove sehala hala (Chrysocoma ciliata) in Mohale’s Hoek*. In addition, the UNDP climate change unit “*helped with the mobilisation of the resources to build capacity at the national level where the unit supports Lesotho government ministries*” when working with politicians and public administrators. Nothing was said of the unit’s relationship with other experts. When the interviewees were asked, “What do you think are the challenges of community

participation in climate change policy processes?” (Attachments 50 and 51, semi-structured interview Question 8). One participant said that community members “do not know where to get the information and where to pass on the information to, for instance, if communities had observed something, they would not know whom to tell or where to report to”. Participants wished that “the government could have the means of getting down to the communities to find out what can be done and what the communities think can be done. It means there should be a channel of communication between the government and communities”.

Similarly, a semi-structured interview Question 3 in Attachment 44 probed how the NCCC ensured that each of the following groups of actors: community representatives, experts, politicians and public administrators, had influence, capacity (resources) and autonomy in playing its facilitative role regarding community participation in the NCCP policy processes? The participant from the NCCC confirmed that the NCCC did not have the capacity to empower community representatives, experts, politicians and public administrators. In the NCCC committee member’s words, the NCCC was not a standalone board. It depended on funding from the Ministry of Energy and Meteorology. In concluding Section A, a semi-structured Question 4, requested the expert to elaborate on any challenges the NCCC faces when co-ordinating community participation in the NCCP processes (Attachment 44). The NCCC committee members said that the NCCC used monthly meetings to reach out to districts. However, the committee member was concerned that this was not done vigorously. The participant repeatedly expressed how the lack of funds hindered the committee’s work.

The study results for Question 8, “What do you think are the challenges of community participation in climate change policy processes?” noted the following i) a lack of change in the mindset, ii) poverty, iii) politics and iv) overdependence of community members on the unit when given an opportunity to start on agricultural projects (Attachments 52). Noteworthy in the experts’ response was that the agricultural projects sought to reduce the impacts of climate change such as reduced agricultural production. About the mindset, for example, the experts understood that some community members believed that they should *“burn the rangelands in winter to allow green grass to grow quickly. It takes time to change people from what they are used to doing for so many years. The other thing is poverty”*, for example, community members may volunteer to do some work, but some of them do not have food to eat. *“Instead of working voluntarily, poor community members expect to get something because of poverty”*, one participant said. To cater for community members affected by drought, the RVCC project *“started by providing agricultural inputs to ensure that community members have “something on the table”*. Politics was also pointed out as a challenge by experts. The change of political leadership was said to sometimes bring changes that affected running climate change adaptation programmes in communities. Again, overlaps in the chief’s area and electoral divisions were also cited as problematic *“when dealing with land issues”* Finally, on the overdependence of some community members on the unit, for instance, the experts were of the view that the unit *“supported communities to put up permaculture gardens. Agricultural inputs were given to farmers during the rainy season to plant.”* The farmers were assisted to create own ecosystems within their gardens to follow good agricultural practices. The idea was that the beneficiary should continuously produce food from

the permaculture garden “*without relying on someone else to come and help*”. Nevertheless, the experts pointed out the challenge of beneficiaries who would expect to receive agricultural inputs all the time.

5.7.2 How community awareness regarding climate change and climate change policy influence their participation in policy formulation and implementation

“What is your view of community awareness of climate change?”, was the first semi-structured interview question to be asked to experts on Section B (Attachments 50 – 52 and 44). The experts concurred that communities “*are aware of climate change, but what lacks is understanding the causes of climate change because of cultural beliefs in some cases*”. From the NCCC’s outreaches during the policy formulation of NCCP, it was reported that community members were still a long way from understanding climate change. Undeniably, it was noted that climate change (*‘pheto phetoho ea boemo oa le holimo’*) was talked about on radio in Sesotho. Hence, “*communities know that, but they don’t know the full implications of climate change*”. It is still difficult for the community members to believe that there is climate change. This participant strongly suggested having ways to change behaviour of the community to enhance their participation in climate change policy processes.

“What is your view on using participatory techniques such as cause and impact diagrams, cultural transects, participatory mapping and vulnerability maps?” (Attachments 50 and 51, semi-structured interview question 2). The experts agreed that the participatory techniques mentioned for this question were useful for communicating about climate change. However, they stressed that the usefulness of the participatory techniques depended on how the information could be communicated to avoid scaring people.

The second question for the semi-structured interview schedule, Attachment 52, followed by asking, “How does the unit use participatory techniques such as cause and impact diagrams, cultural transects, participatory mapping and vulnerability maps to enhance community awareness of climate change?” The experts pointed out that the UNDP unit worked with “*government ministries, such as Forestry and Energy and Meteorology. The relevant ministries organised pitsos. The specific participatory techniques were not used as such for climate change policy processes, but the UNDP Climate Change unit held sit-in trainings and in-house learning*” with communities through Disaster Management Authority (DMA), Ministry of Forestry and Lesotho Meteorological Service (LMS)” on specific climate change programmes.

Attachment 52, Question 3 asked experts, “*How does your unit complement the Lesotho government’s efforts to ensure communities are informed of the following climate change causes: air pollution, climate variability, deforestation, industrialisation, ozone depletion, poor agricultural practices, temperature changes, urbanisation, weather changes and wildfires?*” The participants indicated that the focus of the unit was on projects targeting a specific issue, for example, land rehabilitation through the filling up of dongas. The unit did not go to the extent of talking about technical terms such as ozone depletion. Participants reported that although communities may not understand scientifically what was happening, they used indigenous knowledge systems to explain climate change. The participant applauded “*the knowledge as advanced at times*”

The fourth question for Attachment 52 probed experts, “How does the unit complement the Lesotho government’s efforts in ensuring communities are informed of climate change risks, for example, extreme weather events, food insecurity, floods, insufficient access to drinking water, land degradation, loss of biodiversity, loss of rural livelihoods, and reduced agricultural production?” Of all the climate change risks mentioned in this question, participants highlighted that the unit worked with specific government ministries to mobilise resources and support specific climate change policy processes and projects. Concerning extreme weather events, participants mentioned that they collected data from communities through LMS. The UNDP unit installed weather stations in some communities for LMS to get data from remote areas for analyses and forecast. The UNDP Climate Change unit supported the establishment of the inter-council committee. About food insecurity, the unit assisted communities to start permaculture gardens. Regarding floods, the unit supports the DMA whenever needed to assist affected communities. Further, the unit assisted communities to protect wetlands and rangelands to increase access to drinking water and to mitigate land degradation, loss of biodiversity, loss of rural livelihoods and reduced agricultural production. To this effect, the unit gives grants of about USD 50 000 to communities which are doing something on climate change. The unit piloted a climate change project in Mohale’s Hoek in three community councils which are Thaba Mokhele, Lilitipeng and Khoelenya. *“These community councils are encouraged to look after their own resources as a way of building resilience against climate change”*. The unit does not pay them. The project started in 2015, ending in 2022.

“What do you think could be done to ensure that communities are informed of the following climate change causes air pollution, climate variability, deforestation, industrialisation, ozone depletion, poor agricultural practices, temperature change, urbanisation, weather changes and wildfires?” (Attachments 50 and 51, semi-structured interview Question 3). Giving a view to this question, one participant was skeptical about talking of air pollution to community members. This participant was doubting that people will accept it, especially if one would be talking about cars emitting smoke because community members wanted to have cars. Climate variability was one of the climate change causes which was suggested to be easy to sensitise community members about *“because it affects their sources of livelihood. They can see the link”*. With deforestation, participants said that trees decreased in number in Lesotho. The nation usually *“experienced strong winds”*. Therefore, deforestation could be linked to strong winds for community members to understand that the trees which used to shield houses are no more there. Resultantly, the participant pointed out that community members could be told that cutting down trees promoted more houses to be blown away by the strong winds.

Answering Question 3 on industrialisation, the experts stated that *“community members want job creation”*. Giving an example, one participant said that *“if you say industrialisation leads to climate change, you are not giving people any hope”*. Community members are *“expecting to get jobs”*. Without jobs, the perception is that *“they will be poor”*. Again, the participant stressed that the issue of industrialisation places a burden upon the person who should spread the message. The same applies to urbanisation. The participant impliedly said that talking about urbanisation is saying *“people should not to come to stay in Maseru and should continuously stay in the mountains”*. Instead, the participant suggested that the government should improve

service delivery in the mountains so that community members stay comfortably in the mountains. In that way, *“community members will not believe that for them to develop they have to come to Maseru”*.

Still responding to Question 3 (Attachments 50 and 51) about wildfires, it was explained by participants that *“there are more wildfires than they used to be in the past because of what people have done to the environment”*. The departments of *“Range, Forestry and Environment”* were the ones proposed to raise awareness on such issues. Additionally, one participant suggested that the LMS and DMA *“should be involved in wildfires raising awareness on temperature changes, weather changes and climate variability”*. Concerning ozone depletion, one participant recommended the Ministry of Environment, Ministry of Trade and LMS to raise awareness. The recommended government ministries and departments were to a certain extent working with communities on environmental programmes.

“What do you think could be done to inform communities of the following climate change risks: extreme weather events, floods, food insecurity, insufficient access to drinking water, land degradation, loss of biodiversity, loss of rural livelihoods and reduced agricultural production?” (Attachments, semi-structured interview Question 4). Participants stated that the DMA was responsible for communicating extreme weather events forecasts and floods through working with the LMS. The DMA issued early warnings in case of extreme weather conditions. About insufficient access to drinking water, it was indicated that it was the responsibility of the Department of Water Affairs. The participants suggested that the loss of rural livelihoods and reduced agricultural production should be dealt with by the Lesotho Vulnerability Authority Assessment Committee (LVAAC). According to participants, the LVAAC visited communities to assess the situation to produce a report. On the other hand, the Department of Environment worked on biodiversity. In brief, the experts expressed that relevant government ministries should *“go a little deeper into research to identify what can be done”* in relation to their mandate. Government should be making *“clear policies and means and ways of implementing what they have decided”*. In doing so, participants highlighted that communities should be actively involved in such decisions. Thus, participants believed that there was a need for *“active facilitation”* to enhance community participation in climate change policy formulation and implementation.

Question 5 of Attachments 50 and 51 asked, *“What do you think could be done to inform communities of the climate change impacts on them and the environment?”* The climate change impacts referred to in this question were compromised agricultural production, cyclones, drought, floods, heatwaves, health impacts, significant loss of biodiversity and ecosystems, water insecurity problems and wildfires.” The participants reported that compromised agricultural production *“is within the Ministry of Agriculture’s responsibility through its different departments”*. There should be extension officers. The officers are required to interact with communities, acting as mediators between ministries and communities. Further, participants suggested that information could be spread through the District Disaster Management Teams (DDMTs) and the Village Disaster Management Teams (VDMTs). The experts said that the committees were supposed to meet and report to DMA. In the past, the committees used to meet every month to report to DMA. In that way, they were able to see if there was a drought coming and what action

needed to be taken. The reason for participants' reference to DDMTs and VDMTs was because *"communities already see that things have changed. All they need is active facilitation"*.

The semi-structured interview Questions 2, 3 and 4, Attachment 44, sought to find out how ministries accountable to the NCCC informed communities of climate change causes, risks and impacts. It was found that the committee was not a standalone board, but depended on the Ministry of Energy and Meteorology for its funds. The first question to the NCCC committee members asked, "How do you ensure that ministries accountable to this committee keep communities informed of climate causes, such as air pollution, deforestation, climate variability, industrialisation, ozone depletion, poor agricultural practices, temperature changes, urbanisation, weather changes and wildfires?" The second question explored, "How do you ensure that ministries accountable to this committee keep communities informed of climate change risks, such as extreme weather events, floods, food insecurity, insufficient access to drinking water, land degradation, loss of biodiversity, loss of rural livelihoods and reduced agricultural production?" Lastly, Question 4 investigated, "How do you ensure that ministries accountable to this committee keep communities informed of climate change impacts, such as compromised agricultural production, cyclones, drought, floods, health impacts, heatwaves, significant loss of biodiversity and ecosystems, water insecurity problems and wildfires for them and the environment?" The participant stated that the NCCC was not independent from the Ministry of Energy and Meteorology. Therefore, the views to the three questions were not specific. Overall, it was highlighted that the NCCC had an Outreach sub-committee. *The role of the committee was "getting people to understand". "The Outreach committee run radio programmes". The NCCC was in "an informal partnership with Tsenuilo F.M. to broadcast on climate change". Nevertheless, "it was not on a massive scale due to budgetary constraints and lack of established local committees at the community level. The climate change implementation strategy called for the formation of local committees and they were not established yet. The broadcast focused on what people see, for instance, changes in rain patterns, prolonged drought periods and storms. They didn't go for complicated things like ozone depletion and air pollution". There was "no need to complicate the things" according to this participant.*

5.7.3 Section C: How community understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation

"How do you view the following concepts: community awareness of climate change, community understanding of climate change, community understanding of environmental issues and public understanding of environmental issues, *in relation to climate change?*" (Attachments 50 and 51, semi-structured interview Question 1). The experts gave their views on this question and said that *"community awareness of climate change is different from community understanding of climate change"*. Communities *"are aware that something is happening to the climate, but what causes that, the impacts and everything else it's still not clear to them. They do not understand"*. It was said that community understanding of environmental issues and public understanding of environmental issues were the same terms which referred to the same meaning. *The experts thought that communities did not understand environmental issues in general"*. For example, community members *"sell spiral aloe. They*

are not aware that at some point it will finish.” Further, “community members kill wild animals”. The participants claimed that “the situation was worse for urban dwellers” than the rural dwellers “who did not care for the environment at all”

Further, Question 1, semi-structured interview asked experts, “How do you use the concepts community awareness of climate change, community understanding of climate change, community understanding of environmental issues and public understanding of environmental issues in relation to the unit’s mandate?” (Attachment 52). The UNDP climate change unit separated between awareness and understanding to some extent. With the RVCC project, *“it was all about awareness for them to understand”*. The experts concurred that communities *“are aware of climate change but they may not understand”*. The community’s level of understanding manifest when they start to engage in different practices, for example, *“land rehabilitation and practising conservation agriculture”*. Nonetheless, the experts emphasised that the concepts should not be separated. Both community awareness and community understanding of climate change were reported to be equally important and work together to complement each other. In relation to public awareness and public understanding of environmental issues, it appeared the concepts were somehow difficult to separate for experts because climate change started when *“communities faced serious environmental challenges, such as land degradation”*.

Similarly, but specific to the NCCC (Attachment 44) committee member, Question 1 asked, *“How do you use the concepts community awareness of climate change, community understanding of climate change, community understanding of environmental issues and public understanding of environmental issues in relation to the committee’s mandate?”*. In the end, Question 2 explored community understanding and community awareness. “In your oversight role, how does this committee ensure the ministries accountable to it facilitate community understanding of climate change regarding community understanding of climate change causes, community understanding of climate change impacts, community awareness of climate change decision making processes and community understanding of climate change risks for themselves and their environment?” The two questions were not directly applicable to NCCC, according to the participant. Regarding the use of the concepts and supervision of other ministries, the committee member repeated that the NCCC *“was not a standalone board.”* It depended on the Ministry of Energy and Meteorology for funding. Other than the Outreach sub-committee which broadcasted climate change messages via Tsenuullo FM, the committee member said that the use of the concepts were not conceptualised. The use of Tsenuullo FM was not frequent, but it was mostly used during the formulation of the NCCP. However, the expert agreed with other participants that communities were aware of climate change but did not understand it.

The semi-structured interview Question 2 for the experts (Attachments 50 and 51) inquired about community understanding of climate change. The question was, “What do you think could be done to ensure community understanding of climate change regarding community understanding of climate change impacts, community awareness of climate change policy decision making processes, community awareness of climate change policy decision making processes and community awareness of climate change risks for themselves and the environment?” In giving their view on this question, the experts suggested that the relevant government ministries and departments should raise awareness. As a solution, it was recommended that

“government officials should stay a little bit in communities for some time to learn their language, beliefs and culture. Such learning makes communities think you are part of them, and whatever you are talking about, they will listen.”

The semi-structured interview Question 3 in Section C asked, “What is your view of participatory techniques, such as cause and impact diagrams, consensus building, facilitation, participatory technology, PRA techniques, public meetings, public hearings, resources mapping and transects to enhance community understanding of climate change? (Attachments 50 and 51, semi-structured interview Question 3). In their response, the experts perceived that cause and impact diagrams and PRA *“could work best at community level because they can remember if it’s shown pictorially”*. It was also understood that the experts thought resource mapping and transects might work. Facilitation was suggested to be done by both government and communities. The experts also emphasised that participatory technology *“should be for the youth, not for the elderly”*.

Comparably Question 3, on Attachment 44 asked participants, “Which of the following participatory techniques are used by your unit to enhance community understanding of climate change: cause and impact diagrams, consensus building, facilitation, participatory technology, PRA techniques, public meetings, public hearings, resources mapping and transects? In the experts’ accounts of how the Unit worked, the UNDP unit used specific participatory techniques for a specific project. For example, under the RVCC project, the unit worked with Econet to disseminate messages through cell phones targeting strategic people, such as extension officers and chiefs, within the communities. This was only done in areas where they had cell phones. Consensus building happened when council secretaries represented their community councils to ensure that ideas to be implemented were community-based. About facilitation, whatever the community decided was done through their committees at the village level. The experts said that the unit provided technical support.

5.7.4 Section D: How the use of indigenous knowledge systems in climate change policy formulation and implementation facilitate community participation in climate governance

The first semi-structured interview asked was, “What is your view on using the following community values: cultural values, family, historical information, natural resources (traditional land, flora, and fauna) and wealth, when making climate change decisions and their implementation?” (Attachments 50 and 51). On cultural values, one expert suggested that they could work. However, the challenge raised by the participant was that some community beliefs used to work in the past but not anymore. *“They lack scientific proof”*. Without necessarily pointing out examples, the experts said that some cultural values are somehow linked to science but not all of them. Regarding family, *“family plays an important role in one’s life”*. If one interferes with family, it could be a problem; for instance, when there is a need for a relocation because of climate change impacts, family should be considered. Regarding the use of historical information, natural resources and wealth, one participant said that *“climate change agents”* should go and stay in the village for about two to three months to learn about cultural beliefs and traditions, among other things. Their stay should aim to listen and understand the practices. Although one realises that the beliefs seemed not-related to climate change, the participant recommended that they should not despise the community’s beliefs. Whatever the community members would claim to do for adaptation should be added to what the climate change experts know.

Question 1 (Attachment 52) asked experts the same issue as in Question 1, Attachment 50 and 51. The experts, concurred that it was *“very important to include and embrace community indigenous values”*. Giving an example of the RVCC project, it was revealed that one could hear what *“farmers think and perceive when you are with them”*. *“When Katse Dam was constructed, for example, there were a lot of perceptions about it”*, one expert remarked. Communities attributed the changes in weather patterns to the construction of the dam. This participant believed that such perceptions should be listened to for one to hear from communities. Maybe, what they *“thought could have happened?”* This participant said that things had changed and policymakers should be realistic and understand that *“the people who impact on the environment are the very people who live in that environment”*. To emphasise on the same point, it was said that the policy process leaves *“key people”* out and do things only at a higher level. In the case of rangeland and land degradation, *“the facilitators lately realised that the very people, the herd boys who damage the fields every day, were left out.”* The MFRSC and Range Department engaged with the herd boys because they realised that they were the very people on the ground, contributing to the damage that was happening. It was established that the UNDP Climate Change unit did not directly deal with community indigenous knowledge systems. The RVCC project under the unit brought together *“community structures, including chiefs, community council leaders and prominent people”* within the target communities. These were the structures used to reach communities for discussions because interviewing community members without permission from authorities, one would *“come out empty-handed.”* Nevertheless, it was also highlighted that some community members were comfortable sharing their views in the absence of their leaders. One of the RVCC team members went to the field, intending to address a certain issue, but there was a local leader and community members. Community members whispered to the team members, *‘we are not comfortable to talk in the presence of our leader’*. They had to find a way of excusing the leader, and community members later shared their views on the matter. This example was extrapolated from the RVCC project.

Correspondingly, Attachment 44 Question 1 inquired, *“What is your view on including the following community values, among others: cultural values, family, historical information, natural resources (traditional land, flora, and fauna) and wealth, in the NCCP and its implementation?”* Likewise, the participant agreed that community values were *“helpful”* although they were not yet used in the NCCP. *“Past agricultural practices could resolve climate change issues”*, the participant supported. It may be better *“for people to go back to their original practices”*. The participant believed that *“animal manure used in the past was better than the currently used inorganic fertilisers”*. Another good practice to protect land, mentioned by the participant, was *“rotational grazing (maboeela); the chief would designate an area as a grazing area and close off the other areas. It helped the grazing land to recover”*.

Question 2, Attachment 44 asked, *“Which of the following participatory techniques: historical calendars, impact diagrams and seasonal calendars, are recommended by your committee to enable the consideration of community values in your current climate change decision making process and implementation?”* Similar to other participants’ responses, seasonal calendars, timeline and trend analysis were not yet used by the NCCC. The other question was, *“Which of the following participatory techniques: seasonal calendars, timeline and trend analysis, are recommended by this committee to ensure community norms*

are documented for use when making climate change decisions and during the implementation of those decisions? (Question 4, Attachment 44). In giving views to these questions, it was reported that the NCCC used brochures at some stage, but it had not used “*pictures per se*”. The other reason cited as impeding the use of such participatory techniques was that the NCCP was not yet at “*the full implementation stage*”. According to the participant, it was not yet clear if the implementation strategy would recommend the use of such participatory techniques.

“In your current climate change decision making processes, how does the NCCC promote using community norms, such as cattle grazing, collecting grass for thatching houses, cutting trees for firewood and building houses, history about agricultural practices and wildfires, to promote bottom-up mitigation and adaptation responses?” This was a semi-structured interview Question 3, Attachment 44. To explore the use of culture in the national climate change decision making process, it was asked, “How does this committee promote using the culture (art, collective community achievements, identity, physical things given meanings, rituals and stories) in your current national climate change decision making process and implementation programmes?” It was noted that it was not in the NCCC’s jurisdiction. According to this participant, the “*NCCC could not go too much*” into community norms and culture because such issues are handled by chiefs.

Attachment 44, Question 5 was about, “How does this committee promote using indigenous knowledge in your current NCCP and its implementation to form part of climate change projections?” The indigenous knowledge referred to in the question include behaviour of animals, birds attributed to climate change, observing climate variability, studying the environment, studying weather, the direction of wind, type of clouds and vegetation. The expert acknowledged that it may not be necessarily written but, “*obviously, the disappearance of species is an important indicator of the effects of climate change. The NCCC shall always talk about it*”. The examples of indigenous knowledge given were supported by the expert that it was something that community members “*can always refer to*” from childhood. However, the participant said that the NCCC’s discussions were “*broader*”. Hence, the expert considered the indigenous knowledge examples given for this question “*very specific*”. It was said that on such issues, the Environment Department representatives in the NCCC were the people who work on such issues. The Environment Department “*consciously conserves animals*”. Therefore, “*because of climate change or other issues, the NCCC let them lead*”. The NCCC was not specifically finding solutions about what could be done “*about the disappearing animals*”. The NCCC intended to have local people form climate change committees within their communities. “*The process will be in two ways, feeding the committee with information and then they also give the NCCC feedback.*”

“Which of the following participatory techniques: consensus building, interviews, PRA techniques, presentation to communities, public hearings and public meetings, are used to incorporate community culture into the NCCP formulation and implementation?” This was a semi-structured interview Question 8, Attachment 44. Unfortunately, no such techniques were used to incorporate community culture into the NCCP. The expert said that the NCCP is yet to be implemented.

Unfortunately, there were no institutions, legislation and regulations to promote the indigenous knowledge systems into the NCCP in accordance with the expert's responses. "The question was, "How does your committee promote the incorporation of indigenous knowledge systems (values, culture, norms and indigenous knowledge) into the NCCP using institutions, new legislation and regulations?" (Attachment 44, Question 9).

The last two semi-structured questions (9 and 10), Section D in Attachment 44, were related. Question 9 asked, "Which role does this committee play in climate change policy co-governance processes to facilitate community participation in the phases of co-producing (co-planning, co-designing, co-implementing and co-evaluating) the national climate change policy?" Subsequently, Question 10 was linked to Question 9 which asked, "If yes to Question 9, which of the following participatory techniques: briefings, consensus building, facilitation, focus group discussions, interviews, media, participatory technology, polls, PRA techniques, presentations to communities, public hearings, public meetings, surveys and workshops, are recommended by your committee to encourage community co-governance in the NCCP formulation and implementation?" In response to these questions, the committee member said that the NCCC is at the top and focuses on broad issues. "*The secretariat of the NCCC is the LMS. The LMS is the one which meets with the people to find out the information*". The NCCC can make a resolution to do community consultation, but the LMS implements the decisions. "*The NCCC has sub-committees which are Outreach, Finance, and Monitoring and Evaluation. The Outreach committee also helps the secretariat*". The Outreach committee's "*mandate is to go out and reach the people*". The first step is talking to the District Administrators and the District Council Secretaries when reaching out to communities. The participant claimed that they were the people who connected community visitors to the communities. Regarding the use of participatory techniques, the participant's view was that the NCCC did not conduct the communities direct. Much work was done by the secretariat, LMS.

Question 2, (semi-structured interview) asked, "How can the following participatory techniques: historical calendars, impact diagrams, and seasonal calendars, be used to enable the consideration of community values during climate change policy formulation and implementation?" The experts said that these participatory techniques "*could work*."

Attachments 50 and 51, a semi-structured interview Question 3 probed the experts' views on the use of community norms. The question read, "What is your view on using community norms, such as cattle grazing, collecting grass for thatching houses, cutting trees for firewood and building houses, history about agricultural practices and wildfires, to promote bottom-up climate change policy alternatives regarding mitigation and adaptation?" The experts agreed that using community norms for mitigation and adaptation "*can work*". One participant said that the norms asked in Question 3 used to be followed by communities.

Again, in Section D, the experts supported the use of participatory techniques such as seasonal calendars, trend analysis and timeline, in their response to the semi-structured interview Question 4. It was asked, "How can the following participatory techniques be used to document community norms, such as seasonal calendars, trend analysis and timeline, for use in climate change policy and implementation?" (Attachments 50 and 51). The experts said that the "techniques could work"

Generally, the experts supported the use of indigenous knowledge. They were asked, “What is your view on using indigenous knowledge in climate change policy and implementation processes to assist communities in the following: behaviour of animals, birds attributed to climate change, observing climate variability, studying the environment, studying weather, the direction of wind, type of clouds and vegetation?” (Attachments 50 and 51, semi-structured interview Question 5). The experts testified that in *“many communities, they used birds to foretell when the rain is coming”*. Community members could recall the birds that used to be there but were no more. The community members also knew the birds and insects which predicted *“trouble”*, for instance, drought. The same applies to the wind that predicts good rainfall or thunderstorm. Likewise, the experts also said that vegetation was used to predict rain. Nevertheless, climate change was not being talked about that much in communities. *“When in problems, people will say let’s start to do something, yet, somebody would have said it a long time ago.”* The views of the experts pointed out that *“dongas are becoming too much”, taking the place of fields. Water is flowing everywhere because of floods. It is a serious problem.”* Nevertheless, no action was being taken by the communities.

The experts liked the idea of using indigenous knowledge, saying that *“communities are ready to listen and say they were wondering what they could do because they could see something was happening”* (Attachments 50 and 51, semi-structured interview Question 7). The question asked was, “What is your view on using indigenous knowledge in climate change policy and implementation to form part of climate change projections such as the appropriate crop mix, appropriate farming methods and forecast expected rainfall?” The experts agreed that communities needed such information to be disseminated to them. The experts said that *“there used to be farmers going to the villages to help”* in the old days. The farmers (extension workers) were from the MAFS. They were the ones who were supposed to go and assist the communities on what should be done regarding planting. On appropriate crop mix, the experts said that maize used to be planted but its productivity has declined. The experts suggested that *“It is important to grow, among others, butternut, beans and potatoes”*. *“There is a need for knowledgeable people to assist the communities about what they should plant because of these climatic changes. We should not be waiting for wheat, maize and sorghum. Seasons have changed. There is no clear transitioning from one season to another. It is important that we have other crops, for example, cabbage, which are short term in bulk, to assist.”* Some community members used *“white tents to grow short-term crops like tomatoes, cabbage and spinach, whilst they wait for maize, wheat and sorghum, which take some time”*. Winter used to be in May, June and July. It was reported that sometimes winter *“takes longer to finish because it is expected to finish in three months, but it gets to December”*.

The use of participatory techniques to reach out to communities on climate change issues was welcomed by the experts. Question 7 asked the experts, “What is your view on using the following participatory techniques: focus group discussions, impact diagrams and mapping, to ensure community indigenous knowledge is part of climate change policy and implementation?” (Attachments 50 and 51, semi-structured interview). Interestingly, experts concurred that *“it is very important”* to use these participatory techniques because *“communities are not clear on climate change”*. *“If the government can have a means of approaching or getting down to the communities to find out what can be done and what the communities think can be done, it can help”*, the experts said. The expert further said, *“there should be a channel of finding the communities from the*

government point to the communities. To find how they can communicate.” Again, one expert emphasised that the effectiveness of focus group discussions “depend on how the groups will be formed because culturally, a daughter-in-law is not supposed to talk too much when the father-in-law is there”.

The semi-structured interview Question 8, Attachments 50 and 51 investigated, “What is your view on using community culture, such as art, collective community achievements, identity, physical things given meanings, rituals and stories, in climate change policy formulation and implementation?” One participant suggested that art “*could be used*”. *The participant claimed that in the past, it was not considered. It wasn’t taken seriously. It’s only recently that art is included in some of our things*”. The experts also agreed that collective community achievements could be used. The experts said that collective community achievements, identity, physical things given meanings, rituals and stories can be used to enhance community participation in climate change policy formulation and implementation. One participant said, “*Let them bring it, and we add to what we know. Some of the local experiences work.*”

“What is your view on using the following participatory techniques: consensus building, PRA techniques, presentation to communities, public hearings and public meetings, to incorporate community culture in climate change policy and implementation?” (Attachments 50 and 51, semi-structured interview Question 9). Participatory techniques were supported by experts. However, some participatory techniques, such as public hearings and public meetings, were perceived to be less effective when used for a mixed group of people. In support of this assertion, one expert said that “*they are people who are highly influential in communities and when such people are there, others would not raise up issues that would be opposing theirs*”. If one’s father-in-law is there, a daughter-in-law is not supposed to talk too much.

In a semi-structured interview, Attachments 50 and 51 (Question 10), the question probed, “What is your view on incorporating indigenous knowledge systems (values, culture, norms and indigenous knowledge) in climate change policy using institutions, new legislation and regulations?” One participant was of the view that the Department of Culture, in the MTEC, can gather information. The experts supported that having legislation and regulations that specify how people can contribute their indigenous knowledge systems to the climate change policy would be critical.

The experts thought it could work to adopt co-production as part of climate change co-governance. This was said when experts were giving their views on the question, “What is your view of community participation in the co-production phases (co-planning, co-designing, co-implementing, co-evaluating) regarding climate change policy as part of co-governance?” (Semi-structured interview Question 11, Attachments 50 and 51. The participants highlighted that planning together with communities was inevitable. It was told that it is better to plan together than expecting their participation during implementation in programmes they were not involved during the policy process.

Question 12, Attachments 50 and 51 (semi-structured interview) asked the views of participants on participatory techniques applicable in co-governance. It was asked, “What is your view on using the following participatory techniques: beneficiary assessment, briefings, consensus building, facilitation, focus group discussions, interviews, media, polls, participatory technology, PRA techniques, presentations to communities, public hearings, public meetings, surveys and workshops, to encourage community co-governance in climate change decision making and implementation?” The participants indicated that beneficiary assessment, briefings, consensus building, facilitation, focus group discussions, PRA techniques, presentations to communities, public hearings and public meetings were good for use. However, the participants repeatedly indicated that focus group discussions, public hearings, public meetings and workshops can be tricky if the groups comprise “*highly influential people*”. Thus, participants doubted the effectiveness of interviews, media, polls, participatory technology and surveys because the techniques elicit “*individual views*”, yet the aim is to come up with community views together. Apart from the suggested participatory techniques, the other participant brought up the issue of people getting to stay with community members, as one of them, to study their indigenous knowledge systems.

In conclusion to (Attachments 50 and 51) the semi-structured interview, Question 13 asked, “In your view, what are some of the challenges encountered when using indigenous knowledge systems in climate change policy formulation and implementation” The experts pointed out two challenges regarding the use of indigenous knowledge systems. First, the experts said that “*in some cases it encompasses many things. It’s not written anywhere, but you can see it happening. The elders will never tell you why they are doing what they are doing. They will tell you this should not be done. One is given information and instruction on something, but the reasons you never get to know*”. To the experts, this becomes a challenge to community members who might throw away the idea because reasons for not being allowed to do certain things are not provided. Second, “*the indigenous knowledge systems have problems of lacking scientific proof.*” Nonetheless, “*the ideas thrown away because of lacking explanations might be beneficial to enhance community participation because it is culturally accepted. Depending on the individual facilitator carrying the exercise with communities, some of the ideas might be thrown away*”. The experts encouraged policymakers to listen, learn and see if the indigenous knowledge systems could be useful and added to “today’s knowledge” and make a good contribution.

Question 2 (Attachment 52) of the semi-structured interview inquired, “Which of the following participatory techniques: historical calendars, impact diagrams and seasonal calendars, are used by your unit to enable consideration of community values in your current climate implementation programmes?” The response to this question was the same explanation given for Questions 3-9 of the semi-structured interview schedule, Attachment 52. In responding to Question 2, the participants explained that the UNDP climate change unit “*provides technical support to government ministries*”. The government ministries were the ones facilitating community participation. The UNDP Climate Change unit “*played an oversight role to ensure expected results when a project is developed*”. The unit did not go “*to communities everyday*”. On the other hand, Question 3 asked, “In your current climate change implementation programmes, how do you use community norms, such as cattle grazing, collecting grass for thatching houses, cutting trees for firewood and building houses, history about agricultural practices and

wildfires, to promote bottom-up mitigation and adaptation responses?” This was followed by Question 4 which asked experts, “How does your unit use participatory techniques, such as seasonal calendars, timeline and trend analysis to document community norms for use when implementing climate change programmes?” Further, Question 5 asked, “How does your unit use indigenous knowledge in your current climate change implementation processes to assist communities in, among others, behaviour of animals, birds attributed to climate change, observing climate variability, studying the environment, studying weather, the direction of wind, type of clouds and vegetation?” Question 6 investigated, “How does your unit use the participatory techniques, such as focus group discussions, impact diagrams and mapping to ensure community indigenous knowledge is part of climate change implementation programmes?”

In addition, Questions 7, 8 and 9 in Attachment 52 asked the following questions, respectively: “How does your unit use culture, for example, art, collective community achievements, identity, physical things given meanings, rituals and stories in your current climate change implementation programmes?” “Which of the following participatory techniques are used by your unit to incorporate community, for instance, culture consensus building, interviews, PRA techniques, presentation to communities, public hearings and public meetings when implementing climate change decisions?” “How does your unit assist the Lesotho government ministries and departments to promote the incorporation of indigenous knowledge systems (values, culture, norms and indigenous knowledge) into the climate change policy using the following institutions, new legislation and regulations?” The responses to Questions 3-9 established that the UNDP Climate change unit provided support to the Lesotho government ministries. Communities were involved by the unit during specific projects.

Question 10 explored, “Which role does your unit play in climate change policy co-governance processes to facilitate community participation in the phases of co-production (co-planning, co-designing, co-implementing and co-evaluating)?” (Attachment 52). It was noted that the UNDP Climate Change unit empowered local communities through specific projects. The unit identified farmers who were doing something to assist them with agricultural inputs. The farmers identified were said to be useful regarding their ability to have observed the weather patterns for that community. The experts claimed that “*other community members may learn from the person (identified farmer)*”. The unit had nearly “*one hundred identified farmers*”. The unit also “*established a farmers’ school, where identified farmers were capacitated with technology. The expectation is that the surrounding community will come and learn. These are the people who would talk about their beliefs or tradition on their interventions they would be using.*” If convinced, the participant believed that the local community could change their mindset. However, Question 11 was not responded to because the unit did not go to communities direct. It was only through specific projects. Question 11 was a follow-up to Question 10. It asked, “If yes to question 10, which of the following participatory techniques: beneficiary assessment, briefings, consensus building, facilitation, focus group discussion, interviews, media, participatory technology, polls, PRA techniques, presentations to communities, public hearings, public meetings, workshops and surveys, are used by your unit to encourage community co-governance in climate change decision making and implementation?”

Finally, semi-structured interview Question 12 in Attachment 52 asked experts, “Elaborate on any challenges you face when using indigenous knowledge systems in climate change implementation programmes?” Relating to challenges of indigenous knowledge in general, one participant said that there is “*no scientific proof*”. The participant encouraged that it would be good to accommodate them by implementing things that are implementable and sustainable while attempting to change their mindset. “*Some indigenous knowledge systems can be dangerous and need to be validated*”. One expert said that he did not have a definite response to this question because his perspectives were derived from the RVCC project.

5.7.5 Section E: Exploring how policy nudging could be used to enhance community participation in climate change policy formulation, implementation and governance

The first semi-structured interview question for Attachments 50 and 51, Attachment 52 (Question 2) and Attachment 44 (Question 2), were similar. It was, “What is your view on the use of the following nudges: education, feedback, incentives, information and persuasion, to encourage a community to participate in climate change decisions and implementation?” The experts said that the listed nudges were critical for use to enhance community participation. To emphasise support for the use of education, one participant said that “*give them knowledge*”. Education was recommended for both formal and informal setups. Some experts suggested that education provision should be in two ways, which are short-term – changing the mindset of community members within a community and long-term plan – introducing climate change issues into formal education. As evidence of the unit’s support for climate change education, it was told that the UNDP Climate Change unit “*supported the development of climate change adaptation training manual which has been piloted in Mphahle’s Hoek district, Lesotho*”. About feedback, it was noted that it was “*very important*”. On incentives, some experts discouraged them for various reasons. One participant said “*no*” to incentives claiming that if community members are given incentives for the first meeting, it implies that the communities would expect something in the following scheduled meetings.

Contrastingly, some experts supported non-monetary incentives. The experts cited a programme run “*during the reign of Prime Minister Leabua Jonathan*” where “*women used to work in the roads*”. The programme was called “*tsoelela oiketsetse (do it yourself)*”. The women working on this programme were given food, for example, “*cooking oil and milk*”. It was reported that these women were interested in working on their roads more than the gifts. It was about “*making the roads for themselves, connecting their villages. It worked*”. Later, the name of the programme was changed from “*tsoelela oiketsetse*” to “*fato-fato (road construction by villagers)*”. *The issue of money was brought in*. In these participants’ views, money brought problems, for example, competition for community members to get an opportunity to be registered for the programme. If incentives are “*well organised with the purpose which is very clear to communities, it can work*.” Many experts concurred that non-monetary incentives could work. With the UNDP Climate Change unit RVCC project, community members were taught about the importance of their land. The RVCC attempted to move away from paying people. Instead, the unit provided “*non-monetary incentives to help improve livelihoods*”. Non-monetary incentives included “*indigenous chickens to lay eggs*” and helping farmers to start up permaculture gardens. However, “*funds are limited*”. Many community members in the target communities

benefited. *“Information is never enough even if it’s one or two people targeted, at least, they will be something.”* Persuasion was also encouraged by experts because non-monetary incentives only were said not to be enough by participants.

The second semi-structured interview question asked, “In your opinion, to what extent should regulations (bans, compliance rules and restrictions) be used to ensure communities are involved in climate change decisions and their implementation?” (Attachments 50 and 51). Similarly, semi-structured interview Question 3, in Attachment 52 and Question 3 in Attachment 44 asked, “What is your view on using regulations (bans, compliance rules and restrictions) to ensure communities are involved in climate change decisions and their implementation?” Four of the five participants disapproved the use of regulations to enhance community participation. The argument was that *“one would not succeed because communities should do things for themselves with that understanding that they are the beneficiaries of natural resources”*, whereas, one participant said that *“it is what has to be done by the local government”*. It was proposed that the local government should impose penalties for *“small things”* because *“the law allowed them to do so”*. People do whatever they do because the law is not enforced. In this expert’s view, the problem of carelessness concerning climate change may be reduced when *“fines, penalties and bans”* are used. For example, *“if one cuts a tree, you have to plant another one”*. This participant claimed that *“If people know such compliance rules, they will comply”*.

The third semi-structured interview question inquired, “How should the participatory techniques, such as briefs, consensus building, facilitation, focus group discussions, interviews, media, polls, public hearing, surveys and workshops, be used to encourage communities to co-plan, co-design, co-implement and co-evaluate nudges before the nudges are implemented?” (Attachments 50 and 51). Related to Question 3, Question 4 in Attachments 52 and 44 asked, “What is your view on using participatory techniques, such as briefs, consensus building, facilitation, focus group discussions, interviews, media, polls, public hearing, surveys and workshops, to ensure that communities are involved in climate change decisions and their implementation?” The experts supported consensus-based decisions. Therefore, consensus building, facilitation, public hearing and focus group discussions were among the most recommended participatory techniques compared to interviews, media, polls and surveys, which encourage the elicitation of individual views.

Still in Section E, the experts were asked, “What is your understanding of policy nudging during climate change policy formulation and implementation?” Participants who gave their views to this question (Attachment 52), Question 1), were not sure if they were using policy nudging until after the researcher explained the concept to them. Their understanding of policy nudging was explained in relation to the UNDP Climate Change Unit’s mandate. The unit worked with government ministries to provide support through resources. The unit got to work directly with communities when they were working on a specific project.

The semi-structured interview Question 1 in Attachment 44 asked, “How does your committee use policy nudging during the NCCP formulation and implementation?” The participant explained that the NCCC supports a bottom-up strategy to encourage

participation in climate change policy formulation and implementation. The NCCC intended to encourage communities to participate in NCCP but the “*LMS did much of the work*”. From the participant’s explanation, it was not clear how the NCCC was using policy nudging in the NCCP policy formulation and implementation.

5.8 A CRITICAL ANALYSIS OF THE CASE OF THE MANONYANE COMMUNITIES

Section 5.7 critically analyses and presents the results of the Manonyane communities’ case according to the conceptual (Chapter 2) and theoretical framework (Chapter 3) for this study. The analysis is based on the perspectives of the Manonyane communities, community representatives, politicians, public administrators and politicians’ manifest content as described in Section 4.6.1. The critical analysis highlights the significant findings of the latent content following what is described in Section 4.6.1. The significant findings are organised according to the following objectives: i) the use of policy nudging to enhance community participation in climate change policy formulation and implementation and governance (Section 5.8.5). (ii) The influence of community awareness and understanding regarding climate change and climate change policy on community participation in policy formulation and implementation (Sections 5.8.2 and 5.8.3). (iii) The use of indigenous knowledge systems in climate change policy formulation and implementation to facilitate community participation in climate governance (Section 5.8.4). Finally, (iv) the nature of community participation in climate change policy processes (Section 5.8.1).

5.8.1 Determining the nature of community participation in climate change policy formulation and implementation

The lack of participation of the Manonyane communities in the climate change policy formulation and implementation as part of climate governance did not reflect how participation was defined in the conceptual framework (Section 2.5). In the case of the Manonyane communities, the findings showed that the Lesotho politicians, public administrators, experts and chiefs were not facilitating community participation at any stage of the climate change policy formulation and implementation, particularly in the NCCP formulation and implementation. The implication of this finding is the possibility that the concepts collaboration, co-production, cross-sector collaboration, deliberation and democratisation were inconsistently applied to guide socio-political, administrative and public policy governance. In light of this finding, it reveals something about the nature of climate governance in Lesotho which is lacking community participation in climate change policy processes, yet community participation should underpin climate governance. Against this background, the remainder of this section presents a critical analysis of the nature of community participation in climate change policy formulation and implementation.

5.8.1.1 Nature of community participation in the National Climate Change Policy (NCCP)

Evident in the findings is that community participation in climate change policy processes was lacking in the Manonyane communities because they were not aware of climate change decision-making processes undertaken by the Meteorology and Climate Department. Perhaps, the most compelling finding is that there was no co-ordination between the Environment and Meteorology and Climate departments yet these are critical departments in the national climate change policy processes (Machepha, 2010:18, Miller, 2014:79, Ministry of Energy and Meteorology, 2017:24). Having said this, many reasons for lack of co-ordinated community participation were given by the public administrators. Consequently, the findings point to fragmented

institutional settings between coordinating departments as confirmed by the communities, community representatives, politicians and public administrators and the literature (Machepha, 2010:18, Miller, 2014:79, Ministry of Energy and Meteorology, 2017:24). Despite the Meteorology and Climate Department applying administrative governance, it was at the national level. There were gaps in allocating responsibilities to departments across the Lesotho government ministries and departments. In such a fragmented setting, the Manonyane community's i) lack of understanding and awareness of climate change; ii) lack of knowledge of climate change decision-making processes and iii) a lack of considering indigenous knowledge systems by the policymakers, seemingly explained why the Manonyane communities were not involved in climate change policy formulation and implementation at the national level.

Contrary to the conceptual framework (Section 2.5), administrative and socio-political governance and policy nudging were not applied by politicians, public administrators and experts. According to the conceptual framework of this study (Section 3.5.2.1), administrative governance and socio-political governance are the main components, which influence public administrators on co-production, aiming to give communities a chance to co-decide, co-plan, co-design and co-evaluate the policy agenda during agenda setting. While acknowledging that the public administrators were taking the lead to bring multiple actors together (politicians, experts, community representatives and communities) (Section 2.5.1), this was not effective. Therefore, the finding draws our attention to the consideration of how should the Manonyane communities be given an opportunity to define the causes, risks and impacts of climate change from the communities' perspectives. The finding also helps the study to justify the need for applying socio-political governance to consider the community's values, norms, indigenous knowledge and culture in a way that a community relates with their environment (Adger et al., 2012:5; Dang, 2018; Brink and Wamsler, 2019).

5.8.1.2 Community participation in the climate change policy process stages

Agenda setting – Administrative and socio-political governance were distinguished in the conceptual (Section 2.5.2) and theoretical (Section 3.5.2.2) frameworks as components of NPG which guide politicians, public administrators, experts and community representatives on the action and behaviour to be taken by communities during policy agenda. An important finding of this study was that the Manonyane communities were not participating at any of the policy stages. During all the policy stages, no collaboration, co-production, cross-sector collaboration, deliberation and democratisation was taking place to get the Manonyane communities to support the national climate change policy formulation and implementation. This could be because the NPG concepts were not applied in a formal way as defined in the theoretical framework (Section 3.5). These concepts guide how socio-political, administrative and public policy governance can be applied when enhancing community participation in a plural and pluralist climate change policy processes. As mentioned in the theoretical framework (Section 3.5.2.1), the communities' contribution during climate change agenda setting "depends on the applied governance components and the actors facilitating community participation (Brink and Wamsler, 2019; Mees et al., 2019). The lack of established structures for the Parliament and Natural Resources, Tourism and Land Portfolio Committee, for example, as the final authority in approving the Lesotho climate change policies to link with the communities and the Ministry of Energy and Meteorology, is a concern which should be addressed if community participation is to be enhanced. From this finding, it appears the lack of

coordinated effort towards enhancing community participation by the Parliament and Natural Resources, Tourism and Land Portfolio Committee and Ministry of Energy and Meteorology indicates the need to define the applicability of socio-political and administrative governance during agenda setting. Against this background, what can be explained from this finding is that communities cannot contribute to agenda setting if participation is only done at the national level without having a plan to include them.

Policy formulation – The conceptual (Section 2.5.2) and theoretical (Section 3.5.2.2) frameworks identified socio-political and administrative governance as critical components which should guide public administrators on how to co-produce, deliberate, collaborate and interact with plural actors to benefit community participation. It appears the socio-political and administrative governance was not used as a process and activity to facilitate collaboration, co-ordinate the co-production of policy alternatives, manage cross-sector dynamics (e.g. power relations and resources), facilitate deliberation and apply policy nudging among the plural actors as confirmed by the interviewed participants (Adger et al., 2012; Egeru, 2012; Ahearn, 2019). Although the NCCP mentioned indigenous knowledge systems, it was not clear from the interviews how they were formulated as alternatives to the NCCP during policy formulation (Ministry of Energy and Meteorology, 2017:17). It seems socio-political governance was not guiding public administrators on how the community indigenous knowledge systems could be used as policy alternatives (Etchart, 2017; Ahearn, 2019). The lack of co-ordination upon which the public administrators could facilitate collaboration, co-produce policies, nudge communities, facilitate deliberation processes and capacitate communities add to a growing body of evidence suggesting that the variables administrative governance and socio-political governance should be clear on how they give communities a voice to provide policy alternatives among multiple actors (Section 2.5.2.1).

Policy adoption – Administrative and public policy governance are the main NPG components which guide how decisions should be made according to the conceptual framework (Section 2.5.2) and theoretical framework (Section 3.5.2.3). The politicians dominate this stage because of representative democracy. The politicians' role, suggested in the theoretical framework, of empowering communities to co-decide, legitimise and observe the adoption process was not clear in the Manonyane communities case. The public administrators' views raised important theoretical issues that have a bearing on why it is critical to conceptualise and operationalise administrative governance and public policy governance. Thus, it can be suggested that administrative governance during policy adoption is when public administrators facilitate collective decisions to enable communities to legitimise the adopted policy (Brink and Wamsler, 2019; Mees et al., 2019). The communities can directly participate if politicians open up the governance process for public administrators to lead collaboration and interaction, promote legitimacy and trust of the policy adoption process (Section 2.5.3). Public policy governance could indicate how the politicians should provide legislation and institutions for communities to participate democratically (in an open system of governance), with communities equally having a say, just like formally organised plural actors. Resultantly, a legitimate policy could be adopted (DeVries, 2007; Carvalho and Gupta, 2012:146). The public administrators' view provides an explanation of why politicians should make the policy adoption stage clear, whether it aims to educate or to ensure active involvement of communities and the amount of power given to public administrators to facilitate community participation.

Policy implementation – Administrative governance is conceptualised (Section 2.5) as the main NPG component which directs what needs to be done, when and how to enhance community participation during policy implementation. Consistent with the conceptual and theoretical framework, the research found that public administrators attempted to bring together diverse plural actors to involve communities to produce implementation programmes together (Mees et al., 2019). This is because the public administrators showed an understanding of the importance of community participation in climate change policy implementation when they gave reference to the LoCAL project. Therefore, the lack of co-ordination between the two key Lesotho government departments (Environment and Meteorology and Climate Departments) which are supposed to lead plural and pluralist climate change policy process could support the idea that administrative governance should be defined in theory for practice during policy implementation. The lack of Manonyane community participation may be taken to indicate that without public administrators and politicians' initiative to high frequency interaction, bottom-up and top-down collaboration approaches, equal and distribution of decision-making power and trust in the adoption process, community participation cannot be enhanced during policy implementation. Concurring with the theoretical framework, the emphasis of the public administrators and experts' response was that communities should have an equal chance to plan the implementation together with formally organised politicians, public administrators and experts who have different forms of expertise (Dhungana et al., 2018:129; Samaddar et al., 2019:129).

Consistent with the conceptual framework, the experts contended that the UNDP, for example, supported climate change policy implementation through financial resources, capacity building and technology (Oberthür et al., 2017:2). However, the fact that the experts mentioned that they implemented specific climate change projects attested to the shortcoming of a plural and pluralist climate change policy implementation. The theoretical framework noted, "solutions are not true or false because they are provided per context" (Section 3.5.2.4). The theoretical framework for this study emphasised that no opportunity should be given to make mistakes during community participation because it can hinder community participation in future climate change policy formulation and implementation (Spires et al., 2014; Samaddar et al., 2015; Newig et al., 2016). The nature of community participation during policy implementation is 'wicked' because the actors have no right to be wrong (Rittel and Webber, 1973:163; Peters, 2017:388). This implies that making mistakes could hamper future participation. For example, the Manonyane communities' case illustrates community projects such as "*fato-fato*" as dividing because of the way communities previously participated.

Policy evaluation – The conceptual framework (Section 2.5.5) identified administrative governance as a critical NPG component at this stage. The way communities were involved during agenda setting, policy formulation and policy adoption could hamper successful policy evaluation because the Manonyane communities dissociate themselves from the NCCP. In the case of the Manonyane communities, the findings could help to shape how administrative governance could be applied during policy evaluation. Administrative governance suggests that no single actor should dominate the policy evaluation process (Crabb and Leroy, 2012; Gilley, 2012:153) and this provides a fair opportunity for the Manonyane communities to

make policy evaluation decisions equally, just like other actors (Davidson and Frickel, 2004:473), in 2027 when the NCCP would be reviewed (Ministry of Energy and Meteorology, 2017:41).

5.8.1.3 Participatory techniques used during the climate change policy process stages

Although participatory techniques could be used to determine how communities participate as leaders of the policy formulation and implementation process, irrespective of their literacy level (Section 3.5.2.2), the study found that the lack of using participatory techniques at every policy stage contradicted the theoretical framework. This contradiction stems from the fact that the Manonyane communities could not use participatory techniques without the facilitation of policymakers. The lack of using participatory techniques could hamper community participation because their use means policymakers go beyond consultation and information to give communities a genuine opportunity to discuss their policy problems and offer solutions. Thus, in future, the participatory techniques recommended in the conceptual framework should be considered during each climate change policy stage. Of note from the Manonyane communities' case is that the youth mainly welcomed participatory technology but the most preferred participatory technique was the public gathering which was considered simple and best.

5.8.1.4 The role of plural actors in enhancing community participation during climate change policy processes

The Manonyane communities did not work with politicians, chiefs, experts, politicians and public administrators to enhance their participation through co-production, collaboration, deliberation, democratisation and cross-sector collaboration as defined in Section 3.5.1.1.1 of the theoretical framework. The communities' response on their lack of participation provided a deeper insight into i) lack of administrative functions of government, ii) lack of interrelationships and interdependencies, iii) complex interrelationships, and iv) less frequent interactions (Section 3.5.1.1.1 - Theoretical framework) in Lesotho climate change policy formulation and implementation. About co-production, collaboration, deliberation, democratisation and cross-sector collaboration, it seemed unclear how each concept occurred in a plural and pluralist environment of the climate change policy process. For instance, the responses from the communities, chiefs, politicians, public administrators and experts were not clear on how the plural actors should enhance community participation when applying socio-political governance, administrative and public policy governance. This may suggest that it could help to define how socio-political, administrative and public policy governance could be applied, stating the roles of actors during co-production, collaboration, deliberation, democratisation and cross-sector collaboration.

The study also found that the trusted actors were the chiefs and experts because of their ability to give feedback to the communities. The Manonyane community members went further to give their reasons for wanting to work with chiefs and experts, instead of politicians and public administrators. The communities regarded politicians as ignorant of climate change and unable to keep their promises. More issues emerged from the experts' view relating specifically to the politicians understanding the importance of community awareness of climate change, changing the mindset of communities, making communities aware of climate change decision-making process and making communities aware of their roles. The findings seem to stress the critical role of politicians as the senior actor in policy processes by suggesting that politicians should be

formally taught about climate change. To community members, the politicians and public administrators were the same (all government officials); thus, giving insights on the political-administrative interface. In comparison to politicians, the issue of experts' ability to give feedback to the communities was emphasised which is a reason why community members trusted experts. The results might further indicate that a combination of the public administrators', experts', community representatives' and communities' views from this study provide support for the conceptual premise that experts are trusted and perceived by other actors to have money to fund active community participation.

The study is important in furthering the understanding of the role of the MLGC as the leading ministry in applying public governance in Lesotho. Each ministry has *"its unique mandate of formulating policies"*. However, it was not clear from the public administrators' views how the MLGC *"directs, co-ordinates and facilitates"* policy implementation formulated by other Lesotho government ministries. It was reported that the MLGC is the central government, which solicits resources to ensure that policies are implemented at the local level. This explains why the Planning Department is implementing the LoCAL climate change project which is an initiative of the Meteorology and Climate Department. The role of MLGC in community participation may reveal the nature of public governance and calls for structured public governance which enhances community participation in future climate change policy formulation and implementation. Using the role of different Lesotho government ministries and departments, it is possible that the concepts co-production, collaboration, deliberation, democratisation and cross-sector collaboration partially overlap and partially differ (section 3.5.1.6.7) according to how they were used in different government departments and ministries. It can therefore be assumed that there is need to define in theory the use of these concepts.

5.8.1.5 Challenges of community participation during climate change policy processes

One of the challenges, which emerged from Manonyane communities' case is that community participation is not formally organised. The finding is contrary to the conceptual framework which articulated public, administrative and socio-political governance in every policy stage, indicating how formally structured community participation enhances their participation in climate change policy process. The lack of Manonyane community participation showed a lack of collaboration, co-production, deliberation, democratisation and cross-sector collaboration, as empirical referents for plural and pluralist climate change policy formulation and implementation. The study confirmed that, if not organised by the policymakers, communities are at a disadvantage because they participate as stakeholders who have other important issues (e.g. livelihood), but the politicians, public administrators and experts participate in the climate change policy process as formally organised groups (Section 3.5.1.1.5).

Overlapping of duties between the chief's area and electoral divisions was problematic, particularly if the climate change programme sought to work on the land. This finding raised a critical issue in Lesotho, that is, the role of gatekeepers according to the conceptual framework (Section 2.5). Noteworthy is that the public administrators agreed that the issue of people not coming for public gatherings only happens in urban areas. The chiefs fine and punish those who do not attend public gatherings in rural areas. This finding raised important questions about the pivotal role played by chiefs in community participation.

Although the new local government system provided for the election of councilors, chiefs are culturally embedded in the social and political life of communities. The role of chiefs in the day-to-day lives of community members is important and final. The findings show that it is critical to define the chiefs' role in enhancing community participation. Without the chiefs, the Manonyane communities are inaccessible.

The public administrators noted the problem of overlapping of duties across government departments when co-ordinating community participation in NCCP processes. For instance, the Environment Department is facilitating environmental governance, using a constitutional mandate, through administrative governance while the Department of Meteorology and Climate facilitates the NCCP and national climate change issues in Lesotho. The seemingly differences in roles of these two departments on paper are not co-ordinated (Machepha, 2010:18; Miller, 2014:79; Ministry of Energy and Meteorology, 2017:24). The overlapping of duties between departments raised important theoretical issues that have a bearing on the role of administrative governance in managing devolved processes (Peters, 2010:37). The Environment Department played a watchdog role over other government ministries which was described as a "*parallel conflict*" by one public administrator. These findings might help us understand the importance of co-ordinated administrative, socio-political and public governance which are fundamental components of NPG in giving communities an opportunity to co-produce climate change policies as well as their implementation. The insights gained from the public administrators' views may be of assistance in analysing the shortcomings of administrative governance. An implication of the public administrators' view on administrative governance in this study is a call for community participation where public administrators begin by making communities understand climate change. All these findings are consistent with the Conceptual (2.5) and theoretical (section 3.5.2) frameworks which gave details on how public policy, administrative and socio-political governance could be applied in a way that enhances community participation in climate change policy formulation and implementation.

The findings that experts drew lessons from the challenges they faced during climate change programmes implemented by the UNDP climate change unit is in line with the theoretical framework. The four challenges alluded to by the experts have important implications for the development of a contextual participatory strategy. These findings confirmed that challenges faced during community participation require changing the mindset and attending to poverty issues. This concurs with the theoretical framework that climate change problems are linked to other policy problems (Ebi and Semenza, 2008; Hawkins and Wang, 2012). The Manonyane communities' case particularly indicated that climate change is of interest to communities because their participation helps them deal with many issues such as unemployment, development and sustaining livelihoods. Further, politicians emerge as indispensable senior partners who have the capacity to hamper or enhance community participation. There is also a need to support community independence to adapt to climate change for sustainable livelihoods long after climate change programmes facilitated by policymakers. Finally, the results show that solutions are provided per context (sector or community) which justifies the need for a contextual participatory strategy.

5.8.2 Community awareness of climate change and climate change policy and its influence on community participation

The concept community awareness of climate change was measured in the Manonyane communities through Walker and Avant's approach as conceptualised in the theoretical framework (Section 3.2). The findings were consistent in confirming that community awareness influenced community participation in climate change policy formulation and implementation. Indeed, the Manonyane communities' definition of community awareness of climate change included the understanding of climate change definition, causes, impacts, risks and planned responses (mitigation and adaptation) based on information or experience (Shepard et al., 2018) (Section 3.2.2.1), which they claimed not to know from a scientific point of view. These findings provide an explanation that information and experience could be important in causing communities to be well informed and critically conscious about climate change (Lorenzoni et al., 2007:447; Friis-Hansen, 2017b:15) (Section 3.2.2.1). Despite community participation being a democratic right, according to the theoretical framework of this study (Section 3.3.3.4.1), the Manonyane communities bemoaned a lack of participation in climate change policy processes. The public administrators and politicians conceded that communities were not participating in climate change policy formulation and implementation. Thus, it could help the Lesotho policymakers to know that the Manonyane communities are willing to participate in climate change policy formulation and implementation through the leadership of their chiefs. The case of the Manonyane communities revealed that these communities believed climate change was a community issue because of its negative impacts on their livelihoods. Therefore, the Manonyane communities prefer public gatherings to other participatory techniques because it is easy for them. This information on the state of the Manonyane community awareness of climate change and climate change policy could assist policymakers with future planning interventions that seek to support bottom-up approaches to help communities understand the definition, impacts, causes, policy processes, risks and planned adaptation and mitigation responses to climate change.

Consistent with the conceptual framework (Section 3.3.3.4.2), the public administrators' view confirmed that without administrative governance, the Manonyane community's awareness of climate change is negatively affected (Section 3.2.2.4.2) (Friis-Hansen, 2017a). The results concurred with the literature that administrative governance is synonymous with facilitating community participation. This is because public administrators in Lesotho were the ones in direct contact with communities, implementing the climate change programmes, for example, the Environment, Meteorology and Climate and Planning departments. The public administrators' view illustrated that financial resources were key to the public administrators' ability to build support, co-ordinate co-production and facilitate collaboration for NCCP policy formulation and implementation through the use of participatory techniques. It seemed the public administrators' role in community participation was affected by a lack of finances. A lack of finances was attributed to change of governments, which participants thought hampered successive politicians to strengthen communication on climate change through formulating legislation that supports community awareness, sourcing funds and managing power dynamics to increase community awareness of climate change. This finding implied that public policy governance has to open the system of governance to enable public administrators to reach

communities to enable them to acquire knowledge about climate change and collectively develop solutions for their climate change problems.

5.8.2.1 Enhancing community awareness of climate change using participatory techniques

The conceptual framework (Section 2.5) found that public administrators build support, co-ordinate co-production and facilitate collaboration by using participatory techniques (van Aalst et al., 2008; Burnside-Lawry and Carvalho, 2016; Brink and Wamsler, 2019). Contrastingly, the findings from the Manonyane communities indicated that community members did not use any participatory techniques to enhance their awareness of climate change. The Manonyane communities' case illustrated that a lack of formalised community participation lead communities into believing that climate change policies do not exist. Such situations could be exacerbated if communities are only told of decisions made somewhere. Undisputable is that in the absence of scientific information, indigenous knowledge systems become an available way of sharing information on climate change through word of mouth as the convenient "participatory technique". The reason for relying on indigenous knowledge systems may have something to do with communities being able to easily access climate change information passed on from one person to another because of lacking facilitation through administrative governance. It is, therefore, likely that the case of Manonyane communities depicts a lack of applied administrative governance to facilitate participatory techniques.

5.8.2.2 Influence of community awareness of climate change and climate change policy on community participation in policy formulation and implementation

The findings from this study indicate that chiefs and politicians in the MCC believed that the Manonyane communities' lack of participation in climate change policy formulation and implementation was because they lacked scientific knowledge of climate change and climate change policy processes. The chiefs' responses reiterated the importance of administrative and public policy governance in facilitating community participation of the Manonyane communities when they contended that without the central government's support, community participation would not be successful. These findings suggest that the Manonyane communities' awareness of climate change was affected by the system of governance, which was closed. Based on the theoretical framework (Section 3.2.2.4.3), community-based climate change solutions require the Lesotho government to be open and accessible to communities (Osborne et al., 2013:10; Robinson, 2015; Dang, 2018), which was not the case in the Manonyane communities. This brings in the foundational values of interaction, trust and legitimacy during each stage of policy formulation and implementation processes (Mees et al., 2019). The Manonyane communities' case illustrated that the politicians' role would be to invite the communities to participate in climate change policy formulation and implementation in a pre-arranged manner (Brinkerhoff and Crosby, 2002:54). Noteworthy is that the politicians representing the Manonyane communities such as the councillors and a member of parliament were not involved in climate change policy formulation and implementation which is not encouraging if community participation is to be enhanced. Some of the issues emerging from these findings relate to the Manonyane communities, chiefs and politicians being unaware of a bill or policy. Consequently, these results are significant in two major respects i) the need to have an open system of governance and ii) the need to reach out to the Manonyane communities to make them understand the processes surrounding the debating of a bill or policy to

enhance their awareness of climate change policy formulation and implementation. It could help if the Parliament Natural Resources, Tourism and Land Portfolio Committee, had the legal mandate to engage communities and other government ministries which submit the bills to it. This will allow this Committee to continuously engage communities to understand the purpose and importance of their contribution to bills.

5.8.2.3 Disseminating information on climate change causes, risks and impacts

Repeatedly, the findings that the Manonyane communities and their chiefs consensually refute that there was no formal way for them to receive information on climate change causes, risks and impacts illustrate that information on climate change causes, risks and impacts was not readily available. The results indicate that the Manonyane communities observed climate change on their own. The findings are relevant in showing how public policy governance can hinder or enhance community participation in climate change policy formulation and implementation if it fails to ensure community awareness of climate change. Community awareness of climate change was identified as a 'pre-cursor' for active community participation in the theoretical framework (Hajito et al., 2015:355) (Section 3.2.2.5). Despite acknowledging that wildfires were discouraged by law, the case of the Manonyane communities demonstrated that wildfires were still a problem because community members secretly burnt grass. This behaviour (of burning grass) by the Manonyane communities showed that it could benefit if the information about climate change was shared on Lesotho radios and television and by any other participatory techniques suggested in the conceptual framework. Additionally, it seems that word of mouth was also effective in disseminating information although the conceptual framework did not include it as a participatory technique. A few individual community members and the chiefs could be trained to share such information at public gathering platforms in their respective communities.

The theoretical framework premised that for communities to influence climate change policies, access to adequate information on climate change causes, risks and impacts was required for active community participation (Cai et al., 2017; Shepard et al., 2018). The way information was disseminated and collected in the Manonyane communities had a huge bearing on their lack of participation in the NCCP formulation. Thus, the term 'well informed' as defined by Schütz (1946:465) in the theoretical framework (Section 3.2.2.2) could not apply to the Manonyane communities. The Manonyane communities' knowledge of climate change was not reasonably founded opinions on climate change impacts in their communities. The information about climate change impacts was socially driven knowledge, gained from fellow community members. Eyewitnesses, community members, elders and people in authority (chiefs and councillors) passed on such information. The findings confirm that the Manonyane communities were not well informed of climate change because they did not understand climate change causes, risks and impacts (technicalities and implications) as they experienced it in their communities. An implication of these findings from the Manonyane context is that critical consciousness through dialogue, participatory action and collective empowerment is key to enhancing community participation. To achieve this, three things could be done. First, the Manonyane communities should understand the importance of community participation to promote community adaptation over individual adaptation to climate change. Second, the policymakers should ensure that the community members are critically conscious of climate

change (Bulkeley, 2000:328; Wi and Chang, 2019) (section 3.2.2.2). Third, information should be disseminated timeously for communities to adapt to climate change as soon as possible to reduce further harm to their communities. This calls for public policy and administrative governance to specify the difference between community awareness and community understanding and acknowledge that awareness leads to understanding.

The results illustrate that caution should be exercised when sharing information on air pollution, industrialisation and urbanisation. Causes of climate change, such as air pollution, were likely to reduce participation because community members are likely to refute, for instance, the explanation that cars and wildfires emit smoke, as noted by one expert. This is because many community members wish to have cars and firewood is the only source of energy for many Manonyane community members. Perhaps, what could work is linking climate variability's negative effects to community's sources of livelihoods. With deforestation, the experts suggested that it could be linked to strong winds for communities to understand the negative effects of strong winds due to depleting trees which used to shield their houses. Of note, again, is how policymakers inform communities about industrialisation and urbanisation. These findings are not very encouraging because the experts' view suggests that the Manonyane communities could mistake talking about industrialisation for anti-employment creation. Similarly, urbanisation could be seen as likely to hamper community participation. This is because urbanisation could mean telling people to stay in the mountains and never to come to Maseru where there is good service delivery. Perhaps the most important suggestion would be Lesotho policymakers should improve service delivery in disadvantaged rural areas in the mountains to reduce rural to urban migration, as suggested by experts.

5.8.2.4 Enhancing community awareness of climate change through socio-political, administrative and public policy governance

In agreement to the theoretical framework which found that community participation is increased by having knowledge of what needs to be done (Section 3.2.2.1) (Adenle et al., 2017; D'haen and Nielsen, 2017), the Manonyane communities did not know the aims, procedures and expected mitigation and adaptation responses, neither were they aware of the NCCP, the actors involved and the intended adaptation for their communities. Likewise, the Manonyane communities, chiefs and politicians admitted that they were not aware of the planned adaptation and mitigation responses. The lack of governance activities (co-production, deliberation, democratisation and policy nudging) in the Manonyane communities to enable the free flow of information on proposed and existing activities to be implemented was noted in this study as one factor hampering the Manonyane community participation in climate change policy processes. As noted in the theoretical framework (Section 3.2.2.1), the Manonyane communities were aware of the usual hazards caused by changes in weather patterns over a long period of time but did not understand climate change. The impact of climate change on agricultural production was the main issue for the Manonyane communities. It can therefore be assumed that the application of socio-political, administrative and public policy governance could increase community awareness of climate change. Based on the Manonyane communities' responses, socio-political, administrative and public policy, governance should define community awareness of climate change. It seems possible that community awareness of climate change should include one's understanding of the climate

change definition, causes, impacts, risks and planned mitigation and adaptation. Learning from the Manonyane context, having information and experience seems to increase the chances of communities to be well informed and critically conscious about climate change (Lorenzoni et al., 2007:447; Friis-Hansen, 2017b:15). Being well informed and understanding increases community participation during climate change policy formulation and implementation (Anderson, 2012:198; Shahid and Piracha, 2016:38).

Socio-political governance – The Manonyane communities' case proved that communities understand the difference between being aware of climate change using scientific knowledge and using indigenous knowledge systems. This was evident in the Manonayne communities' responses when they continuously claimed that they were only aware of climate change through indigenous knowledge systems and not through education by the experts. Similar to the theoretical framework, the Manonyane communities' case proved that community understanding and awareness of climate change could not be blurred together. Therefore, taking it from the public administrators' and politicians' responses, it is apparent that they did not think differentiating such terms could be critical. For instance, community awareness of climate change was mainly through indigenous knowledge systems in the Manonyane communities' case. In light of this explanation, it could be helpful if socio-political governance considers indigenous knowledge systems in designing awareness campaign programmes. Socio-political governance could consider norms such as rotational animal grazing, rotational grass cutting and cutting trees for firewood in the awareness programmes.

Administrative governance – The public administrators' responses suggested recommendations similar to the theoretical framework which could increase the administrative governance's capacity to enhance community participation. Four recommendations to enhance administrative governance emerged from the public administrators' view: i) Politicians to avail financial resources to support the public administrators' ability to build support, co-ordinate co-production and facilitate collaboration for the NCCP; ii) Political stability to strengthen communication on climate change through formulating legislation that supports community awareness, sourcing funds and managing power dynamics to increase community awareness of climate change; iii) Opening up of the system of governance to enable public administrators to reach communities; iv) Reducing political-administrative interface in climate change policy formulation and implementation processes. Further, the experts recommended the return of extension officers because they interacted with communities, acting as mediators between ministries and communities. Moreover, the experts also mentioned the need to resuscitate District Disaster Management Teams (DDMTs) and the Village Disaster Management Teams (VDMTs) as the medium of spreading information to communities. Unlike before, experts reported that the communities were no longer meeting to report to the DMA every month. In contrast, it was clear that the Manonyane communities wanted all community members to participate in climate change issues, as opposed to having a few representatives.

The public administrators, as main actors of administrative governance, should define community awareness of climate change to enhance community participation. This is because one interesting finding was that the public administrator viewed the

concepts community awareness and understanding of climate change, to be technically different, thus dismissing the importance of differentiating them in practice. Admittedly, the public administrators concurred that the communities were generally aware of climate change using indigenous knowledge systems but were not well informed and critically conscious about climate change. Therefore, the public administrators' contradiction on the definition of the concepts is particularly useful in showing the need to define the concept community awareness of climate change if community participation could be enhanced in climate change policy formulation and implementation. Noteworthy is that the Manonyane communities have an understanding that the two terms are different in meaning despite being interrelated. Participants claimed that being aware of climate change does not mean understanding. The public administrators said that they were using the words in practice according to the international documents. It is, therefore, likely that a general agreement should be reached to define community awareness of climate change if community participation is to be enhanced. Thus, the empirical data from the case of the Manonyane communities provided evidence that community awareness of climate change should be defined.

Concerning administrative governance, the most striking result to emerge from the data was that many ministries were working differently on specific climate change programmes. These were the MFRSC, MAFS, MTEC, Ministry of Energy and Meteorology and MLGC. This reflects differences in the size, level of community participation and mandate of different Lesotho ministries in climate change issues. Thus, these results from the public administrators' view portray disintegrated administrative governance attempting to include communities in climate change policy implementation. There could be several possible explanations for this disintegration which could be linked to the lack of community awareness of climate change policy processes. In line with the theoretical framework (Section 3.2.2.6), administrative governance could consider co-production, collaboration and deliberation as empirical referents of community awareness of climate change to ensure co-ordination of community participation. Under such circumstances, socio-political, administrative and public policy governance should be defined as part of the contextual participatory strategy for communities' awareness of climate change to occur (Lorenzonio et al., 2007). Resultantly, effective governance is likely to promote community awareness of climate change and successful co-production, collaboration and deliberation, avoiding fragmented community participation.

Public policy governance – The findings that the Manonyane communities unanimously agreed that there was no formal participation of all the communities in the NCCP highlighted a lack of applied public policy governance. Similar to the theoretical framework, the Manonyane communities' case resembled communities which could not participate in the NCCP because it seemed the system of governance was closed for various reasons. The enhancement of community participation under such circumstances portrayed in the Manonyane communities' case requires the application of public policy governance. Thus, the theoretical framework noted that the policymakers' role would be to invite communities to participate in climate change policy formulation and implementation (Brinkerhoff and Crosby, 2002:54), not only when the bill is tabled as was the case with the Parliament Natural Resources, Tourism, Land and Portfolio Committee. Public policy governance would be about conducting joint activities to enhance their awareness of climate change and related decision-making processes. The Manonyane communities' case showed that building relationships through an open systems of governance was critical to enhance

community participation, for communities feel their ideas are included in the climate change policy (Brink and Wamsler, 2019; Mees et al., 2019). Contrastingly, the Manonyane communities felt that their priorities and preferences were not considered because the climate change policy formulation and implementation was a closed process.

5.8.3 Enhancing community participation through community understanding of climate change and climate change policy

The theoretical framework (Section 3.2.1) found that community understanding regarding climate change and climate change policy influenced their participation in climate change policy formulation and implementation (Bulkeley, 2000; Zahran et al., 2006; Semenza et al., 2008; Halady and Rao, 2010; Lee et al., 2015; Ross et al., 2015:88; Pandey, 2019). (Bulkeley, 2000; Zahran et al., 2006; Semenza et al., 2008; Halady and Rao, 2010; Lee et al., 2015; Ross et al., 2016:88; Pandey, 2019) Likewise, the findings of this study confirmed that the Manonyane communities' level of understanding climate change influenced their lack of participation in the NCCP policy formulation and implementation. Related to the theoretical framework (Section 3.2.1), this finding may be explained by the fact that community understanding of climate change lacked clarity regarding its operational definition in Lesotho. The level of community understanding of climate change depends on the specific laid theory defining community understanding of climate change. The Lesotho NCCP was formulated under the Ministry of Energy and Meteorology with no clear participation procedures defining which ministry should do what, when and how, to enhance community understanding of climate change and climate change policy.

Contrary to how the theoretical framework had defined community understanding, the Manonyane communities' understanding of climate change could not be measured against the theoretical definition (Section 3.2.1). The Manonyane communities' understanding of climate change established that climate change can be defined using indigenous knowledge systems. Even so, the Manonyane communities' case demonstrated that indigenous knowledge systems should be complemented with scientific information on issues of climate change definition, impacts, causes, policy processes, risks and planned mitigation and adaptation responses. This is possible if participation procedures are availed to communities through the application of socio-political, administrative and public policy governance. Further, the lack of an operational definition for the concept (community understanding of climate change) may account for fragmented community participation during climate change policy formulation and implementation in the Lesotho national climate change policy formulation and implementation (Machepha, 2010:18; Miller, 2014:79; Ministry of Energy and Meteorology, 2017:24). Therefore, the findings of this study concur with the theoretical framework (Section 3.2.1.1) which suggests that participation procedures should be informed by applying socio-political, administrative and public policy governance to increase their understanding of climate change regarding its definition, impacts, causes, policy processes, risks and planned responses.

5.8.3.1 Community's understanding of climate change impacts

Consistent with the theoretical framework, this research found that the Manonyane communities understood climate change impacts as follows: reduced agricultural production, punishment by God because of moral decadence, heavy destructive

rainfall, hail storms, destruction of infrastructure and property by strong winds or rain and changes in the seasons of the year. Following the analysis of the findings from the Manonyane communities, three issues emerged from the Manonyane communities' knowledge about the likelihood and severity of expected climate change impacts. First, the results show that rural communities were affected differently compared to communities which are in townships, for example, the Roma Valley communities surrounding the NUL campus. Second, the chiefs and politicians made it clear that their communities did not understand climate change through the facilitation of the government. In agreement with the Manonyane communities' views, the chiefs and politicians confirmed that some community members heard about climate change through the radio but that did not translate into understanding. The politicians, chiefs and Manonyane communities concurred, indicating that the community members were not knowledgeable about the likelihood and severity of expected climate change impacts because no one was providing such information. A possible explanation for this finding could be that the Manonyane communities, chiefs and politicians believed that being aware of climate change does not mean understanding. Emphatically, the Manonyane communities, chiefs and politicians repeated what they already mentioned when they gave their view of climate change impacts (Section 5.3.3 and 5.4.3). Third, the communities in the Roma Valley were said to be different from other villages in the Manonyane Community Council area because they had water, electricity and roads. The research found that the main worry of some of the communities in Manonyane was weather changes and not climate change. A possible explanation for this finding might be that the communities in the Roma Valley have community members from other districts, who do not depend on agriculture but works at the National University of Lesotho and the St Joseph's Hospital. However, the native community members depend on agriculture.

5.8.3.2 Manonyane communities' understanding of climate change causes

The findings of this study regarding the Manonyane communities' understanding of the causes of climate change were that communities did not understand the causes of climate change from a scientific point of view. The results from the Manonyane communities, chiefs and politicians substantiated that the communities knew the difference between community understanding and community awareness of climate change. The results revealed that the Manonyane communities understood climate change by: i) having knowledge about climate change through indigenous knowledge systems; iii) being aware of climate change, and iv) they had reason to believe in climate change because it was affecting their livelihoods. Noteworthy is that the Manonyane communities did not have the ability to comprehend climate change outside the impacts they were witnessing. Accordingly, the communities did not scientifically understand climate change causes, impacts, policy processes, risks and planned mitigation and adaptation measures as defined in the theoretical framework (Section 3.2.1.1) (Wi and Chang, 2019). The Manonyane communities case confirmed the theoretical framework's finding that without these mentioned attributes, community understanding of climate change cannot be said to have occurred (Section 3.2.1.2).

Using their indigenous knowledge systems, many themes were coming out of the Manonyane communities' responses on how they understood the causes of climate change. The theoretical framework (Section 3.2.1.1) found that community understanding which influences participation relates to community understanding of the causes of climate change related to

human activities (Lorenzoni et al., 2007; Whitmarsh, 2009; Niles et al., 2013; Cai et al., 2017). It seems possible that the Manonyane communities were not considering human activities such as deforestation, wildfires, air pollution, urbanisation, industrialisation and poor agricultural practices as causing climate change (Section 3.2.1.1). Contrary to the theoretical framework (Section 3.2.1.1), the Manonyane communities did not know how naturally occurring greenhouse gases, such as carbon dioxide, methane and nitrogen oxide keep the earth warm enough for humans to live (IPCC, 1990:xiv). Despite noticing natural causes such as climate variability, temperature changes and weather changes, the Manonyane communities' understanding of climate change causes was attributed to many different things stemming from lacking adherence to indigenous knowledge systems, pampers, built dams and South African factories. Consequently, consistent with the IPCC (1990:xiv; 2014b:9), the Manonyane communities' case demonstrates that it is when communities understand how human activities increase greenhouse gas concentrations in the atmosphere that there is a chance of behaviour change in motivating their participation in climate change policy formulation and implementation.

5.8.3.3 Enhancing community participation through understanding climate change decision-making processes

Section 3.2.1.4 of the theoretical framework found that socio-political, administrative and public policy governance are antecedents of community understanding of climate change. Application of these governance components should bring community members together for community participation in climate change policy formulation and implementation. Contrastingly, the study found that the Manonyane communities were not getting official information about climate change decision-making processes. Another finding that emerged was that the Manonyane communities had an interest in climate change policy formulation and implementation because it is a matter of their livelihood. This was echoed when some community members claimed that if ever an opportunity to participate in climate change policy formulation and implementation was given, probably it was given to irrelevant people. The sentiment might be explained by the fact that the Manonyane communities were expressing their concern on lacking participation in climate change issues. Another issue which emerged from the findings was that the Manonyane communities disapproved the idea of asking councillors and chiefs about community perspectives arguing that a few individuals will not represent their communities, particularly on climate change issues.

5.8.3.4 Communities' understanding of climate change risks on themselves and the environment

One of the critical issues, which emerged from the Manonyane communities' responses on climate change risks was the importance of socio-political, administrative and public policy governance. The Manonyane communities, chiefs and politicians acknowledged that they did not understand what was required of them as a community. Another notable finding from the chiefs' and Manonyane communities' response was the inability to separate climate change impacts and climate change risks. Generally, community members narrated the climate change impacts as their risks. The results from the Manonyane communities demonstrated that risks vary from community to community just like impacts. Consistent with the theoretical framework (Section 3.2.1.1), the Manonyane communities expressed willingness to participate in climate change policy process because climate change risks placed their communities on the risk of food insecurity, loss of rural livelihoods, insufficient access to drinking water, reduced agricultural production, strong winds and floods (Niles et al., 2013; IPCC,

2014b:15; Tan and Xu, 2019). Owing to this explanation, it is possible to assume that community understanding of climate change risks enhances community participation.

5.8.3.5 Use of participatory techniques to enhance community understanding

The Manonyane communities agreed in their responses that no formal organised community participation in climate change policy formulation and implementation was happening in their communities. However, the Manonyane communities were willing to participate in climate change policy processes if given the opportunity to do so. The Manonyane communities' case affirmed that participatory techniques depends on administrative governance. It could be beneficial to the Manonyane communities if resource maps and transects could be used to ascertain available trees, crop patterns and level of livelihood. Mapped ways could be part of the NCCP during the 2027 evaluation of the policy. The advantage of resource maps is that they will address contemporary Manonyane challenges regarding their understanding of the importance of terracing, contour ploughing and water diversion furrows. The Manonyane communities' case reveals that there is need for community members to change behaviour regarding deforestation, wildfires and the use of poor agricultural practices. If the resource maps are done properly, human activities that exacerbate climate change would have been managed in the Manonyane communities. This is because such community activities represent their daily lives because the Manonyane communities depend on agriculture as a source of livelihood. The Manonyane communities case pointed to the lack of facilitation by administrative governance for communities to use complicated participatory technique's which could hinder the policymakers from getting information on natural resources, indigenous technology, soils, vegetation, topography and farming practices noted in this study (Section 5.3.3).

5.8.3.6 Enhancing community understanding of climate change through socio-political, administrative and public policy governance

The results from the Manonyane communities' case shows that socio-political governance, administrative governance and public policy governance seem not to be applied to enhance community participation. The community members were able to differentiate between awareness and understanding of climate change. In contrast, the policymakers seemed not bothered by the differences in the terms. Thus, the Manonyane communities' case proved that defining the terms could be useful to co-ordinate community awareness and understanding of climate change. The policymakers as key collaborators were not forming new institutions and regulations to include indigenous knowledge systems in climate change policy (Swyngedouw, 2005:2003; Katsamunsk, 2016:135). Using the Manonyane communities, it appeared that they understood their environment and had their means to adapt using indigenous knowledge systems. Undoubtedly, the Manonyane communities understood their environment through indigenous knowledge systems. It could enhance good relationships between communities and policymakers if the latter understand the Manonyane indigenous knowledge systems (Pettenger, 2007a; Adger et al., 2012; Egeru, 2012; Etchart, 2017; Hegger et al., 2017). Socio-political governance is critical to empower communities which were traditionally left out of the climate change policy processes (Anderson, 2003:102-105; Bauer et al., 2012). It could be beneficial for policymakers to adopt socio-political governance and apply it within the target communities. Indigenous knowledge

systems, combined with scientific knowledge, might increase the community understanding of climate change. Community understanding of climate change is of particular importance because it helps to enhance their level of participation in decision making processes (Section 3.2.1.5).

According to the Manonyane communities' case, it is inevitable that the level of community understanding is determined by the type of governance whether socio-political, administrative or public policy governance. The Manonyane communities were willing to participate in climate change policy formulation and implementation. However, the lack of participation was repeatedly linked to a lack of administrative and public policy governance. This was inconsistent with the theoretical framework which identified administrative governance's role as that of building trust, strengthening collaborations and leading policy implementation. The fact that the Manonyane communities did not participate in the NCCP as co-decision makers, co-planners, co-designers and co-evaluators of the climate change policy shows the extent to which the use of socio-political, administrative and public policy governance should be applied to enhance community participation (Wu et al., 2018:7). Nevertheless, the public administrators emphasised the role of politicians, claiming that community participation in climate change policy formulation and implementation is a political process which could be hampered or enhanced by politicians. Every actor is required to understand such a political process to access the communities. With this explanation from the public administrators, the responsibility of ensuring community understanding of climate change and climate change policy was placed on public policy governance. Owing to this explanation, the Parliament and Natural Resources, Tourism and Land Portfolio Committee should have the legal mandate to unify all forms of governance and climate actions. Consequently, the Manonyane communities should understand climate change governance processes (socio-political, administrative and public policy governance) in Lesotho to enhance their participation.

5.8.4 Using indigenous knowledge systems in climate change policy to enhance community participation

The Manonyane communities' case demonstrated the theoretical framework findings (Section 3.3) that the use of indigenous knowledge systems in climate change policy formulation and implementation could facilitate community participation if socio-political and administrative governance is effectively applied. The Manonyane communities' case proved that there was a link between climate change policy formulation and implementation and climate governance in general. Therefore, considering the way the Manonyane communities were aware of climate change using indigenous knowledge systems, it could be assumed that the use of indigenous knowledge systems could facilitate their participation (Meakin, 1992; UNEP, 2015; United Nations, 2015; Chanza and De Wit, 2016; Wamsler et al., 2020). What makes one curious about the Manonyane communities' case regarding indigenous knowledge systems is that there was a lot of joy and excitement during the interviews in all the communities when community members were sharing their knowledge on the subject matter. The joy could be explained by the fact that it felt good for the Manonyane communities to talk about something they knew, lived and experienced. The study also found that the Manonyane communities did not use participatory techniques as a medium of communication with the policymakers.

As identified in the theoretical framework (Section 3.3), the Manonyane indigenous knowledge systems could be used in many ways during climate change policy formulation and implementation. Details of the many ways that can be used are in Section 3.3. Therefore, using indigenous knowledge systems could motivate behaviour change towards participation in climate change policy formulation and implementation. Using the Manonyane communities' case, a critical analysis is presented showing how community participation in climate change policy formulation and implementation could be enhanced using indigenous knowledge systems.

5.8.4.1 Using values to enhance community participation

The most striking result that emerged from the Manonyane communities, chiefs and politicians' responses was claiming that a lack of adherence to cultural values caused climate change. An explanation of what constituted values was given in the theoretical framework to conceptualise values. Values were described as community principles, intrinsically valuable or desirable (Merriam-Webster Dictionary, 2020) (Section 3.3.1.1.1). Consistent with the theoretical framework, values were influencing the perception and interpretation about climate change of the Manonyane communities (Wolf et al., 2013:548; Taylor et al., 2014) (Section 3.3.1.1.1). The Manonyane communities' case showed that values may indirectly assist the policymakers to identify, assess and monitor the impacts of climate change within the Manonyane communities. The significance of the sequence of changes in notable events can be explained from the Manonyane communities' values, making community members to understand, for example, why traditional doctors were failing to contain hail as expected. Deliberations on these Manonyane community-specific values to be incorporated into the climate change policy could enhance their participation in policy formulation and implementation because values were determining the Manonyane communities' perceptions of climate change risks (Hamilton and Lubell, 2018). However, some Manonyane community members regarded cultural values as something which did not link to climate change, but merely cultural respect, highlighting conflicting beliefs of values among members within the same community (Dang, 2018:11). Against this background, policymakers should make efforts to document such values and convince the Manonyane communities that climate change is anthropogenic but maintaining that cultural values bring respect and shows identity for the community.

5.8.4.2 Participatory techniques to consider values in climate change adaptation programme

The theoretical framework (Section 3.3.1.1.1) explained how values could facilitate community participation by using various participatory techniques. It was difficult to establish a link between participatory techniques and the Manonyane communities' ability to identify, assess and monitor climate change impacts related to lack of adherence to the community's values because socio-political governance was not applied in the Manonyane communities context. Impact diagrams, historical calendars and seasonal calendars were not used to consider values in climate change adaptation programmes organised by policymakers. It is, of course, critical to be cautious about using the Manonyane communities values because all of them, except the initiation school, were intrinsic. Instead, in line with the theoretical framework (Section 3.3.1.1.1), it may be useful for the policymakers to use impact analysis to assess and monitor the extent of the damage on the ecosystems because of human activities (poor agricultural practices, cattle grazing, cutting trees for fuelwood and building houses, collecting thatching grass and wildfires).

This is because the Manonyane communities adherence' case is indicating that using values such as "*litharisa*" to stop hailstorm is difficult because it is just a community belief. Maybe, historical and seasonal calendars could be used to identify and assess historical information about climate change, as suggested in the theoretical framework. The Manonyane communities would then identify major events (e.g. drought and floods) which affected their values. Conclusions can be made and included as part of the awareness programme based on the community's contribution.

5.8.4.3 Using community norms to enhance community participation

In accordance with the theoretical framework (Section 3.3.1.1.2), an explanation given to norms for this study when collecting data from the Manonyane communities was based on the acceptable principles and standards or behaviour regarded as critical and binding in these communities. The study results focused on the norms which guided, controlled and regulated the Manonyane community members specifically on cattle grazing, cutting trees for firewood and building houses, collecting grass for thatching houses, history about agricultural practices and wildfires. From these results, this case indicated that the chiefs were pivotal in monitoring community norms. Hence, any intervention to consider the community norms should consider the role of chiefs. The results confirmed that the practised norms were to sustain livelihoods but unknowingly adapting to climate change. These specific norms were chosen for the Manonyane communities because of how they exacerbate climate change. The findings from the reported data found that the Manonyane community norms could be used to: i) identify changes in climate, ii) identify current and past interventions, and iii) promote the socio-economic well-being of the Manonyane communities. These uses of norms can act as an incentive and simultaneously enhancing community participation during climate change policy formulation and implementation, as affirmed by the Manonyane communities in their responses.

Cattle grazing and collecting grass for thatching houses – It seemed the Manonyane communities already follow a good practice of rotational cattle grazing and collecting grass for building houses, which dates back to King Moshoeshoe 1. However, measures should be done to avoid the theft of animals, as reported by Ha Maliele community which no longer practise rotational grazing because of rampant animal theft. The Manonyane communities' case ascertained that community norms can be used to identify explicit climate change impacts related to community norms to encourage their participation during climate change policy formulation and implementation.

Cutting trees for firewood and building houses – Cutting down trees without replacement for firewood and building houses was done in all the Manonyane communities because communities did not have the capacity to plant trees without the help of experts. The initiation schools were also cited as using a lot of firewood. Further, one unanticipated finding was the dislike for exotic trees, particularly the pine tree. The Manonyane communities' case demonstrated how indigenous trees are preferred over exotic trees because indigenous trees re-grow when cut compared to the pine tree which caused problems: i) the pine tree did not regrow after being cut; ii) The pine tree consumed a lot of water; iii) No plants grow around the pine tree. This information could be useful to policymakers to understand the effects of planting exotic trees on indigenous soil and how such trees exacerbate climate change.

History about agricultural practices – The results indicated that the Manonyane communities emphasised agriculture as their source of livelihoods. One disturbing finding was about soil erosion which community members described as a national environmental problem dating back to many years ago. Considering the use of extension workers could help the Manonyane communities to get guidance from experts to use appropriate farming methods when practising agriculture.

Wildfires – Despite starting wildfires secretly, the Manonyane community members understood that wildfires destroyed plant seeds. It could be significant to ensure the laws which forbid people from burning the grass are strengthened.

Confirming the results from the theoretical framework (Section 3.3.1.1.2), the Manonyane communities' case showed that norms could be used to facilitate bottom-up community adaptation alternatives in the climate change policy and to identify past and current community interventions. Therefore, the Manonyane communities' case highlights that indigenous knowledge systems about norms can be used to promote the socio-economic well-being of the Manonyane communities because the norms are practised as a source of livelihoods (Gautam et al., 2014:77).

5.8.4.4 Participatory techniques used to document norms that relate to climate change

The findings from the Manonyane community members, chiefs and politicians' results showed that seasonal calendars, timeline and trend analysis were not used to document the Manonyane community norms relating to climate change. A possible explanation for this finding is that the Manonyane communities repeatedly bemoaned the lack of facilitation by the "*central government*" for them to participate in climate change policy formulation and implementation. Consequently, this finding accords with many responses given in many questions for this study. In line with the theoretical framework (Section 3.3.1.1.2), participatory techniques should be integrated with livelihood strategies to consider existing Manonyane community norms such as those mentioned in Section 5.3.4 (van Aalst et al., 2008:170; Ensor and Berger, 2009:231; Gautam et al., 2014:81-82; Aben, 2017:90).

The Manonyane communities' case indicates that norms can promote the socio-economic well-being of the Manonyane communities. As part of indigenous knowledge systems, norms could also be useful to promote the socio-economic well-being of the target communities, which is an incentive for community participation during climate change policy formulation and implementation (Gautam et al., 2014:77). Through the use of seasonal calendars and trend analysis, cattle grazing, cutting trees for firewood and building houses, collecting grass for thatching houses, history about agricultural practices and wildfires should be considered as Manonyane community norms. This may enhance their participation and collaboration in formulating climate change policies based on the practices they already do and know their disadvantages.

5.8.4.5 Using indigenous knowledge (traditional knowledge) to enhance community participation

Consistent with the theoretical framework (Section 3.3.1.1.3), an explanation of indigenous knowledge was a body of universally shared knowledge and experiences for the Manonyane communities by the local people. In line with the theoretical

framework (Section 3.3.1.1.3), traditional knowledge included knowledge about plants, animals, natural resources and weather (Barker, 2016). Indigenous knowledge on behaviour of animals, birds attributed to climate change, observing climate variability, studying the environment, studying weather, type of clouds, vegetation and wind direction in climate change adaptation strategies were part of the responses from the Manonyane communities, chiefs and politicians. In the Manonyane communities' case, indigenous knowledge assisted the Manonyane communities to study weather, observe climate variability and study their environment.

Explaining how indigenous knowledge facilitates the use of indigenous knowledge systems in the climate change policy could guide how the Manonyane community participation should be enhanced. The Manonyane communities case has proven that indigenous knowledge could form part of climate change projections, based on something communities experience and know and can be used for future scientific research (Egeru, 2012; Jiri et al., 2016). The responses given in Section 5.3.4 confirmed that working with a community could be better because the community members live together geographically and share the same experiences (Petzold et al., 2020:3). The case of the Manonyane communities pointed out indicators that weather experts and researchers could use to forecast expected rainfall, appropriate crop mix and appropriate farming methods in the climate change policy (Gautam et al., 2014:88). Thus, the findings about the Manonyane communities' local observations on vegetation, the direction of wind, type of clouds and the behaviour of animals and birds could be useful in this regard (Shah et al., 1991:3; Egeru, 2012:221; Jiri et al., 2016:160).

5.8.4.6 Participatory techniques to adapt indigenous knowledge into the climate change policy to enhance community participation

The findings concerning the use of participatory techniques were disturbing because all the Manonyane communities, chiefs and politicians confirmed that they did not use participatory techniques because no one organised their participation in climate change policy processes. The Manonyane community members agreed that public gatherings could work best to talk about climate change. These results further reveal that the Manonyane communities expressed interest in participating if the policymakers could facilitate the climate change policy process. Resultantly, it seemed to them there was no harm in using focus groups, impact diagrams and mapping, particularly if participating would improve their socio-economic well-being. Critical to note from the results is that the Manonyane community members could not differentiate focus groups from public gatherings. The researcher observed from their responses that any form of a group gathering was a public gathering to them. Therefore, the Manonyane communities' case highlight that it would be the duty of policymakers in their oversight role to make communities understand the participatory techniques chosen for a particular matter. It is critical that policymakers should be patient enough with the less formally educated community members (Shah et al., 1991; Narayanasamy, 2009:121). Impatience may tempt policymakers to dominate the use of participatory techniques (Ensor and Berger, 2009:231; Narayanasamy, 2009:154).

5.8.4.7 Using culture (set customs and beliefs) to enhance community participation

To give an explanation of culture, the Manonyane communities' case focused on culture (customs and set of beliefs in physical things given meanings, rituals, identity, art and stories and collective community achievements, which was consistent with the definition in the theoretical framework (Section 3.3.1.4) (Adger et al., 2012:5; Oxford English Dictionary, 2017:5; Dang, 2018; Brink and Wamsler, 2019). Although the results from the Manonyane communities, chiefs and politicians (refer to Sections 5.3.4, 5.4.4 and 5.6.4 for details) did not record many of the cultural examples during the interviews, culture provides decision-making rules of thumb compulsory for all community members (Ajani et al., 2013:27). The Manonyane communities' case exposed that they did not have community achievements, art, identity and physical things used to adapt to climate change, raising emotions to many Manonyane communities who expressed their disappointment in the way their culture lost value for many reasons, for example, the "*masokoana*" (cooking sticks in rainmaking ceremony). Many of these natural things (wells and creatures living in those water sources) used to predict weather conditions. Sadly, the Manonyane communities confirmed that they were no longer there. Thus, the implications of these findings from this case are that it might be worth sharing the community's priorities, knowledge, needs and capacities (resources) regarding culture (Reid et al., 2009:13), considering that culture gives the policymakers a chance to include communities' view into the climate change policy. The policymakers are instrumental in understanding relevant participatory techniques such as presentations to communities, consensus building, interviews, public hearings and public meetings to assist the Manonyane communities towards reaching agreements regarding how beliefs could be included in the climate change policy.

5.8.4.8 Participatory techniques used to incorporate community culture into the climate change policy

In accordance with the present results, the findings from the politicians were inconsistent with the theoretical framework (Section 3.3.1.1.4) concerning how community participation could be enhanced. Community participation could be enhanced if participatory techniques chosen by the policymakers allow communities to participate as co-producers of the culture, which should be part of the climate change policy. Perhaps the most disturbing finding which was recurring in all the participants' responses was that the Lesotho government departments and ministries were "*operating in silos*". The Manonyane communities' lack of understanding of climate change seems to be attributed to the lack of cross-sector collaboration by policymakers to enhance community participation. Thus, this is why the politicians claimed that the communities said to be involved by different government ministries and departments could be participating but if asked, they would be ignorant about the participation process they were part of. In general, therefore, the Manonyane communities' case indicated the need for cross-sector collaboration to avoid disintegration when involving communities in the climate change policy process.

5.8.4.9 Promoting indigenous knowledge systems through socio-political, administrative and public policy governance

The study found that the interviewed Lesotho ministries and departments did not use indigenous knowledge systems in the current NCCP. Socio-political, administrative and public policy governance was conceptualised as political factors defined as circumstances determining the level of co-governance, democratisation, management of power dynamics and policy nudging

to incorporate indigenous knowledge systems into the climate change policy (Section 3.3.1.2). The results from the Manonyane communities supported the evidence from the politicians, public administrators, experts and chiefs who concurred that a few communities in the Mphahlele's Hoek District were collaborating with the government on a pilot climate change programme called LoCAL. The findings suggest that no co-production (co-planning, co-designing, co-implementing and co-evaluating) was taking place in the Manonyane communities during the formulation of the NCCP. However, the Manonyane communities welcomed the idea of sharing their indigenous knowledge systems for inclusion into the climate change policy. A recurrent theme in the Manonyane communities' case which surfaced showed the need for active facilitation, which justifies why the application of socio-political, administrative and public policy governance is inevitable to enhance community participation through the use of indigenous knowledge systems in climate change policy formulation and implementation.

Co-governance – Contrary to the theoretical framework, co-governance appeared missing in the Manonyane communities' context. Policymakers did not involve the Manonyane communities as decision makers and policy beneficiaries during all the stages of NCCP formulation. It remains unclear how the policymakers will get feedback in 2027 when the NCCP would be evaluated. The lack of co-governance confirmed lack of deliberation and collaboration in the Manonyane communities regarding their participation in climate change policy processes (Dodson, 2014:119). It was clear in the Manonyane Communities' case that community indigenous knowledge systems were not used in the NCCP. These results are consistent with that of the theoretical framework, which states that without the application of socio-political, administrative and public policy governance, community indigenous knowledge systems cannot be considered. The theoretical framework suggested that co-governance should lead to collaborative activities allowing communities to co-plan, co-design, co-implement and co-evaluate climate change policy decisions (Ansell and Gash, 2007; Wanda, 2008; Diver, 2017; Mees et al., 2019). In the theoretical framework, co-governance embeds co-production and collaboration (Section 3.3.1.2.1). The Manonyane case indicated that the community's indigenous knowledge systems were not considered to enhance democratic accountability and build support for policy implementation. A lack of democratic accountability could hamper the community support for future climate change implementation programmes.

Democratisation – Democratisation for the purpose of this study was defined as availability of information to communities on how to participate in a non-linear communication through legislation, institutions and regulations (Section 3.5.1.5 and 3.3.1.2.2) (Bulkeley and Mol, 2003:148; Sprain, 2016; Brink and Wamsler, 2019:94). Very little was found from the Manonyane communities on the question of using institutions, new legislation and regulations for communities to share with policymakers their indigenous knowledge systems. The Manonyane communities' case showed that the lack of legislation, institutions and regulations hampered community participation during policy formulation and implementation; this made the climate change policy processes undemocratic (Funder et al., 2017). This provides an explanation for why policymakers are required to facilitate the incorporation of indigenous knowledge systems in the climate change policy to enhance community participation. Trust and confidence should be built when practising democratisation, of which this was lacking in the Manonyane communities' case (Tilly, 2000:3; Bertana, 2020).

In light of this explanation, democratisation may not have been applied to facilitate non-linear interaction with the Manonyane communities allowing them to decide the values, norms, indigenous knowledge and culture relating to climate change for incorporation into the climate change policy (Semplici, 2019). Applying democratisation is critical to enhance community participation, as noted in the theoretical framework that adaptation measures should be tailored according to available community norms, values, indigenous knowledge and culture. Using the case of the Manonyane communities, the already known indigenous knowledge (rotational grazing, understanding the importance of wetlands, protection of certain plants) is successfully done without much or no influence from outsiders (Jiri et al., 2016; Makondo and Thomas, 2018). Resultantly, the Manonyane communities' case confirms that a climate change policy which includes such community indigenous knowledge systems, under the leadership of the chiefs, may make communities to feel obliged to support its implementation (Etchart, 2017).

Management of power dynamics – management of power dynamics was not consistent with the theoretical framework (Section 3.2.1.2.3). The Manonyane communities' case confirmed that the policymakers were not empowering them to give their perspectives on indigenous knowledge systems for addition to the scientific information during the NCCP (Moser, 2009b:288; Egeru, 2012; Mistry and Berardi, 2016:1275; Samaddar et al., 2019). The lack of community participation in key climate change decisions by the Manonyane communities showed that the policymakers should put effort to manage power dynamics (Petzold et al., 2020:2). Consequently, the policymakers should not only acknowledge in the policy that indigenous or scientific knowledge is equally invaluable in the climate change policy, without applying socio-political governance to put this into reality for the Manonyane communities (Makondo and Thomas, 2018:83). The Manonyane communities' case also draws attention to why politicians, public administrators, community representatives and experts should empower communities as previously excluded actors in climate change policy formulation and implementation (Shawoo and Thornton, 2019). Thus, using indigenous knowledge assists to manage such power imbalances. Notable from the Manonyane communities' case is that participation may not happen if communities are not formally organised by policymakers. Additionally, the community may not participate if they do not have trust in the experts assisting them. In light of this explanation, trust in the policymakers emerged as a key factor in enhancing community participation.

5.8.4.10 Projecting appropriate crop mix, appropriate farming methods and forecasting expected rainfall

The results from the politicians showed that the Manonyane communities were having a difficult time in choosing appropriate crop mix, farming methods and were no longer able to forecast the rainfall. Sorghum (drought resistant), beans and maize were the crops mainly grown. The Manonyane communities' case indicates that many communities practised inappropriate farming methods because they waited for the government to hire them just like what was happening through "*fato-fato*" (organised community road works paid by the government). The Manonyane communities' case also revealed how birds, frogs, animals and vegetation are used to forecast expected rainfall and note significant changes caused by climate change (see Table 5.2). It can therefore be assumed that the identified indigenous knowledge systems could be tested scientifically for inclusion in the policy to enhance community participation. Another possible explanation for these results is that the use of

indigenous knowledge systems depends on how the policymakers apply socio-political, administrative and public policy governance. Thus, policymakers should strike a balance between scientific knowledge and indigenous knowledge systems when applying socio-political, administrative and public policy governance.

5.8.4.11 Challenges of indigenous knowledge systems as a way of enhancing community participation

Noteworthy from the politicians' findings is that indigenous knowledge systems were mentioned in the NCCP but it was not clear how they could be included as part of the climate change policy (Ministry of Energy and Meteorology, 2017:17). Consistent with the theoretical framework (Section 3.3.1.3), identifying limitations because of using indigenous knowledge systems in climate change policy to facilitate community participation were difficult because indigenous knowledge systems proved to be helpful in the case of the Manonyane communities. "*Litharisa*", burning grass and rotational animal grazing were considered very useful indigenous knowledge systems, according to the Manonyane communities, chiefs and politicians. For instance, it was reported by politicians that herd boys were failing to adjust to climate change by continuously going to the mountains for remote grazing in December. Unlike before, it is sometimes snowing in December, making it dangerous to go to the mountains, yet the herd boys still go because it is a norm. Snowfalls cause such places inaccessible, making herd boys go without food. It will be dangerous to animals too. The Manonyane communities' case highlights positive impacts of using indigenous knowledge systems to adapt to climate change. The Manonyane communities' case mirrors the theoretical framework (Section 3.3.1.3) which established that climate change is related to environmental issues such as deforestation, desertification, biodiversity loss and socio-economic issues (livelihoods and health) (Pinkse and Kolk, 2012:177; Ukwandu, 2018). Several factors could explain why the Manonyane communities expressed interest to participate in climate change policy formulation and implementation. The Manonyane communities' case proved that the communities wanted to participate in climate change policy formulation and implementation to solve other issues related to environmental problems and sustainable development (Peters, 2010; Pinkse and Kolk, 2012).

5.8.5 Using policy nudging to enhance community participation

The study found that the Manonyane communities are not concerned with technical terms, for example, policy nudging. The policymakers have an obligation to apply socio-political governance, administrative governance and public policy governance aiming to change the behaviour of communities towards active participation in climate change policy formulation and implementation. The theoretical framework (Section 3.4) dictated that a shared understanding on when and how nudges should inform the climate change policy was critical. Therefore, the Manonyane communities' case highlights their preferred nudges. The where, when and how the policy nudges should be used remains the responsibility of policymakers through applying socio-political, administrative and public policy governance (Ewert, 2019:3).

5.8.5.1 Education, feedback, incentives and information as nudges to motivate community participation

Generally, the Manonyane communities' case showed that the participants preferred the idea of education, feedback, incentives, information and persuasion compared to using bans, compliance rules and restrictions. If bans, compliance rules

and restrictions were to be used, a consensus with the communities should be reached. The Manonyane communities' case confirmed education as one of the accepted nudges. All the participants unanimously concurred that both formal education (from primary school to tertiary) and informal education was needed. Giving of feedback, to be done through public gatherings and radios to those who had access, was encouraged. Another important matter which emerged from the Manonyane communities' case was the need for agricultural extension officers in the communities to give guidance on agricultural practices. Extension officers are likely to motivate behaviour change concerning inappropriate farming methods. From the Manonyane communities' case, it appeared that the community members were concerned more about climate change because of affected livelihoods than just participating in the climate change policy processes. This means that the Manonyane communities were seeing beyond policy implementation to sustainable adaptation measures. The different views aired out pertaining to incentives seem to indicate that incentives could be used to encourage community participation, depending on the context and what needs to be done by the communities. Moreover, the how and when to give incentives should be considered. This is because previous incidences of unfair distribution of aid made the Manonyane community members to dislike the idea of incentives. The Manonyane communities' case revealed that the policymakers could also make use of experts as the main actors to engage communities because they were trusted more, compared to policymakers.

5.8.5.2 Policy nudging and socio-political governance

Policy nudging through socio-political governance is defined in the theoretical framework (Section 3.4.1), as when policymakers develop nudges with communities using the indigenous knowledge systems. Contrary to the theoretical framework (Section 3.4.1), the policymakers were not using indigenous knowledge to develop policy nudges with the communities, thus, nudging was not a governance activity. Repeatedly, the Manonyane communities bemoaned the lack of facilitation by policymakers in climate change policy processes. The Manonyane communities' case showed that policy nudging seems to be influenced by socio-political governance. Communities do not have the capacity to steer themselves as organised groups to inform policymakers of their preferred nudges. Using the Manonyane communities' case, nothing on policy nudging was applied by the policymakers. Consistent with the theoretical framework, the Manonyane communities' case appeared to confirm that co-production of nudges is complex in Lesotho because of complexity, altered power relations and the need for resources, particularly funding (Section 3.5.1.2.5). As such, the Manonyane communities' case illustrates that policy nudging does not happen in a vacuum without co-ordinated socio-political governance which should be open to communities. The politicians should guide interrelationships, interactions and interdependence among the plural actors when co-producing nudges (Ewert, 2019:19). Moreso, it may help if the policymakers learn and understand about policy nudging and its relationship with socio-political governance.

5.8.5.3 Policy nudging and administrative governance

Simply designing nudges as default choices by public administrators means that there is no engagement but using bottom-up approaches is likely to take place, thus helping to understand the preferences of the communities. In light of this argument, public administrators should therefore not only focus on providing information on climate change aiming to change the way

communities think about their behaviour towards exacerbating climate change and lack of willingness to participate in climate change policies, but also to go further and formulate (co-produce) nudges with the concerned actors. As noted in the theoretical framework, the Manonyane communities' case proved that policy nudges should be deliberated on and actors co-produce the presentation of choices, design choices, means of sharing information and the type of education to be given (Kasdan, 2019). Policy nudging becomes more than nudging communities to change behaviour but determine how the policymakers design and implement nudges together with the communities. It appears costing and time-consuming to engage communities in behaviour change but it will cost more when communities do not support climate change policy implementation.

5.8.5.4 Policy nudging and public policy governance

Using policy nudging during public policy governance requires an open system of governance, according to the theoretical framework (Section 3.4.3). Conversely, the Manonyane communities' case portrayed an opposite scenario of what the theoretical framework suggested. It appears there was no open system of governance concerning nudging (Sunstein et al., 2018). Further, policymakers did not know the language of policy nudging. The Manonyane communities' case confirms that without the help of public policy governance, the communities could not initiate participation in climate change policy formulation and implementation (Room, 2016:8). The Parliament National Resources, Tourism, Land and Portfolio Committee was not using policy nudging, despite being the overseer of ministerial projects for different ministries. Thus, there was no cross-sector collaboration and democratisation across the interviewed ministries and departments to capacitate communities to design and implement policy nudges with the policymakers. Owing to this explanation, the policymakers might need to consider enhancing community participation using public policy governance.

5.8.5.5 Participatory techniques to ensure communities design and implement nudges

Many participatory techniques were proposed for use in the theoretical framework (Section 3.4). The results indicated that many politicians were in favour of having workshops for chiefs and councillors and public gatherings for the communities. Participants advocated for public gatherings or any method which gives the communities an opportunity to interact physically with the policymakers. The fact that the Manonyane communities preferred public gatherings for all community members and workshops for chiefs and councillors (suggested by public administrators and politicians) concurs with the literature that communities are likely to stick to default options available even when changing such a method does not cost. Consequently, measures should be put in place through socio-political, administrative and public policy governance to use other participatory techniques that could enhance community participation as suggested in the theoretical framework (Section 3.4).

5.9 CONCLUSION

Chapter 5 presented empirical findings from the case of the Manonyane communities which combined perspectives from communities, community representatives, politicians, public administrators and experts. The Manonyane communities case showed that enhancing community participation in climate change policy formulation and implementation requires the application of socio-political, administrative and public policy governance. The Manonyane community members were able to

differentiate between awareness and understanding of climate change through using indigenous knowledge systems. Thus, policymakers should form new institutions and regulations to include indigenous knowledge systems in climate change policy. Drawing from the Manonyane communities' case, the level of community understanding of climate change policy processes is determined by the type of governance, whether socio-political, administrative or public policy governance. The findings are in line with the research questions (Section 1.5) and objectives (Section 1.4) of the study. The Chapter involved reporting the results collected using 11 focus groups and 15 semi-structured interviews (qualitative data). In summary, this chapter included the introduction (Section 5.1) and projected as well as the actual samples (Section 5.2). Further, the community's perspective concerning their participation in climate change policy formulation and implementation was presented in Section 5.3. Sequentially, the community representatives (Section 5.4), the public administrators' (Section 5.5), the political office bearers' (Section 5.6) and experts' (Section 5.7) perspectives on community participation in climate change policy formulation and implementation were discussed. Finally, Section 5.8 analysed and presented a critical evaluation of the findings. This brings the Chapter to conclusion with Section 5.9.

CHAPTER 6: A CONTEXTUAL PARTICIPATORY STRATEGY FOR ENHANCING COMMUNITY PARTICIPATION IN FUTURE CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION

6.1 INTRODUCTION

The chapter presents a contextual community participatory strategy for future climate change policy formulation and implementation. In Section 6.1, introductory remarks are presented. This section is followed by the participants' perspectives on enhancing community participation in future climate change policy formulation and implementation (Section 6.2). Subsequently, lessons learnt for practice and future research are discussed in Section 6.3, and the achievement of the aim, objectives and research questions are reflected on in Section 6.4. In Section 6.5, a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes is presented. Finally, Section 6.6 presents the concluding remarks to Chapter 6 and the thesis.

6.2 PARTICIPANTS' PERSPECTIVES ON ENHANCING COMMUNITY PARTICIPATION IN FUTURE CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION

Before presenting a contextual participatory strategy, Section 6.2 presents the responses from participants and interviewees in Section F (Attachments 39 – 52): presenting a contextual participation strategy for enhancing community participation in future climate change policy formulation and implementation processes. Therefore, results are presented for each category of participants and interviewees as follows: (i) the Manonyane communities (MC) (focus group responses from Questions 1 to 3); (ii) Community representatives (focus group responses for Questions 1 to 3 and semi-structured interview responses to Questions 1 to 6); (iii) Public administrators (semi-structured interview responses to Questions 1 to 6), and (iv) Politicians (semi-structured interview responses from Question 1 to 6) and experts' views (semi-structured interview responses to Question 1 to 6).

6.2.1 Manonyane communities

The first question of the focus group discussion asked the Manonyane communities what they thought could be done to enhance community participation in future climate change decision making process and implementation (Attachment 43). In responding to this question, concerns were expressed about a lack of facilitation by policymakers. Thus, the MC suggested that policy formulation should be bottom-up, with *“the ministry consulting people on the ground, especially in rural areas, before making policies”*. The participants requested assistance in closing dongas because this was a cause for concern in all the Manonyane communities. Consequently, many participants believed that respecting *“the tree planting day”* could assist communities in participating in climate change policies. The participants also indicated that they preferred public gatherings to media and participatory technology. As a suggestion, the Manonyane communities requested that data on specific rainfall patterns should be shared with communities to guide their *“farming activities”* as this will enhance their participation in climate change policy processes. In light of this explanation, community participation would be based on community understanding of climate change impacts and risks. In their accounts of events surrounding their environment, one Manonyane community bemoaned the littering of the environment with pumpers and plastics as an impediment to community participation in climate change policy processes. The participants pleaded with the policymakers to consider cleaning the environment to reduce

climate change. In conclusion, similar to the experts' view, the Manonyane communities recommended that the chiefs and councillors are two land administrators whose functions should be harmonised to serve the communities and avoid conflicts. The participants reported that disunity between these two leaders of the communities hampered community participation in climate change policy formulation and implementation. It is not clear who does what, when and how, according to the MC.

Turning to Question 2 of the Manonyane communities focus group discussions, it asked the community members' perspective on what they thought could be done by other actors (experts, politicians, councillors, chiefs and public administrators) to enhance the coordination and facilitation of community participation during climate change policy processes. This is in Attachment 43. All the participants agreed that the experts were the most trusted actors. The politicians, particularly the councillors were identified as without power to initiate community participation because their mandate is from the "*Central government*". Generally, the Manonyane communities unanimously agreed that politicians were not trusted. Concurring with the public administrators, one participant gave a reason why politicians were not trusted by saying, "*When they are moving from one place to another, it's about canvassing for votes to be in the parliament. They don't care about us*". Notable from the responses was that some Manonyane community members understood the difference between public administrators and politicians while other members referred to both as politicians. Again, the chiefs were trusted as faithful community representatives.

The third question asked for final remarks from participants towards the establishment of a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes (Attachment 43-focus group discussion). A variety of perspectives were given by communities, emphasising some points raised in Sections A to F of Attachment 43. First, the overwhelming majority of the participants informed the researcher that failure to adhere to indigenous knowledge was causing climate change. One participant said, "*these women and gentlemen here know that we have turned our backs on the culture and practices of Basotho, after which we cry. If we can learn to go back to our known common practices and culture, we can fight the issue of climate change, not denying the Ministry of Energy to come to us as a community to ask us questions so that we can give our perspectives to the ministry. This will help us to protect our community.*" For example, the participants for the focus groups believed that "*pine trees destroy our land and the gumtree tree causes drought*". Second, another perspective repeated during the final remarks was education. Communities repeated many times the issue of needing both formal and informal education. Third, incentives were another common view, as a way of encouraging community participation. Particularly revealing was unemployment and infrastructure which community members believed was a problem that needed to be solved too. However, some community members agreed that being given incentives or no incentives; was fine for them because their aim was to sustain livelihoods. Fourth, the Manonyane communities agreed that community understanding of climate change was critical for them. As participants agreed with one participant who said, "*This is what I have to say, after being asked all these questions, I feel like it is time we begin to understand climate change issues and its causes*". Fifth, participants also agreed that the issue of lacking facilitation was an impediment to community participation in climate change policy processes. Talking about this issue, the participants in all the Manonyane communities

agreed that they had not seen policymakers in their communities. As participants agreed with the statement that *“it is our desire; if the government wishes, it should give such platforms to hear our views”*. Feedback to communities was also emphasised. It appears without feedback, community participation could be hampered. The researcher perceived that feedback was a very serious and emotive issue where communities said that they feel used for no reason if they participate in climate change policy formulation and implementation without getting feedback at every policy stage. In agreement with other participants, one individual said to the researcher, *“We understand that you will share this information we have provided with the office of the Principal Chief and even the Ministry of Energy. Right, you said that you will give them the results? So we are putting our eyes on you.”* This statement demonstrates how critical feedback is to communities to enhance their participation in future climate change policy formulation and implementation. Moreover, one participant said that *“we usually have these kinds of public gatherings and they make promises. We know that the government is slow and the government does not have money so we do not know if these things will happen or not. They should return to the people from whom they collected information to share with us the final conclusion. We should be knowing about what is really taking place.”*

6.2.2 Community representatives' perspective

The first question for the semi-structured interview probed the Manonyane chiefs to give supporting reasons if they thought community participation during climate change policy processes was needed (Attachment 42). The other question for the focus group discussion was, *“What do you think can be done to persuade communities to understand the importance of participation in the formulation of climate change policies?”* (Question 1, Attachment 41). The majority of the chiefs expressed their desire to let their communities participate in climate change policy formulation and implementation, citing education regarding policy issues and climate change as critical to spearhead their participation. Some participants expressed concern about continuous animal grazing, suggesting that laws could be made to punish community members who do not practise rotational grazing. Other responses to this question included initiation of top-down co-production, arguing that it is the responsibility of policymakers to do so.

Further questioning revealed that the participants did not have much to say after giving their ideas in Sections A – F. What do you think could be done to enhance community participation in future climate change decision making processes and implementation? This was Question 2 for the semi-structured interviews and the participants gave the same answers as in Question 1, Attachment 42. To participants, the questions seemed the same because one theme was recurring, needing education on policies and climate change to enhance community participation. The participants believed that any policy process to involve communities was likely to be unsuccessful without education to understand and be aware of climate change policy processes.

Question 3 (semi-structured interview) in Attachment 42 probed the participants' views on the participatory techniques which could be used to enhance community participation in future climate change policy decisions for successful policy

implementation. Not much was said concerning this question. Repeatedly, the participants indicated that they preferred public gatherings because they were simple and easy.

“What do you think could be done to enhance community participation in future climate change decision making processes and implementation?” This was Question 4 of the semi-structured interview for Attachment 42. Not much was said in responding to this question. One participant suggested that the government should build a dam at a river close to St Joseph’s hospital to sustain agriculture which is a source of livelihood for the Manonyane communities.

Question 2 for the focus group discussion (Attachments 41 and 42). and Question 5 (Attachments 42). for the chiefs’ semi-structured interviews asked chiefs what other actors (experts, politicians, councillors and public administrators) could do to enhance the coordination and facilitation of community participation during climate change policy processes. Some chiefs were particularly critical, indicating that politicians were unlikely going to assist in community participation because of “*their bad behaviour*” (Attachments 41 and 42). The chiefs attributed the politicians’ bad behaviour to the perception that they did not care about people but votes. The chiefs continued emphasising that the Manonyane communities “*cannot understand climate change if there is no education*”. To these chiefs, education was a priority before participation could begin. Additionally, the chiefs indicated that they were ready to make community participation happen “*with the assistance of the central government*”.

The last question for both the focus group discussion (Question 3) and semi-structured interview (Question 6) sought the chiefs’ final remarks towards the establishment of a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes (Attachments 41 and 42). A common recurring theme in these interviews was the need for education through facilitation by policymakers or the “*central government*”. A common view amongst the chiefs was that community participation in climate change policy formulation and implementation was a good idea. Participants further suggested that there “*should be policies (regulations) to help communities to adhere to policies that guide the environment, for example, rotational grazing*” was noted as critical. A variety of perspectives were expressed regarding what could be taught concerning climate change. These were teaching communities “*about appropriate crop mix*”, agriculture for sustainable livelihoods and good agricultural practices. Another important perspective was that chiefs should be trained to facilitate community participation. One participant put it, “*Chiefs still need to be trained; it shouldn’t be that this one talks like this while the other one talks like that*”.

6.2.3 Public administrators’ perspective

In a semi-structured interview, the public administrators were asked if they thought community participation during climate change policy processes is needed and to motivate their answer (Question 1, Attachments 45 – 49). Although working at the national level, the public administrators admitted that “*it is very critical in that the impacts of climate change are localised*” to communities. The public administrators agreed with the statement that the nation could not have one adaptation approach applicable to all communities. As one public administrator puts it, “*Rather than somebody dictating that, so my answer is yes,*

yes, and yes, and yes. *The local structures and people should be leading the local climate change agenda. Not even the centre*". The argument by the public administrators was that successful adaptation is possible when solutions are "community-specific" although *"it may appear to be a lot of work"*. Other responses to this question included, *"What works in Leribe, may not work in Qacha's Nek"*. The public administrators believed that a policy which is not community-based when formulated is not good enough to address emerging issues from the communities, suggesting that solutions should come from the communities because *"they know how to deal with the issues"* they are facing. The public administrators suggested that such community-based policies should embed indigenous knowledge systems and scientific knowledge to enhance community participation in climate change policy formulation and implementation.

Question 2 of the semi-structured interview probed public administrators, "What do you think can be done to persuade communities to understand the importance of participation in the formulation of climate change policies?" (Question 2, Attachments 45 – 49). In responding to this question, the public administrators emphasised the same issue of community specific adaptation strategy where communities propose solutions to their problems. Another issue identified by one public administrator was that input from the communities should be part of the policy to be implemented. indicating that *"shelving the policy"* after community participation hampers future community participation because *"communities are interested in results, that is, policy implementation"*. This implies that when communities participate during the stages of the policy, the ultimate goal is to know and experience the benefits of the policy through its implementation. Talking about the same issue, one public administrator said that *"communities shouldn't just be recipients of projects, they should be in a position to propose what should happen"* instead of funders from somewhere dictating to communities what should be done. These views concurred with those of the Manonayne communities which exhibited an interest in participating in climate change policy formulation and implementation because it is a critical matter of livelihoods to them.

The third question asked the public administrators about their view regarding the participatory techniques which could be used to enhance the participation of communities in future climate change policy decisions, and ultimately successful implementation (Question 3, Attachments 45 – 49). What emerged from the response results from public administrators for this question highlighted that the approaches used to enhance community participation can vary depending on the issue being addressed. One public administrator suggested that it would enhance community participation if public administrators introduce to communities new participatory techniques. Concerns regarding the need for public administrators to share information on participatory techniques were widespread in all the public administrators interview responses. The public administrators believed that contemporary issues, such as changes in rainfall patterns, affecting communities should be addressed to enhance their participation in climate change policy formulation and implementation. For example, one public administrator said that issues of rainfall patterns could be part of climate change awareness programmes to assist communities to change their farming times according to current rainfall patterns. By so doing, communities are assisted to sustain their agricultural livelihood. The following comment illustrates what was said by one public administrator, *"You tell them this is how the rainfall is for your area. It behaves like this. you are saying this is the normal pattern, now this is the forecast, you are expecting*

more rain, or you are expecting less rain. You also plot on set of rain for a number of years. How many droughts, occurrences, things like that? You give them that information so that they can decide how they do their farming throughout the season”.

Despite being the most favoured participatory technique by communities, some public administrators expressed concerns about “*pitsos*” arguing that not everyone who attends a “*pitso*” understands what will be discussed. A further issue, which emerged on public gatherings, was the influence of powerful groups. The public administrators suggested holding public gatherings of homogenous groups or individual interviews to manage such power dynamics in communities. Instead, one public administrator claimed action research when done by experts and community leaders could work compared to any other participatory technique. The issue here is about trust. Negative comments were said about public gatherings claiming that “*our people can be polite when saying, yes, yes, ‘We like it’, only to find out that they don’t. It’s a waste of time. You can only pick that up when you are trusted and live with them. It is that approach and the NGOs are the best people to do that for us*”. However, one public administrator viewed radio programmes, consensus building, focus group discussions, public hearing, public meetings, participatory technology, polls and formal education (from primary to tertiary) as participatory techniques, which could enhance community participation in climate change policy formulation and implementation. The view on formal education was similar to that of the Manonyane communities.

When asked, “What could be done to enhance community participation in future climate change decision making process and implementation?” Some public administrators felt that adaptation responses should be community specific for communities to see the value of the climate change policy. The question was a semi-structured interview (Question 4, Attachments 45 – 49). Moreover, two diverging and conflicting views were echoed where some public administrators considered changing the community mindset, regulations and incentives as helpful in enhancing community participation in future climate change policy processes, while others thought it might not work if communities participate without understanding.

The next, Question 5 of this semi-structured interview asked, “What could be done by other actors (experts, politicians, community representatives and public administrators) to enhance the coordination and facilitation of community participation in climate change policy formulation and implementation? This was a semi-structured interview, Question 4 (Attachments 45 – 49). The public administrators who responded to this question felt that the politicians should not be in contact with communities because they usually have a way of “*politicising issues*” even when it is unnecessary to do so. Some public administrators felt that politicians did not have the required expertise to lead community participation directly because they are concerned with luring voters. A problem cited during the NCCP agenda setting was one prominent politician (former deputy minister) leading the community engagements. It seemed the perception of communities in working with politicians was not good as one public administrator said, communities know that “*it will end in tears*”. In the public administrators’ accounts surrounding actors, they recommended neutral people such as themselves, experts and community representatives (e.g. chiefs) or any apolitical leaders and religious leaders who were perceived to be suitable for directly working with the communities. With the experts, it was mainly on the issues of research and trusted policy implementation. As for the politicians,

the public administrators agreed that they should not work directly with communities. Further, an unstable political environment was cited as a hindrance to administrative governance because public administrators could not do their work effectively “as ministers changed every two years”. Moreover, the ministers usually have different priorities, with some having no expertise of local governance, causing everything in between to disintegrate. *“We need to go far deeper than just addressing single projects to say this will bring them together. We need far more than that. We can’t have every ministry, every agency and every individual going to the communities about the same thing. If for example, issues of climate change are coordinated by a certain agency, find a way to find existing structure mechanism that has been used to get in to access communities. Then people would not be so disinterested with so little hope about anything, especially if you mention government.”*

Question 6 of the semi-structured interview required the public administrators to give final remarks towards the establishment of a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes. Refer to Question 6, Attachments 45 – 49. A common view among the public administrators was that *“we need strategies on how we are engaging the communities and how do we get information from the communities and how do we take information to the communities”*. The value of interaction was pointed out as *“vital especially on issues of adaptation”*. Another different perspective by the public administrators was that communities should understand and be aware of the climate change risks, causes and impacts, claiming that understanding and being aware of the negative consequences is likely to enhance their participation. Communities would then have to do their best to adapt to climate change. The public administrators also pointed out that there is *“need to balance between what we learn through theories and what people know through their experiences so that our policies are not just paperwork, but contain real solutions that people live with and can be applicable”*.

6.2.4 Politicians’ perspectives

The first question of the focus group discussion aimed at asking politicians about what they think could be done to enhance community participation in future climate change decision making process and implementation (Attachment 39). The participants in this focus group discussion shared two divergent and conflicting views. One group of people believed incentives were critical and needed to enhance community participation. Another group of participants thought education was key for communities to understand and be aware of climate change risks, causes and impacts and not incentives, while some thought both education and incentives were needed to enhance community participation.

Question 2, 3 and 4 for the politicians’ semi-structured interview were not responded to in detail. The responses for Questions 1 and 6 made participants to feel as if they had said out all they needed to say. Question 2 read, “What do you think can be done to persuade communities to understand the importance of participation in the formulation of climate change policies?” Question 3 asked, “In your opinion, which participatory techniques could be used to enhance community participation in future climate change policy decisions, and ultimately successful implementation?” Lastly, Question 4 probed, “What could be done to enhance community participation in future climate change decision making processes and implementation?”

The next question for both the semi-structured interview and focus group discussion was about what the politicians thought could be done by other actors (experts, politicians, councillors and public administrators) to enhance the coordination and facilitation of community participation during climate change policy processes. This was Question 2, Attachment 39 and Question 5, Attachment 44. The main issue from these participants was acknowledging the role of chiefs in the Manonyane communities. The interviewees supported the use of public gatherings, arguing that they were easy and simple.

In the final question of the politicians' focus group discussion for councillors and a semi-structured interview, participants were asked if they had final remarks towards the establishment of a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes (Attachments 39, 40 and 44). Quite a number of suggestions emerged. These were first, use of bottom-up approaches to policy formulation and implementation with the policymakers as the facilitators. Talking about this issue, a participant said that "*Khomo li fula li sa tloha motseng, ere li fihla makhulong tsabe li khotshe, li shebisa manaka ka hae. The proverb is translated to mean that climate change policy formulation and implementation should begin here where we live before it can be taken to the government. Government as the facilitator, our responsibility is to put initiated ideas into practice as a nation because they would have initially originated from us.*" A blending of indigenous knowledge systems and scientific knowledge in the policies could also enhance community participation in climate change policy formulation and implementation. As one politician said, "*Communities can share how they pasture their animals*". This would change the mentality of people having to wait for the "*government to do everything for them*" (e.g. giving aid). Some participants pleaded that the results of the study should be shared with the relevant ministries so that the Manonyane communities could be assisted in issues of climate change and climate change policy processes.

6.2.5 Experts' perspective

The first question for the semi-structured interview probed the experts' views, if they thought community participation during climate change policy processes is needed. The question required them to give reasons for their choice of answer (Attachments 44 and 50-52). The results of this question showed that the experts concurred that community participation during climate change policy formulation and implementation was needed. One main reason was identified to support why community participation during policy formulation and implementation was needed. The reason was that the impacts of climate change are different in town and rural areas. "*Because for the rural people, livelihood depends on the natural resources. They are affected more than people in town.*"

Turning now to Question 2 of the semi-structured interview, the experts were asked about what they thought could be done to persuade communities to understand the importance of participation in the formulation of climate change policies (Attachments 44 and 50-52). Frequent and regular education (formal and informal) came out to be the most recommended way to make communities understand about climate change. The results from the experts also indicated that public gatherings and chiefs remained critical to access the Manonyane communities and make them understand climate change. Without the chiefs, the experts conceded that it would be impossible to talk of community participation. "*Morena (chief) is still very important in the*

communities", remarked one expert. However, one expert was reluctant to give views arguing that they work on specific projects and are not directly involved in climate change policy issues.

Moving now to Question 3 of the semi-structured interview, the experts were asked their view regarding participatory techniques that could be used to enhance the participation of communities in future climate change policy decisions and ultimately successful implementation (Attachments 44 and 50-52). Some experts felt that public gatherings were a good starting point because community members have an opportunity to discuss issues at the chief's place for further clarification if need be. Media came out as one way to reach out to communities through the radio. However, some experts felt that radios were distant from communities in that people only hear voices and will not know the person talking to them. One expert believed that the chiefs' leadership is likely to bring desired results because they were known of their origins and places of stay compared to listening to radios. *"He always make an instruction"* and has the power to rebuke community members, that was according to one expert. Further, one expert said that workshops for the chiefs could also help. Another suggested making chiefs ambassadors of community participation agenda. This is because chiefs were said to have the time and capacity to share such information during social gatherings at the community members' convenience. One expert said that *"If the community leaders appreciate what we are doing, then it's easy that whenever they have a public gathering, they will always talk about these issues"*, claiming that it could work considering that this was the same *modus operandi* used during the Covid-19 pandemic.

In further questioning the experts in a semi-structured interview probed was "What could be done to enhance community participation in the future climate change decision making process and implementation?" (Question 4, Attachments 44 and 50-52). All of the experts recommended that the *"local government structures which operate through the councils"* should bring the chiefs and councils together. Their working relationship was reported as that of *"two land administrators working parallel"*. According to the experts, chiefs and councillors should work together to serve the people; otherwise, if not addressed, this scenario was likely to hamper community participation in future climate change policy formulation and implementation.

Question 5 of the semi-structured interview asked, "What could be done by other actors (experts, politicians, community representatives and public administrators) to enhance the coordination and facilitation of community participation in climate change policy formulation and implementation?" (Attachments 44 and 50-52). The experts suggested that chiefs and other influential community representatives could also be helpful in enhancing the community participation agenda.

Finally, the experts were asked for their final remarks on the establishment of a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes in Question 6 of the semi-structured interview (Attachments 44 and 50-52). A number of perspectives were expressed. First, the experts said that consultations with community members and not only community leaders should be frequent, regular and continuous. Second, the experts suggested that *"climate change should not be the responsibility of one institution like the LMS but also the agricultural sector, crops, livestock and range"*. Third, some experts suggested that the politicians should *"understand policy*

and climate change” before communities are engaged. Fourth, the experts emphasised that it is critical to keep participation contextual to a particular community than “*talking community B problems to community A*”. Finally, the experts indicated that communities should be given feedback after any form of participation.

6.3 LESSONS LEARNT FOR PRACTICE AND FUTURE RESEARCH

The lessons learnt for practice and future research are discussed in respect of the significance of this study. This includes lessons learnt for the Lesotho policy agenda, climate governance, community participation, practice and future research.

6.3.1 Lessons learnt from the Manonyane Communities for Lesotho policy agenda

This section discusses the lessons learnt from the Manonyane Communities for the Lesotho policy agenda in three parts. These are community participation in climate change policy formulation and implementation, coordination of community participation and participatory strategy.

6.3.1.1 Community participation in climate change policy formulation and implementation

The main actor in the Lesotho climate change policy adoption was the Parliament and Natural Resources, Tourism and Land Portfolio Committee which did not have the legal mandate to unify all forms of governance and climate actions. The Parliament and Natural Resources, Tourism and Land Portfolio Committee had no defined oversight role to ensure the ministries were accountable to it when engaging communities. The committee could enhance community participation if it had a legal mandate to monitor other government departments and ministries engaging communities on climate change policy rather than only waiting for bills or policies tabled before it. A community centred participatory strategy, which promotes community participation in sharing, collecting and using information towards climate change policy formulation and implementation, could be put in place. Consequently, whichever committee to play an oversight role on climate change policy should make ministries and departments accountable to it to engage communities and community representatives whenever needed. The lesson learnt from the Manonyane communities’ case is that unified coordination of community participation by politicians and public administrators could reduce duplication of efforts. Moreover, the community representatives should be trained as ambassadors and facilitators of their communities on climate change policy processes. This should be an additional measure to ensure community understanding and awareness of climate change.

6.3.1.2 Coordination of community participation

The lack of coordination of community participation across government ministries and departments such as the MFRSC, MAFS, MTEC, Ministry of Energy and Meteorology and MLGC has contributed to disintegrated community participation in Lesotho. For example, this study found that the Manonyane communities had never participated in climate change policy formulation and implementation through the facilitation of policymakers. It is commendable that many of these ministries (e.g. Ministry of Energy and Meteorology and MTEC) were disbanded and combined under the Ministry of Natural Resources, since October 2022. However, the new Ministry of Agriculture, Food Security and Nutrition and Ministry of Local Government,

Chieftainship, Home Affairs and Police were still running as standalone ministries. This study found that the Lesotho ministries and departments involved communities individually, depending on the mandate. In light of these findings, the new Ministry of Natural resources could consider co-production, collaboration and deliberation with the new Ministry of Agriculture, Food Security and Nutrition and Ministry of Local Government, Chieftainship, Home Affairs and Police to ensure coordination of community participation. Coordinated governance promotes pre-arranged co-production, collaboration and deliberation to avoid fragmented community participation. Feedback to the communities is critical for enhancing community participation in carrying out these coordinated governance processes.

6.3.1.3 Participatory strategy

In this study, the aim was to explore community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes. The study found that a lack of a participatory strategy leads to fragmented governance. As evidenced in this study, every ministry and department was engaging communities in silo, causing disintegration in community participation in climate change issues. The Lesotho policymakers could learn that in the absence of a participatory strategy, it would be difficult to trace progress regarding community participation. Ministries and departments could be engaging communities but the communities could still not know that they were engaged. Thus, the aim of having a participatory strategy is to specify the objectives of participation for multiple actors regarding who does what, when and how.

6.3.2 Lessons Learnt for climate governance

The lessons Learnt on climate governance are presented in respect of applying the NPG to enhance community participation in every stage of climate change policy formulation and implementation. Socio-political, administrative and public policy governance should be defined for coordinated efforts among the actors involved in climate change policy formulation and implementation.

6.3.2.1 The New Public Governance in plural and pluralist climate change policy processes

It appeared actors such as politicians, public administrators and experts were participating in climate change policy formulation and implementation but the Manonyane communities had no clue of what was happening with the policy processes. This study contributes to our understanding of why socio-political, administrative and public policy governance should occur to enable communities to participate just like other actors in a plural and pluralist climate change policy formulation and implementation. The study has also gone some way towards enhancing understanding of how socio-political, administrative and public policy governance could be applied to enhance community participation in a pluralist climate change policy formulation and implementation. The research lays groundwork for future research on how the NPG components guide the rules of collective-decision making among multiple actors in a practical set-up involving community participation. Governance should outline forms of interactions and interdependence. Socio-political governance should provide principles and standards on the inclusion of indigenous knowledge systems in climate change policy. Administrative governance should outline how public administrators

facilitate collaboration, co-production, cross-sector collaboration, deliberations and policy nudging in their role of building support for climate change policy implementation. Public policy governance should provide a general framework defining parameters (legislation, institutions and regulations) within which socio-political and administrative should operate. This brings in the importance of an open system of governance and understanding a bill or policy to enhance community participation. In conclusion, the empirical findings of this study confirm that it could help to outline the participatory techniques to be used to engage communities to enhance co-production, collaboration and deliberation during these governance interactions.

This study provided additional evidence with respect to the broadness and vagueness of community participation without a universal fixed criterion. Therefore, the study has shed light on the contemporary contentious issue of community participation as a key element of climate governance. The lessons learnt confirm previous findings and contribute additional evidence which suggests that community participation during climate change policy formulation and implementation should be an objective process applying the principles of NPG. In climate governance, community participation is when communities are directly involved in the climate change policy process and implementation of climate change projects aiming at mitigating and adapting to climate change. Resultantly, understanding the objectives of NPG influences how communities participate at every stage of the climate change policy. The application of socio-political, administrative and public policy governance should be clearly spelt out on its nature. The following questions should be answered for each NPG component: i) Who should participate? ii) How should the participants be involved? iii) When should participants be involved? iv) What are the objectives of participation? The main lesson learnt from the Manonyane communities' responses is that the policymakers should give a clear guideline on what communities could contribute to the climate change policy.

The results of this study support the idea that co-production, collaboration, deliberation, democratisation and cross-sector collaboration within a plural and pluralist climate change policy formulation and implementation overlap and partially differ. The implication of this is a possibility that the concepts should be conceptualised to attempt to reach some kind of theoretical understanding regarding their use in a plural and pluralist climate change policy formulation and implementation aiming to enhance community participation. For example, this study has shown that the public administrators and politicians interviewed in this study were using deliberation, collaboration and co-production interchangeably yet in practice, they are different in meaning and application.

6.3.2.2 Lessons learnt for community participation

The insights gained from the Manonyane communities' case show that community participation in climate change policy formulation and implementation is a community issue influenced by facilitation, participatory techniques used and community understanding and awareness of climate change. The study confirms that a few individuals cannot represent their communities in climate change policy processes, particularly if there is no prior consensus on the issue. Communities believe that climate change requires the views of all community members. Climate change affects livelihoods and also exacerbates other sustainable development goals problems such as poverty and unemployment. Allowing community participation in climate

change policy formulation and implementation is killing many birds with one stone. Thus, education and feedback should be given to communities for them to participate in climate change policy formulation and implementation with understanding.

6.3.3 Lessons Learnt for practice

Many lessons could be learnt for practice from this study. These are understanding the nature of community participation, valuing community understanding of climate change, valuing community awareness of climate change, use of indigenous knowledge systems and policy nudging.

6.3.3.1 Understanding the nature of community participation

The findings reported in this study shed new light on the nature of community participation during each climate change policy stage. Community participation during each policy stage in a plural and pluralist climate change policy formulation and implementation depends on how the policymakers structure participation. Enhancing community participation requires policymakers to understand when and how to apply the concept co-production, collaboration, deliberation, democratisation and cross-sector collaboration during each stage of the climate change policy process. During climate change agenda setting, administrative and socio-political governance should pay attention to how co-production and policy nudging could be structured. Thus, the level at which communities participate as co-decision-makers, co-planners, co-designers and co-evaluators of the climate change policy agenda could enhance or hamper their participation. During climate change policy formulation, how administrative and socio-political governance structure co-production, deliberation, collaboration, interaction and policy nudging determine how communities participate as previously marginalised actors. During policy adoption, administrative and public policy governance should ensure high frequency of interaction, collaborations (bottom-up and top-down approaches), balanced decision-making power and legitimacy of the adoption process. Thus, the policymakers allow communities to participate as authors and subjects of the climate change policy during the policy adoption stage. Enhanced community participation during policy implementation is enhanced by how administrative governance structures co-production, legitimacy, collaboration and policy nudging. During this stage, communities participate as co-producers of policy implementation and its associated programmes. During the policy evaluation stage, administrative governance as the main NPG component enhances community participation by allowing co-production of the policy evaluation decisions on the interpretation and release of the evaluation results. Policymakers allow communities to deliberate the policy evaluation process to co-plan, co-produce, co-implement and co-evaluate the climate change evaluation criteria. The participation objectives determine the participatory techniques to be used at each policy stage.

6.3.3.2 Valuing community understanding of climate change

The contribution of this study confirmed that a lack of community understanding of climate change might seriously hamper community participation in climate change policy formulation and implementation. Largely, community understanding contributes to their participation in climate change policy formulation and implementation. Noteworthy is that a lack of community understanding hinders climate change policy implementation. The lesson learnt from this study is that access to

adequate information on climate change is required for communities to participate actively in climate change policy formulation and implementation. Thus, these findings raised important theoretical and practical issues which have a bearing on how socio-political, administrative and public policy governance could enhance community participation by standardising the meaning of community understanding of climate change. Without having a reason to believe in climate change, it is difficult for communities to participate. A conclusion could be drawn when standardising the definition of community understanding of climate change. It should include having knowledge of the climate change definition, being aware of the climate change policy processes, having the ability to comprehend the causes, impacts and risks of climate change and understanding planned adaptation and mitigation measures. Community understanding of climate change should affect how communities participate in climate change policy processes to enhance their participation.

6.3.3.3 Valuing community awareness of climate change

This study provides a comprehensive assessment of the extent to which the level of community awareness of climate change could influence their participation in climate change policy formulation and implementation. This should not be underestimated. Community awareness of climate change is possible because of socio-political, administrative and public policy governance which is highlighting the potential usefulness of the NPG components. Community participation should be enhanced by socio-political, administrative and public policy governance, depending on how they occur for community awareness of climate change to influence their participation in policy processes. Therefore, community awareness should be said to have occurred when a community understands climate change definition, causes, impacts, risks and planned mitigation and adaptation based on information and experience. In light of this explanation, community participation would be influenced by one's state of being well informed and critically conscious of climate change.

6.3.3.4 Use of indigenous knowledge systems

The results of this study suggest many ways in which indigenous knowledge systems could be used in the climate change policy to enhance community participation in the policy processes. The lessons learnt from this study provide support for the conceptual premise that the use of indigenous knowledge systems depends on how the policymakers apply socio-political governance. Despite science being perceived as objective compared to indigenous knowledge systems, policymakers should apply both scientific knowledge and indigenous knowledge systems to enhance community participation by identifying existing coping strategies and showing appreciation of past interventions. Communities are eager to participate in climate change policy formulation and implementation to address multiple challenges such as conserving their natural resources, sustaining livelihoods, developing (infrastructure development) their places, and managing the environmental challenges such as soil erosion. Community participation could be enhanced through indigenous knowledge systems incorporation into the climate change policy to show respect and understanding of the local people's societal (values, norms, indigenous knowledge and culture) and political (co-governance, democratisation and management of power dynamics) factors, viewing communities as problem solvers. For instance, the Manonyane communities already practised rotational animal grazing, understand the importance of wetlands and protect certain plants without much or no influence from outsiders. Such practices could be helpful

if adopted as part of the policy. Resultantly, this research recommends that policymakers should: i) investigate the trade-offs and synergies of traditional and new adaptation measures as described in community indigenous knowledge systems; ii) Explore the economic and social costs of indigenous knowledge systems; iii) Identify useful indigenous knowledge systems and key areas to conserve, and iv) Complement indigenous seasonal forecasting with scientific mechanisms. Refer to the indigenous knowledge systems charter in Table 6.1.

6.3.3.5 Policy nudging

The study found that community participation also depends on the level of policy nudging by the policymakers. The study contributes to the current debate concerning how socio-political governance, administrative governance and public policy governance are required to model communities' behaviour regarding the decisions they make to enhance their participation in climate change policies. This requires policymakers to outline how policy nudges should inform the policy process. Resultantly, this study provides important insights suggesting that socio-political, administrative and public policy governance should spell out where, when and how policy nudges could be used during the climate change policy process.

6.3.4 Lessons learnt for future research

Four lessons learnt for future research are presented here. First, bridging the gap between theory and practice through the analysis of how systems, governance and participatory theories influence community participation in climate change policy formulation and implementation / and governance. Second, the relevance of community participation, Systems theory, NPG theory and the concept of nudging in public administration and climate governance. Third, the use of policy nudging to enhance community participation in climate change policy formulation, implementation and governance. Fourth, giving new contemporary participation methodologies to enhance community participation in climate change policy formulation and implementation.

Despite the systems, governance and participatory theories emphasising the influence of communities on policy decisions, the theories do not clearly define the applicability of the NPG components (socio-political, administrative and public policy). The NPG components should include the concepts co-production, collaboration, deliberation, democratisation and cross-sector to guide multiple actors to the advantage of communities as previously marginalised actors. Meanwhile, the NPG theory as it is does not address in detail how communities should be part of the decision-making processes during each policy stage. The future research should consider the importance of participatory techniques to be part of the theory because the participatory techniques used determine whether communities participate as co-producers and beneficiaries of the climate change policy. The issues of climate change seem to be getting worse with each day passing by; therefore, the use of indigenous knowledge systems could go a long way in letting the communities provide adaptation and mitigation measures used for generations and generations. It should be clear in the theories that without community participation, the chances of successful climate change policy implementation is limited. Such research should add to the debate and contribute to the discourse on how communities

are central to successful climate change policy implementation, despite their literacy level. The policymakers are required to guarantee community participation, although it may seem costly.

This study illustrated that the community participation theory, systems Theory, NPG theory and the concept of nudging are interlinked. The relevance of community participation, systems theory, NPG theory and the concept of nudging in public administration and climate governance cannot be underestimated because they provide an overarching guideline on how to involve communities in decision-making processes. As indicated by the community participation theory, without top-down deliberation or co-production approach and bottom up deliberation or coproduction approach complementing top-down one-way approach and bottom-up one-way communication approach, no complete community participation can be said to have occurred. The direction of co-production determines the level of community understanding and awareness of climate change policy. This would be a fruitful area for further work in future research to explore the direction of co-production which enhances community participation using practical participatory techniques.

Policy nudging was a completely new concept in the context of Lesotho climate change policy formulation and implementation. Even so, the participants were excited by mere hearing in brief how nudging could enhance community participation. Future research should distinguish policy nudging as a novel policy tool from community understanding and awareness of climate change at regional and national climate change policy agenda to enhance community participation in policy processes. Considerably, more work could be done in future research other than merely providing information and making communities aware does not raise ethical issues widely talked of in using nudges. Further, future research should analyse ethical issues relating to nudging on a community by community basis for sustainable behaviour during climate change policy formulation and implementation. This requires research on practical nudge interventions to determine such ethical issues. Noteworthy is that nudges are comparatively cheap and easy to manage and implement. Therefore, it is worth to continue with this policy nudging debate for the successful implementation of climate change policies.

About new contemporary participation methodologies for enhancing community participation in climate change policy formulation and implementation, this study found that this issue was not investigated in the Manonyane communities. This research found that the Manonyane communities are aware of the use of public gatherings, interviews, media, public hearings and workshops (for community leaders) in other settings not during community participation in climate change policy formulation and implementation. Through future research, the participatory techniques such as briefings, presentations to communities, PRA, participatory technology, consensus building, facilitation, focus groups, interviews, workshops, beneficiary assessment, surveys and polls could be explored for a particular community to determine the level of community participation and their behaviour when such participatory techniques are used to enhance community participation. However, such participatory techniques should be integrated with livelihood strategies.

6.4 THE ACHIEVEMENT OF THE AIM, AND THE OBJECTIVES AND RESEARCH QUESTIONS

The aim of the study was to explore community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes. This was done through using the Manonyane case study. The following objectives were set and achieved for this aim:

- (i) To analyse systems, governance and participatory theories influencing community participation in climate change policy formulation, implementation and governance. This objective was addressed in Chapter 2.
- (ii) To explore how policy nudging could be used to enhance community participation in climate change policy formulation, implementation and governance. This objective was addressed in Chapters 2, 5 and 6.
- (iii) To assess how community awareness and understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation. This objective was addressed in Chapters 3, 5 and 6.
- (iv) To explore how the use of indigenous knowledge systems in climate change policy formulation and implementation facilitates community participation in climate governance. This objective was addressed in Chapters 3, 5 and 6.
- (v) To determine the nature of community participation in climate change policy processes. This objective was addressed in Chapters 3, 5 and 6.
- (vi) To present a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes. This objective was addressed in Chapter 6.

The following research questions were answered in the respective chapters stated. These were:

- (i) How could public policy governance influence community participation during climate change policy formulation and implementation? This research question was addressed in Chapters 3, 5 and 6.
- (ii) How do community awareness and understanding regarding climate change influence their participation in climate change policy formulation and implementation? This research question was addressed in Chapters 3, 5 and 6.
- (iii) How could the use of indigenous knowledge systems in climate change policy formulation and implementation facilitate community participation in climate governance? This research question was addressed in Chapters 3, 5 and 6.

(iv) How does community participation underpin climate change policy processes and climate governance? This research question was addressed in Chapters 3, 5 and 6.

(v) How could social-political governance, administrative governance and the political system use policy nudging to enhance community participation in climate change policy formulation, implementation and governance? This research question was addressed in Chapters 2, 3, 5 and 6.

6.5 A CONTEXTUAL PARTICIPATORY STRATEGY FOR ENHANCING COMMUNITY PARTICIPATION IN FUTURE CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION PROCESSES

This section presents a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation. A strategy in this study is a course of action designed with a particular focus on efforts that seek to achieve specific goals and how this can be done to succeed in achieving the set goals. This strategy takes account of the unique indigenous knowledge systems context of the Manonyane communities. The contextual participatory strategy sets out to highlight the nature of community participation during each stage of climate change policy formulation and implementation. This strategy considers top-down deliberation and/ or co-production and bottom-up deliberation and /or co-production practical approach which seeks to enhance community participation in climate change policy formulation and implementation. Community participation underpins climate governance and its success depends on how multiple actors interpret participation guidelines. Involving communities during policy formulation and implementation increases the chance of successful climate change policy implementation. Unlike other actors, communities are not formally organised. Consequently, community participation during every policy stage should be to enhance their participation as previously marginalised actors. Against this background, a contextual participatory strategy is presented and discussed.

6.5.1 A contextual participatory strategy

Unless the policymakers approve a contextual participatory strategy for use, community participation in climate change policy formulation and implementation could be hampered. Policymakers refer to politicians and public administrators, unless specified. Currently, overarching agreements on community participation during climate change policy formulation and implementation are made by international organisations such as the UNFCCC. A reasonable approach to tackle this issue could be that community participation should not take place in a vacuum before a contextual participatory strategy is availed for use. Continued efforts are needed to make it clear in the contextual participatory strategy how each actor contributes to enhance community participation because communities are not formally organised. Unlike politicians, public administrators and experts who are paid for the time devoted to participation, community participation is time-consuming for the communities. Participation in policy processes for communities may be a challenge because their main priorities are to provide for their families (livelihoods). There is therefore a need for plural actors in climate change policy formulation and implementation to interdepend for resources with communities as equal actors just like other formally organised actors. Having a contextual participatory strategy should be a priority if community participation is to be enhanced. A contextual participatory strategy

should be adopted showing how socio-political, administrative and public policy governance frames participatory objectives at every stage of the climate change policy process for each actor involved and the intended participatory techniques which could enhance community participation. As usual, in any policy process, politicians should take a central lead through applying the administrative, socio-political and public policy governance process to give a general direction. However, decisions should be made based on consensus with other actors (public administrators, community representatives, communities and experts). Therefore, public administrators steer devolved governance processes through administrative governance to coordinate other actors. Together with the public administrators, experts take a leading role in collaboration, policy nudging, deliberation and co-production to enhance community participation during each policy stage. In conclusion, community representatives should act as gatekeepers and the voice of communities in situations where it is difficult for all community members to be present, based on prior community consensual agreements.

The application of socio-political governance, administrative and public policy governance during each applicable policy stage is premised on how these NPG components propose to enhance community participation in climate change policy formulation and implementation as previously marginalised actors. It is, therefore, critical to outline the facilitative role of these NPG components in enhancing community participation specifying the role of each actor. A contextual participatory strategy becomes critical to communities if it specifies how communities will be engaged during each policy stage and what could be done to ensure their understanding and awareness of climate change. Another important issue is for communities to know when and how their indigenous knowledge systems would be incorporated into the climate change policy. All this is done to lure communities to take part in climate change policy stages preparing for policy implementation.

The value of the participatory strategy to politicians and public administrators is to define the complex decision-making spaces of climate governance and huge gaps between traditional actors (policymakers and experts) and communities. A key priority could be having a participatory strategy regulating the formal and informal interactions, interrelationships and inter-dependences in a pluralist environment where co-production, deliberation, collaboration and democratisation take place.

6.5.2 Seven pillars for enhancing community participation during climate change policy formulation and implementation

The study proposes seven pillars in the contextual participatory strategy to enhance community participation during climate change policy formulation and implementation. These are governance, community awareness of climate change, community understanding of climate change, use of indigenous knowledge systems, climate education, policy nudging and participatory methodologies and techniques. This section explains what these seven pillars should entail to enhance community participation during climate change policy formulation and implementation.

6.5.2.1 Governance

The meaning of NPG in the contextual participatory strategy should be about revamping institutional arrangements, existing policymaking processes and daily practices (co-production, collaboration, deliberation, democratisation and cross-sector collaboration) of government to create space for active community participation. The two main actors to facilitate governance are politicians and public administrators through socio-political, administrative and public policy governance. Enhancing community participation in climate change policy processes should not be confined to meteorology departments, conservation biologists, climate change scientists and environmentalists. Politicians, as the senior actors with representative power, should ensure that planning community participation should not be part of budget and calendars demanded by government and donors. Instead, it should have a standalone budget. Community participation in climate change policy process should be an interdisciplinary issue, bringing in open actors willing to learn hard sciences, participatory processes and prioritising communities' indigenous knowledge systems. The strategy should provide politicians and public administrators with a set of practical tools and guidelines to engage communities when applying socio-political, administrative and public policy governance.

In applying socio-political governance, communities participate as co-producers and social learners. Application of socio-political governance requires the formation of new institutions and regulations to enable the incorporation of community indigenous knowledge systems into the climate change policy. In this regard, institutions encompass founded organisations and regulations encompass established law or practice. Socio-political governance could entail empowering communities to understand and use participatory techniques such as the cause and impact diagrams and vulnerability maps. A cause and impact diagram could be used for communities to visualise different causes and impacts of wetland degradation, soil erosion, the disappearance of plants and migration of birds because communities have an accurate understanding of these impacts. Such participatory techniques could be useful to sensitise communities on human activities contributing to climate change and assessing the extent to which communities understand climate change impacts using what they already know and see. Such participatory techniques could be useful to sensitise communities on human activities contributing to climate change and assess the extent to which communities understand climate change impacts using what they already know and see. Vulnerability maps would allow participation of marginalised groups in communities. The communities should be equally important just like other actors during all the climate change policy stages. The communities participate as co-producers of climate change policies and adaptation programmes. They also participate as social learners in the climate change policy process.

Administrative governance exhibits its functions within the three spheres of governance (socio-political, administrative and public policy governance) by managing devolved governance. Public administrators are the main facilitators of administrative governance. Politicians (senior actors), through public policy governance, manage the application of administrative governance by defining roles and responsibilities and establishing processes (co-production, collaboration, deliberation, democratisation and cross-sector collaboration) to co-ordinate administrative governance. The co-ordination of processes by public policy

governance is critical to the role of public administrators as managers of administrative governance. Thus, politicians support public administrators in carrying out their roles when applying administrative governance. This means that politicians acknowledge the distinctive functions of public policy governance, administrative and socio-political governance while ensuring that the three forms of governance are interdependent and function as a whole. Politicians give authority to public administrators to co-ordinate the climate change policy process and other actors. Led by politicians, the public administrators should be given authority to co-ordinate multiple actors to benefit community participation during co-production, collaboration, deliberation, democratisation and cross-sector collaboration.

Through public policy governance, communities could be empowered to make decisions. The politicians, who are the main actors, should enshrine in the participatory strategy community participation as a democratic right. There are broadly five methodologies which could be used interdependently to enhance community participation. These are co-production, deliberation, democratisation, collaboration and cross-sector collaboration, and they should be defined by politicians when applying public policy governance. Alongside these methodologies, participatory techniques guide the type of methodology to be used. Subsequently, the communities identify the risks, formulate the policy and be responsible for its implementation. The participatory strategy should specify the definition of a community as referring to a group of people living in a particular area, defined by common culture, language, beliefs and values because the impacts of climate change could be completely different from one community to another. Whenever views differ, the politicians and public administrators should closely look into the matter not to cite reasons such as lack of resources, timeframes, money and objectives. Communities should be given an opportunity to air out their views throughout the climate change policy process without fear of power dynamics. The communities should not be asked for feedback on pre-determined policy during policy adoption. This will lead to communities feeling that they do not own the policy and dissociate themselves from the whole climate change policy process. Public policy governance demonstrates how it can improve communities' livelihoods and provide alternative livelihood support to communities when participating in climate change policy processes. Communities should perceive the linkage (livelihoods and participation) as beneficial to consider their participation in climate change policy formulation and implementation meaningful. The final climate change policy and intended adaptation programmes should be about community priorities and processes which they chose for themselves during their involvement in climate change policy formulation and implementation.

How New Public Governance components interrelate

Figure 6.1 provides the interrelationships of the NPG components (administrative governance, socio-political governance and public policy governance) when applied by politicians and public administrators to enhance community participation.

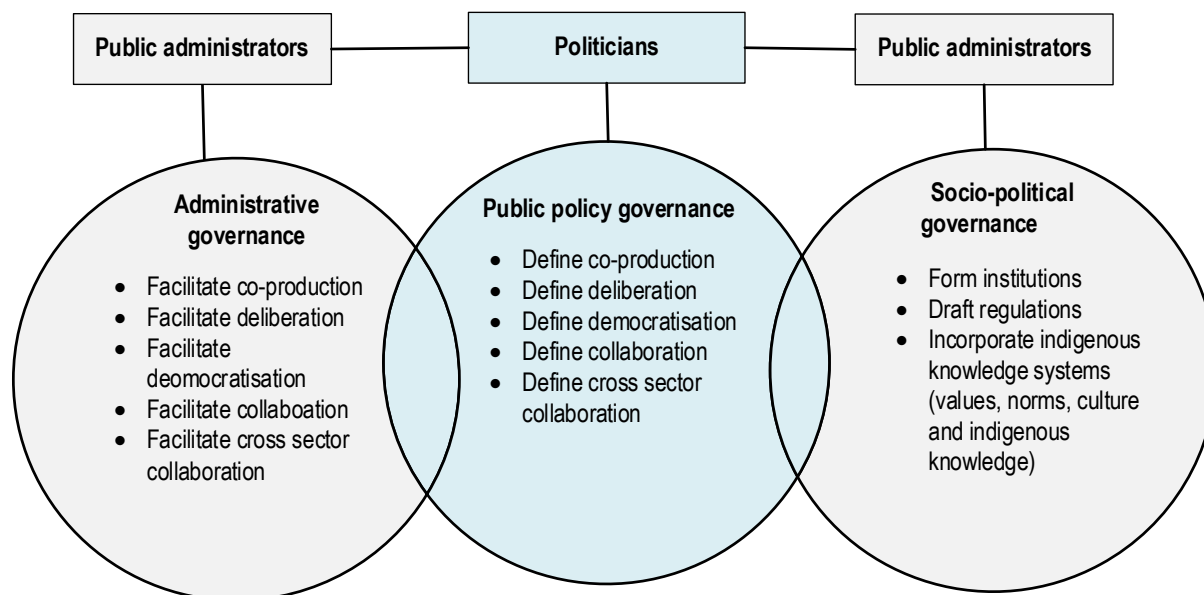


Figure 6.1: The interrelationships among administrative, public policy and socio-political governance

Source: Author

6.5.2.2 Community awareness of climate change

Building community awareness of climate change includes clarifying the meaning of community awareness of climate change in terms of causes, impacts, risks and formulated policies based on information and experience. This is critical in changing the community's mindset towards climate change. Availability of information on specific climate change risks and impacts is critical for enhancing community participation. Disseminating information on the impacts and likelihood of risks in a specific community could help communities to assess the impacts and risks of climate change using indigenous knowledge systems and act accordingly. Climate models should provide geographic information for specific communities rather than providing general information which may be of no use to specific communities. Thus, communities should be part of developing these climate models to ensure accuracy. A connection should be made between the information needed by a particular community and information provided by climate scientists. This would reduce frustrations on communities having to receive long-term predictions that is of little use to their community that wants to know the amount of rainfall expected for that season, the appropriate crop mix and information about when and how to plant them. That way, it would reduce cases where communities think climate change is for the "educated people". If the communities are unaware of climate change, it may not be possible to expect the successful implementation of a climate change policy. This suggests that climate change is not just an environmental issue. Without community awareness of climate change, community participation in climate change policy formulation and implementation is likely to be impossible. Predictions of mean annual rainfall on the general level could be less relevant compared to information about the first rains which guides communities on when to plant and the length of the season because agriculture is a source of livelihood, particularly in Southern Africa where Manonyane communities are located.

Community awareness of climate change can be addressed by sharing relevant model data, defining community awareness and understanding of climate change separately, embarking on community-based projects and teaching critical scientific concepts. Communities could participate in climate change policy formulation and implementation if the climate change policy addresses how model data could be relevant to communities. Wider and targeted communication could be employed to provide communities with climate change information. Communities need to be made aware of the climate change policy process and the difference between a bill and a policy. Wider dissemination of such information would stimulate a desire by communities to participate as communities perceive that they understand what is required of them. Community awareness that enhances community participation relates to a strategy which clarifies the meaning of community understanding and awareness of climate change differently. Thus, community awareness of climate change includes when communities are well informed of climate change by the climate change experts. This implies being conscious about the climate change definition, causes, impacts, risks and targeted measures to constitute conditions of community awareness of climate change. Community awareness of climate change does not mean community understanding of climate change. When the two concepts are used together, the actors involved should appreciate that being aware of climate change does not mean understanding climate change. Usually, communities have an understanding emanating from general awareness so the two should be applied together but distinctly. Raising community awareness of climate change should depend on the approach, audience and community. The process of raising community awareness of climate change could also include community-based climate change projects aiming to raise awareness on climate change. Making use of group meetings for example, church, youth, women and any other, depending on the community, could also form part of the contextual participatory strategy. Delivering precise and accurate information could also raise community awareness of climate change. Teaching critical scientific concepts regarding climate change causes, impacts, risks and climate change policy processes should form part of building community awareness of climate change. The strategy should explain what is known about climate change to communities and correct misconceptions. Finally, balanced information dissemination on local weather conditions and climate change using known community scenarios (e.g. an extreme weather event) could enhance community participation in the climate change policy processes.

Climate Literacy to enhance community awareness of climate change

Climate literacy should aim to make people understand how climate influences communities and individuals. Climate literacy relates to teaching basic sciences in school curricula (primary, secondary and tertiary education). A compulsory climate curriculum for schools should be developed to fit into the current education system. A climate curriculum has the potential to improve climate literacy for formal education. The information learnt should allow communities to understand the differences in the following: weather, climate, climate system, climate variability and climate change. Weather could refer to the variation of atmospheric changes in temperature, cloudiness, wind, humidity and precipitation. The climate could be the variation in the hydrosphere, atmosphere (lakes, rivers and oceans) and land surface systems slowly for months. Climate systems could be referring to the processes and interactions happening in the Earth's spheres which determine the region's climate. Climate variability could refer to variations of climate beyond community weather. Climate change would be climate variability extended over a long period, for example, a decade. It's about making the learners understand timescales because eventually, these

changes and interactions cause climate change over time. Further, communities should distinguish between credible and non-credible sources of information about climate and climate change as a result of climate literacy. The aim of climate literacy would be to make learners understand that human activities are the primary cause of climate change. Basically, climate literacy considers the following questions: How do you intend to address misconceptions? Which language to use? What time should interventions be done in the curricula? Do you have formal educators to carry out the task? What is the role of life experiences in understanding climate change? Who should be educated in climate science? What level of knowledge is appropriate for different age groups?

6.5.2.3 Community understanding of climate change

Efforts should be made to make communities knowledgeable about the scientific definition of climate change, causes, impacts, risks and planned future adaptation measures. Community understanding of climate change should be applied to include communities having knowledge of climate change and the associated policy processes. Although related to community awareness of climate change, community understanding should be used differently from community awareness of climate change. The community could be considered as understanding climate change when they have sympathetic awareness or tolerance and have scientific reasons and indigenous knowledge to believe in climate change. Community understanding of climate change depends on how and when the concept is defined and applied. Issues of community understanding of climate change should be based on a contextual participatory strategy and not on global and regional overarching guidelines which usually fail to address contextual climate change risks and impacts.

The idea behind community participation in climate change policy is to ensure communities understand the importance of policy implementation during climate change adaptation. Even after the implementation of the policy, the adaptation programmes would be community-based because communities would feel ownership of the climate change policy. Thus, community participation should sometimes happen outside of policymakers because of community understanding of climate change. Simple announcements without explanation or linkage to agricultural recommendations also limit a forecast's usefulness. Information should be communicated through perceived credible sources on a regular basis. Thus, openly acknowledging successful cases of community participation in climate change adaptation programmes in similar settings is critical to enhance community understanding of climate change.

Climate education and literacy to increase community understanding of climate change

Effective climate education and literacy should target selected groups. It may be better when politicians are literate first before any other groups because policies which are detached from community realities may not be successful during implementation. The other group of people is the media. There was a general perception in this study that the media misrepresents scientific results. In some cases, communication was done through the media and the communities were not aware that the message was being communicated to them. Because of the growing gap between what is known about climate change by the communities and what is understood by communities, urgent attention is needed to enhance climate literacy and start climate

education which is currently low, as proven by this study. The study recommends that efforts towards climate literacy and education should be intensified.

6.5.2.4 Use of indigenous knowledge systems

Enhancing community participation in the climate change policy process means drawing knowledge from the community's indigenous knowledge systems to identify their priorities, build capacities and empower them to make policy alternatives. Along with scientific knowledge, the participatory strategy should be clear on the inclusion of indigenous knowledge systems such as rotational grazing, importance of wetlands, protection of certain plants, integrating information about birds migration and behaviour and good agricultural practices. The participatory strategy should be clear on how it will include such indigenous knowledge systems in the climate change policy. Reliable meteorological data should be merged with indigenous knowledge systems to engage communities in climate change policymaking with specific needs. Otherwise, climate change policy formulation and implementation would be perceived as the duty of "central government" with communities seeing it as an irrelevant process to them. Community participation in climate change policy formulation and implementation could be enhanced by integrating meteorological data and community seasonal forecasts to develop consensual seasonal forecasts to communicate to the wider community. Thus, communities could be willing to know more about climate change if the migration of birds is confirmed with scientific data to provide information on the varying seasons of the year, sowing time, coming of the rains and predicting imminent extreme weather events. Black rolling clouds could be noted in terms of how they predict bad weather events.

Communities could actively participate in climate change policy formulation and implementation by finding value in the way the policy would address livelihood issues. Communities are in need of land for cultivation and livestock production, yet the quality of natural pasture has declined drastically. Feed resources for animal grazing are diverse; thus, community participation could be enhanced if the policy includes how communities could be supported to grow sustainable feeds for their animals. Communities practise rotational grazing and remote grazing, so improved pasture for communal lands would be a welcome idea for communities to see it relevant for them to participate in the climate change policy. Active community participation could be enhanced through introducing new drought resistant maize and sorghum varieties and harvesting water in small earth dams for irrigation. Indigenous knowledge systems could enhance the confidence of communities because they would relate meteorological forecasts with what they know and experience. Such information will go a long way in improving agriculture, which is a source of livelihood. Poor agricultural practices such as ploughing along the riverbank for fertile soils and water, should be discouraged.

This study suggests that commissioning climate change impact and mitigation projects, which consider the impacts of climate change on cultural heritage places and values and how the affected communities could enhance their participation in climate change policy processes. Communities have developed and implanted extensive adaptation strategies that have enabled them to reduce vulnerability to climate change. Understanding that indigenous knowledge should be supported with scientific

and technical assessments, the communities' capacity to participate during climate change policy processes could be enhanced through organising physical meetings and implementing relevant projects to improve the community's socio-economic well-being. Pilot projects such as the ones already implemented in Thaba Mokhele, Lilitipeng and Khoelenya in the Mphahle's Hoek District of Lesotho could help to continue in other communities.

Indigenous knowledge chart for climate change

The indigenous knowledge chart suggests specific indigenous knowledge systems which can be incorporated into the climate change policy for use together with scientific information. These include rotational grazing, protection of wetlands, protection of certain plants, tree planting, seasonal forecasting, flower and fruit production, temperatures, wind, animal behaviour and indigenous weather forecasts. Rotational grazing could be included as part of the climate change policy adaptation measures with the policy officially specifying the number of months animals are required to graze in a particular place. The climate change policy could include the importance of planting indigenous trees. Provision should be made to teach communities to have their community tree planting day(s). Further, communities should be sensitised about the importance of trees. For instance, trees can shield houses from violent winds, provide shade for people and animals, store water and prevent soil erosion which can assist in situations of extreme weather events. Indigenous local seasonal forecasting could work as an alternative to scientific forecasts by establishing a relationship with the community representatives who can take note and account for what is happening in their community. The indigenous forecast would focus on temperature changes, birds migration, behaviour of insects and winds for official documentation in the climate change policy.

Regarding rainfall, the focus should be on the type and timing of rainfall rather than on the quantity of the rainfall. Different patterns of rainfall affect communities differently depending on how the rainfall occurs. Thus, combining this information with scientific forecasts could increase the relevance of future predictions of vulnerability and climate change adaptations. The policymakers should commission a research to check the notable changes by communities to scientifically establish chances of animals changing their behaviour or plants flowering at different times and identify the local predictors and how they equate in meteorological terms. Regard communities as knowledge holders and social scientists, if indeed whatever the communities are saying is true, it needs to be documented as part of the contextual participatory strategy. Communities value their own experiences through indigenous knowledge systems compared to scientific forecasts which they believe are usually irrelevant to their communities. The role of community representatives, particularly the chief, elders and ritualists, remains significant when incorporating indigenous knowledge systems in the climate change policy. Table 6.1 explains the chart in brief.

Table 6.1: Indigenous knowledge systems chart

Indigenous knowledge systems	How can indigenous knowledge systems be incorporated in the climate change policy?
Rotational grazing	• Officially, regulate rotational grazing according to how communities are doing it.
Wetlands	• Agree with communities on how wetlands can be protected.
Plants	• Agree with communities on how to protect certain plants.

Tree planting	• Educate communities on the importance of tree planting. • Help communities to organise themselves to have a tree planting day(s) for their communities. Communities favour indigenous trees over exotic trees.
Seasonal forecasting	• Identify the local predictors and how they equate in meteorological terms.
Flower and fruit production	• Identify different flowers and trees in terms of how they vary in flowering or fruit to signal rainfall or drought.
Temperatures	• Compare meteorological forecasts with indigenous forecasts. • Cold or hot seasons and rainfall patterns follow a certain climate pattern. • High temperatures predict a bad rainy season. • Train local community representatives to keep records.
Wind	• Compare meteorological forecasts with indigenous forecasts. • Violent wind can predict a bad rainy season. The direction of wind (East and West) determine the rainfall pattern.
Animal behaviour	• The behaviour of animals such as livestock, insects and amphibians predict a certain rainfall pattern. Sometimes, it may not rain.
Indigenous weather forecasts	• Complement indigenous seasonal forecasting with scientific mechanisms.
Type of clouds	• Determine if black rolling clouds are triggered by climate change. The clouds predict bad weather.

Source: Author

6.5.2.5 Policy nudging

On policy nudging, it could help communities if the politicians and public administrators balance incentives and voluntary participation because communities would sacrifice their time in return for livelihoods. Communities may be unresponsive to calls for voluntary action. In such cases, policy nudging should be applied. The terms and conditions of collaboration should be clear. Therefore, top-down collaboration, co-production, cross-sector collaboration, deliberation and democratisation should form part of a standard way of participation in the participatory strategy. Community participation should not be done because it is a requirement for climate governance but should be consensual with the communities based on their understanding and awareness of climate change.

Practical nudges to enhance community participation

With the agreement of the communities, politicians and public administrators should: i) set aside large areas of community lands for grazing; ii) replace western modified seeds with local seeds; iii) agree on how to protect wetlands, integrate participation with sustaining livelihoods, and iv) encourage the planting of indigenous trees and complement the indigenous forecast on wind, type of clouds, seasons, rainfall patterns and temperatures with meteorological data. Effective nudges work alongside other tools of government to enhance community participation. Policy nudging should not be applied as a standalone policy but as part of the climate change policy to enhance the behavioural lens of the communities in every stage of the policy process. Politicians, public administrators and organisations should aim at using the policy nudging concept because it is an official tool for officials seeking to influence positive behaviour change without infringing on individual's choices. Community-

owned behavioural interventions, tested and promoted by experts could enhance community participation in climate change policy formulation and implementation. Nudges could be co-produced by communities and policymakers.

The importance of policy nudging is that the policymakers shift focus from individuals to improving communities' creativity in their social, economic and political status to adapt to climate change. The citizens are not only presented with choices, but are given a voice to determine nudges to be offered and also nudge the policymakers in a different direction if desired. Policy nudging gives communities a role to be equal actors in every stage of the climate change policy. The policymakers empower communities to expand the range and content of nudges to be used.

6.5.2.6 Climate education

Public policy governance should prioritise community education on climate change and climate change policy processes. The education can be given as formal or informal, depending on the target group of community members. Establishing a formal structure, which involves communities, in climate change decisions could make communities feel equipped to make sense of the local changes they are observing in their communities. It should be noted in the contextual participatory strategy that communities are early observers of climate change in their communities. Thus, feedback mechanisms could enable regular and timely reporting of observations to politicians and public administrators with the expertise and capacity to engage climate scientists to investigate them. Projected risks should be effectively communicated to people for them to have the required basic information to start formulating or improving their adaptive capacity. Community awareness and understanding of climate change could also be addressed through formal climate education in primary, secondary and tertiary education and informal education for communities. Thus, children will learn about climate change from an early age until they become adults. Community participation in climate change policy formulation and implementation should be considered a long term investment.

Formalise climate education

The other task at hand, besides applying public policy governance, could be to group people according to common characteristics and target the groups of people. Climate education should be formal (schools) and informal (communities, policymakers, media and community representatives). Both informal and formal education should be prioritised to engage people of all ages. Formal education will target the young generation who are the future community members (see the details on climate literacy under Section 6.5.2.2). It may be difficult to educate everyone about climate change but if communities are taught, such information can be easily passed on from generation to generation. The first thing to be taught should be weather. All the groups should be targeted but the messages and methods of delivery should be tailored for each group. The methods and message is guided by the targeted group, their needs, expectations, capacity to understand and where the group of people is found or geographically located.

6.5.2.7 Participatory methodologies and techniques

The contextual participatory strategy could include structured new participatory methodologies deduced from the NPG theory, systems theory and theory of community participation in environmental management . The methodologies are co-production, deliberation, collaboration, democratisation and cross-sector collaboration. Further, participatory methodologies, such as storytelling, collaborative public gatherings, livelihood integration, offering extension services, road shows, door knocking and signs, could be used to make co-production, deliberation, collaboration, democratisation and cross-sector collaboration a reality to communities for them to participate during climate change policy formulation and implementation. Concerning participatory techniques, communities are willing to use their traditional techniques, for example, public gatherings (pitsos) – in the absence of facilitation by the experts. Through public policy governance, the politicians and public administrators should agree on the selection of appropriate participatory techniques such as briefings, media, presentations to communities, PRA, participatory technology, consensus building, facilitation, focus groups, interviews, public hearings, public gatherings, workshops, beneficiary assessment, surveys and polls depending on the participatory methodology used. Despite communities emphasising the use of traditional participatory techniques, an attempt by the actors to use these participatory techniques could promote active community participation in the climate change policy decision making and bridge the gap between policy formulation and implementation. The politicians should approve a contextual participatory strategy which involves the communities through dialogue at all the climate change policy stages. Participatory techniques encourage win-win solutions to complex climate change problems and what is critical when using them is to enhance a sense of ownership.

The desired participatory platform for communities can be created to give communities an equal opportunity to participate through participatory techniques. Therefore, such platforms should be created with the inputs from the communities. Otherwise, without the assistance of the facilitators, the communities think that only the public gatherings are relevant to their context because of the community members' perception that they are simple and easy. Participatory methodologies should be carefully chosen to translate community participatory strategy into practice through the use of participatory techniques. The chosen participatory techniques could be flexible, giving communities power to decide how they want to be involved in the climate change policy formulation and implementation. More facilitation would be on visual and oral communication. It may help to avoid texts that communities would not understand. A large proportion of the population does not pay attention to news and media for various reasons. They want an easy and simple procedure to follow. Holding public gatherings to spread awareness of climate change would ensure that no time is lost while the environment is disrupted. In the absence of participatory rural appraisal techniques, the communities' perception of the seriousness of climate change could be raised by a clear presentation to communities during a public gathering.

New participatory methodologies

Community participation during climate change policy formulation and implementation can be enhanced through storytelling. The stories could include crises that the community encountered in the past. An attempt should be made to share and replicate the stories, visually, in accessible places and in the media. This will increase the communities' exposure to climate information.

Storytelling is good for all the age groups. Storytelling could be used as a new method of passing on information to the communities. For instance, using current events such as the Kwazulu Natal floods (2022), Cyclone Idai (2019) and Cyclone Freddy (2023) in Southern Africa. This enhances the communities' understanding of the information based on something they know that it happened. Listeners could benefit from the story narratives – community stories which the community is sure that they happened. Communities may not care to listen to scientific information which is not relevant to them. Hence, storytelling of recent past events could cover up that gap. The communities could learn how to think about the process of climate change instead of being told what to do. Eventually, the communities consciously or subconsciously will select the events they deem important and learn how to deal with potential impacts of such extreme weather events. The told stories should provide context (known extreme weather events and indigenous knowledge systems) for the stories to be perceived credible and factual. Thus, to enhance community participation, storytelling should be regarded as a way of knowing.

Another methodology could be going beyond public gatherings by shifting the facilitation of the policy process to communities which this study would refer to as collaborative public gatherings. The shift from normal public gatherings to collaborative public gatherings will allow communities to participate stage by stage in the climate change policy process until the policy is implemented. Having participated fully in climate change policy processes means that the communities could have an opportunity to formulate their adaptation measures. Collaborative public gatherings could ensure that climate change policies are community driven because community facilitators can be any community representatives, as agreed upon, to lead the policy process. These additional roles for communities require policymakers who understand the principles of policy nudging. The communities should understand that the climate change policies are used for countrywide community adaptation measures; thus, their participation is critically needed.

Livelihood integration could also be used to enhance community participation. Livelihood integration works in a community whose source of livelihood is the same. Community participation under such circumstances should purely be led by the concerned community and facilitated by a NGO. The NGOs are the most trusted actors because communities perceive them as apolitical and genuine in their interventions. The livelihood integration should emphasise the importance of engaging communities from agenda setting and responding to their expressed priorities and needs. Thus, the livelihood integration approach begins with communities facilitating the climate change policy process based on their priorities, indigenous knowledge systems and capabilities to empower them for policy implementation which is usually adaptation measures. The communities are already practising livestock management and agriculture which just needs the government to assist with specific geographic information and climate information services. This was one of the top issues in the Manonyane communities.

Door knocking could also be a good participatory methodology to leave no one behind in climate change policy issues. Policymakers to officially introduce themselves to the community representatives so that they can gain access to the community households. The policymakers could also participate in social functions to gain the trust of the community members. The social

gatherings could include funerals, sports, religious activities, community works (e.g. fato-fato) and having drinks with community members. This will allow the facilitators to know the community through active participation through sharing community concerns and progress as well as understanding their values and cultures. However, door knocking could also reveal community conflicts as communities have a chance to say out their views in privacy. Communities are tired of politicians because they are perceived as un genuine in their engagements with the communities. The communities perceive that politicians engage communities when they need “the finger” (to be voted into office). The situation is worsened by the fact that politicians change every five years in most communities. Further, the communities do not understand the difference between politicians and public administrators. The word government is associated with politics. Resultantly, the communities may view the facilitators as insiders and not outsiders.

Road shows could be an effective participatory technique for policymakers to disseminate information about climate change in terms of mitigation and adaptation measures planned by the government. It can allow policymakers to make communities aware of climate change, build relationships with communities, get community feedback and share about the climate change policy. The underlying idea for using road show is that community participation requires motivated community members who are also conscious of climate change. Road shows should be conducted in such a way that communities and policymakers benefit from the experience. Road shows would provide a platform to talk about climate change and allow the policymakers to develop a rapport with communities. The feedback from the road shows could allow the policymakers to assess the level of community participation in climate change issues. A road show could make communities aware of climate change by introducing the climate change policy processes to new community members. The policymakers have an opportunity to impress the communities to motivate future participation. Building relationships with communities is also critical for policymakers to build trust in the planned engagement processes. Feedback can also be received from road shows. Lastly, road shows can allow policymakers to introduce climate change policy processes for future community participation.

Signs could be a useful participatory methodology to encourage communities to participate in climate change policy formulation and implementation. Signs, for example, have long been used on roads to provide drivers and road users with information. Signs, in this case, would work as a conscious way of transmitting information to nudge community behaviour towards their participation in climate change policy processes. They pass on different kinds of information. There are different types of signs but this study proposes the use of regulatory, warning and information signs. Unlike road signs which are only put in the roads, using signs as a method to enhance community participation implies putting them anywhere where the intended community could see them. Warning signs information could be used to warn communities about the potential impacts of human activities such as overgrazing, poor agricultural practices and veld fires, among many. These signs can help raise awareness of human activities which exacerbate climate change and encourage communities to take action to reduce the impact of such activities on their environment. Informational signs provide information about the impacts of climate change such as extreme weather events and the action people can take to adapt to climate change. Signs could be a powerful method to disseminate information

about climate change to prepare communities for engagements in climate change policy formulation and implementation. The seven new participatory methodologies are shown in Figure 6.2.

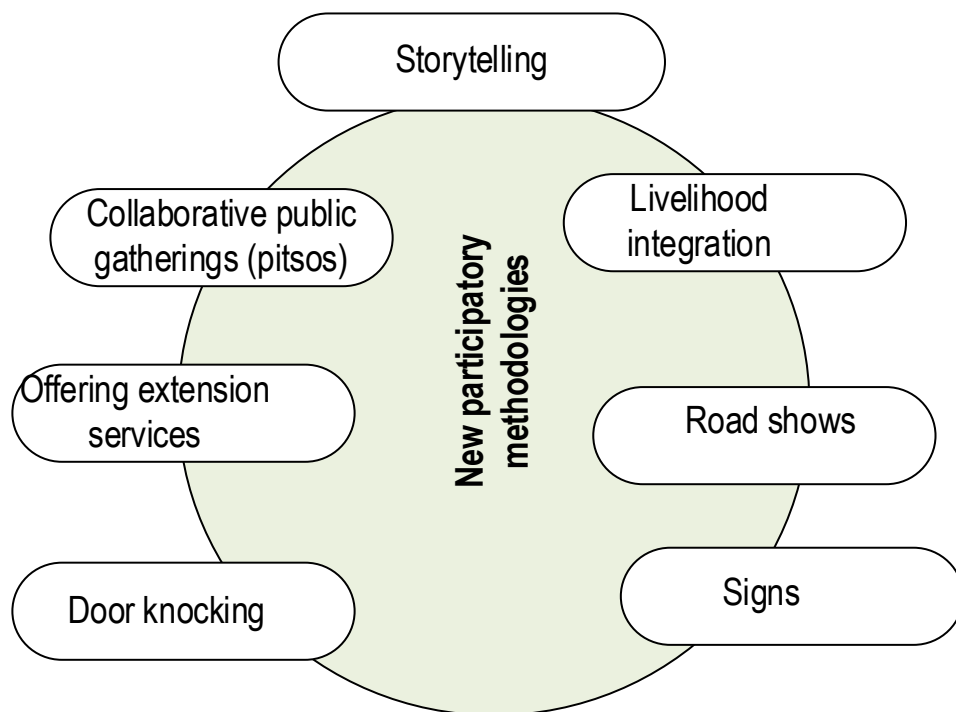


Figure 6:2 New participatory methodologies for enhancing community participation during climate change policy formulation and implementation

Source: Author

In concluding the discussion on the seven pillars of community participation, Figure 6.3 illustrates the pillars resonating with communities and others with the policymakers. Policymakers are required to take the lead in applying governance, use indigenous knowledge systems, apply policy nudging and facilitate new participatory methodologies to enhance community participation during climate change policy formulation and implementation. Regarding communities, the level of community awareness and understanding of climate change as well as climate education, directly impacts how they respond to participation in climate change policy processes.

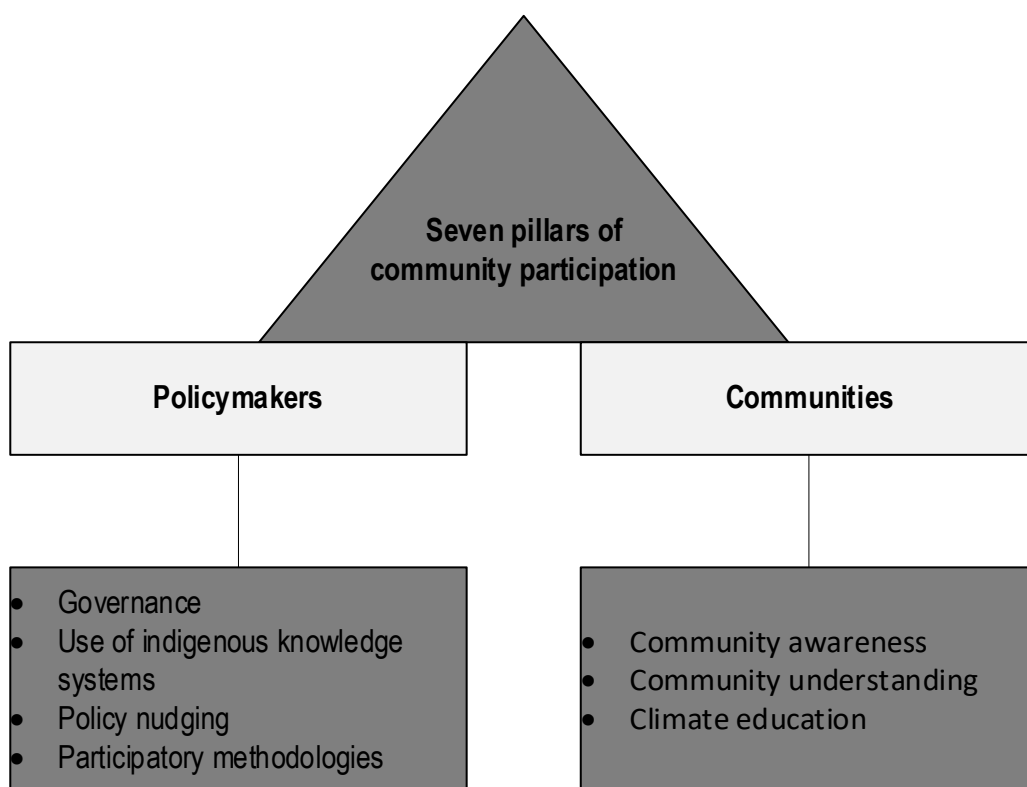


Figure 6.3: Seven pillars for enhancing community participation

Source: Author

6.5.3 A contextual strategy-measuring indicator for enhancing community participation in Lesotho

A contextual strategy-measuring indicator relates to how the Lesotho's ministry responsible for climate change policies assesses itself and empowers communities to participate in climate change policy formulation and implementation. The importance of the contextual strategy-measuring indicator is that it can be used by politicians, public administrators and other stakeholders in climate change policies and other policy areas. The indicators are governance, climate awareness, community understanding, climate literacy, climate education, use of indigenous knowledge systems, participatory methods and policy nudging. As per Figure 6.4, the responsible ministry could use the measuring indicators to assess how it is enhancing community participation during each climate change policy stage. The first indicator is detailing what governance should entail, considering the NPG. Thus, the question is: How can socio-political, administrative and public policy governance be applied? The second indicator is climate awareness, which relates to connecting information needed by a particular community to information provided by climate scientists. Therefore, the question is: What climate information does this community need? The third indicator is community understanding of climate change, which requires detailing how communities can be taught to have knowledge of climate change and the associated policy processes attempting to answer the question; how can a community be made to understand climate change? The fourth indicator is climate literacy. Who should be educated in climate science, when and how? The fifth indicator is climate education which requires detailing how communities can be educated through formal and informal education. How can formal and informal education be provided to communities? The sixth indicator

is the use of indigenous knowledge systems in climate change policy which should be specified in terms of what to include and how to include it in the climate change policy. The question would be – Which community indigenous knowledge systems can be used together with scientific information in the climate change policy? The seventh indicator is the use of participatory methodologies. The question to be answered would be: Who are we targeting, and what methods are relevant? The eighth indicator is policy nudging, entailing how to balance incentives and voluntary community participation. How can communities be motivated to participate in the climate change policy process?

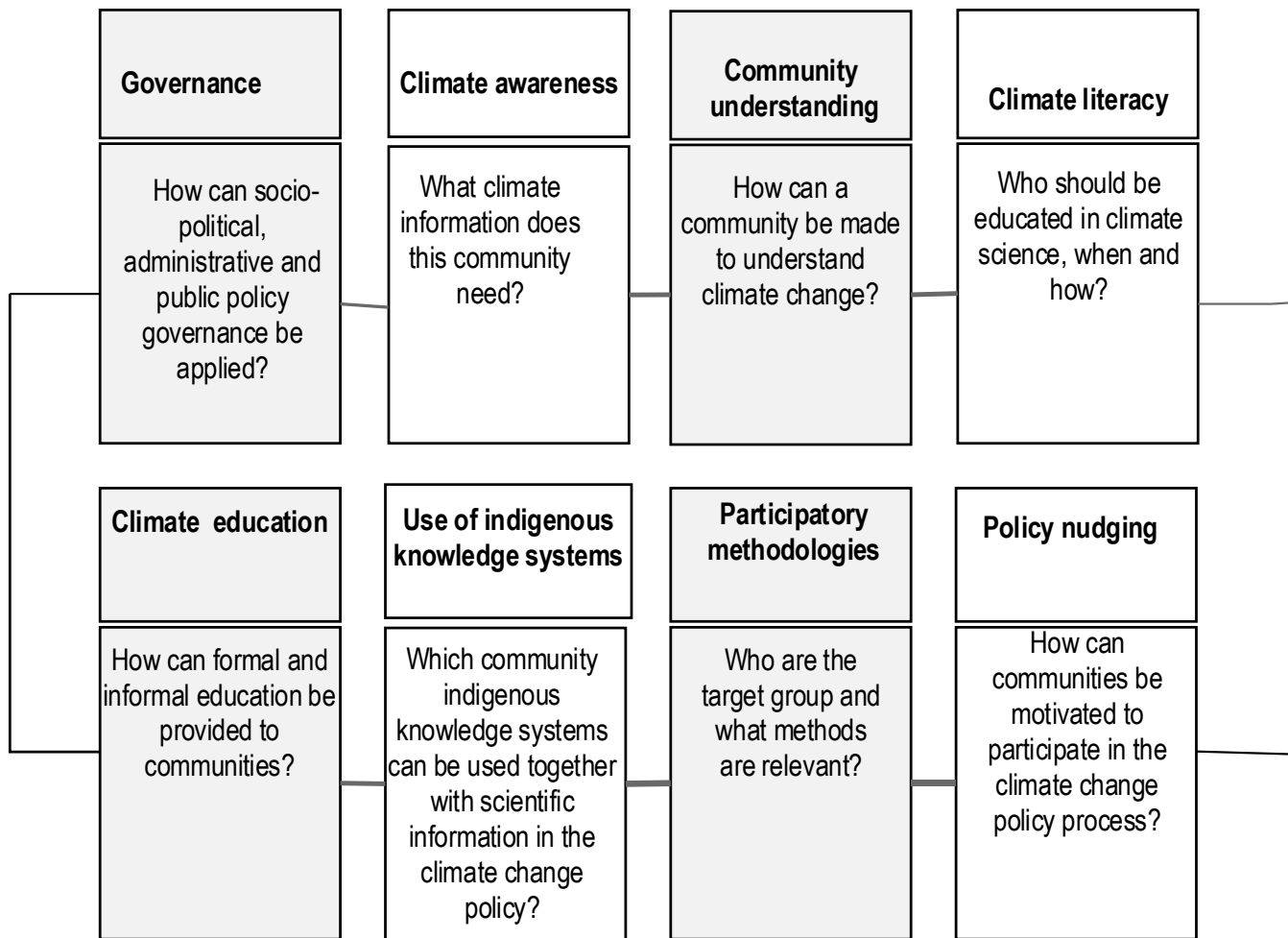


Figure 6.4: A contextual strategy-measuring indicator

Source: Author

6.5.4 The multiple actors' roles and the climate change policy formulation and implementation

This strategy places the communities at the centre of the climate change policy formulation and implementation. The centrality of communities as co-producers of the policy requires multiple plural actors to interdepend for resources to enhance community participation as previously marginalised actors. In this respect, defining the role of multiple actors is critical to avoid fragmented community participation or a lack of community participation. The multiple actors for this strategy are politicians, public administrators, community representatives, communities and experts. The complex set of interactions that guide the multiple

actors calls for the definition of roles for each group of actors during each policy stage which is explained in the remainder of this section. Each section explains the roles of politicians, public administrators, experts, community representatives and communities on how the actors facilitate community participation when enhancing community participation during a particular policy stage guided by the NPG components. Figure 6.5 displays a summary of the applicable NPG components during each policy stage when enhancing community participation.

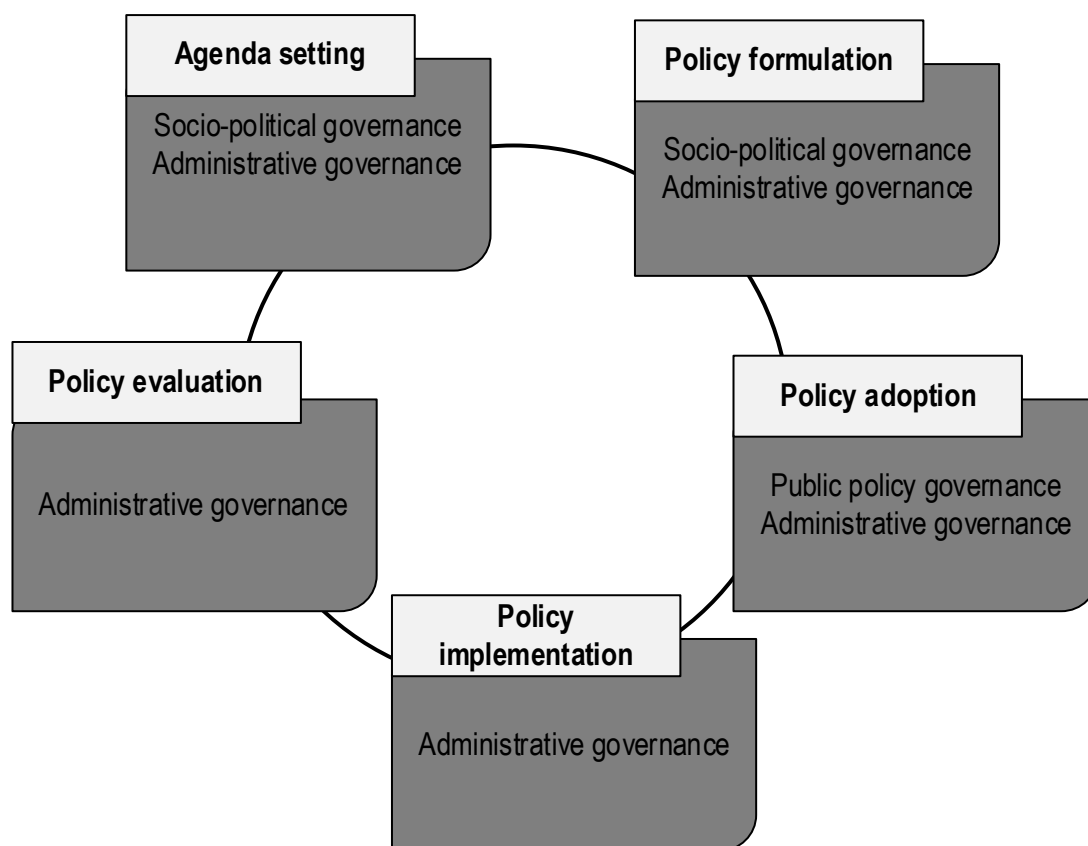


Figure 6. 5: The New Public Governance components applicable during each policy stage

Source: Author

6.5.4.1 Actors' role during agenda setting

Politicians – The role of politicians during agenda setting when enhancing community participation is to socially and politically construct administrative structure or framework (institutions and regulations) through socio-political and administrative governance. During agenda setting, socio-political and administrative governance guides the behaviour of politicians on how to ensure community input in the climate change agenda. Thus, the politicians define socio-political and administrative governance for public administrators to carry out their work within defined parameters. The framework (formal institutions and regulations) gives the public administrators authority to formulate the climate change policies with the involvement of the communities. The politicians make community participation an institutional agenda during climate change policy agenda setting where they feel obliged to give serious attention. Administrative governance requires politicians to prioritise communities

in the climate change agenda setting, as well as changing the mindset of public administrators through their values and behaviour and increasing administrative capacity to enhance community participation. Administrative capacity in this context means re-educating public administrators as managers of devolved governance. This involves adding administrative roles from just being an expert manager to involve inter/intrapersonal skills such as communication, team building, facilitation and listening. Thus, public administrators become community participation practitioners rather than promoting self-interests and the ruling party's interests. Administrative governance requires changing institutionalised habits and practices that do not promote community participation. Without a real change in how administrative governance works, there is a possibility of little or no community participation in climate change policy formulation and implementation.

Socio-political governance occurs when the politicians rely on other societal actors, such as the communities, for legitimacy and impact of the climate change policy. Thus, the strategy takes into consideration a combination and integration of the social and political systems to get community input into the agenda setting process. Noteworthy is that politicians ensure community understanding and awareness of the agenda setting process and policy nudges to help communities make informed decisions. This implies that the type of governance (open or closed) determines the level of community participation during agenda setting. While politicians are superior actors because of their representative authority, they should acknowledge that they are dependent on public administrators and other actors to engage the communities during agenda setting. Politicians provide the public administrators and other actors with a strategy defining the parameters of community participation within which communities contribute during the agenda setting policy stage.

Public administrators – The role of public administrators during agenda setting when enhancing community participation is to coordinate co-production, facilitate deliberations and manage cross-sector collaborations. As noted during agenda setting, socio-political and administrative governance forms the basis upon which public administrators engage communities during agenda setting. The public administrators are guardians who ensure that the actual participation theorised on paper takes place. Establishing a close relationship with communities is necessary and desirable for public administrators during agenda setting. The communities should not feel left out of the national climate change policy agenda. The communities dissociate themselves from the policy under such circumstances. The public administrators manage the participation process, thus, having the ability to influence how communities could participate during agenda setting. In respect of applying socio-political governance during agenda setting, the public administrators transition from hierarchical and market forms of governance to the use of indigenous knowledge systems as a more robust way to enhance community participation during the definition of climate change policy problems.

Through administrative governance, the public administrators' role is to encourage communities to participate as equal decision-makers and social learners (by sharing indigenous knowledge systems) through co-production. The public administrators are responsible for ensuring that communities co-plan, co-design, co-implement and co-evaluate decisions during the policy agenda. The public administrators use community social and political values to define policy problems and

democratise the agenda setting process through the active participation of communities. The socio-political governance implies that communities are shaped continuously by their interactions within their social and political systems, which explains why communities have shared policy problems and societal challenges. Administrative governance, therefore, highlights the steering role among public administrators (bureaucracies), society (communities, experts and other stakeholders) and politicians (legislature and executive) during agenda setting. It is important for public administrators to know how forms of collective action (co-production, deliberations and cross-sector collaborations) influence the policy agenda during these interactions and interrelationships with other actors.

Experts - Regarding the experts, their role is enhancing community participation during agenda setting by promoting interaction, interdependence for resources, collaboration and advocacy. The experts are expected to give advice and identify courses of action that will assist communities to be part of the policy agenda setting. The value of experts to communities is that experts are objective in carrying out their duties and have specialised knowledge. Thus, the politicians and public administrators should give some level of independence to the experts to allow them to engage communities. The research work done by experts is also critical to unpack when and how communities can be part of the agenda setting process. Consequently, the experts drive complex participatory techniques during agenda setting because of their expertise. The role of experts during collaboration is to continuously facilitate communities to organise themselves and make themselves heard by the policymakers on new climate change problems arising in their communities. Thus, the role of experts is not a one-time work but dynamic because of the nature of climate change. Understandably, climate change is an open-ended problem (not known when it will end) by nature. The experts' resources (money and human) are used to capacitate communities to re-group and re-organise themselves whenever climate change problems arise in their communities. Communities are provided with knowledge about the climate change agenda and resources to participate in the agenda setting process. In such circumstances, the agenda setting becomes the foundation upon which community participation is enhanced. When participation is missed at this stage, it may hamper how communities participate in all the other stages. In addition, the experts can play the advocacy role where they negotiate for the community's climate change adaptation needs to be part of the policy agenda. By facilitating collaboration, it means experts help communities and policymakers build a consensus around the policy agenda to develop shared goals and strategies.

Community representatives - As for community representatives, their role when enhancing community participation during agenda setting is to be gatekeepers for their communities. Recognising community representatives as invaluable community leaders enhance community participation because access to communities would be made easy because of their closeness and trustworthiness to the communities. This causes the community representatives to mobilise communities and act as gatekeepers in their communities. Therefore, community representatives could work closely with politicians, public administrators and experts to understand climate change on the basis of the latest scientific research to exchange such information during social gatherings with their communities. The reciprocal sharing of indigenous knowledge systems about the climate change policy agenda could be done through the community representatives, based on prior community agreements whenever communities cannot be available. In addition, the involvement of community representatives builds trust

and legitimacy in the perception of community members regarding the agenda setting process as they are likely to feel comfortable engaging with outsiders through their leaders. However, this may be debatable considering different communities.

Communities – The role of communities during agenda setting is to co-produce the climate change agenda and share indigenous knowledge systems. Communities tell the government their needs and what they need to be done to meet such needs. An enabling environment created by public administrators involves public administrators and communities in a relationship with mutual input to the policy agenda. Communities participate freely and voluntarily in the comfort of their communities. Space to ask questions about the agenda setting process should be provided by the politicians and public administrators and vice-versa. Public administrators should ensure that participation happens in the communities at agreed places and not ask communities to come to parliament. This means that community members without money and time will never have an opportunity to go to parliament. Public gatherings can be the main method of engaging communities. However, it should be understood that communities are incapable of using some participatory techniques without the assistance of facilitators. In every climate change policy stage, policymakers should choose participatory techniques with the understanding that climate change is a community issue. Therefore, the objective for participation should determine the participatory techniques that could be used. In addition, PRA techniques, participatory technology, consensus building, facilitation, focus groups, interviews, public hearing and workshops could also be used if communities have an opportunity to reach a consensus. The focus should not be on a few individuals but to the whole community. Finally, Table 6.2 summarises the roles of actors when enhancing community participation during the agenda setting.

Table 6:2 : Roles of actors when enhancing community participation during the agenda setting stage

Actors	Roles of actors during agenda setting stage
Politicians	▪ Socially and politically construct administrative structures (institutions and regulations) through applying socio-political and administrative governance.
Public administrators	▪ Co-ordinate co-production. ▪ Facilitate deliberations. ▪ Manage cross-sector collaborations.
Experts	▪ Promote interaction. ▪ Promote interdependence for resources. ▪ Promote collaboration. ▪ Advocacy
Community representatives	▪ Gatekeepers for communities.
Communities	▪ Co-produce the climate change agenda. ▪ Share indigenous knowledge systems.

Source: Author

6.5.4.2 Actors' role during policy formulation

Politicians – The politicians enhance community participation during climate change policy formulation by playing an oversight role. The politicians set clear values across government to guide community engagement to have a consistent set of operating principles. Because of shared responsibility, shared leadership, interdependence, relationship and interaction between public administrators and politicians, the politicians should specify how the public administrators lead co-production, deliberation, collaboration and interaction. It should also be clear how public administrators are required to manage socio-political and administrative governance. Enhancing community participation happens when politicians are clear on how they guide public administrators to link the climate change agenda and livelihoods. In defining administrative governance, co-production should account for communities' livelihoods and priorities for it to enhance their participation during policy formulation. The politicians should understand that it may be difficult for community members with different occupations and farmers to leave their work for active participation in climate change policy formulation. Many community members may not understand the importance of their participation in climate change policies if not related to their livelihoods. The main NPG components to be applied during policy formulation are socio-political and administrative governance to enhance community contribution towards selecting policy alternatives. Amongst plural actors (multiple actors), public administrators would therefore lead collaboration and coordinate the co-production of policy alternatives during this policy stage under the oversight role of the politicians.

Politicians invest in meeting with communities to build trust and enthusiasm for the whole climate change policy process as part of their responsibility during policy formulation. Building local relationships with community members and community representatives is necessary to enhance community participation. Politicians give communities the power to initiate engagement processes which are authoritative and legitimate to influence policy formulation as it happens in policymaking processes. Efforts are made to show communities that participation is critical, informative and rewarding. Communities should not be deprived of power because of lacking money. Politicians have a duty to convince communities that participation works. It is at this stage that the politicians should listen and be interested in what communities suggest as solutions. Thus, going beyond listening and demonstrating to communities that they are incorporating their ideas in the policy should be visible to communities. Politicians provide leadership (giving communities power and space to meet) to communities but communities remain with the duty to produce policy alternatives.

Public administrators - The public administrators' role relates to creating space (access to information and direct participation) for communities to participate. The role of the public administrators is to bring together experts, community representatives and experts to interdepend, interact and collaborate in a way that allows communities to co-produce policy solutions. The public administrators outline how they propose to deal with potential conflicts, manage power dynamics and joint activities of many actors to prioritise communities as previously marginalised actors. Thus, the main NPG components (socio-political and administrative governance) applicable during policy formulation specify how the public administrators could manage the devolved governance. Guided by administrative governance, the public administrators check for inconsistency or contradictions with the national goals with what the communities could have proposed as policy alternatives during the policy

formulation stage. Vague and unclear proposed community policy alternatives should be noted and technically assessed to find common ground with what the communities want. The value of participation for communities is in how the public administrators adopt the proposed community policy alternatives for inclusion in the climate change policy.

The public administrators assist communities to examine their proposed solutions to agree on the proposals. In this regard, enhancing community participation requires public administrators to consider social factors during the formulation of climate change policy alternatives as guided by socio-political governance. The public administrators educate communities on the policy process. Therefore, policy formulation is characterised by trust, commitment, and transparent and honest discussions on the proposed climate change adaptation measures. The communities initiate communication, manage it and control it to increase their capacity to participate to avoid communities receiving information late. Further, the public administrators ensure that the participatory methodologies are acceptable to communities.

Experts' role – The experts' role during climate change policy formulation is to promote collaboration, interrelationships and interdependences. Consequently, the experts encourage community participation by sharing their expertise, knowledge and skills with politicians and public administrators to ensure communities are part of the policy formulation process. Through international, regional and national platforms, experts submit proposals and ideas in relation to community participation which could be used by politicians and public administrators. This makes experts advocates for communities, ensuring that the principles of community participation are upheld. Through such interdependences, the influence of experts is to bring together the communities and other actors to exchange resources, information and expertise during policy formulation. In some cases, experts do this without necessarily engaging the communities directly. The experts' role is to be non-partisan when promoting interrelationships. The experts should not be politically linked to the policymakers. This affects the credibility of the policy process. Communities may be deterred from participating because of experts who support the climate change policy process based on, for example, the politicians' populist and religious ideas. The feeling in communities of deprivation to make decisions could provoke a hostile reaction to policy implementation.

Community representatives' role – As leaders of communities, the role of community representatives does not change from one policy stage to another, they are gatekeepers to accessing communities. The role of community representatives would be to encourage people to see the importance of participation in the climate change policy and mobilise support for policy formulation. Community representatives work with politicians and public administrators to co-produce policy proposals. Likewise, during policy formulation, the community representatives work closely with politicians, public administrators and experts as gatekeepers the same way it was explained during the agenda setting. The community representative mobilise support for the policy formulation process. The mobilisation is done through public gatherings and other communication channels to raise awareness of the importance of participating in policy formulation and encourage communities to participate during the policy formulation stage.

Communities - The role of communities during policy formulation is to co-produce policy proposals, expressing their prioritised adaptation measures and suggesting solutions. Community participation during policy formulation should be real for communities. This could happen when communities have power to re-direct administrative efforts towards their priorities and not to work as partners to propose solutions to their climate change problems. The communities establish their parameters on how they should participate and select the methods which are relevant to their participation. The communities should feel confident and informed about the climate change policy formulation. Consequently, the objectives for community participation should specify how PRA techniques, participatory technology, public hearings, facilitation, interviews, public meetings, focus groups, workshops and consensus building could be used to enhance their participation. The communities should clearly be indicated as leaders of the policy formulation process. This discussion on the role of actors during policy formulation ends with Table 6.3, showing each actors' role when enhancing community participation during policy formulation.

Table 6.3: Roles of actors when enhancing community participation during the policy formulation stage

Actors	Roles of actors during the policy implementation stage
Politicians	Play an oversight role.
Public administrators	- Create space (access to information and direct participation) for communities to participate. - Co-ordinate interdependence. - Facilitate interaction. - Facilitate collaboration in a way that allows communities to co-produce policy solutions. - Assist communities to examine their proposed solutions to agree on proposed proposals.
Experts	- Promote collaboration. - Promote interrelationships. - Promote interdependences.
Community representatives	- Gatekeepers for communities. - Encourage community members to see the importance of participation in climate change policy. - Mobilise support for policy formulation.
Communities	- Co-produce policy proposals. - Propose solutions.

Source: Author

6.5.4.3 Actors' role during policy adoption

Politicians – Through public governance, the politicians are required to promote interaction of actors, legitimacy, trust, collaboration, democratisation, equal distribution of power, information, education and persuasion and policy nudging. This is done by creating a legislative framework of guidelines and restrictions for involving the communities as part of the legislation process. The main applicable NPG components during policy adoption are administrative governance and public policy governance. Interaction is having a mutual beneficial relationship to create synergies for a legitimate policy adoption process. The politicians should ensure two-way trust exists with public administrators, community representatives, communities and experts. The communities should be convinced through information, education and persuasion to understand the policy adoption process. Regarding collaboration, the politicians should ensure that communities are involved in the policy adoption

dialogue to motivate them to participate. However, as usual, the final decision-making and control over the technical legislation remain with the politicians. Democratisation and sharing of power mean the politicians should share authority with the communities and ensure that they are kept informed of what is happening with the climate change policy as it passes through parliamentary processes. In summary, information and education about the bill and policy adoption process is critical to enhance community participation in climate change policy formulation and implementation. On policy nudging, this implies that the politicians go beyond education, attempting to encourage participation by ensuring mandates, incentives and sometimes regulations.

Another role of politicians during policy adoption is to have the political will to adopt preferred community policy alternatives. In other words, the politicians should action proposed community alternatives. Communities should be provided with the justification for rejection or modification of their proposed policy alternatives. The justification for modification should be based on the technical soundness of the proposed alternatives and proposals that assist to solve climate change problems. Accordingly, the politicians should take serious community participation by prioritising their proposed courses of action in the climate change policy. Political endorsement through effective public policy governance is critical to enhance community participation in climate change policy formulation and implementation. The legitimacy of the climate change policy is affected by how the communities perceive the policy adoption process. The communities should at least perceive that what the politicians are doing is “proper” (perceived the policy adoption process as transparent and acceptable) and addresses the climate change problems of the communities. Politicians should acknowledge the importance of this legitimacy because when eroded, the effectiveness of climate change policy implementation could be reduced. This implies that politicians should be aware of the decision-making theories such as the rationale comprehensive theory and incremental theory. This means that the politicians could hamper or enhance community participation depending on whether or not they accept the communities’ proposed policy alternatives.

Public administrators – The role of public administrators during policy adoption when enhancing community participation is to promote interaction, legitimacy, trust and collaboration. Community participation is enhanced through applying administrative and public policy governance as the main components during decision-making for policy adoption. At this stage, administrative governance is vested in how public administrators champion collective decision-making through pluralist processes that enable communities to legitimise the adopted policy (having an equal say in decision-making, just like any other actor). As such, public administrators are expected to enhance community participation through non-linear interaction by ensuring that:

- proposed alternatives by the communities are technically sound;
- policy alternatives address contextual climate change issues;
- they estimate the budgetary costs of implementing the policy; and
- the preferred policy alternatives by the community have political support.

The other role of public administrators during policy adoption is to build trust through promoting “real” accountability and administrative legitimacy. Real accountability refers to active accountability which is visible and perceived right by the communities. This accountability takes place when public administrators become interpreters of the technical policy adoption process involving communities. The public administrators go beyond the technical policy adoption process to assist communities in examining the policy adoption process, working together with them and engaging them in an open and honest manner acceptable to communities. Resultantly, the public administrators assist communities in reaching a consensus after their understanding of the policy adoption process. Diminished trust in the policy adoption process means less accountability of the public administrators in the perception of communities. Consequently, public administrators should understand that adopting a policy not considering community input decreases community participation. Communities could feel cheated. In future, the communities would fail to differentiate between public administrators and politicians. Administrative legitimacy requires public administrators to account for the policy adoption process. The communities should feel part of the policy adoption process, although they might not be physically present during the policy adoption process. This may cause the communities’ interest in participation to decline.

Experts – Experts enhance community participation during policy adoption when they ensure that the politicians and public administrators bargain power for communities, give simplified feedback of the policy adoption process to communities, balance power inequalities and make policy recommendations. Experts facilitate community-led action. This is how the experts observe the policy adoption process to ensure that community input is included in the final climate change policy. The experts are required to understand the prescribed requirements of the policy adoption process when engaging communities to be part of the policy adoption decision-making. Noteworthy is that the role of experts is not much at the policy adoption stage. Politicians do much work because of their authoritative power. The experts balance power inequalities through empowering marginalised groups of people in a community. The ability of experts to balance power inequalities and manage power dynamics is critical to enhance community participation. Participation during policy adoption includes the marginalised groups (e.g. women, youth, children and the disabled) in communities. Special public gatherings for such marginalised groups should be organised in communities where power may be limited to men and community representatives. Sincere discussions should take place for such marginalised groups to understand the climate change policy adoption process. The experts also make policy recommendations during the policy adoption stage. Practically, the recommendations should be technical and neutral. Experts should avoid recommendations which criticise community’s indigenous knowledge systems. Whenever required, the experts should be obligated to justify their recommendations.

Community representatives – The role of community representatives are not many during the policy adoption process except that they may indirectly or directly observe the policy adoption process to represent their communities in a pre-arranged manner. The pre-arranged manner here means that community representatives ensure that community inputs and agreed policy alternatives are indeed included in the draft policy. Further, ensuring that the community has an opportunity to comment on it. Communities may observe the climate change adoption process through their community representatives, meaning

acting as a bridge between the policymakers and communities. Their communities often recognise community representatives as primary leaders with authority. They have the power to make decisions that affect the welfare of the people. In some cases where communities cannot be present, community representatives can make pre-arranged decisions. What is critical to note in the strategy is that whatever representation, should be pre-arranged to increase community trust in the adoption process. Whenever possible, community representatives should use consensual agreements when representing the communities.

Communities –The role of the communities during policy adoption is providing support to the draft policy prior to adoption, thus legitimising the policy. The policy adoption process should always have an acceptable level of consultation for communities to legitimise the policy. Communities join in decision-making equally and fully as communities or through their representatives. Thus, communities are central and control decisions during policy adoption. The policymakers should cheap in to give an explanation of the policy adoption process at the invitation of the communities whenever required. The communities need to know that their policy proposals will be considered during the policy adoption. However, community participation during policy adoption could also be determined by the level of deliberation initiated by other actors. The enhancement of community participation should be addressed by formally defining collaboration process, which formally includes the communities. Communities could contribute through organised briefs, community presentations and the media, which are some of the participatory techniques that communities could use to co-decide, legitimise and observe the policy adoption process. Thus, the politicians and public administrators should clearly define in the participatory strategy the objectives for participation at this stage. In concluding the discussion on the policy adoption stage, the roles identified for each actor are summarised in Table 6:4.

Table 6.4: Roles of actors when enhancing community participation during the policy adoption stage

Actors	Roles of actors during the policy agenda stage
Politicians	▪ Promote interaction of actors. ▪ Promote legitimacy. ▪ Promote trust. ▪ Promote collaboration. ▪ Democratise the policy adoption process. ▪ Promote equal distribution of power, information and education about the policy adoption process. ▪ Apply policy nudging. ▪ To have the political will to adopt preferred community policy alternatives
Public administrators	▪ Promote interaction. ▪ Promote trust. ▪ Promote legitimacy. ▪ Promote collaboration.
Experts	▪ Bargain power for communities. ▪ Give simplified feedback. ▪ Balance power inequalities. ▪ Make policy recommendations.

Community representatives	▪ May indirectly or directly observe the policy adoption process to represent their communities in a pre-arranged manner.
Communities	▪ Legitimise the policy.

Source: Author

6.5.4.4 Actors' role during policy implementation

Politicians – The politicians' role during policy implementation when enhancing community participation is to play an oversight role regarding national goals, financial support and technical support. The politicians use their legal and authoritative power to guide the collective decisions through knowledge exchange and skills. However, public administrators do the day-to-day administration action. In action, the public administrators implement the policy to the target population. The main role of politicians is decentralising political power to public administrators. Administrative governance is the main component that dominates climate change policy implementation. The practice of administrative governance is characterised by broad courses of action which include plural actors and pluralist processes, all aimed at one goal, to enhance community participation during policy implementation.

The politicians control financial resources and take decisions on what to spend on when implementing the policy. They should priorities activities that support community participation. The politicians' role is to adopt implementation strategies linked to the needs of communities. Of use to communities is when the communities perceive politicians as serious in funding adaptation measures that solve their climate change problems. This could only happen when communities are involved in the policy implementation. Resultantly, the politicians gain the trust of the communities, which is usually lacking.

Public administrators – The role of public administrators is to manage cross-sector collaboration, facilitate co-production of adaptation programmes, coordinate interdependence for resources, nudge communities and manage power dynamics. Hence, the public administrators bring diverse plural actors together to implement climate change policy programmes collectively to benefit communities. Regarding cross-sector collaboration, the public administrators manage relevant government ministries and departments to ensure communities are not left out in co-producing the implementation of the policy. Successful coordination and cooperation of many actors could assist to avoid fragmented facilitation of communities and isolated community participation. Isolated community participation is referring to having a few communities participating in the climate change policy implementation while other communities are unaware of what is happening. Co-production at this stage implies that communities are not only involved during policy implementation but should have been part of the co-planning, co-designing, co-implementing and co-evaluating the implementation plan. Interdependence for resources implies that the public administrators should source funds, expertise and any resources needed to ensure community participation. With community nudging, the public administrators design opportunities for communities to participate voluntarily during the policy implementation.

The participation of communities during policy implementation requires public administrators to acknowledge the communities' existing adaptation measures (refer to Table 6.1). The public administrators with communities should list such adaptation measures to form part of the climate change policy implementation strategies. The extent to which the communities' already existing adaptation strategies could be incorporated into the policy implementation adaptation measures depends on the interactions and relationships (How frequently do the public administrators communicate? How do they communicate with communities?). Without trust and cohesion, it could be difficult to involve communities during policy implementation. Such an arrangement (adopting already known adaptation measures) could provide an opportunity to integrate indigenous knowledge systems with scientific information. The value of community participation during the policy implementation lies in the question of power over the implementation programmes. Consequently, the level of community influence in the immediate environment determines how far the policy implementation could be successful. The communities are not only information centres but co-producers of the adaptation measures, way before the actual implementation.

Lastly, the public administrators need greater efforts to manage power dynamics. Many communities may have little or no knowledge of what is done during policy implementation if not directly affected by the climate change policy. The emphasis of public administration should be on the lower level public officials on how they interact with communities, targeting to improve the lower officials' capacity, attitude and actions as they interact with communities. The role of public administrators is to ensure that they make the climate change policy specific regarding how communities participate when implementing the policy. Policy implementation places communities as the immediate decision makers who have an equal opportunity to influence the implementation programmes.

Experts' role – The experts' role when enhancing community participation during the policy implementation stage is to facilitate co-production and collaborative activities with politicians and public administrators. In these co-production and collaborative activities, the experts are concerned with achieving specific objectives with different communities where tasks are linked to these specified objectives. In brief, the experts co-ordinate specified implementation programmes and projects. The experts have clear boundaries and pre-arranged schedule of completion. Their expertise, knowledge, skills and resources form part of enhancing community participation by using practical means, for instance, relevant projects that are appealing to communities. The experts take a lead using community-based projects (linking participation to livelihoods) to allow communities to co-implement the climate change programmes. Prioritising how the experts and public administrators would share responsibilities to facilitate community-based policy implementation should be part of the climate change policy.

Community representatives' role – The role of community representatives when enhancing community participation during policy implementation is essentially about consenting to the implementation plan as individuals who have the authority to do so on behalf of the communities they lead, based on prior agreements. Further, community representatives secure resources for policy implementation on behalf of the community. Advocacy, policy interpretation and leading implementation also constitute part of community representatives' roles during policy implementation. The community representatives also make

preliminary efforts to meet or communicate with the community, explaining what the climate change policy implementation entails and encouraging community members to participate. This builds trust and legitimacy of the climate change policy implementation process. Moreover, community representatives promote policy implementation by negotiating with external stakeholders to secure resources or funding for their communities. Community representatives are advocates through using their leadership position to re-enforce and communicate the priorities of communities to policymakers. During policy implementation, the community representatives also interpret the policy implementation process, explaining the purpose and implications of implementation programmes to communities. Regarding leading implementation, the community representatives can enforce what the communities agreed upon. For example, community representatives could ensure that communities comply with policy implementation and adaptation processes, according to what was agreed on.

Communities - The role of the communities during the policy implementation stage is to co-produce and legitimise the climate change implementation programmes. Communities should facilitate the resources and implementation of such programmes. Co-production during policy implementation implies that communities express their adaptation priorities, including their traditional adaptation capacity. Objectives for participation should recognise communities as legitimisers of the implemented policy. Thus, the participatory techniques to be used should give communities an opportunity to consent to proposed policy programmes and co-produce implementation plans. The participatory methodologies such as livelihood integration, collaborative public gatherings and extension services could be applicable during policy implementation. Finally, it can be seen from Table 6.5 that every actor has a role to play when enhancing community participation during the policy implementation stage.

Table 6.5: Roles of actors when enhancing community participation during the policy implementation stage

Actors	Roles of actors during the policy implementation stage
Politicians	Play an oversight role, for example, control financial resources and take decisions on what to spend on when implementing the policy.
Public administrators	- Manage cross-sector collaboration. - Facilitate co-production of adaptation programmes. - Coordinate interdependence for resources. - Nudge communities. - Manage power dynamics.
Experts	- Facilitate co-production. - Facilitate and initiate collaborative activities.
Community representatives	- Consenting to the implementation plan as individuals who have the authority to do so on behalf of their communities. - Secure resources for policy implementation on behalf of the community. - Advocacy - Policy interpretation. - Leading implementation.
Communities	- Co-produce implementation programmes. - Legitimise the climate change implementation programmes.

Source: Author

6.5.4.5 Actors' role during policy evaluation

Politicians' role – The role of politicians when enhancing community participation during policy adoption is to monitor the experts and public administrators who engage communities directly (oversight role), thus building the trust of communities and their representatives in the evaluation process. It is critical that the politicians apply administrative governance as the main NPG component which dominates the policy evaluation stage. The relevance of administrative governance during policy evaluation relates to how communities, together with other actors, are part of pluralist processes to choose the evaluation criteria for the climate change policy. In this regard, the politicians spell out how community participation could be realised during policy evaluation in the face of collective action problems. The value of communities would be their knowledge. Whether the communities possess the needed knowledge or not, the politicians' role is to ensure community participation during policy evaluation for communities to perceive the policy evaluation as meaningful. The politicians account to communities for the ways in which they manage or choose not to manage the policy evaluation process. For instance, it is the way politicians define administrative governance which determines how public administrators and other stakeholders could manage power dynamics. Therefore, the public administrators, in reality, seem not to have much power to redefine and alter administrative governance to allow for active community participation. Against this background, public administrators can either enhance or hinder such participation of communities during policy evaluation depending on how they coordinate the co-production of evaluation decisions and facilitate deliberations about climate change policy evaluation among multiple actors.

Politicians also play a big role by opening up the evaluation process to communities through administrative governance. Traditionally, policy evaluation excludes communities because they are believed to lack expertise. The politicians should, through administrative governance, show interest in engaging communities as policy evaluators by ensuring that whatever political processes made do not hinder but advances community participation during policy evaluation. Community participation during policy evaluation should be real and meaningful. The communities should be allowed to decide the direction of the evaluation process and not politicians to decide the evaluation process without the input of the communities. The information on the policy evaluation process should be managed and controlled by the communities. Thus, politicians should increase the community's capacity to participate through open processes of policy evaluation. Communication about the policy evaluation processes should be two-way and clear. Two-way in the sense that even communities should initiate a dialogue whenever needed to contribute to the evaluation processes. No community should feel left behind.

Public administrators - The role of public administrators is to select and allocate adequate resources for community participation, reward (non-monetary incentives) for participation, advertise the policy evaluation process so that community members are informed, initiate relationships with communities, pay attention to what communities suggest, create opportunities for communities to interact and set-up flexible meeting times. In addition, the public administrators should choose appropriate participatory techniques inclusive of communities and other stakeholders and educate communities to participate. Public administrators initiate community participation in action because governance structures are nothing without individual public administrators involved. The public administrators enhance community participation by changing their practices and start

engaging communities in administrative structures and processes as a permanent feature. Enhancing community participation during policy evaluation requires public administrators to choose participatory techniques relevant to the target community. Moreover, the timing of using such chosen techniques should be convenient and accommodating the target communities. This calls for innovation by public administrators who should look for alternative and accommodative ways of engaging communities. The policy evaluation process should not be done the same way, excluding the communities. Efforts should be made to increase community participation. It may not be possible to involve all the community members at the same time but there should be a general satisfaction about how the communities are engaged. On educating communities, this requires the public administrators to teach communities on how to work with government. Communities should be viewed as part of government. There should be no administrative governance without talking of community participation.

The public administrators advise the politicians on what course of action to take regarding policy evaluation, depending on their interaction with the communities and other stakeholders. The role of public administrators when enhancing community participation during the policy evaluation stage is to facilitate collaboration, deliberation and nudging between communities and other stakeholders. They also capacitate communities through allowing them to evaluate (giving their view on the effects of the policy) the policy. Nudges are used to nudge communities to evaluate the policy. What is critical during the policy evaluation stage is for communities to have been involved throughout all the stages of the policy. Inherent to the role of public administrators during policy evaluation is managing how cross-sector collaboration among stakeholders occur when policy evaluation decisions are made to ensure communities give a voice to the policy evaluation process as previously marginalised actors.

Experts' role – The experts' role when enhancing policy evaluation during the policy evaluation is to conduct research and assist politicians and public administrators in using nudges, for example, frequent community participation, giving feedback, consultation, using education, disseminating information and persuading communities to willingly participate in evaluating the climate change policy. In addition, experts promote accountability in governing policy evaluation. Traditionally, experts do policy evaluation through research or funding research. The experts provide the communities with information about the policy evaluation process and advocate for their participation in policy evaluation. Resultantly, the ability of experts to enhance a community's capacity to evaluate policies should be part of the contextual participatory strategy which guides the experts. Experts should promote accountability in the governance of the climate change policy process at policy evaluation and every policy stage. This is done through raising awareness of the policy evaluation process and explaining how communities can evaluate the policy. The experts help the communities to establish clear evaluation goals and objectives. This means identifying specific intended policy outcomes. The same communities establish the evaluation criteria to measure the success of policy implementation. Communities should be the ones to collect data to evaluate the policy. Later, communities analyse data and communicate the findings. Finally, communities make recommendations based on the findings through community public gatherings, sharing with other communities and presenting the data to policymakers. By so doing, the experts enhance the

democratic legitimacy of the climate change policy process. Pressure should be given to policymakers to release information on policy evaluation processes to the communities.

Community representatives' role – The role of community representatives when enhancing community participation during the policy evaluation stage is to represent communities whenever needed and ensure that community voices are heard through engagement, collaboration, inclusiveness and recognition. The community representatives are authoritative leaders, ambassadors and facilitators of the policy evaluation process. As such, their role during policy evaluation is to represent communities whenever needed. As noted in other policy stages, the community representatives' role is that of gatekeeping to bridge stakeholders who want to work with communities. Community representatives also ensure that the voices of the communities are heard during the evaluation process by facilitating community engagement, collaboration, inclusiveness and recognition. The community representatives engage communities to communicate on the importance of policy evaluation and how participation benefits them. Thus, community representatives collaborate with other stakeholders such as the experts and policymakers to ensure that the policy evaluation is more representative of the communities' perspectives. It is critical that the chiefs create space for policy evaluation by ensuring that the policy evaluation process is inclusive, accessible to all community members and community-led. The community representatives can reward (non-monetary incentives such as having more space to graze animals) communities which participate in policy evaluation process as a form of recognition. Such gestures could encourage active participation.

Communities – The role of communities during policy evaluation is to co-produce the evaluation plan prior to the actual policy evaluation. The criteria for measuring success of the climate change policy should be from the community's perspective. Unlike before, where policy evaluation was usually the work of public administrators and researchers, the strategy should place emphasis on how the communities' perceived success could be considered during policy evaluation. The policymakers should do this exercise with the communities and not confine it to academic exercise. The communities' participation is determined by their skills, knowledge and time during the policy evaluation. The communities are given the authority to evaluate the policy if it has worked as intended. The public administrators should persuade the communities to understand policy evaluation. Similar to other policy stages, defining objectives of participation should be done to determine when communities could ideally be engaged during policy evaluation. Accordingly, the participatory techniques to be used to achieve the expected outcomes could include PRA techniques, focus groups, workshops, beneficiary assessment, public hearings, polls and surveys, interviews and public meetings. The use of participatory techniques ignite an honest dialogue on climate change policy evaluation and provide empowerment tools through which the communities could add a voice to climate change policy evaluation. In concluding the discussion on the roles of actors during policy evaluation, Table 6.6 gives an overview of how actors enhance community participation during the policy evaluation.

Table 6.6: Roles of actors when enhancing community participation during the policy evaluation stage

Actors	Roles of actors during policy evaluation stage
Politicians	▪ Monitor the experts and public administrators who engage communities directly (oversight role). ▪ Open up the evaluation process to communities through administrative governance.
Public administrators	▪ Allocate adequate resources for community participation. ▪ Reward (non-monetary incentives) for participation. ▪ Advertise the policy evaluation process so that community members are informed. ▪ Initiate relationships with communities. ▪ Pay attention to what communities suggest as success and failures of the policy. ▪ Create opportunities for communities to interact. ▪ Set-up flexible meeting times. ▪ Advise the politicians on what course of action to take regarding policy evaluation, depending on their interaction with the communities and other stakeholders.
Experts	▪ Conduct research. ▪ Assist politicians and public administrators in using nudges. ▪ Promote accountability in governing policy evaluation.
Community representatives	▪ Represent communities whenever needed. ▪ Ensure community voices are heard through engagement, collaboration, inclusiveness and recognition.
Communities	▪ Co-produce the evaluation plan prior to the actual policy evaluation.

Source: Author

6.6 CONTRIBUTION TO KNOWLEDGE

The contribution of the study is threefold namely it contributes to (i) the discipline of PA, (ii) Lesotho's policy agenda, and (iii) community participation in climate change policy. Pertaining to PA, the gap between theory and practice was bridged through empirical data that analysed the relationship among community participation, participation theories and the practical application of the NPG components through public administration and climate governance (the interrelationships among administrative, public policy and socio-political governance). The study found the applicability of the NPG components during each policy process as follows: agenda setting (administrative and socio-political governance), policy formulation (socio-political and administrative governance), policy adoption (public policy and administrative governance), policy implementation (administrative governance) and policy evaluation (administrative governance). From the synthesis of the theories (systems theory, NPG theory and theory of participation in environmental management), it emerged that administrative governance, socio-political governance, public policy governance and policy nudging can either enhance or deter community participation during the respective climate change policy stages. The theoretical framework in Chapter 2 led to the development of a conceptual framework which suggests variables and their presumed relationships which could be considered for every policy stage to enhance community participation. Co-production, policy nudging and governance emerged as inevitable requirements for enhancing community participation during each policy stage while deliberation, consideration of interdependence for ideas, interaction, context, power dynamics and consideration of indigenous knowledge systems are critical during agenda setting.

In addition, the study adds to the ongoing debate regarding new contemporary participation methodologies that could enhance community participation in climate change policy formulation and implementation. Co-production, deliberation, collaboration, democratisation and cross-sector collaboration emerged from the study as common methodologies used to enhance community participation in climate change policy formulation and implementation. Furthermore, this study also proposed participatory methodologies such as storytelling, collaborative public gatherings, livelihood integration, offering extension services, road shows, door knocking and signs to make co-production, deliberation, collaboration, democratisation and cross-sector collaboration a reality to communities.

Regarding the KOL's policy agenda, data were generated that could influence the policy agenda regarding community participation in future climate change policy formulation and implementation. The public administrators' responses suggested recommendations similar to findings from the theoretical framework which could increase the administrative governance's capacity to enhance community participation. The recommendations are that: politicians should

- i) provide financial resources to enhance the public administrators' capacity to build support, co-ordinate co-production and facilitate collaboration;
- ii) ensure political stability;
- iii) open up the system of governance to enable public administrators to reach communities, and reduce political-administrative interface by giving public administrators an opportunity to co-ordinate community participation in climate change policy formulation and implementation processes. The indigenous knowledge systems charter provides novel insights regarding how to use indigenous knowledge systems in climate change policies to facilitate community participation.

Concerning community participation in climate governance, this study contributes to the research agenda for future studies regarding community participation in climate change policy formulation and implementation. This research agenda includes the seven pillars suggested by this study for enhancing community participation. These pillars are governance, the use of indigenous knowledge systems, policy nudging, participatory methodologies, community awareness, community understanding and climate education. Many concepts were conceptualised, identifying their attributes, antecedents and empirical referents. Furthermore, the study proposed practical nudges to enhance community participation and a contextual strategy-measuring indicator which is also part of the contribution of the study.

6.7 CONCLUSION

Using the case of Manonyane Communities in Lesotho, this study explored community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes. Community participation was explored in this study as a complex and broad phenomenon. Climate change affects livelihoods and exacerbates other sustainable development goals problems such as poverty and unemployment. Allowing community participation in climate change policy formulation and implementation contributes to addressing other socio-

economic problems prioritised through the attainment of the SDGs. This focus on community participation is timely given that climate change is regarded as a global problem that is prioritised as the 2030 SDG 13 of the UN. Climate change is a policy problem that receives attention from international institutions such as the UNFCCC and the AU, and as highlighted in this study by governments such as Lesotho. Against this background, Chapter 1 set the scene for this study by providing the study's rationale, significance of the study and the research aim, objectives and questions. It was found that the Lesotho NCCP does not explicitly specify the extent to which the communities should participate in policy formulation and implementation. As a result, community participation seems not to have the desired impact.

Chapter 2 analysed the systems theory, NPG theory, and the theory of participation in environmental management. The relationship between public governance and community participation in the stages of the policy process was also explored. Policy nudging was explored in terms of how it could be used to enhance community participation in climate change policy formulation, implementation and governance. The chapter presented the theoretical framework for the study that led to the development of a conceptual framework for community participation during the stages of the policy process. This framework used NPG theory as the basis for analysis focusing on socio-political, administrative and public policy governance to describe community participation as a plural and pluralist process. The concepts and variables developed from the theoretical framework were analysed to specify the actors' roles about when and how they can contribute to the climate change policy process during each policy stage.

Chapter 3 discussed perspectives regarding climate change and indigenous knowledge systems. The study found that community awareness and understanding of climate change policy influence their participation in policy formulation. It assessed how community awareness and understanding regarding climate change and climate change policy influence their participation in climate change policy formulation and implementation. This chapter further explored the use of indigenous knowledge systems to facilitate community participation in climate governance. Indigenous knowledge systems call for respecting and understanding the local people's societal and political factors, while acknowledging them as problem solvers. The use of policy nudging by socio-political, administrative and public policy governance was discussed. Of note, in this chapter, was delineating the nature of community participation in climate change policy formulation and implementation and how public policy governance influences community participation during climate change policy formulation and implementation.

Chapter 4 validated the research methodology for the study. A qualitative research approach was adopted in this study. A case study design was applied to explore community participation in climate change policies by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes. This design was executed in three stages (conceptual - Stage 1, theoretical - Stage 2 and empirical - Stage 3). Through qualitative methods of data collection (documents, focus group discussions and semi-structured interviews), multiple sources of data were used to address the research problem.

Chapter 5 presented empirical findings and a critical analysis of the case of the Manonyane communities from the perspective of communities, community representatives, politicians, public administrators and experts' perspectives. The Manonyane communities case showed that enhancing community participation in climate change policy formulation and implementation requires the application of socio-political, administrative and public policy governance. These NPG components were found critical to guide what should be done when enhancing community participation during climate change policy formulation and implementation.

Chapter 6 concludes the study by proposing a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation. In this strategy, the study specified the role of plural actors during each policy stage, giving insights on how to use the indigenous knowledge systems charter and a contextual strategy-measuring indicator as well as applying socio-political, administrative and public policy governance.

The chapter presents a contextual participatory strategy for future climate change policy formulation and implementation. The participants' perspectives on enhancing community participation in future climate change policy formulation and implementation were discussed. Lessons learnt for practice and future research were presented. The chapter concluded by proposing a contextual participatory strategy anchored on the seven pillars of community participation, a contextual strategy-measuring indicator for enhancing community participation in Lesotho and the multiple actors' roles during climate change policy formulation and implementation.

The study found that the success of community participation during climate change policy formulation and implementation depends on how communities, community representatives, policymakers and experts co-produce, collaborate, deliberate and democratise policy formulation and implementation processes as well as through cross-sector collaboration. The empirical results of the study support the idea that the applicability of co-production, collaboration, deliberation, democratisation and cross-sector collaboration within a plural and pluralist climate change policy formulation and implementation overlap and partially differ. Enhancing community participation requires policymakers to understand when and how to apply collaboration, deliberation, democratisation and cross-sector collaboration during each stage of the climate change policy process, based on the nature of community participation. Such co-ordination of community participation involves many distinct dimensions to be considered such as community understanding, community awareness, use of indigenous knowledge systems and policy nudging. This implies that the concepts should be conceptualised to reach a practical understanding regarding their use in climate change policies to enhance community participation. This study contributes new perspectives for increased legitimacy, acceptance and ownership of climate change policies through community participation in future climate policy processes. The contextual participatory strategy introduced novel insights regarding the use of indigenous knowledge systems, a contextual strategy measuring indicator and the indigenous knowledge systems charter which can be used to enhance community participation in future climate change policy formulation and implementation.

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ATTACHMENTS

Attachment 1: Request for permission to conduct research – Manonyane Councillors



The Manonyane Community Council

P.O Roma 180
Maseru, Lesotho

6 May 2021

Re: Request for permission to conduct research in Manonyane Community Council

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this letter which outlines details concerning my PhD study, I am requesting permission to conduct this study in the Manonyane communities in Lesotho.

DATE: The venue and time will be determined at your convenience

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

WHY ARE YOUR ORGANISATION INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain:

- i. Manonyane chiefs and community councillors' perspective on community participation during climate change policy formulation and implementation; and
- ii. Manonyane communities' perspective regarding their participation in climate change policy formulation and implementation.

Manonyane chiefs

As community representatives, the perspectives of chiefs are deemed critical in this study. The Manonyane communities comprise 30 chiefs, 8 of whom are area chiefs, and 22 are village headmen who are non-partisan. Because the reporting structure of these chiefs entails the village headmen reporting to the area chief, and the latter reporting to the principal chief (overall head of all the chiefs in Manonyane), the researcher requests your permission to conduct interviews in the main villages of the Manonyane Community Council (MCC). Of the 30 chiefs, the researcher would like to conduct a focus group discussion with 8 area chiefs and

semi-structured interviews with any 2 chiefs (village headmen). Permission is thus requested to get the chiefs and councillors' contact details who will be recruited to participate in this study.

Manonyane councillors

Manonyane councillors as community representatives facilitate the development of the Manonyane communities and are selected to participate in semi-structured interviews. Of the 14 councillors serving on the Manonyane Community Council, 14 are selected to participate in this study. Out of the 14 councillors, semi-structured interviews will be conducted with two councillors, and 1 focus group discussion with 12 councillors. Permission is thus requested to get the contact details of the chiefs and councillors who will be recruited to participate in this study.

Manonyane communities

Community members (villagers) of Manonyane villages are selected to participate in this study to obtain their perspectives regarding community participation during climate change policy formulation and implementation. The researcher, thus, requests permission to conduct 9 focus group discussions (for villagers) with 12 community members per focus group discussion in the nine main villages of the MCC. These main villages are Boinyantso, Hata-butle, Mafefooane, Mafikeng, Poopa, Popanyane, Roma, Thoteng, and Tloutle.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

The Manonyane chiefs' and community councillors' perspectives will be obtained during semi-structured interviews and focus group discussions that will range between 90 to 120 minutes, respectively. Responses during these semi-structured interviews and focus group discussions will be recorded (with permission) for data analysis purposes.

The Manonyane communities' perspectives will be obtained during focus group discussions that will range between 90 to 120 minutes. Responses during focus group discussions will be recorded (with permission) for purposes of data analysis.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The data collected will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

WHAT ARE THE POTENTIAL RISKS TAKING PART IN THIS STUDY?

The only risk in taking part in this study will be the loss of work time during the semi-structured interviews and focus group discussions. However, the researcher will schedule the semi-structured interviews and focus group discussions at a time that is convenient for the participants.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during semi-structured interviews and focus group discussions may be used for other academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report. As for the focus group discussions, please keep in mind that it is sometimes impossible to make an absolute guarantee of confidentiality/anonymity. While the researcher will make every effort to ensure that you will not be connected to the information that you share during the focus group discussion, I cannot guarantee that other participants in the focus group discussions will treat the information confidentially. I shall, however, encourage participants to sign confidentiality forms. For this reason, I advise participants of focus group discussions not to disclose sensitive personal information during the discussion.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

HOW WILL THE ORGANISATION BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

Yours sincerely



Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Attachment 2: Response from the Manonyane Councillors

PERMISSION TO CONDUCT RESEARCH IN THE MANONYANE COMMUNITY COUNCIL

Redemption Chatanga, a student (student number 2017493467) at the University of Free State, South Africa, is hereby granted permission to conduct semi-structured interviews and focus groups and administer a questionnaire for the purposes of her doctoral research. The permission granted is limited to:

1. A 120 minute semi-structured interview for each participant. Four semi-structured interviews (2 semi-structured interviews with chiefs and 2 semi-structured interviews with councillors) will be conducted. A separate consent form to participate should be signed by the research participants before participation.
2. A 120 minute focus group discussion each, with no more than 12 community members per group from Manonyane Community Council. Eleven focus groups will be conducted (1 focus group with the chiefs, 1 focus group with the councillors, and 9 focus groups in each Manonyane main village). A separate consent form should be signed by the focus group participants before participation.

The use of data collected is limited to developing research findings and any other academic purpose, such as publishing the dissertation, writing research reports, journal articles, and conference presentations. It is expected that Mrs. Redemption Chatanga will exercise due care in publishing research findings and publishing the data findings not to bring harm to the research participants. The anonymity and confidentiality of the research participants should be respected.

Approval granted by the person authorised to do so

First Name LISEMELO Last Name LESENTEHO

Title COMMUNITY COUNCIL SECRETARY - MANONYANE A04

Signature 

Date 01/10/2021



Attachment 3: Request for permission to conduct research – Ministry of Local Government and Chieftainship



The Minister of Local Government and Chieftainship

Moposo House

P.O. Box 686 Maseru 100

Lesotho

13 July 2021

Re: Request for permission to conduct research in the Ministry of Local Government and Chieftainship

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this letter which outlines details concerning my PhD study, I am requesting permission to interview the minister, director Decentralisation Department, director Chieftainship Department, and the Maseru District Administrator (DA) in the Lesotho Ministry of Local Government and Chieftainship (MLGC).

DATE: The venue and time will be determined at your convenience

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

WHY ARE YOUR ORGANISATION INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain:

- i. Minister's perspective regarding community participation in climate change policy formulation and implementation;
- ii. Director Decentralisation's perspective regarding community participation in climate change policy formulation and implementation;
- iii. Director Chieftainship's perspective regarding community participation in climate change policy formulation and implementation; and;
- iv. The District Administrator's perspective regarding community participation in climate change policy formulation and implementation.

The Minister of Local Government and Chieftainship

The minister's perspective is deemed critical in this study. The MLGC mandates chiefs and councilors as well as providing policy direction and support for local authorities. This Ministry serves as the point of departure for coordinating community participation in public policy formulation and implementation, amongst other responsibilities. The researcher requests permission to conduct a semi-structured interview with the minister. Permission is thus requested to get the minister's contact details who will be recruited to participate in this study.

Director Decentralisation Department

The Department of Decentralisation is selected to participate in this study because it is one of the central government departments in the MLGC mandated to enable local governments to be responsible for service delivery and development within their mandate. Therefore, the researcher requests permission to get the director's perspective, whose role is to ensure that the mandate of the Department is fulfilled. The researcher would like to conduct a semi-structured interview with the director Decentralisation Department. Permission is thus requested to get the director's contact details who will be recruited to participate in this study.

Director Chieftainship Department

The director Chieftainship Department is selected to participate in this study because the Department is part of the central government in the MLGC. The Department ensures that chiefs and local authorities work in harmony and facilitates chiefs' participation in the local government decentralisation process. It is deemed critical for this study to get a perspective from the director Chieftainship because of the director's coordinating and leading role in executing the Department's mandate. The researcher, thus, requests permission to conduct a semi-structured interview with the Chieftainship Department director to obtain a perspective regarding community participation during climate change policy formulation and implementation. Permission is thus requested to get the director's contact details who will be recruited to participate in this study.

Maseru District Administrator

The Maseru DA is selected because the office heads the Maseru District. The office of the DA oversees the local District committees on behalf of the central government. Therefore, the researcher requests permission to conduct a semi-structured interview with the Maseru DA to provide a district perspective regarding community participation in climate change policy formulation and implementation. Permission is thus requested to get the DA's contact details who will be recruited to participate in this study.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

The minister's, director Decentralisation's, director Chieftainship's, and the DA's perspectives will be obtained during semi-structured interviews that will range between 90 to 120 minutes. Responses during these semi-structured interviews and focus group discussions will be recorded (with permission) for data analysis purposes.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well

Attachment 4: Response from the Ministry of Local Government and Chieftainship

PERMISSION TO CONDUCT INTERVIEW(S) IN /AT THE MINISTRY OF LOCAL
GOVERNMENT

Redemption Chatanga, a student (student number 2017493467) at the University of Free State, South Africa, is hereby granted permission to conduct 4 (state number of interviews) semi-structured interview(s) for the purposes of her doctoral research. The permission granted is limited to a 120 minute semi-structured interview(s) for each research participant. A separate consent form to participate should be signed by the research participants before participation.

The use of data collected is limited to developing research findings and any other academic purpose, such as publishing the dissertation, writing research reports, journal articles, and conference presentations. It is expected that Mrs. Redemption Chatanga will exercise due care in publishing research findings and publishing the data findings not to bring harm to the research participants. The anonymity and confidentiality of the research participants should be respected.

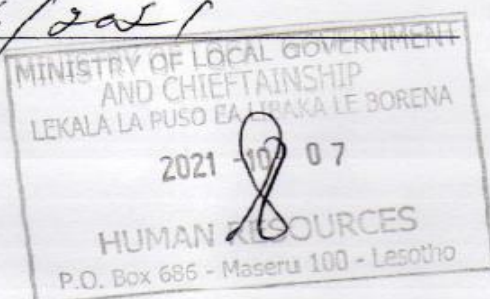
Approval granted by the person authorised to do so

First Name LEKITHA Last Name RATARE

Title BAR

Signature [Signature]

Date 13/06/2021



Attachment 5: Request for permission to conduct research – Manonyane Chiefs



The Manonyane Principal Chief

P.O Roma 180

Maseru, Lesotho

6 May 2021

Re: Request for permission to conduct research in Manonyane Community Council

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this letter which outlines details concerning my PhD study, I am requesting permission to conduct this study in the Manonyane communities in Lesotho.

DATE: The venue and time will be determined at your convenience

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

WHY ARE YOUR ORGANISATION INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain:

- i. Manonyane chiefs and community councillors' perspective on community participation during climate change policy formulation and implementation; and
- ii. Manonyane communities' perspective regarding their participation in climate change policy formulation and participation.

Manonyane chiefs

As community representatives, the perspectives of chiefs are deemed critical in this study. The Manonyane communities comprise 30 chiefs, 8 of whom are area chiefs, and 22 are village headmen who are non-partisan. Because the reporting structure of these chiefs entails the village headmen reporting to the area chief, and the latter reporting to the principal chief (overall head of all the chiefs in Manonyane), the researcher requests your permission to conduct interviews in the main villages of the Manonyane Community Council (MCC). Of the 30 chiefs, the researcher would like to conduct a focus group discussion with 8 area chiefs and

semi-structured interviews with any 2 chiefs (village headmen). Permission is thus requested to get the chiefs' and councillors' contact details who will be recruited to participate in this study.

Manonyane councillors

Manonyane councillors as community representatives facilitate the development of the Manonyane communities and are selected to participate in semi-structured interviews. Of the 14 councillors serving on the Manonyane Community Council, 14 are selected to participate in this study. Out of the 14 councillors, semi-structured interviews will be conducted with two councillors, and 1 focus group discussion with 12 councillors. Permission is thus requested to get the contact details of the chiefs and councillors who will be recruited to participate in this study.

Manonyane communities

Community members (villagers) of Manonyane villages are selected to participate in this study to obtain their perspectives regarding community participation during climate change policy formulation and implementation. The researcher, thus, requests permission to conduct 9 focus group discussions (for villagers) with 12 community members per focus group discussions in the nine main villages of the MCC. These main villages are Boinyantso, Hata-butle, Mafefooane, Mafikeng, Poopa, Popanyane, Roma, Thoteng, and Tloutle.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

The Manonyane chiefs' and community councillors' perspectives will be obtained during semi-structured interviews and focus group discussions that will range between 90 to 120 minutes, respectively. Responses during these semi-structured interviews and focus group discussions will be recorded (with permission) for data analysis purposes.

The Manonyane communities' perspectives will be obtained during focus group discussions that will range between 90 to 120 minutes. Responses during focus group discussions will be recorded (with permission) for purposes of data analysis.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The data collected will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

WHAT ARE THE POTENTIAL RISKS TAKING PART IN THIS STUDY?

The only risk in taking part in this study will be the loss of work time during the semi-structured interviews and focus group discussions. However, the researcher will schedule the semi-structured interviews and focus group discussions at a time that is convenient for the participants.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during semi-structured interviews and focus group discussions may be used for other academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report. As for the focus group discussions, please keep in mind that it is sometimes impossible to make an absolute guarantee of confidentiality/anonymity. While the researcher will make every effort to ensure that you will not be connected to the information that you share during the focus group, I cannot guarantee that other participants in the focus group discussion will treat the information confidentially. I shall, however, encourage participants to sign confidentiality forms. For this reason, I advise participants of focus group discussions not to disclose sensitive personal information during the discussion.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

HOW WILL THE ORGANISATION BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

Yours sincerely



Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Attachment 6: Response from the Manonyane Principal Chief's office

PERMISSION TO CONDUCT RESEARCH IN THE MANONYANE COMMUNITY COUNCIL

Redemption Chatanga, a student (student number 2017493467) at the University of Free State, South Africa, is hereby granted permission to conduct semi-structured interviews and focus groups and administer a questionnaire for the purposes of her doctoral research. The permission granted is limited to:

1. A 120 minute semi-structured interview for each participant. Four semi-structured interviews (2 semi-structured interviews with chiefs and 2 semi-structured interviews with councillors) will be conducted. A separate consent form to participate should be signed by the research participants before participation.
2. A 120 minute focus group discussion each, with no more than 12 community members per group from Manonyane Community Council. Eleven focus groups will be conducted (1 focus group with the chiefs, 1 focus group with the councillors, and 9 focus groups in each Manonyane main village). A separate consent form should be signed by the focus group participants before participation.

The use of data collected is limited to developing research findings and any other academic purpose, such as publishing the dissertation, writing research reports, journal articles, and conference presentations. It is expected that Mrs. Redemption Chatanga will exercise due care in publishing research findings and publishing the data findings not to bring harm to the research participants. The anonymity and confidentiality of the research participants should be respected.

Approval granted by the person authorised to do so

First Name BATHOBAKAE Last Name MAHAMA

Title CHIEF

Signature *[Signature]*

Date 15/10/2021



Attachment 7: Request for permission to conduct research – Department of Meteorology and Climate



Department of Meteorology and Climate

P.O. Box 772 Maseru 100

Maseru, Lesotho

6 May 2021

Re: Request for permission to interview the director Department of Meteorology and Climate

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this letter which outlines details concerning my PhD study, I am requesting permission to interview the director Department of Meteorology and Climate in the Ministry of Energy and Meteorology.

DATE: The venue and time will be determined at your convenience

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

WHY ARE YOUR ORGANISATION INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain the director Meteorology and Climate Department's perspective regarding community participation in climate change policy formulation and implementation. The director in the Department of Meteorology and Climate is selected to participate in this study because the Department serves as the secretariat of the National Climate Change Policy (NCCP), ensuring the implementation of the NCCP, and enhances transparency by reporting to the UNFCCC under the Paris Agreement. The Department, which the director heads, has historical insight and understanding regarding past and current stakeholder engagement as well as community participation in climate change policy formulation and implementation. In light of this, permission is thus requested to conduct a semi-structured interview with the director. Permission is also requested to get the director's contact details who will be recruited to participate in this study.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

The director's perspectives will be obtained during a semi-structured interview that will range between 90 to 120 minutes. Responses during this semi-structured interview will be recorded (with permission) for data analysis purposes.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The data collected will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

WHAT ARE THE POTENTIAL RISKS TAKING PART IN THIS STUDY?

The only risk in taking part in this study will be the loss of work time during the semi-structured interview. However, the researcher will schedule the semi-structured interview at a time that is convenient for you.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during the semi-structured interview may be used for other academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

HOW WILL THE ORGANISATION BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

Yours sincerely



Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Attachment 8: Response from the Department of Meteorology and Climate

PERMISSION TO CONDUCT INTERVIEW(S) IN /AT THE DEPARTMENT OF
METEOROLOGY AND CLIMATE

Redemption Chatanga, a student (student number 2017493467) at the University of Free State, South Africa, is hereby granted permission to conduct 1 (state number of interviews) semi-structured interview(s) for the purposes of her doctoral research. The permission granted is limited to a 120 minute semi-structured interview(s) for each research participant. A separate consent form to participate should be signed by the research participants before participation.

The use of data collected is limited to developing research findings and any other academic purpose, such as publishing the dissertation, writing research reports, journal articles, and conference presentations. It is expected that Mrs. Redemption Chatanga will exercise due care in publishing research findings and publishing the data findings not to bring harm to the research participants. The anonymity and confidentiality of the research participants should be respected.

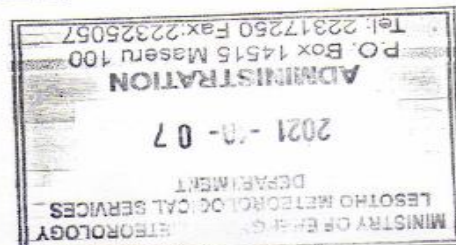
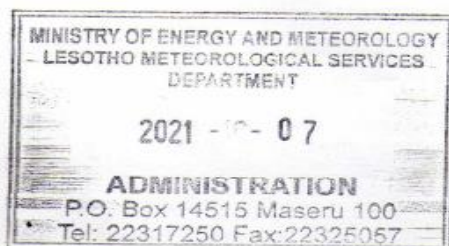
Approval granted by the person authorised to do so

First Name Mokoena Last Name France

Title DIRECTOR

Signature [Signature]

Date 07/10/2021



Attachment 9: Request for permission to conduct research – Ministry of Tourism, Environment and Culture for the Department of Environment



The Minister of Environment, Tourism and Culture

P.O Box 52

Maseru 100, Lesotho

6 May 2021

Re: Request for permission to conduct research in the Ministry of Environment, Tourism and Culture

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this letter which outlines details concerning my PhD study, I am requesting permission to conduct my study in the Ministry of Environment, Tourism and Culture in the Department of Environment.

DATE: The venue and time will be determined at your convenience

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

WHY ARE YOUR ORGANISATION INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain a perspective from the director heading the Department of Environment regarding community participation in climate change policy formulation and participation. The Department of Environment is the only department under the Ministry of Environment, Tourism, and Culture mandated to ensure that the Kingdom of Lesotho adopts policies designed to protect and enhance the natural and cultural environment. Because of the Department's role in environmental policy, the researcher would like to conduct a semi-structured interview with the Department of Environment director. Hence, permission is requested to get the director's contacts who will be recruited to participate in the study.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

The Department of Environment director's perspective will be obtained during a semi-structured interview that will range between 90 to 120 minutes. Responses during the semi-structured interview will be recorded (with permission) for data analysis purposes.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The data collected will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

WHAT ARE THE POTENTIAL RISKS TAKING PART IN THIS STUDY?

The only risk in taking part in this study will be the loss of work time during the semi-structured interview. However, the researcher will schedule the semi-structured interview at a time that is convenient for the participant.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during semi-structured interviews may be used for other academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

HOW WILL THE ORGANISATION BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

Yours sincerely



Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Attachment 10: Response from the Ministry of Tourism, Environment and Culture for the Department of Environment

PERMISSION TO CONDUCT INTERVIEW(S) IN /AT THE DEPARTMENT OF
ENVIRONMENT

Redemption Chatanga, a student (student number 2017493467) at the University of Free State, South Africa, is hereby granted permission to conduct 1 (state number of interviews) semi-structured interview(s) for the purposes of her doctoral research. The permission granted is limited to a 120 minute semi-structured interview(s) for each research participant. A separate consent form to participate should be signed by the research participants before participation.

The use of data collected is limited to developing research findings and any other academic purpose, such as publishing the dissertation, writing research reports, journal articles, and conference presentations. It is expected that Mrs. Redemption Chatanga will exercise due care in publishing research findings and publishing the data findings not to bring harm to the research participants. The anonymity and confidentiality of the research participants should be respected.

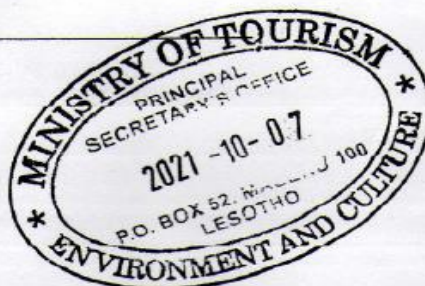
Approval granted by the person authorised to do so

First Name STARKEY M. Last Name DAMANE

Title DIRECTOR ENVIRONMENT

Signature 

Date 7/10/2021



Attachment 11: Request for permission to conduct research – Maseru District Office



The Maseru District Office

Maseru, Lesotho

6 May 2021

Re: Request for permission to interview the Maseru District Administrator

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this letter which outlines details concerning my PhD study, I am requesting permission to interview the Maseru District Administrator (DA) in Lesotho.

DATE: The venue and time will be determined at your convenience

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

WHY ARE YOUR ORGANISATION INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain a perspective from the Maseru District Administrator's office regarding community participation in climate change policy formulation and implementation. The Maseru District Administrator's office is selected because it oversees the local District committees on behalf of central government. The District Administrator's office ensures that the National Climate Change Policy implementation meets the needs of the communities in the District. The researcher requests permission to conduct a semi-structured interview with the Maseru District Administrator's office. Permission is thus requested to get the interviewee's contact details who will be recruited to participate in this study.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

The District Administrator's perspective will be obtained during a semi-structured interview that will range between 90 to 120 minutes. Responses during the semi-structured interview will be recorded (with permission) for data analysis purposes.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The data collected will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

WHAT ARE THE POTENTIAL RISKS TAKING PART IN THIS STUDY?

The only risk in taking part in this study will be the loss of work time during the semi-structured interview. However, the researcher will schedule the semi-structured interview at a time that is convenient for you.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during semi-structured interviews may be used for academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

HOW WILL THE ORGANISATION BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

Yours sincerely



Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Attachment 12: Response from the Maseru district office

PERMISSION TO CONDUCT INTERVIEW(S) IN /AT THE MASERU DISTRICT OFFICE

Redemption Chatanga, a student (student number 2017493467) at the University of Free State, South Africa, is hereby granted permission to conduct 1 (state number of interviews) semi-structured interview(s) for the purposes of her doctoral research. The permission granted is limited to a 120 minute semi-structured interview(s) for each research participant. A separate consent form to participate should be signed by the research participants before participation.

The use of data collected is limited to developing research findings and any other academic purpose, such as publishing the dissertation, writing research reports, journal articles, and conference presentations. It is expected that Mrs. Redemption Chatanga will exercise due care in publishing research findings and publishing the data findings not to bring harm to the research participants. The anonymity and confidentiality of the research participants should be respected.

Approval granted by the person authorised to do so

First Name NEO Last Name JOHANE

Title ADMIN MANAGER

Signature [Signature]

Date 06/10/2021



Attachment 13: Request for permission to conduct research – Department of Decentralisation



The Decentralisation Department, Ministry of Local Government and Chieftainship

Moposo House

P.O. Box 686 Maseru 100

Lesotho

6 May 2021

Re: Request for permission to interview the director Decentralisation Department in the Ministry of Local Government and Chieftainship

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this letter which outlines details concerning my PhD study, I am requesting permission to interview the director Decentralisation Department in the Lesotho Ministry of Local Government and Chieftainship (MLGC).

DATE: The venue and time will be determined at your convenience

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

WHY ARE YOUR ORGANISATION INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain the director Decentralisation's perspective regarding community participation in climate change policy formulation and implementation. The Decentralisation Department is selected to participate in this study because it is one of the central government departments in the MLGC mandated to enable local governments to be responsible for service delivery and development within their mandate. Therefore, the researcher requests permission to get the director's perspective, whose role is to ensure that the Department's mandate is fulfilled. The researcher would like to conduct a semi-structured interview with the director Chieftainship Department. Permission is thus requested to get the director's contact details who will be recruited to participate in this study.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

The director Decentralisation's perspectives will be obtained during a semi-structured interview that will range between 90 to 120 minutes. Responses during this semi-structured interview will be recorded (with permission) for data analysis purposes.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The data collected will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

WHAT ARE THE POTENTIAL RISKS TAKING PART IN THIS STUDY?

The only risk in taking part in this study will be the loss of work time during the semi-structured interview. However, the researcher will schedule the semi-structured interview at a time that is convenient for you.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during the semi-structured interview may be used for other academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

HOW WILL THE ORGANISATION BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

Yours sincerely



Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Attachment 14: Response from the Decentralisation Department

PERMISSION TO CONDUCT INTERVIEW(S) IN /AT THE MINISTRY OF LOCAL GOVERNMENT
AND CHIEFTAINSHIP - DEPARTMENT OF DECENTRALISATION

Redemption Chatanga, a student (student number 2017493467) at the University of Free State, South Africa, is hereby granted permission to conduct 1 (state number of interviews) semi-structured interview(s) for the purposes of her doctoral research. The permission granted is limited to a 120 minute semi-structured interview(s) for each research participant. A separate consent form to participate should be signed by the research participants before participation.

The use of data collected is limited to developing research findings and any other academic purpose, such as publishing the dissertation, writing research reports, journal articles, and conference presentations. It is expected that Mrs. Redemption Chatanga will exercise due care in publishing research findings and publishing the data findings not to bring harm to the research participants. The anonymity and confidentiality of the research participants should be respected.

Approval granted by the person authorised to do so

First Name MAMATSI Last Name MOLI CHABA

Title SENIOR LOCAL GOVERNMENT OFFICER

Signature 

Date 07/10/2021

Attachment 15: Request for permission to conduct research –Chieftainship Department



Department of Chieftainship, Ministry of Local Government and Chieftainship

Moposo House

P.O. Box 686 Maseru 100

Lesotho

6 May 2021

Re: Request for permission to interview the director Department of Chieftainship in the Ministry of Local Government and Chieftainship

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this letter which outlines details concerning my PhD study, I am requesting permission to interview the director Chieftainship Department in the Lesotho Ministry of Local Government and Chieftainship (MLGC).

DATE: The venue and time will be determined at your convenience

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

WHY ARE YOUR ORGANISATION INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain the director Chieftainship's perspective regarding community participation in climate change policy formulation and implementation. The director is selected to participate in this study because the Department is part of the central government in the MLGC. The Department ensures that chiefs and local authorities work in harmony and facilitates chiefs' participation in the local government decentralisation process. It is, therefore, deemed important for this study to get a perspective from the director Chieftainship because of the director's coordinating and leading role in executing the Department's mandate. The researcher, thus, requests permission to conduct a semi-structured interview with the Chieftainship Department director to obtain a

perspective regarding community participation during climate change policy formulation and implementation. Permission is thus requested to get the director's contact details who will be recruited to participate in this study.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

The director Chieftainship's perspectives will be obtained during a semi-structured interview that will range between 90 to 120 minutes. Responses during this semi-structured interview will be recorded (with permission) for data analysis purposes.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The data collected will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

WHAT ARE THE POTENTIAL RISKS TAKING PART IN THIS STUDY?

The only risk in taking part in this study will be the loss of work time during the semi-structured interview. However, the researcher will schedule the semi-structured interview at a time that is convenient for you.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during the semi-structured interview may be used for other academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

HOW WILL THE ORGANISATION BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

Yours sincerely



Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Attachment 16: Response from the Chieftainship Department

PERMISSION TO CONDUCT INTERVIEW(S) IN /AT THE DIRECTOR CHIEFTAINSHIP

Redemption Chatanga, a student (student number 2017493467) at the University of Free State, South Africa, is hereby granted permission to conduct 1 (state number of interviews) semi-structured interview(s) for the purposes of her doctoral research. The permission granted is limited to a 120 minute semi-structured interview(s) for each research participant. A separate consent form to participate should be signed by the research participants before participation.

The use of data collected is limited to developing research findings and any other academic purpose, such as publishing the dissertation, writing research reports, journal articles, and conference presentations. It is expected that Mrs. Redemption Chatanga will exercise due care in publishing research findings and publishing the data findings not to bring harm to the research participants. The anonymity and confidentiality of the research participants should be respected.

Approval granted by the person authorised to do so

First Name Tseliso Last Name Molise

Title DIRECTOR CHIEFTAINSHIP

Signature T. Molise

Date 06/10/2021



Attachment 17: Request for permission to conduct research – National Climate Change Committee and the Parliament and Natural Resources Committee



The National Assembly Clerk
P.O Box 190
Maseru 100
Lesotho

6 May 2021

Re: Request for permission to interview members of the Parliament Committees of the Kingdom of Lesotho

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this letter which outlines details concerning my PhD study, I am requesting permission to interview members of the Parliament and Natural Resources, Tourism and Land Portfolio Committee and the National Climate Change Committee (NCCC).

DATE: The venue and time will be determined at your convenience

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

WHY ARE YOUR ORGANISATION INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain:

- i. A perspective from a member of the Parliament and Natural Resources, Tourism and Land Portfolio Committee on community participation in climate change policy formulation and implementation and;
- ii. A perspective from a member of the National Climate Change Committee on community participation in climate change policy formulation and implementation.

The KOL Parliament and Natural Resources, Tourism and Land Portfolio Committee

A member of the KOL Parliament and Natural Resources, Tourism and Land Portfolio Committee is selected to participate in a semi-structured interview because the Committee's responsibilities include oversight of the National Climate Change Policy's (NCCP) implementation and reviewing the legislation supporting the implementation of the NCCP. Given these responsibilities, permission is

requested to conduct a semi-structured interview with a committee member. Of the committee members, preferably the chairperson, could be interviewed. Thus, permission is requested to get the committee members' contact details who will be recruited to participate in the study.

The National Climate Change Committee

A member of the NCCC is selected to participate in this study because the NCCC offers expert advice regarding climate change issues. This Committee plays a key role in enhancing stakeholder participation, coordination, and dialogue regarding climate change policy formulation and implementation. Thus, the NCCC's perspective regarding community participation as stakeholders in climate governance is deemed critical. Of the committee members representing different institutions, preferably the NCCC chairperson could be interviewed. Thus, permission is requested to interview a committee member in a semi-structured interview for this study. The researcher requests the contact details of the committee member who will be recruited for the study.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

The Parliament and Natural Resources, Tourism and Land Portfolio Committee members and the NCCC committee member's perspectives will be obtained during semi-structured interviews that will range between 90 to 120 minutes, respectively. Responses during these semi-structured interviews will be recorded (with permission) for data analysis purposes.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The data collected will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

WHAT ARE THE POTENTIAL RISKS TAKING PART IN THIS STUDY?

The only risk in taking part in this study will be the loss of work time during the semi-structured interview. However, the researcher will schedule the semi-structured interview at a time that is convenient for the participants.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during semi-structured interviews may be used for other

academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

HOW WILL THE ORGANISATION BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

Yours sincerely



Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Attachment 18: Response from the National Climate Change Committee and the Parliament Natural Resources, Tourism, Land and Portfolio Committee

PERMISSION TO CONDUCT INTERVIEW(S) IN /AT THE National Assembly
of Lesotho.

Redemption Chatanga, a student (student number 2017493467) at the University of Free State, South Africa, is hereby granted permission to conduct ----- (state number of interviews) semi-structured interview(s) for the purposes of her doctoral research. The permission granted is limited to a 120 minute semi-structured interview(s) for each research participant. A separate consent form to participate should be signed by the research participants before participation.

The use of data collected is limited to developing research findings and any other academic purpose, such as publishing the dissertation, writing research reports, journal articles, and conference presentations. It is expected that Mrs. Redemption Chatanga will exercise due care in publishing research findings and publishing the data findings not to bring harm to the research participants. The anonymity and confidentiality of the research participants should be respected.

Approval granted by the person authorised to do so

First Name Kimetso Last Name Mathaba

Title Honourable

Signature [Signature]

Date 19.10.2021

Attachment 19: Request for permission to conduct research – National University of Lesotho Geography and Environmental Science and Political and Administrative Studies Departments



The Registrar

The National University of Lesotho

P.O Roma 180

Maseru, Lesotho

17 May 2021

Re: Request for permission to interview academic staff at the National University of Lesotho

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this letter which outlines details concerning my PhD study, I am requesting permission to interview academic staff who works at the National University of Lesotho (NUL) in the Department of Political and Administrative Studies and Department of Geography and Environmental Science.

DATE: The venue and time will be determined at your convenience

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Marêve Biljohn

Contact number: +27(0)514017185

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

WHY ARE YOUR ORGANISATION INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain:

- i. Perspectives on community participation during climate change policy formulation and implementation from two academics working in the Department of Political and Administrative Studies and
- ii. Perspectives on community participation during climate change policy formulation and implementation from two academics working in the Department of Geography and Environmental Science.

Department of Political and Administrative Studies

The academics in the Department of Political and Administrative Studies are selected to participate in this study because of their experience, skills, and expertise in public policy and public administration. Thus, permission is requested to conduct semi-structured

interviews with the selected academics who will be recruited to participate in this study. The researcher requests the experts' contact details who will participate in the study.

Department of Geography and Environmental Science

Individuals in the Department of Geography and Environmental Science are selected because of their experience, skills, and expertise in climate change. The researcher requests to conduct semi-structured interviews with the selected academics. Thus, permission is requested to get the contact details of the individuals who will be recruited for this study.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

The experts' perspectives will be obtained during semi-structured interviews that will range between 90 to 120 minutes. Responses during these semi-structured interviews will be recorded (with permission) for data analysis purposes.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The data collected will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

WHAT ARE THE POTENTIAL RISKS TAKING PART IN THIS STUDY?

The only risk in taking part in this study will be the loss of work time during the semi-structured interview. However, the researcher will schedule the semi-structured interview at a time that is convenient for the participants.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during semi-structured interviews may be used for other academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

HOW WILL THE ORGANISATION BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

Yours sincerely



Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Attachment 20: Response from the National University of Lesotho Geography and Environmental Science and Political and Administrative Studies Departments

THE NATIONAL UNIVERSITY OF LESOTHO

Telephone: +266 52213907
+266 22340264
+266 22340601
Fax: +266 22340000
Website: <http://www.nul.ls>



P O Roma 180
Lesotho
Africa

OFFICE OF THE REGISTRAR

18th May 2021

REF: REG/ADM-1.37
LML/hym1

Mrs. Redemption Chatanga
C/o National University of Lesotho
P.O. Roma 180
Lesotho

Dear Mrs Chatanga

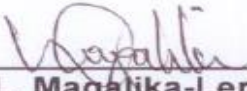
Re: Request to Conduct Research at the National University of Lesotho

The National University of Lesotho (NUL) is in receipt of your application to conduct Research at this institution. The title of the Study is "**Community participation in climate change policy formulation and implementation in Lesotho**".

After careful consideration of all relevant facts, the University has agreed to allow you to continue with your research as requested. It is hoped that the research outcome will be beneficial to both the institution of Higher learning and the country at large.

By copy of this letter the Heads of departments of Political and Administration Studies and department of Geography and Environmental Science are requested to assist you to carry out your assignment.

Sincerely


L. Maqalika-Lerotholi
Registrar

Cc: Head of Department - Political and Administrative Studies
Head of Department - Geography and Environmental Science

Attachment 21: Request for permission to conduct research – United Nations Development Programme



UNDP Energy and Environment

13 UN Road

UN House

Maseru, Lesotho

22 June 2021

Re: Request for permission to interview staff at the United Nations Development Programme (UNDP) Energy and Environment

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this letter which outlines details concerning my PhD study, I am requesting permission to interview staff at the UNDP Energy and Environment in the unit of Climate Change.

DATE: The venue and time will be determined at your convenience

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

WHY ARE YOUR ORGANISATION INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain:

- i. The Climate Change Unit head's perspective on community participation in climate change policy formulation and participation; and
- ii. The environment project manager's perspective on community participation in climate change policy formulation and implementation.

The UNDP is chosen because it is an important international body that is concerned with climate change. The UNDP assists many countries, such as the Kingdom of Lesotho (KOL) to strengthen new frameworks for climate change. Of relevance to this study is the

Climate Change Unit, which falls under a bigger unit called the UNDP Energy and Environment Unit, which is mandated with helping to implement initiated climate change programs by the KOL government ministries and departments. Thus, the researcher requests permission to conduct semi-structured interviews with the Climate Change Unit head and the environment project manager. The head unit oversees the implementation of climate change programs at the community level. The environment project manager (who reports to the Climate Change Unit head) is deemed critical because of the manager's coordinating role in the implementation of UNDP climate change programs at the grassroots. Permission is requested to obtain the contact details of the Climate Change Unit head and the environment project manager who will be recruited to participate in this study.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

The Climate Change Unit head's and the environment project manager's perspectives will be obtained during semi-structured interviews that will range between 90 to 120 minutes, respectively. Responses during these semi-structured interviews will be recorded (with permission) for data analysis purposes.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The data collected will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

WHAT ARE THE POTENTIAL RISKS TAKING PART IN THIS STUDY?

The only risk in taking part in this study will be the loss of work time during the semi-structured interview. However, the researcher will schedule the semi-structured interview at a time that is convenient for the participants.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during the semi-structured interviews may be used for other academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

HOW WILL THE ORGANISATION BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

Yours sincerely



Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Attachment 22: Response from the UNDP

PERMISSION TO CONDUCT INTERVIEW(S) IN /AT THE UNITED NATIONS DEVELOPMENT
PROGRAMME (UNDP) ENERGY AND ENVIRONMENT

Redemption Chatanga, a student (student number 2017493467) at the University of Free State, South Africa, is hereby granted permission to conduct 2 (state number of interviews) semi-structured interview(s) for the purposes of her doctoral research. The permission granted is limited to a 120 minute semi-structured interview(s) for each research participant. A separate consent form to participate should be signed by the research participants before participation.

The use of data collected is limited to developing research findings and any other academic purpose, such as publishing the dissertation, writing research reports, journal articles, and conference presentations. It is expected that Mrs. Redemption Chatanga will exercise due care in publishing research findings and publishing the data findings not to bring harm to the research participants. The anonymity and confidentiality of the research participants should be respected.

Approval granted by the person authorised to do so

First Name LIMOMANE Last Name PESHOANE

Title SUSTAINABLE DEVELOPMENT SPECIALIST

Signature 

Date 06/10/2022

Attachment 23: POPIA compliant consent form – Focus group question schedule for the Manonyane councillors



RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM **PAMPITŠANA EA LITABA TSA BOITHUTO-PHUPUTSO LE FOROMO EA TUMELLO**

DATE: The venue and time will be determined at your convenience.

LETSATSI: Sebaka le letsatsi li tla khethoa ke oena ka nako e tla u nolofalla.

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

SEHLOOHO SA POROJEKE: Ho nka karolo hoa sechaba litabeng tsa ho thehoa hoa melao le ho kenngoa tšebetsong litabeng tsa ho feto-fetoha hoa leholimo naheng ea Lesotho.

WHO IS DOING THE RESEARCH?

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this information leaflet and consent form, which outlines details concerning my PhD study, I am requesting permission for your participation in my study through a focus group discussion.

PHUPUTSO EE E ETSOA KE MANG?

Lebitso la ka ke Redemption Chatanga (student number: 2017439467), moithuti oa lengolo la PHD, lekaleng la Public Administration and Management, Faculty of Economics and Management sciences, University of Free State. Ka pampitšana ena ea litaba le foromo ea tumello e bontšang lintlha tsohle mabapi le boithuto baka, ke kopa tumello ea hau hore u nke karolo ea lipuisano ka hara sehlopha.

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

MABITSO LE LINOMORO TSA MOETAPELE OA BOITHUTO BONA:

Moetapele oa boithuto: Dr Maréve Biljohn

linomoro tsa mohala: +27(0)514017185

RESEARCHER'S NAME AND CONTACT NUMBER(S):

Researcher: Redemption Chatanga Student number: 2017493467 Contact number: +266 62509044 / +266 50644457

LEBITSO LE LINOMORO TSA MOFUPUTSI:

Mofuputsi: Redemption Chatanga Student number: 2017439467 Llinomoro tsa mohala: +266 62509044/ +26650644457

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

LEBAKA LA BOITHUTO

Boithuto bona bo hlahlobisisa ho nka karolo ha sechaba mabapi le melao ea ho feto-fetoha hoa leholimo ka ho hlaisa ho nka karolo ho tebileng mabapi le ho thehoeng hoa melao le methati ea ho e kenya tšebetsong kamoso.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

NA BOITHUTO BO BO FILOE TUMELLO EA MELAO EA TŠEBETSO? (Ethical approval)

Boithuto bona ha bo e-so fuoe tumello ho tsoa komiting ea melao ea tšebetso ea University of Free State ha joale. Kopi ea lengolo la tumello e tla fumaneha hang hoba e lokolloe pele methati ea ho bokelletsa litaba tsa boithuto e ka nkoa.

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain the Manonyane community councillors' perspective on community participation during climate change policy formulation and implementation. The Manonyane councillors as community representatives facilitate the development of the Manonyane communities and are selected to participate in focus group discussion. Of the 14 councillors serving on the Manonyane Community Council, 14 are selected to participate in this study. Out of the 14 councillors, I request your participation in a focus group discussion with other councillors.

HOBANENG U MENNGOE HO NKA KAROLO PROJEKENG EE EA LIPHUPUTSO?

Boithuto bona bo labalabela ho fumana maikutlo a makh'anselara a Manonyane ka ho nka karolo hoa sechaba holima melao le ho kenngoa tšebetsong hoa eona holima ho feto-fetoha hoa leholimo. Makh'anselara a Manonyane joalo ka baemeli ba sechaba, ke bona ba tsamaisang tsoelopele ea metse ea Manonyane 'me a khethiloe ho nka karolo ka hara lipuisano tse tsepameng tsa sehlopha. Holima makh'anselara a leshome le metso e mene a sebeletsang kh'ansele ea sechaba ea Manonyane (MCC) ba leshome le metso e mene ba khethiloe ho nka karolo. Holima ba leshome le metso e mene, ke kopa boteng ba hau le hore u nke karolo ka hara lipuisano tse tsepameng tsa sehlopha le makh'anselara a mang.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

Your perspective will be obtained during a focus group discussion with other councillors. The focus group discussion ranges between 90 to 120 minutes. Responses during the focus group discussion will be recorded (with permission) for data analysis purposes.

SEBOPEHO SA HO NKA KAROLO KE SE JOANG BOITHUTONG BO?

Maikutlo a hau a nkuoa le ho eloa hloko nakong ea lipuisano tse tsepameng ka hara sehlopha le makh'anselara a mang. Lipuisano tse tsepameng li tla nka nako e ka bang metsotso e mashome a robong (hora le halofo) ho isa ho metsotso e lekholo le mashome a mabeli (hora tše peli). Likarabo le lipuisano nakong ena li tla hatisoa (ka tumello) molemong oa ho hlahlobisisa lintlha/litaba tseo.

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Participation is voluntary, and you are under no obligation to consent to participation. There is no penalty or loss of benefit for non-participation. You are free to withdraw at any time and without giving a reason during the interview. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. However, once the interview is concluded and data analysis commenced, it will not be possible to withdraw.

NA MOTHO EA NKANG KAROLO EA BOITHUTO BO BA KA IKHULA?

Ho nka karolo ea boithuto bona ke boithapo. Ha ho kotlo kapa tahleho ea ho una melemo ha u sa nke karolo. Ho ba teng boithutong bona ke boithapo, 'me ha u tlasa khatello e fe kapa e fe ho lumela ho nka karolo. U lokolohile ho ka ikhula nako e fe kapa e fe ntle le ho fana ka lebaka nakong ea lipotso. Haeba u etsa qeto ea ho ba karolo ea boithuto bo, u tla fuoa tokomane ena ea litaba 'me u tla koptjoa ho tekena foromo ea tumello. Leha hole joalo, ha lipotso li se li qetilo le liphuputso kapa pokello ea litaba e se e qalile, ha hona khonahala ho ka ikhula.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The collected data will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

MELEMO EA HO NKA KAROLO BOITHUTONG BO KE EFE?

Ho nka karolo ke boithapo, 'me ha hona meropotso ea chelete e tla unoa ha motho a nka karolo ea boithuto bona. Leha hole joalo, ka ho nka karolo hoa hau boithutong bona, u tla kenya letsoho tsoelopeleng ea mekhoe (contextual participatory strategy) ea ho matlafatsa ho nka karolo hoa sechaba molemong oa ho thehoa hoa melao le methati ea ho kenngoa tšebetsong hoa eona kamoso. Mekhoe ena e tla fa 'muso oa Lesotho kutloisiso e batsi ea tsebo e ipapisitseng le tse teng ka hara naha (indigenous knowledge systems) ho tseba hore na sechaba se tseba ha kae, ho utloisisa le ho ela hloko kapa ho elelloa bohlokoa ba ho ba karolo ea ho thehoa hoa melao le methati ea ho kenngoa tšebetsong ea melao eo kamoso. Litaba tse fumanoeng li tla sebelisoa molemong oa lithuto le lipatlisiso. Qetellong ea boithuto, lintlha tse fumanoeng li tla phatlalatsoa mapatlaleng a boithuto hore batho ba bang ba ka bang le khahleho ba tle ba ithute ho tsoa liphuputsoeng tsena.

WHAT ARE THE POTENTIAL RISKS FOR TAKING PART IN THIS STUDY?

There are no known potential risks for participating in this study. However, participation in this study may result in the loss of work time. In this regard, the focus group discussion will be conducted at a time and date that is agreed on by participants.

KE E FE KOTSI E KA HLAHANG HA U BA KAROLO EA BOITHUTO BO?

Ha ho kotsi e tsebahalang e ka hlahang ha u nka karolo boithutong bona, leha hole joalo, ho nka karolo boithutong bona ho ka baka tahleho ea nako ea mosebetsi. Ka lebaka lena, tlhophiso ea popeho ea lipotso (semi-structured interview) e tla etsoa ka nako le letsatsi tse tla u nolofalla kapa tse ke keng tsa u sitisa.

Mofuputsi o tla boloka pokello e tšoarehang ea likarabo tsa hau nakong ea lilemo tse hlano ka hara kabinete kapa lebokose le notletsoeng ha hae molemong oa liphuputso tsa kamoso kapa molemong oa lithuto tsa hae. Litaba tse marangrang li tla bolokoa kh'omputareng e nang le sesireletsi kapa nomoro ea lekunutu ea tšireletso. Tšebeliso ea kamoso ea litaba tsena tse bolokuoeng e tla ba ho tihathobisiso ea boitšoaro tšebetsong ea phuputso (Research Ethics Review) le tumello ha ho khonahala. Kamora lilemo tse hlano, lipokello tsohle li tla senngoa 'me le tse marangrang li tla hlakoloe.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

NA HO TLABA LE HO PATALOA KAPA MEROPOTSO HA U NKA KAROLO EA BOITHUTO BO?

Ho nka karolo boithutong bona ke boithaopo ka ho felletseng. Ha ho melemo ea lichelete kapa meropotso ha u nka karolo ea boithuto bona.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

EA NKANG KAROLO O TLA TSEBISOA JOANG KA LIPHUPUTSO/ TSE FUMANOENG KA HARA BOITHUTO BO?

Qetellong ea boithuto, kopi ea tse fumanoeng le likhothalletso e tla fumaneha ofising ea morena oa sehlooho oa Manonyane le Lesotho Ministry of Energy & Meteorology. U ka boetse oa ikopanya le mofuputsi (Redemption Chatanga) bakeng sa tihaloetso e batsi ea boithuto bona nomorong ea mohala ea +266 62509044/ +266 50644457/ redemutoozi@gmail.com. Ha u kaba le maikutlo kapa khoao mabapi le kamoo phuputso ena e entsoeng ka teng, u ka letsetsa Dr Maréve Biljohn nomorong ena ea mohala +27 (0)514017185/ BiljohnMIM@ufs.ac.za.

Yours sincerely

Ka boikokobetso



Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Mofuputsi: Redemption Chatanga

Nomoro ea mohala: +266 62509044/ +266 50644457 email: redemutoozi@gmail.com

kea leboha ha u nkile nako ea ho bala litaba tsena le ho nka karolo ea boithuto bona.

Thank you for taking the time to read this information sheet and for participating in this study.



CONSENT TO PARTICIPATE IN THIS STUDY

I, the undersigned, _____ (*participant's full names to be included*), (the **"Participant"**) confirm that I voluntarily agree to participate in the research study referred to as the

_____ (the **"Study"**) in relation to

and which Study is being conducted by _____

(*insert the name of the researcher*), (the **"Researcher"**).

I, the undersigned Participant, further confirm that—

1. the Researcher has explained the nature, procedure, potential benefits and anticipated inconvenience of my participation in the Study;
2. I have read (or had explained to me) and understood the Study as explained in the attached information sheet;
3. I have had sufficient opportunity to ask questions and am prepared to participate in the Study;
4. I understand that my participation in the Study is entirely voluntary and that I am free to withdraw at any time without penalty (if applicable);
5. I voluntarily provide the UFS and the Researcher with my personal information and consent to the UFS and the Researcher collecting, disclosing and processing my personal information in order to conduct the Study and any related activities in relation thereto;
6. I hereby acknowledge and confirm that I understand the purpose for which the UFS and the Researcher may collect, store, use, delete, destroy, outsource, transfer or otherwise process, as the context and circumstances may require and as contemplated in terms of POPIA, my personal information as set out herein;
7. I am aware that the findings of the Study will be anonymously processed into a research report, journal publications and/or conference proceedings and that my personal information will be aggregated and identified at such stage;
8. I also give the UFS permission to share, without notification, the collected data with other researchers at the UFS or other Higher Education Institutions. This permission is dependent on the same principles of ethical research practices, anonymity/confidentiality, safekeeping of information, and other issues listed above applying.

I, the Participant, agree to the recording of the focus group discussion.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

Full Name(s) of Researcher(s): _____

Signature of Researcher: _____ Date: _____



TUMELO EA HO NKA KAROLO EA BOITHUTO BONA

'Na.....(mabitso ka botlalo a kenyetsetsoe), ("ea nkang karolo") ke tiisa hore ke ithaopetse ho lumela ho ba karolo ea boithuto-phuputso bo bitsoang.....(boithuto) mabapi le 'me eo boithuto bona bo etsoang ke..... (kenya lebitso la mofuputsi) ("mofuputsi").

'Na ea nkang karolo mona, ke tiisa le ho netefatsa hore-

1. Mofuputsi o hlalositse sebopeho, mokhoa le melemo e ka hlahang le ho bontša tšitiso e ka bang teng ho nkeng karolo ea boithuto bona.
2. Ke balile (kapa ke hlalositse) 'me ka utloisisa boithuto joalo kaha ke hlalositse leqephe la litaba le qhoaelletsoeng.
3. Ke bile le monyetla o lekaneng oa ho botsa lipotso 'me ke itukiselitse ho nka karolo ea boithuto bona.
4. Kea utloisisa hore ho nka karolo boithutong bona ke boithapo bo felletseng 'me ke lokolohile ho ikhula nako e fe kapa e fe ntle le kotlo (ha ho khonahala).
5. Ke ithaopela ho fa University of Free State le mofuputsi litaba tsa ka le tumello ho University of Free State le mofuputsi ea bokellang, ea lokollang le ho sebetsana le litaba tsaka e le ho etsa boithuto le liketsahalo tse amanang le seo.
6. Ke lumela le ho tiisa hore ke utloisisa lebaka leo UFS le mofuputsi a ka bokellang, a boloka, a sebelisa, a hlakola, a senya, a ipatlela kante, a fetisa kapa ho sebetsana (to process), joalo kaha moelelo le mabaka a ka batla 'me a nahanisisa ho ea ka POPIA, litaba tsa ka joalo kaha li beiloe.
7. Kea elelloa hore tse fumanehileng boithutong li tla sebetsoa ka ho pata mabitso ka hara tlaleho ea phuputso, koranta ea boithuto e phatlalalitsoeng (journal publication) le lietsahala tsa seboka le hore litaba tseo tsaka li ka sesefatsoa(agggregated) 'me tsa fumanoa ka nako eo.
8. Ke boetse ke fa UFS tumello ea ho arolelana ntle le tsebiso ea letho, litaba tse bokellelitsoeng le bafuputsi ba bang UFS kapa likolong tse ling tse phahameng tsa thuto. Tumello ena e itšetlehile holima tsamaiso ea boitsoaro tšebetsong ba liketsahalo tsa liphuputso, ho boloka/ho pata mabitso a monga litaba, polokeho ea litaba, le tse ling tsa lintlha tse boletsoeng.

'Na, ea nkang karolo, ke lumela khatisona ea lipotso tse hlophisitsoeng.

Mabitso ka botlalo a ea nkang karolo.....

Motekeno oa ea nkang karolo..... Letsatsi.....

Mabitso ka botlalo a mofuputsi.....

Motekeno oa mofuputsi..... Letsatsi.....

Attachment 24: POPIA compliant consent form – Semi-structured interview schedule for the Manonyane councillors



RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM
PAMPITŠANA EA LITABA TSA BOITHUTO-PHUPUTSO LE FOROMO EA TUMELLO

DATE: The venue and time will be determined at your convenience.

LETSATSI: Sebaka le letsatsi li tla khethoa ke oena ka nako e tla u nolofalla.

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

SEHLOOHO SA POROJEKE: Ho nka karolo hoa sechaba litabeng tsa ho thehoa hoa melao le ho kenngoa tšebetsong litabeng tsa ho feto-fetoha hoa leholimo naheng ea Lesotho.

WHO IS DOING THE RESEARCH?

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this information leaflet and consent form, which outlines details concerning my PhD study, I am requesting your participation in my study through a semi-structured interview.

PHUPUTSO EE E ETSOA KE MANG?

Lebitso la ka ke Redemption Chatanga (student number: 2017439467), moithuti oa lengolo la PHD, lekaleng la Public Administration and Management, Faculty of Economics and Management sciences, University of Free State. Ka pampitšana ena ea litaba le foromo ea tumello e bontšang lintlha tsohle mabapi le boithuto baka, ke kopa tumello ea hau hore u nke karolo ea lipuisano ka hara sehlopha.

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

MABITSO LE LINOMORO TSA MOETAPELE OA BOITHUTO BONA:

Moetapele oa boithuto: Dr Maréve Biljohn

linomoro tsa mohala: +27(0)514017185

RESEARCHER'S NAME AND CONTACT NUMBER(S):

Researcher: Redemption Chatanga Student number: 2017493467 Contact number: +266 62509044 / +266 50644457

LEBITSO LE LINOMORO TSA MOFUPUTSI:

Mofuputsi: Redemption Chatanga Student number: 2017439467 Llinomoro tsa mohala: +266 62509044/ +26650644457

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

LEBAKA LA BOITHUTO

Boithuto bona bo hlalobisisa ho nka karolo ha sechaba mabapi le melao ea ho feto-fetoha hoa leholimo ka ho hlaisa ho nka karolo ho tebileng mabapi le ho thehoa hoa melao le methati ea ho e kenya tšebetsong kamoso.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

NA BOITHUTO BO BO FILOE TUMELLO EA MELAO EA TŠEBETSO? (Ethical approval)

Boithuto bona ha bo e-so fuoe tumello ho tsoa komiting ea melao ea tšebetso ea University of Free State ha joale. Kopi ea lengolo la tumello e tla fumaneha hang hoba e lokolloe pele methati ea ho bokelletsa litaba tsa boithuto e ka nkoa.

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain the Manonyane community councillors' perspective on community participation during climate change policy formulation and implementation. The Manonyane councillors as community representatives facilitate the development of the Manonyane communities and are selected to participate in semi-structured interviews. Of the 14 councillors serving on the Manonyane Community Council, 14 are selected to participate in this study. Out of the 14 councillors, I request your participation in a semi-structured interview.

HOBANENG U MENNGOE HO NKA KAROLO PROJEKENG EE EA LIPHUPUTSO?

Boithuto bona bo labalabela ho fumana maikutlo a makh'anselara a Manonyane holima ho nka karolo hoa sechaba holima melao le ho kenngoa tšebetsong hoa eona holima pheto-pheto ea leholimo. Makh'anselara a Manonyane joalo ka baemeli ba sechaba, ke bona ba tsamaisang tsoelopele ea metse ea Manonyane 'me a khethiloe ho nka karolo lipotsong ka mokhoa moqoqo. Holima makh'anselara a leshome le metso e mene a sebeletsang kh'ansele ea sechaba ea Manonyane (MCC) ba leshome le metso e mene ba khethiloe ho nka karolo. Holima ba leshome le metso e mene, ke kopa hore u nke karolo ea lipotso ka mokhoa moqoqo.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

Your perspectives will be obtained during the semi-structured interview that will range between 90 to 120 minutes. Responses during this semi-structured interview will be recorded (with permission) for data analysis purposes.

SEBOPEHO SA HO NKA KAROLO KE SE JOANG BOITHUTONG BO?

Maikutlo a hau a nkuoa le ho eloa hloko nakong ea lipotso ka mokhoa moqoqo nakong e ka bang metsotso e mashome a robong (hora le halofo) ho isa ho metsotso e lekholo le mashome a mabeli (hora tše peli). Likarabo le lipuisano nakong ena li tla hatisoa (ka tumello) molemong oa ho hlalobisisa lintlha/litaba tseo.

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Participation is voluntary, and you are under no obligation to consent to participation. There is no penalty or loss of benefit for non-participation. You are free to withdraw at any time and without giving a reason during the interview. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. However, once the interview is concluded and data analysis commenced, it will not be possible to withdraw.

NA MOTHO EA NKANG KAROLO EA BOITHUTO BO BA KA IKHULA?

Ho nka karolo ea boithuto bona ke boithapo. Ha ho kotlo kapa tahlehelo ea ho una melemo ha u sa nke karolo. Ho ba teng boithutong bona ke boithapo, 'me ha u tlasa khatello e fe kapa e fe ho lumela ho nka karolo. U lokolohile ho ka ikhula nako e fe kapa e fe ntle le ho fana ka lebaka nakong ea lipotso. Haeba u etsa qeto ea ho ba karolo ea boithuto bo, u tla fua tokomane ena ea litaba 'me u tla koptjoa ho tekena foromo ea tumello. Leha hole joalo, ha lipotso li se li qetilo le liphuputso kapa pokello ea litaba e se e qalile, ha hona khonahala ho ka ikhula.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The collected data will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

MELEMO EA HO NKA KAROLO BOITHUTONG BO KE EFE?

Ho nka karolo ke boithapo, 'me ha hona meropotso ea chelete e tla unoa ha motho a nka karolo ea boithuto bona. Leha hole joalo, ka ho nka karolo ho hau boithutong bona, u tla kenya letsoho tsoelapeleng ea mekhoha (contextual participatory strategy) ea ho matlafatsa ho nka karolo ho sechaba molemong oa ho thehoa ho melao le methati ea ho kenngoa tšebetsong ho eona kamoso. Mekhoa ena e tla fa 'muso oa Lesotho kutloisiso e batsi ea tsebo e ipapisitseng le tse teng ka hara naha (indigenous knowledge systems) ho tseba hore na sechaba se tseba ha kae, ho utloisisa le ho ela hloko kapa ho elelloa bohlokoa ba ho ba karolo ea ho thehoa ho melao le methati ea ho kenngoa tšebetsong ea melao eo kamoso. Litaba tse fumanoeng li tla sebelisoa molemong oa lithuto le lipatlisiso. Qetellong ea boithuto, lintlha tse fumanoeng li tla phatlalatsoa mapatlelong a boithuto hore batho ba bang ba ka bang le khahleho ba tle ba ithute ho tsoa liphuputso tse.

WHAT ARE THE POTENTIAL RISKS FOR TAKING PART IN THIS STUDY?

There are no known potential risks for participating in this study. However, participation in this study may result in loss of work time. In this regard, the semi-structured interview will be conducted at a time and date that is convenient for you.

KE E FE KOTSI E KA HLAHANG HA U BA KAROLO EA BOITHUTO BO?

Ha ho kotsi e tsebahalang e ka hlahang ha u nka karolo boithutong bona, leha hole joalo, ho nka karolo boithutong bona ho ka baka tahleho ea nako ea mosebetsi. Ka lebaka lena, tlhophiso ea popeho ea lipotso (semi-structured interview) e tla etsoa ka nako le letsatsi tse tla u nolofalla kapa tse ke keng tsa u sitisa.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people

responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during the semi-structured interview, may be used for other academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

NA LITABA TSE TLA BUUOA MOO E TLABA LEKUNUTU? (CONFIDENTIALITY)

Likarabo tse bokellelitsoeng kapa tse hatisitsoeng li tla sebetsoa ka tsela e sirelelitseng mofani oa tsona, 'me li tla sebelisoa fela boithutong bona. Likarabo tsa hau li tla pata lebitso la hau kapa li tla rehelloa ka lebitso la maiketsetso leo eseng la hau 'me u tla bitsoa ka lona litabeng tsena, liphatlalatsong kapa mokhoa tlaleho-phuputso joalo ka tsamaisong ea seboka. Ntle ho mosupisi oa mofuputsi, likarabo tsa hau li tla hlalohoa ke batho ba ikarabellang ho netefatseng hore phuputso e entsoe ka mecha e nepahetseng (transcriber, external coder) le litho tsa komiti ea tsamaiso ea boitsoaro tšebetsong ea liphuputso. Leha hole joalo, motho emong le emong ea amehang boithutong bona o lokela ho tekena foromo ea tumellano ea ho boloka litaba tseo (confidentiality form). Likhatiso tse u hlalohanyang kapa tse u supang li tla bonoa ke batho ba sebetsang boithutong bona (mofuputsi, moetapele oa boithuto, toloko le bathusi ba mofuputsi) ntle le haeba oena u ka lamella batho ho bona likhatiso. Ke kopa u ele hloko hore litaba tse se nang mabitso tse bokellelitsoeng nakong ea lipotso, li kanna tsa sebelisetsoa mabaka a mang a lithuto joalo ka litlaleho tsa phuputso, koranta ea thuto (journal article) le litlhaliso tsa seboka. Tlaleho ea boithuto e ka isoa bakeng sa bophatlalatsi, empa batho ba nkileng karolo kabo mong ba keke ba qolloa ka hara tlaleho eo.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

LITABA TSEE LI TLA BOLOKOA JOANG LI BE LI SENNGOE JOANG?

Mofuputsi o tla boloka pokello e tsoarehang ea likarabo tsa hau nakong ea lilemo tse hlano ka hara kabinete kapa lebokose le notletsoeng ha hae molemong oa liphuputso tsa kamoso kapa molemong oa lithuto tsa hae. Litaba tse marangrang li tla bolokoa kh'omputareng e nang le sesireletsi kapa nomoro ea lekunutu ea tšireletso. Tšebeliso ea kamoso ea litaba tsena tse bolokuoeng e tla ba ho tlathlobisiso ea boitsoaro tšebetsong ea phuputso (Research Ethics Review) le tumello ha ho khonahala. Kamora lilemo tse hlano, lipokello tsohle li tla senngoa 'me le tse marangrang li tla hlakoloa.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

NA HO TLABA LE HO PATALOA KAPA MEROPOTSO HA U NKA KAROLO EA BOITHUTO BO?

Ho nka karolo boithutong bona ke boithaopo ka ho felletseng. Ha ho melemo ea lichelete kapa meropotso ha u nka karolo ea boithuto bona.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

EA NKANG KAROLO O TLA TSEBISOA JOANG KA LIPHUPUTSO/ TSE FUMANOENG KA HARA BOITHUTO BO?

Qetellong ea boithuto, kopi ea tse fumanoeng le likhothalletso e tla fumaneha ofising ea morena oa sehlooho oa Manonyane le Lesotho Ministry of Energy & Meteorology. U ka boetse oa ikopanya le mofuputsi (Redemption Chatanga) bakeng sa tihaloetso e batsi ea boithuto bona nomorong ea mohala ea +266 62509044/ +266 50644457/ redemutoozi@gmail.com. Ha u kaba le maikutlo kapa khoao mabapi le kamoo phuputso ena e entsoeng ka teng, u ka letsetsa Dr Maréve Biljohn nomorong ena ea mohala +27 (0)514017185/ BiljohnMIM@ufs.ac.za.

Yours sincerely

Ka boikokobetso



Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Mofuputsi: Redemption Chatanga

Nomoro ea mohala: +266 62509044/ +266 50644457 email: redemutoozi@gmail.com

Kea leboha ha u nkile nako ea ho bala litaba tsena le ho nka karolo ea boithuto bona.

Thank you for taking the time to read this information sheet and for participating in this study.



CONSENT TO PARTICIPATE IN THIS STUDY

I, the undersigned, _____ (participant's full names to be included), (the "Participant") confirm that I voluntarily agree to participate in the research study referred to as the

_____ (the "Study") in relation to

and which Study is being conducted by _____
(insert the name of the researcher), (the "Researcher").

I, the undersigned Participant, further confirm that—

1. the Researcher has explained the nature, procedure, potential benefits and anticipated inconvenience of my participation in the Study;
2. I have read (or had explained to me) and understood the Study as explained in the attached information sheet;
3. I have had sufficient opportunity to ask questions and am prepared to participate in the Study;
4. I understand that my participation in the Study is entirely voluntary and that I am free to withdraw at any time without penalty (if applicable);
5. I voluntarily provide the UFS and the Researcher with my personal information and consent to the UFS and the Researcher collecting, disclosing and processing my personal information in order to conduct the Study and any related activities in relation thereto;
6. I hereby acknowledge and confirm that I understand the purpose for which the UFS and the Researcher may collect, store, use, delete, destroy, outsource, transfer or otherwise process, as the context and circumstances may require and as contemplated in terms of POPIA, my personal information as set out herein;
7. I am aware that the findings of the Study will be anonymously processed into a research report, journal publications and/or conference proceedings and that my personal information will be aggregated and identified at such stage;
8. I also give the UFS permission to share, without notification, the collected data with other researchers at the UFS or other Higher Education Institutions. This permission is dependent on the same principles of ethical research practices, anonymity/confidentiality, safekeeping of information, and other issues listed above applying.

I, the Participant, agree to the recording of the semi-structured interview.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

Full Name(s) of Researcher(s): _____

Signature of Researcher: _____ Date: _____

TUMELO EA HO NKA KAROLO EA BOITHUTO BONA

'Na.....(mabitso ka botlalo a kenyetletsoe), ("ea nkang karolo") ke tiisa hore ke ithaopetse ho lumela ho ba karolo ea boithuto-phuputso bo bitsoang.....(boithuto) mabapi le 'me eo boithuto bona bo etsoang ke..... (kenya lebitso la mofuputsi) ("mofuputsi").

'Na ea nkang karolo mona, ke tiisa le ho netefatsa hore-

1. Mofuputsi o hlalositse sebopeho, mokhoa le melemo e ka hlahang le ho bontša tšitiso e ka bang teng ho nkeng karolo ea boithuto bona.
2. Ke balile (kapa ke hlalositse) 'me ka utloisisa boithuto joalo kaha ke hlalositse leqepheng la litaba le qhoaelletsoeng.
3. Ke bile le monyetla o lekaneng oa ho botsa lipotso 'me ke itukiselitse ho nka karolo ea boithuto bona.
4. Kea utloisisa hore ho nka karolo boithutong bona ke boithapo bo felletseng 'me ke lokolohile ho ikhula nako e fe kapa e fe ntle le kotlo (ha ho khonahala).
5. Ke ithaopela ho fa University of Free State le mofuputsi litaba tsa ka le tumello ho University of Free State le mofuputsi ea bokellang, ea lokollang le ho sebetsana le litaba tsaka e le ho etsa boithuto le liketsahalo tse amanang le seo.
6. Ke lumela le ho tiisa hore ke utloisisa lebaka leo UFS le mofuputsi a ka bokellang, a boloka, a sebelisa, a hlakola, a senya, a ipatlela kante, a fetisa kapa ho sebetsana (to process), joalo kaha moelelo le mabaka a ka batla 'me a nahanisisa ho ea ka POPIA, litaba tsa ka joalo kaha li beiloe.
7. Kea elelloa hore tse fumanehileng boithutong li tla sebetsoa ka ho pata mabitso ka hara tlaleho ea phuputso, koranta ea boithuto e phatlalalitsoeng (journal publication) le lietsahala tsa seboka le hore litaba tseo tsaka li ka sesefatsoa(aggreated) 'me tsa fumanoa ka nako eo.
8. Ke boetse ke fa UFS tumello ea ho arolelana ntle le tsebiso ea letho, litaba tse bokellelitsoeng le bafuputsi ba bang UFS kapa likolong tse ling tse phahameng tsa thuto. Tumello ena e itšetlehile holima tsamaiso ea boitsoaro tšebetsong ba liketsahalo tsa liphuputso, ho boloka/ho pata mabitso a monga litaba, polokeho ea litaba, le tse ling tsa lintlha tse boletsoeng.

'Na, ea nkang karolo, ke lumela khatisona ea lipotso tse hlophisitsoeng.

Mabitso ka botlalo a ea nkang karolo.....

Motekeno oa ea nkang karolo..... Letsatsi.....

Mabitso ka botlalo a mofuputsi.....

Attachment 25: POPIA compliant consent form – Focus group question schedule for Manonyane chiefs



RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM **PAMPITŠANA EA LITABA TSA BOITHUTO-PHUPUTSO LE FOROMO EA TUMELLO**

DATE: The venue and time will be determined at your convenience.

LETSATSI: Sebaka le letsatsi li tla khethoa ke oena ka nako e tla u nolofalla.

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

SEHLOOHO SA POROJEKE: Ho nka karolo hoa sechaba litabeng tsa ho thehoa hoa melao le ho kenngoa tšebetsong litabeng tsa ho feto-fetoha hoa leholimo naheng ea Lesotho.

WHO IS DOING THE RESEARCH?

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this information leaflet and consent form which outlines details concerning my PhD study, I am requesting permission for your participation in my study through a focus group discussion.

PHUPUTSO EE E ETSOA KE MANG?

Lebitso la ka ke Redemption Chatanga (student number: 2017439467), moithuti oa lengolo la PHD, lekaleng la Public Administration and Management, Faculty of Economics and Management sciences, University of Free State. Ka pampitšana ena ea litaba le foromo ea tumello e bontšang lintlha tsohle mabapi le boithuto baka, ke kopa tumello ea hau hore u nke karolo ea lipuisano ka hara sehlopha.

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

MABITSO LE LINOMORO TSA MOETAPELE OA BOITHUTO BONA:

Moetapele oa boithuto: Dr Maréve Biljohn

linomoro tsa mohala: +27(0)514017185

RESEARCHER'S NAME AND CONTACT NUMBER(S):

Researcher: Redemption Chatanga Student number: 2017493467

Contact number: +266 62509044 / +266 50644457

LEBITSO LE LINOMORO TSA MOFUPUTSI:

Mofuputsi: Redemption Chatanga Student number: 2017439467

Llinomoro tsa mohala: +266 62509044/ +26650644457

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

LEBAKA LA BOITHUTO

Boithuto bona bo hlalobisisa ho nka karolo ha sechaba mabapi le melao ea ho feto-fetoha hoa leholimo ka ho hlaisa ho nka karolo ho tebileng mabapi le ho thehoeng hoa melao le methati ea ho e kenya tšebetsong kamoso.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

NA BOITHUTO BO BO FILOE TUMELLO EA MELAO EA TŠEBETSO? (Ethical approval)

Boithuto bona ha bo e-so fuoe tumello ho tsoa komiting ea melao ea tšebetso ea University of Free State ha joale. Kopi ea lengolo la tumello e tla fumaneha hang hoba e lokolloe pele methati ea ho bokelletsa litaba tsa boithuto e ka nkoa.

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain the Manonyane chiefs' perspective on community participation during climate change policy formulation and implementation. As community representatives, the perspectives of chiefs are deemed critical in this study. The Manonyane communities comprise 30 chiefs, 8 of whom are area chiefs, and 22 are village headmen who are non-partisan. Because the reporting structure of these chiefs entails the village headmen reporting to the area chief, and the latter reporting to the principal chief (overall head of all the chiefs in Manonyane), the researcher requests your participation in a focus group discussion.

HOBANENG U MENNGOE HO NKA KAROLO PROJEKENG EE EA LIPHUPUTSO?

Boithuto bona bo labalabela ho fumana maikutlo a marena a Manonyane holima ho nka karolo hoa sechaba holima melao le ho kenngoa tšebetsong hoa eona holima ho feto-fetoha hoa leholimo. Joalo ka baemeli ba sechaba, maikutlo le chebo ea marena e bohlokoa haholo boithutong bona. Sechaba sa Manonyane se bopiloe ka marena a mashome a mararo (30), bao ba robeli (8) ba bona e leng marena a sebaka, le ba mashome a mabeli a metso e 'meli (12) e leng bo ra-motse. Kaha boitlaleho ba marena aa bo bopiloe ka hore bo ramotse ba itlalehe ho morena oa sebaka 'me eena a itlalehe ho morena oa sehlooho oa Manonyane, mofuputsi o kopa boteng ba hau kapa ho nka karolo hoa hau hara sehlopha se tlang ho tšohla taba ena.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

Your perspective will be obtained during a focus group discussion with other chiefs. The focus group discussion will range between 90 to 120 minutes. Responses during the focus group discussion will be recorded (with permission) for data analysis purposes.

SEBOPEHO SA HO NKA KAROLO KE SE JOANG BOITHUTONG BO?

Maikutlo a hau a nkuoa le ho eloa hloko nakong ea ho tšohla litaba tsena ka hara sehlopha le marena a mang. Litaba tsena li tla tšohloa nakong e ka bang metsotso e mashome a robong (hora le halofo) ho isa ho metsotso e lekholo le mashome a

mabeli (hora tše peli). Likarabo le lipuisano tsa sehlopha nakong ena li tla hatisoa (ka tumello) molemong oa ho hlahlobisisa lintlha/litaba tseo.

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Participation is voluntary, and you are under no obligation to consent to participation. There is no penalty or loss of benefit for non-participation. You are free to withdraw at any time and without giving a reason during the interview. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. However, once the interview is concluded and data analysis commenced, it will not be possible to withdraw.

NA MOTHO EA NKANG KAROLO EA BOITHUTO BO BA KA IKHULA?

Ho nka karolo ea boithuto bona ke boithapo. Ha ho kotlo kapa tahleho ea ho una melemo ha u sa nke karolo. Ho ba teng boithutong bona ke boithapo, 'me ha u tlasa khatello e fe kapa e fe ho lumela ho nka karolo. U lokolohile ho ka ikhula nako e fe kapa e fe ntle le ho fana ka lebaka nakong ea lipotso. Haeba u etsa qeto ea ho ba karolo ea boithuto bo, u tla fuoa tokomane ena ea litaba 'me u tla koptjoa ho tekana foromo ea tumello. Leha hole joalo, ha lipotso li se li qetiloe le liphuputso kapa pokello ea litaba e se e qalile, ha hona khonahala ho ka ikhula.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The collected data will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

MELEMO EA HO NKA KAROLO BOITHUTONG BO KE EFE?

Ho nka karolo ke boithapo, 'me ha hona meropotso ea chelete e tla unoa ha motho a nka karolo ea boithuto bona. Leha hole joalo, ka ho nka karolo hoa hau boithutong bona, u tla kenya letsoho tsoelopeleng ea mekhoa (contextual participatory strategy) ea ho matlafatsa ho nka karolo hoa sechaba molemong oa ho thehoa hoa melao le methati ea ho kenngoa tšebetsong hoa eona kamoso. Mekhoa ena e tla fa 'muso oa Lesotho kutloisiso e batsi ea tsebo e ipapisitseng le tse teng ka hara naha (indigenous knowledge systems) ho tseba hore na sechaba se tseba ha kae, ho utloisisa le ho ela hloko kapa ho elelloa bohlokoa ba ho ba karolo ea ho thehoa hoa melao le methati ea ho kenngoa tšebetsong ea melao eo kamoso. Litaba tse fumanoeng li tla sebelisoa molemong oa lithuto le lipatlisiso. Qetellong ea boithuto, lintlha tse fumanoeng li tla phatlalatsoa mapatlelong a boithuto hore batho ba bang ba ka bang le khahleho ba tle ba ithute ho tsoa liphuputsoeng tsena.

WHAT ARE THE POTENTIAL RISKS FOR TAKING PART IN THIS STUDY?

There are no known potential risks for participating in this study. However, participation in this study may result in the loss of work time. In this regard, the focus group discussion will be conducted at a time and date that is agreed on by research participants.

KE E FE KOTSI E KA HLAHANG HA U BA KAROLO EA BOITHUTO BO?

Ha ho kotsi e tsebahalang e ka hlahang ha u nka karolo boithutong bona, leha hole joalo, ho nka karolo boithutong bona ho ka baka tahleho ea nako ea mosebetsi. Ka lebaka lena, tlhophiso ea popeho ea lipotso (semi-structured interview) e tla etsoa ka nako le letsatsi tse tla u nolofalla kapa tse ke keng tsa u sitisa.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during a focus group discussion may be used for other academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report. Please keep in mind that it is sometimes impossible to make an absolute guarantee of confidentiality/anonymity. While the researcher will make every effort to ensure that you will not be connected to the information that you share during the focus group discussion, I cannot guarantee that other participants in the focus group discussion will treat the information confidentially. I shall, however, encourage participants to sign confidentiality forms. For this reason, I advise participants of focus group discussions not to disclose sensitive personal information during the discussion.

NA LITABA TSE TLA BUUOA MOO E TLABA LEKUNUTU? (CONFIDENTIALITY)

Likarabo tse bokellelitsoeng kapa tse hatisitsoeng li tla sebetsoa ka tsela e sirelelitseng mofani oa tsona, 'me li tla sebelisoa fela boithutong bona. Likarabo tsa hau li tla pata lebitso la hau kapa li tla rehelloa ka lebitso la maiketsetso leo eseng la hau 'me u tla bitsoa ka lona litabeng tsena, liphatlalatsong kapa mokhoa tlaleho-phuputso joalo ka tsamaisong ea seboka. Ntle ho mosupisi oa mofuputsi, likarabo tsa hau li tla hlahlojoa ke batho ba ikarabellang ho netefatseng hore phuputso e entsoe ka mecha e nepahetseng (transcriber, external coder) le litho tsa komiti ea tsamaiso ea boitsoaro tšebetsong ea liphuputso. Leha hole joalo, motho emong le emong ea amehang boithutong bona o lokela ho tekena foromo ea tumellano ea ho boloka litaba tseo (confidentiality form). Likhatiso tse u hlalohanyang kapa tse u supang li tla bonoa ke batho ba sebetsang boithutong bona (mofuputsi, moetapele oa boithuto, toloko le bathusi ba mofuputsi) ntle le haeba oena u ka lamella batho ho bona likhatiso. Ke kopa u ele hloko hore litaba tse se nang mabitso tse bokellelitsoeng nakong ea lipotso, li kanna tsa sebelisetsoa mabaka a mang a lithuto joalo ka litlaleho tsa phuputso, koranta ea thuto (journal article) le lithaiso tsa seboka. Tlaleho ea boithuto e ka isoa bakeng sa bophatlalatsi, empa batho ba nkileng karolo kabo mong ba keke ba qolloa ka hara tlaleho eo.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

LITABA TSEE LI TLA BOLOKOA JOANG LI BE LI SENNGOE JOANG?

Mofuputsi o tla boloka pokello e tsoarehang ea likarabo tsa hau nakong ea lilemo tse hlano ka hara kabinete kapa lebokose le notletsoeng ha hae molemong oa liphuputso tsa kamoso kapa molemong oa lithuto tsa hae. Litaba tse marangrang li tla bolokoa kh'omputareng e nang le sesireletsi kapa nomoro ea lekunutu ea tsireletso. Tšebeliso ea kamoso ea litaba tse tse bolokuoeng e tla ba ho tlatlhobisiso ea boitsoaro tšebetsong ea phuputso (Research Ethics Review) le tumello ha ho khonahala. Kamora lilemo tse hlano, lipokello tsohle li tla senngoa 'me le tse marangrang li tla hlakolwa.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

NA HO TLABA LE HO PATALOA KAPA MEROPOTSO HA U NKA KAROLO EA BOITHUTO BO?

Ho nka karolo boithutong bona ke boithaopo ka ho felletseng. Ha ho melemo ea lichelete kapa meropotso ha u nka karolo ea boithuto bona.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS OF THE STUDY?

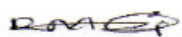
Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

EA NKANG KAROLO O TLA TSEBISOA JOANG KA LIPHUPUTSO/ TSE FUMANOENG KA HARA BOITHUTO BO?

Qetellong ea boithuto, kopi ea tse fumanoeng le likhothalletso e tla fumaneha ofising ea morena oa sehlooho oa Manonyane le Lesotho Ministry of Energy & Meteorology. U ka boetse oa ikopanya le mofuputsi (Redemption Chatanga) bakeng sa tlhalosetso e batsi ea boithuto bona nomorong ea mohala ea +266 62509044/ +266 50644457/ redemutoozi@gmail.com. Ha u kaba le maikutlo kapa khoao mabapi le kamoo phuputso ena e entsoeng ka teng, u ka letsetsa Dr Maréve Biljohn nomorong ena ea mohala +27 (0)514017185/ BiljohnMIM@ufs.ac.za.

Yours sincerely

Ka boikokobetso



Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Mofuputsi: Redemption Chatanga

Nomoro ea mohala: +266 62509044/ +266 50644457 email: redemutoozi@gmail.com

Thank you for taking the time to read this information sheet and for participating in this study.

kea leboha ha u nkile nako ea ho bala litaba tsena le ho nka karolo ea boithuto bona.

CONSENT TO PARTICIPATE IN THIS STUDY

I, the undersigned, _____ (*participant's full names to be included*), (the **"Participant"**) confirm that I voluntarily agree to participate in the research study referred to as the

_____ (the **"Study"**) in relation to

and which Study is being conducted by _____
(*insert the name of the researcher*), (the **"Researcher"**).

I, the undersigned Participant, further confirm that–

1. the Researcher has explained the nature, procedure, potential benefits and anticipated inconvenience of my participation in the Study;
2. I have read (or had explained to me) and understood the Study as explained in the attached information sheet;
3. I have had sufficient opportunity to ask questions and am prepared to participate in the Study;
4. I understand that my participation in the Study is entirely voluntary and that I am free to withdraw at any time without penalty (if applicable);
5. I voluntarily provide the UFS and the Researcher with my personal information and consent to the UFS and the Researcher collecting, disclosing and processing my personal information in order to conduct the Study and any related activities in relation thereto;
6. I hereby acknowledge and confirm that I understand the purpose for which the UFS and the Researcher may collect, store, use, delete, destroy, outsource, transfer or otherwise process, as the context and circumstances may require and as contemplated in terms of POPIA, my personal information as set out herein;
7. I am aware that the findings of the Study will be anonymously processed into a research report, journal publications and/or conference proceedings and that my personal information will be aggregated and identified at such stage;
8. I also give the UFS permission to share, without notification, the collected data with other researchers at the UFS or other Higher Education Institutions. This permission is dependent on the same principles of ethical research practices, anonymity/confidentiality, safekeeping of information, and other issues listed above applying.

I, the Participant, agree to the recording of the focus group discussion.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

Full Name(s) of Researcher(s): _____

Signature of Researcher: _____ Date: _____



TUMELO EA HO NKA KAROLO EA BOITHUTO BONA

'Na.....(mabitso ka botlalo a kenyelletsoe), ("ea nkang karolo") ke tiisa hore l
ithaopetse ho lumela ho ba karolo ea boithuto-phuputso bo bitsoang.....(boithuto) mabapi
..... 'me eo boithuto bona bo etsoar
ke..... (kenya lebitso la mofuputsi
("mofuputsi").

'Na ea nkang karolo mona, ke tiisa le ho netefatsa hore-

1. Mofuputsi o hlalositse sebopeho, mokhoa le melemo e ka hlahang le ho bontša tšitiso e ka bang teng ho nkeng karolo e boithuto bona.
2. Ke balile (kapa ke hlalositse) 'me ka utloisisa boithuto joalo kaha ke hlalositse leqepheng la litaba le qhoaelletsoeng.
3. Ke bile le monyetla o lekaneng oa ho botsa lipotso 'me ke itukiselitse ho nka karolo ea boithuto bona.
4. Kea utloisisa hore ho nka karolo boithutong bona ke boithapo bo felletseng 'me ke lokolohile ho ikhula nako e fe kapa e fe ntle le kotlo (ha ho khonahala).
5. Ke ithaopela ho fa University of Free State le mofuputsi litaba tsa ka le tumello ho University of Free State le mofuputsi ea bokellang, ea lokollang le ho sebetsana le litaba tsaka e le ho etsa boithuto le liketsahalo tse amanang le seo.
6. Ke lumela le ho tiisa hore ke utloisisa lebaka leo UFS le mofuputsi a ka bokellang, a boloka, a sebelisa, a hlakola, a senya, a ipatlela kantle, a fetisa kapa ho sebetsana (to process), joalo kaha moelelo le mabaka a ka batla 'me a nahanisisa ho ea ka POPIA, litaba tsa ka joalo kaha li beiloe.
7. Kea elelloa hore tse fumanehileng boithutong li tla sebetsoa ka ho pata mabitso ka hara tleaho ea phuputso, koranta ea boithuto e phatlalalitsoeng (journal publication) le lietsahala tsa seboka le hore litaba tseo tsaka li ka sesefatsoa(agggregated) 'me tsa fumanoa ka nako eo.
8. Ke boetse ke fa UFS tumello ea ho arolelana ntle le tsebiso ea letho, litaba tse bokellelitsoeng le bafuputsi ba bang UFS kapa likolong tse ling tse phahameng tsa thuto. Tumello ena e itšetlehile holima tsamaiso ea boitšoarō tšebetsong ba liketsahalo tsa liphuputso, ho boloka/ho pata mabitso a monga litaba, polokeho ea litaba, le tse ling tsa lintlha tse boletsoeng.

'Na, ea nkang karolo, ke lumela khatisona ea lipotso tse hlophisitsoeng.

Mabitso ka botlalo a ea nkang karolo.....

Motekeno oa ea nkang karolo..... Letsatsi.....

Mabitso ka botlalo a mofuputsi.....

Motekeno oa mofuputsi..... Letsatsi.....



RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM
PAMPITŠANA EA LITABA TSA BOITHUTO-PHUPUTSO LE FOROMO EA TUMELLO

DATE: The venue and time will be determined at your convenience.

LETSATSI: sebaka le letsatsi li tla khethoa ke oena ka nako e tla u nolofalla.

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

SEHLOOHO SA POROJEKE: Ho nka karolo hoa sechaba litabeng tsa ho thehoa hoa melao le ho kenngoa tšebetsong litabeng tsa ho feto-fetoha hoa leholimo naheng ea Lesotho.

WHO IS DOING THE RESEARCH?

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this information leaflet and consent form, which outlines details concerning my PhD study, I am requesting permission for your participation in my study through a semi-structured interview.

PHUPUTSO EE E ETSOA KE MANG?

Lebitso la ka ke Redemption Chatanga (student number: 2017439467), moithuti oa lengolo la PHD, lekaleng la Public administration and management, Faculty of Economics and Management sciences, University of Free State. Ka pampitšana ena ea litaba le foromo ea tumello e bontšang lintlha tsohle mabapi le boithuto baka, ke kopa tumello ea hau hore u nke karolo ea lipuisano ka hara sehlopha.

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

MABITSO LE LINOMORO TSA MOETAPELE OA BOITHUTO BONA:

Moetapele oa boithuto: Dr Maréve Biljohn

linomoro tsa mohala: +27(0)514017185

RESEARCHER'S NAME AND CONTACT NUMBER(S):

Researcher: Redemption Chatanga Student number: 2017493467 Contact number: +266 62509044 / +266 50644457

LEBITSO LE LINOMORO TSA MOFUPUTSI:

Mofuputsi: Redemption Chatanga Student number: 2017439467

Llinomoro tsa mohala: +266 62509044/ +26650644457

AIM OF THE STUDY



This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

LEBAKA LA BOITHUTO

Boithuto bona bo hlalobisisa ho nka karolo ha sechaba mabapi le melao ea ho feto-fetoha hoa leholimo ka ho hlaisa ho nka karolo ho tebileng mabapi le ho thehoeng hoa melao le methati ea ho e kenya tšebetsong kamoso.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

NA BOITHUTO BO BO FILOE TUMELLO EA MELAO EA TŠEBETSO? (Ethical approval)

Boithuto bona ha bo e-so fuoe tumello ho tsoa komiting ea melao ea tšebetso ea University of Free State ha joale. Kopi ea lengolo la tumello e tla fumaneha hang hoba e lokolloe pele methati ea ho bokelletsa litaba tsa boithuto e ka nkoa.

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain Manonyane chiefs' perspective on community participation during climate change policy formulation and implementation. As community representatives, the perspectives of chiefs are deemed critical in this study. The Manonyane communities comprise 30 chiefs, 8 of whom are area chiefs, and 22 are village headmen who are non-partisan. Because the reporting structure of these chiefs entails the village headmen reporting to the area chief and the latter reporting to the principal chief (overall head of all the chiefs in Manonyane), the researcher requests your participation in a semi-structured interview.

HOBANENG U MENNGOE HO NKA KAROLO PROJEKENG EE EA LIPHUPUTSO?

Boithuto bona bo labalabela ho fumana maikutlo a marena a Manonyane holima ho nka karolo hoa sechaba holima melao le ho kenngoa tšebetsong hoa eona holima ho feto-fetoha hoa leholimo. Joalo ka baemeli ba sechaba, maikutlo le chebo ea marena e bohlokoa haholo boithutong bona. Sechaba sa Manonyane se bopiloe ka marena a mashome a mararo (30), bao ba robeli (8) ba bona e leng marena a sebaka, le ba mashome a mabeli a metso e 'meli (12) e leng bo ra-motse. Kaha boitlaleho ba marena aa bo bopiloe ka hore bo ramotse ba itlalehe ho morena oa sebaka 'me eena a itlalehe ho morena oa sehlooho oa Manonyane, mofuputsi o kopa boteng ba hau kapa ho nka karolo hoa hau hara sehlopha se tlang ho tšohla taba ena.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

Your perspective will be obtained during the semi-structured interview. The semi-structured interview ranges between 90 to 120 minutes. Responses during this semi-structured interview will be recorded (with permission) for data analysis purposes.

SEBOPEHO SA HO NKA KAROLO KE SE JOANG BOITHUTONG BO?

Maikutlo a hau a nkuoa le ho eloa hloko nakong ea lipotso ka mokhoa moqoqo. Lipotso ka mokhoa moqoqoq li tla nka nako e ka bang metsotso e mashome a robong (hora le halofo) ho isa ho metsotso e lekholo le mashome a mabeli (hora tše peli). Likarabo nakong ena li tla hatisoa (ka tumello) molemong oa ho hlalobisisa lintlha/litaba tseo.

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Participation is voluntary, and you are under no obligation to consent to participation. There is no penalty or loss of benefit for non-participation. You are free to withdraw at any time and without giving a reason during the interview. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. However, once the interview is concluded and data analysis commenced, it will not be possible to withdraw.

NA MOTHO EA NKANG KAROLO EA BOITHUTO BO BA KA IKHULA?

Ho nka karolo ea boithuto bona ke boithapo. Ha ho kotlo kapa tahleho ea ho una melemo ha u sa nke karolo. Ho ba teng boithutong bona ke boithapo, 'me ha u tlasa khatello e fe kapa e fe ho lumela ho nka karolo. U lokolohile ho ka ikhula nako e fe kapa e fe ntle le ho fana ka lebaka nakong ea lipotso. Haeba u etsa qeto ea ho ba karolo ea boithuto bo, u tla fuoa tokomane ena ea litaba 'me u tla koptjoa ho tekana foromo ea tumello. Leha hole joalo, ha lipotso li se li qetiloe le liphuputso kapa pokello ea litaba e se e qalile, ha hona khonahala ho ka ikhula.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The collected data will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

MELEMO EA HO NKA KAROLO BOITHUTONG BO KE EFE?

Ho nka karolo ke boithapo, 'me ha hona meropotso ea chelete e tla unoa ha motho a nka karolo ea boithuto bona. Leha hole joalo, ka ho nka karolo hoa hau boithutong bona, u tla kenya letsoho tsoelopeleng ea mekhoe (contextual participatory strategy) ea ho matlafatsa ho nka karolo hoa sechaba molemong oa ho thehoa hoa melao le methati ea ho kenngoa tšebetsong hoa eona kamoso. Mekhoe ena e tla fa 'muso oa Lesotho kutloisiso e batsi ea tsebo e ipapisitseng le tse teng ka hara naha (indigenous knowledge systems) ho tseba hore na sechaba se tseba ha kae, ho utloisisa le ho ela hloko kapa ho elelloa bohlokoa ba ho ba karolo ea ho thehoa hoa melao le methati ea ho kenngoa tšebetsong ea melao eo kamoso. Litaba tse fumanoeng li tla sebelisoa molemong oa lithuto le lipatlisiso. Qetellong ea boithuto, lintlha tse fumanoeng li tla phatlalatsoa mapatlelong a boithuto hore batho ba bang ba ka bang le khahleho ba tle ba ithute ho tsoa liphuputso tse.

WHAT ARE THE POTENTIAL RISKS FOR TAKING PART IN THIS STUDY?

There are no known potential risks for participating in this study. However, participation in this study may result in loss of work time. In this regard, the semi-structured interview will be conducted at a time and date that is convenient for you.

KE E FE KOTSI E KA HLAHANG HA U BA KAROLO EA BOITHUTO BO?

Ha ho kotsi e tsebahalang e ka hlahang ha u nka karolo boithutong bona, leha hole joalo, ho nka karolo boithutong bona ho ka baka tahleho ea nako ea mosebetsi. Ka lebaka lena, tlhophiso ea popeho ea lipotso (semi-structured interview) e tla etsoa ka nako le letsatsi tse tla u nolofalla kapa tse ke keng tsa u sitisa.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during the semi-structured interview, may be used for other academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

NA LITABA TSE TLA BUUOA MOO E TLABA LEKUNUTU? (CONFIDENTIALITY)

Likarabo tse bokellelitsoeng kapa tse hatsitsoeng li tla sebetsoa ka tsela e sirelelitseng mofani oa tsona, 'me li tla sebelisoa fela boithutong bona. Likarabo tsa hau li tla pata lebitso la hau kapa li tla rehelloa ka lebitso la maiketsetso leo eseng la hau 'me u tla bitsoa ka lona litabeng tsena, liphatlalatsong kapa mokhoa tlaleho-phuputso joalo ka tsamaisong ea seboka. Ntle ho mosupisi oa mofuputsi, likarabo tsa hau li tla hlahlojoa ke batho ba ikarabellang ho netefatseng hore phuputso e entsoe ka mecha e nepahetseng (transcriber, external coder) le litho tsa komiti ea tsamaiso ea boitsoaro tšebetsong ea liphuputso. Leha hole joalo, motho emong le emong ea amehang boithutong bona o lokela ho tekena foromo ea tumellano ea ho boloka litaba tseo (confidentiality form). Likhatiso tse u hlalohanyang kapa tse u supang li tla bonoa ke batho ba sebetsang boithutong bona (mofuputsi, moetapele oa boithuto, toloko le bathusi ba mofuputsi) ntle le haeba oena u ka lamella batho ho bona likhatiso. Ke kopa u ele hloko hore litaba tse se nang mabitso tse bokellelitsoeng nakong ea lipotso, li kanna tsa sebelisetsoa mabaka a mang a lithuto joalo ka litlaleho tsa phuputso, koranta ea thuto (journal article) le litlhaliso tsa seboka. Tlaleho ea boithuto e ka isoa bakeng sa bophatlalatsi, empa batho ba nkileng karolo kabo mong ba keke ba qolloa ka hara tlaleho eo.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

LITABA TSEE LI TLA BOLOKOA JOANG LI BE LI SENNGOE JOANG?

Mofuputsi o tla boloka pokello e tsoarehang ea likarabo tsa hau nakong ea lilemo tse hlano ka hara kabinete kapa lebokose le notletsoeng ha hae molemong oa liphuputso tsa kamoso kapa molemong oa lithuto tsa hae. Litaba tse marangrang li tla



bolokoa kh'omputareng e nang le sesireletsi kapa nomoro ea lekunutu ea tsireletso. Tšebeliso ea kamoso ea litaba tsena tse bolokuoeng e tla ba ho tlhatlhobisiso ea boitsoaro tšebetsong ea phuputso (Research Ethics Review) le tumello ha ho khonahala. Kamora lilemo tse hlano, lipokello tsohle li tla senngoa 'me le tse marangrang li tla hlakoloa.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

NA HO TLABA LE HO PATALOA KAPA MEROPOTSO HA U NKA KAROLO EA BOITHUTO BO?

Ho nka karolo boithutong bona ke boithaopo ka ho felletseng. Ha ho melemo ea lichelete kapa meropotso ha u nka karolo ea boithuto bona.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

EA NKANG KAROLO O TLA TSEBISOA JOANG KA LIPHUPUTSO/ TSE FUMANOENG KA HARA BOITHUTO BO?

Qetellong ea boithuto, kopi ea tse fumanoeng le likhothalletso e tla fumaneha ofising ea morena oa sehlooho oa Manonyane le Lesotho Ministry of Energy & Meteorology. U ka boetse oa ikopanya le mofuputsi (Redemption Chatanga) bakeng sa tlhalosetso e batsi ea boithuto bona nomorong ea mohala ea +266 62509044/ +266 50644457/ redemutoozi@gmail.com. Ha u kaba le maikutlo kapa khoao mabapi le kamoo phuputso ena e entsoeng ka teng, u ka letsetsa Dr Maréve Biljohn nomorong ena ea mohala +27 (0)514017185/ BiljohnMIM@ufs.ac.za.

Yours sincerely

Ka boikokobetso

Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Mofuputsi: Redemption Chatanga

Nomoro ea mohala: +266 62509044/ +266 50644457 email: redemutoozi@gmail.com

Kea leboha ha u nkile nako ea ho bala litaba tsena le ho nka karolo ea boithuto bona.

Thank you for taking the time to read this information sheet and for participating in this stud

CONSENT TO PARTICIPATE IN THIS STUDY

I, the undersigned, _____ (participant's full names to be included), (the "**Participant**") confirm that I voluntarily agree to participate in the research study referred to as the

_____ (the "**Study**") in relation to

and which Study is being conducted by _____
(insert the name of the researcher), (the "**Researcher**").

I, the undersigned Participant, further confirm that–

1. the Researcher has explained the nature, procedure, potential benefits and anticipated inconvenience of my participation in the Study;
2. I have read (or had explained to me) and understood the Study as explained in the attached information sheet;
3. I have had sufficient opportunity to ask questions and am prepared to participate in the Study;
4. I understand that my participation in the Study is entirely voluntary and that I am free to withdraw at any time without penalty (if applicable);
5. I voluntarily provide the UFS and the Researcher with my personal information and consent to the UFS and the Researcher collecting, disclosing and processing my personal information in order to conduct the Study and any related activities in relation thereto;
6. I hereby acknowledge and confirm that I understand the purpose for which the UFS and the Researcher may collect, store, use, delete, destroy, outsource, transfer or otherwise process, as the context and circumstances may require and as contemplated in terms of POPIA, my personal information as set out herein;
7. I am aware that the findings of the Study will be anonymously processed into a research report, journal publications and/or conference proceedings and that my personal information will be aggregated and identified at such stage;
8. I also give the UFS permission to share, without notification, the collected data with other researchers at the UFS or other Higher Education Institutions. This permission is dependent on the same principles of ethical research practices, anonymity/confidentiality, safekeeping of information, and other issues listed above applying.

I, the Participant, agree to the recording of the semi-structured interview.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

Full Name(s) of Researcher(s): _____

Signature of Researcher: _____ Date: _____



TUMELO EA HO NKA KAROLO EA BOITHUTO BONA

'Na.....(mabitso ka botlalo a kenyetletsoe), ("**ea nkang karolo**") ke tiisa hore ke ithaopetse ho lumela ho ba karolo ea boithuto-phuputso bo bitsoang.....(boithuto) mabapi le 'me eo boithuto bona bo etsoang ke..... (kenya lebitso la mofuputsi) ("**mofuputsi**").

'Na ea nkang karolo mona, ke tiisa le ho netefatsa hore-

1. Mofuputsi o hlalositse sebopeho, mokhoa le melemo e ka hlahang le ho bontša tšitiso e ka bang teng ho nkeng karolo ea boithuto bona.
2. Ke balile (kapa ke hlalositsoe) 'me ka utloisisa boithuto joalo kaha ke hlalositsoe leqepheng la litaba le qhoaelletsoeng.
3. Ke bile le monyetla o lekaneng oa ho botsa lipotso 'me ke itukiselitse ho nka karolo ea boithuto bona.
4. Kea utloisisa hore ho nka karolo boithutong bona ke boithapo bo felletseng 'me ke lokolohile ho ikhula nako e fe kapa e fe ntle le kotlo (ha ho khonahala).
5. Ke ithaopela ho fa University of Free State le mofuputsi litaba tsa ka le tumello ho University of Free State le mofuputsi ea bokellang, ea lokollang le ho sebetsana le litaba tsaka e le ho etsa boithuto le liketsahalo tse amanang le seo.
6. Ke lumela le ho tiisa hore ke utloisisa lebaka leo UFS le mofuputsi a ka bokellang, a boloka, a sebelisa, a hlakola, a senya, a ipatlala kante, a fetisa kapa ho sebetsana (to process), joalo kaha moelelo le mabaka a ka batla 'me a nahanisisa ho ea ka POPIA, litaba tsa ka joalo kaha li beiloe.
7. Kea elelloa hore tse fumanehileng boithutong li tla sebetsoa ka ho pata mabitso ka hara tlaleho ea phuputso, koranta ea boithuto e phatlalalitsoeng (journal publication) le lietsahala tsa seboka le hore litaba tseo tsaka li ka sesefatsoa(agggregated) 'me tsa fumanoa ka nako eo.
8. Ke boetse ke fa UFS tumello ea ho arolelana ntle le tsebiso ea letho, litaba tse bokellelitsoeng le bafuputsi ba bang UFS kapa likolong tse ling tse phahameng tsa thuto. Tumello ena e itšetlehile holima tsamaiso ea boitsoaro tšebetsong ba liketsahalo tsa liphuputso, ho boloka/ho pata mabitso a monga litaba, polokeho ea litaba, le tse ling tsa lintlha tse boletsoeng.

'Na, ea nkang karolo, ke lumela khatisona ea lipotso tse hlophisitsoeng.

Mabitso ka botlalo a ea nkang karolo.....

Motekeno oa ea nkang karolo..... Letsatsi.....

Mabitso ka botlalo a mofuputsi.....

Motekeno oa mofuputsi..... Letsatsi.....



RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM
PAMPITŠANA EA LITABA TSA BOITHUTO-PHUPUTSO LE FOROMO EA TUMELLO

DATE: The venue and time will be determined at your convenience.

LETSATSI: sebaka le letsatsi li tla khethoa ke oena ka nako e tla u nolofalla.

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

SEHLOOHO SA POROJEKE: Ho nka karolo hoa sechaba litabeng tsa ho thehoa hoa melao le ho kenngoa tšebetsong litabeng tsa ho feto-fetoha hoa leholimo naheng ea Lesotho.

WHO IS DOING THE RESEARCH?

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this information leaflet and consent form, which outlines details concerning my PhD study, I am requesting permission for your participation in my study through a focus group discussion.

PHUPUTSO EE E ETSOA KE MANG?

Lebitso la ka ke Redemption Chatanga (student number: 2017439467), moithuti oa lengolo la PHD, lekaleng la Public administration and management, Faculty of Economics and Management sciences, University of Free State. Ka pampitšana ena ea litaba le foromo ea tumello e bontšang lintlha tsohle mabapi le boithuto baka, ke kopa tumello ea hau hore u nke karolo ea lipuisano ka hara sehlopha.

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

MABITSO LE LINOMORO TSA MOETAPELE OA BOITHUTO BONA:

Moetapele oa boithuto: Dr Maréve Biljohn

linomoro tsa mohala: +27(0)514017185

RESEARCHER'S NAME AND CONTACT NUMBER(S):

Researcher: Redemption Chatanga

Student number: 2017493467

Contact number: +266 62509044 / +266 50644457

LEBITSO LE LINOMORO TSA MOFUPUTSI:

Mofuputsi: Redemption Chatanga

Student number: 2017439467

Llinomoro tsa mohala: +266 62509044/ +26650644457

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

LEBAKA LA BOITHUTO

Boithuto bona bo hlalobisisa ho nka karolo ha sechaba mabapi le melao ea ho feto-fetoha hoa leholimo ka ho hlaisa ho nka karolo ho tebileng mabapi le ho thehoeng hoa melao le methati ea ho e kenya tšebetsong kamoso.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

NA BOITHUTO BO BO FILOE TUMELLO EA MELAO EA TŠEBETSO? (Ethical approval)

Boithuto bona ha bo e-so fuoe tumello ho tsoa komiting ea melao ea tšebetso ea University of Free State ha joale. Kopi ea lengolo la tumello e tla fumaneha hang hoba e lokolloe pele methati ea ho bokelletsa litaba tsa boithuto e ka nkoa.

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain the Manonyane communities' perspective regarding their participation in climate change policy formulation and implementation. Community members (villagers) of Manonyane villages are selected to participate in this study to obtain their perspectives regarding community participation during climate change policy formulation and implementation. The researcher requests permission to interview you together with other community members in a focus group discussion with not less than 8 community members and not more than 12 community members. Focus group discussions are spread across the nine main villages of the MCC. These main villages are Boinyantso, Hata-butle, Mafefooane, Mafikeng, Poopa, Popanyane, Roma, Thoteng, and Tloutle. Therefore, I request you to be part of a focus group discussion with community members in your main village.

HOBANENG U MENNGOE HO NKA KAROLO PROJEKENG EE EA LIPHUPUTSO?

Boithuto bona bo labalabela ho fumana maikutlo a sechaba sa Manonyane holima ho nka karolo hoa sechaba holima melao le ho kenngoa tšebetsong hoa eona holima ho feto-fetoha hoa leholimo. Sechaba sa Manonyane sekhethiloe ho nka karolo boithutong bona e le ho nka maikutlo a bona mabapi le ho nka karolo hoa sechaba holima melao le ho kenngoa tšebetsong hoa eona holima ho feto-fetoha hoa leholimo. Mofuputsi o kopa ho u botsa lipotso 'moho le litho tse ling tsa sechaba ka hara lipuisano tse tsebameng tsa sehlopha, sehlopha se tla ba le litho tse seng ka tlaase ho robeli empa tse sa feteng leshome le metso e 'meli, lihlopha li pharalletse le metse e robong ea Manonyane community council, 'me metse eo ke Boinyatso, Hata-Butle, Mafefooane, Mafikeng, Poopa, Popanyane, Roma, Thoteng le Tloutle. Ke kop aka boikokobetso hore u be karalo ea sehlopha sena le litho tse ling tsa sechaba sa motse oa heno.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

Your perspective will be obtained during a focus group discussion with other community members. The focus group discussion ranges between 90 to 120 minutes. Responses during the focus group discussion will be recorded (with permission) for data analysis purposes.

SEBOPEHO SA HO NKA KAROLO KE SE JOANG BOITHUTONG BO?



Maikutlo a hau a nkuoa le ho eloa hloko nakong ea lipuisano tse tsepameng ka hara sehlopha. Lipuisano tse tsepameng li tla nka nako e ka bang metsotso e mashome a robong (hora le halofo) ho isa ho metsotso e lekholo le mashome a mabeli (hora tše peli). Likarabo le lipuisano nakong ena li tla hatisoa (ka tumello) molemong oa ho hlahlobisisa lintlha/litaba tseo.

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Participation is voluntary, and you are under no obligation to consent to participation. There is no penalty or loss of benefit for non-participation. You are free to withdraw at any time and without giving a reason during the interview. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. However, once the interview is concluded and data analysis commenced, it will not be possible to withdraw.

NA MOTHO EA NKANG KAROLO EA BOITHUTO BO BA KA IKHULA?

Ho nka karolo ea boithuto bona ke boithapo. Ha ho kotlo kapa tahleho ea ho una melemo ha u sa nke karolo. Ho ba teng boithutong bona ke boithapo, 'me ha u tlasa khatello e fe kapa e fe ho lumela ho nka karolo. U lokolohile ho ka ikhula nako e fe kapa e fe ntle le ho fana ka lebaka nakong ea lipotso. Haeba u etsa qeto ea ho ba karolo ea boithuto bo, u tla fuoa tokomane ena ea litaba 'me u tla koptjoa ho tekena foromo ea tumello. Leha hole joalo, ha lipotso li se li qetilo le liphuputso kapa pokello ea litaba e se e qalile, ha hona khonahala ho ka ikhula.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The collected data will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

MELEMO EA HO NKA KAROLO BOITHUTONG BO KE EFE?

Ho nka karolo ke boithapo, 'me ha hona meropotso ea chelete e tla unoa ha motho a nka karolo ea boithuto bona. Leha hole joalo, ka ho nka karolo ho hau boithutong bona, u tla kenya letsoho tsoelopeleng ea mekhoe (contextual participatory strategy) ea ho matlafatsa ho nka karolo ho sechaba molemong oa ho thehoa ho melao le methati ea ho kenngoa tšebetsong ho eona kamoso. Mekhoe ena e tla fa 'muso oa Lesotho kutloisiso e batsi ea tsebo e ipapisitseng le tse teng ka hara naha (indigenous knowledge systems) ho tseba hore na sechaba se tseba ha kae, ho utloisisa le ho ela hloko kapa ho elelloa bohlokoa ba ho ba karolo ea ho thehoa ho melao le methati ea ho kenngoa tšebetsong ea melao eo kamoso. Litaba tse fumanoeng li tla sebelisoa molemong oa lithuto le lipatlisiso. Qetellong ea boithuto, lintlha tse fumanoeng li tla phatlalatsoa mapatlaleng a boithuto hore batho ba bang ba ka bang le khahleho ba tle ba ithute ho tsoa liphuputsoeng tsena.

WHAT ARE THE POTENTIAL RISKS FOR TAKING PART IN THIS STUDY?

There are no known potential risks for participating in this study. However, participation in this study may result in the loss of work time. In this regard, the focus group discussion will be conducted at a time and date that is agreed on by the participants.

KE E FE KOTSI E KA HLAHANG HA U BA KAROLO EA BOITHUTO BO?

Ha ho kotsi e tsebahalang e ka hlahang ha u nka karolo boithutong bona, leha hole joalo, ho nka karolo boithutong bona ho ka baka tahleho ea nako ea mosebetsi. Ka lebaka lena, tlhophiso ea popeho ea lipotso (semi-structured interview) e tla etsoa ka nako le letsatsi tse tla u nolofalla kapa tse ke keng tsa u sitisa.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during a focus group discussion may be used for other academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report. Please keep in mind that it is sometimes impossible to make an absolute guarantee of confidentiality/anonymity. While the researcher will make every effort to ensure that you will not be connected to the information that you share during the focus group discussion, I cannot guarantee that other participants in the focus group discussion will treat the information confidentially. I shall, however, encourage participants to sign confidentiality forms. For this reason, I advise participants of focus group discussions not to disclose sensitive personal information during the discussion.

NA LITABA TSE TLA BUUOA MOO E TLABA LEKUNUTU? (CONFIDENTIALITY)

Likarabo tse bokellelitsoeng kapa tse hatisitsoeng li tla sebetsoa ka tsela e sirelelitseng mofani oa tsona, 'me li tla sebelisoa fela boithutong bona. Likarabo tsa hau li tla pata lebitso la hau kapa li tla rehelloa ka lebitso la maiketsetso leo eseng la hau 'me u tla bitsoa ka lona litabeng tsena, liphatlalatsong kapa mokhoa tlaleho-phuputso joalo ka tsamaisong ea seboka. Ntle ho mosupisi oa mofuputsi, likarabo tsa hau li tla hlahlojoa ke batho ba ikarabellang ho netefatseng hore phuputso e entsoe ka mecha e nepahetseng (transcriber, external coder) le litho tsa komiti ea tsamaiso ea boitsoaro tšebetsong ea liphuputso. Leha hole joalo, motho emong le emong ea amehang boithutong bona o lokela ho tekena foromo ea tumellano ea ho boloka litaba tseo (confidentiality form). Likhatiso tse u hlalohanyang kapa tse u supang li tla bonoa ke batho ba sebetsang boithutong bona (mofuputsi, moetapele oa boithuto, toloko le bathusi ba mofuputsi) ntle le haeba oena u ka lamella batho ho bona likhatiso. Ke kopa u ele hloko hore litaba tse se nang mabitso tse bokellelitsoeng nakong ea lipotso, li kanna tsa sebelisetsoa mabaka a mang a lithuto joalo ka litlaleho tsa phuputso, koranta ea thuto (journal article) le lithaiso tsa seboka. Tlaleho ea boithuto e ka isoa bakeng sa bophatlalatsi, empa batho ba nkileng karolo kabo mong ba keke ba qolloa ka hara tlaleho eo.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

LITABA TSEE LI TLA BOLOKOA JOANG LI BE LI SENNGOE JOANG?

Mofuputsi o tla boloka pokello e tsoarehang ea likarabo tsa hau nakong ea lilemo tse hlano ka hara kabinete kapa lebokose le notletsoeng ha hae molemong oa liphuputso tsa kamoso kapa molemong oa lithuto tsa hae. Litaba tse marangrang li tla bolokoa kh'omputareng e nang le sesireletsi kapa nomoro ea lekunutu ea tšireletso. Tšebeliso ea kamoso ea litaba tsena tse bolokuoeng e tla ba ho tihathobisiso ea boitšoaro tšebetsong ea phuputso (Research Ethics Review) le tumello ha ho khonahala. Kamora lilemo tse hlano, lipokello tsohle li tla senngoa 'me le tse marangrang li tla hlakoloe.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

NA HO TLABA LE HO PATALOA KAPA MEROPOTSO HA U NKA KAROLO EA BOITHUTO BO?

Ho nka karolo boithutong bona ke boithaopo ka ho felletseng. Ha ho melemo ea lichelete kapa meropotso ha u nka karolo ea boithuto bona.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

EA NKANG KAROLO O TLA TSEBISOA JOANG KA LIPHUPUTSO/ TSE FUMANOENG KA HARA BOITHUTO BO?

Qetellong ea boithuto, kopi ea tse fumanoeng le likhothalletso e tla fumaneha ofising ea morena oa sehlooho oa Manonyane le Lesotho Ministry of Energy & Meteorology. U ka boetse oa ikopanya le mofuputsi (Redemption Chatanga) bakeng sa tihaloetso e batsi ea boithuto bona nomorong ea mohala ea +266 62509044/ +266 50644457/ redemutoozi@gmail.com. Ha u kaba le maikutlo kapa khoao mabapi le kamoo phuputso ena e entsoeng ka teng, u ka letsetsa Dr Maréve Biljohn nomorong ena ea mohala +27 (0)514017185/ BiljohnMIM@ufs.ac.za.

Yours sincerely

Ka boikokobetso



Researcher: Redemption Chatanga



Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Mofuputsi: Redemption Chatanga

Nomoro ea mohala: +266 62509044/ +266 50644457 email: redemutoozi@gmail.com

Kea leboha ha u nkile nako ea ho bala litaba tsena le ho nka karolo ea boithuto bona.

Thank you for taking the time to read this information sheet and for participating in this study.

CONSENT TO PARTICIPATE IN THIS STUDY

I, the undersigned, _____ (participant's full names to be included), (the "Participant") confirm that I voluntarily agree to participate in the research study referred to as the

_____ (the "Study") in relation to

and which Study is being conducted by _____
(insert the name of the researcher), (the "Researcher").

I, the undersigned Participant, further confirm that–

1. the Researcher has explained the nature, procedure, potential benefits and anticipated inconvenience of my participation in the Study;
2. I have read (or had explained to me) and understood the Study as explained in the attached information sheet;
3. I have had sufficient opportunity to ask questions and am prepared to participate in the Study;
4. I understand that my participation in the Study is entirely voluntary and that I am free to withdraw at any time without penalty (if applicable);
5. I voluntarily provide the UFS and the Researcher with my personal information and consent to the UFS and the Researcher collecting, disclosing and processing my personal information in order to conduct the Study and any related activities in relation thereto;
6. I hereby acknowledge and confirm that I understand the purpose for which the UFS and the Researcher may collect, store, use, delete, destroy, outsource, transfer or otherwise process, as the context and circumstances may require and as contemplated in terms of POPIA, my personal information as set out herein;
7. I am aware that the findings of the Study will be anonymously processed into a research report, journal publications and/or conference proceedings and that my personal information will be aggregated and identified at such stage;
8. I also give the UFS permission to share, without notification, the collected data with other researchers at the UFS or other Higher Education Institutions. This permission is dependent on the same principles of ethical research practices, anonymity/confidentiality, safekeeping of information, and other issues listed above applying.

I, the Participant, agree to the recording of the focus group discussion.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

Full Name(s) of Researcher(s): _____

Signature of Researcher: _____ Date: _____

TUMELO EA HO NKA KAROLO EA BOITHUTO BONA

'Na.....(mabitso ka botlalo a kenyetsetsoe), ("ea nkang karolo") ke tiisa hore ke ithaopetse ho lumela ho ba karolo ea boithuto-phuputso bo bitsoang.....(boithuto) mabapi le 'me eo boithuto bona bo etsoang ke..... (kenya lebitso la mofuputsi) ("mofuputsi").

'Na ea nkang karolo mona, ke tiisa le ho netefatsa hore-

1. Mofuputsi o hlalositse sebopeho, mokhoa le melemo e ka hlahang le ho bontša tšitiso e ka bang teng ho nkeng karolo ea boithuto bona.
2. Ke balile (kapa ke hlalositse) 'me ka utloisisa boithuto joalo kaha ke hlalositse leqepheng la litaba le qhoaelletsoeng.
3. Ke bile le monyetla o lekaneng oa ho botsa lipotso 'me ke itukiselitse ho nka karolo ea boithuto bona.
4. Kea utloisisa hore ho nka karolo boithutong bona ke boithapo bo felletseng 'me ke lokolohile ho ikhula nako e fe kapa e fe ntle le kotlo (ha ho khonahala).
5. Ke ithaopela ho fa University of Free State le mofuputsi litaba tsa ka le tumello ho University of Free State le mofuputsi ea bokellang, ea lokollang le ho sebetsana le litaba tsaka e le ho etsa boithuto le liketsahalo tse amanang le seo.
6. Ke lumela le ho tiisa hore ke utloisisa lebaka leo UFS le mofuputsi a ka bokellang, a boloka, a sebelisa, a hlakola, a senya, a ipatlela kante, a fetisa kapa ho sebetsana (to process), joalo kaha moelelo le mabaka a ka batla 'me a nahanisisa ho ea ka POPIA, litaba tsa ka joalo kaha li beiloe.
7. Kea elelloa hore tse fumanehileng boithutong li tla sebetsoa ka ho pata mabitso ka hara tlaleho ea phuputso, koranta ea boithuto e phatlalalitsoeng (journal publication) le lietsahala tsa seboka le hore litaba tseo tsaka li ka sesefatsoa(agggregated) 'me tsa fumanoa ka nako eo.
8. Ke boetse ke fa UFS tumello ea ho arolelana ntle le tsebiso ea letho, litaba tse bokellelitsoeng le bafuputsi ba bang UFS kapa likolong tse ling tse phahameng tsa thuto. Tumello ena e itšetlehile holima tsamaiso ea boitsoaro tšebetsong ba liketsahalo tsa liphuputso, ho boloka/ho pata mabitso a monga litaba, polokeho ea litaba, le tse ling tsa lintlha tse boletsoeng.

'Na, ea nkang karolo, ke lumela khatisona ea lipotso tse hlophisitsoeng.

Mabitso ka botlalo a ea nkang karolo.....

Motekeno oa ea nkang karolo..... Letsatsi.....

Mabitso ka botlalo a mofuputsi.....

Motekeno oa mofuputsi..... Letsatsi.....

Attachment 28: POPIA compliant consent form – Meteorology and Climate Department



RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM

DATE: The venue and time will be determined at your convenience

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

WHO IS DOING THE RESEARCH?

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this information leaflet and consent form, which outlines details concerning my PhD study, I am requesting permission for your participation in my study through a semi-structured interview.

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

RESEARCHER'S NAME AND CONTACT NUMBER(S):

Researcher: Redemption Chatanga Student number: 2017493467 Contact number: +266 62509044 / +266 50644457

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain the director Meteorology and Climate Department's perspective regarding community participation in climate change policy formulation and participation. The director in the Department of Meteorology and Climate is selected to participate in this study because the Department serves as the secretariat of the National Climate Change Policy (NCCP), ensuring the implementation of the NCCP, and enhances transparency by reporting to the UNFCCC under the Paris Agreement. The Department, which the director heads, has historical insight and understanding regarding past and current stakeholder engagement as well as community participation in climate change policy formulation and implementation. In light of this, the researcher requests your participation in a semi-structured interview.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

Your perspective will be obtained during the semi-structured interview. The semi-structured interview ranges between 90 to 120 minutes. Responses during this semi-structured interview will be recorded (with permission) for data analysis purposes.

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Participation is voluntary, and you are under no obligation to consent to participation. There is no penalty or loss of benefit for non-participation. You are free to withdraw at any time and without giving a reason during the interview. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. However, once the interview is concluded and data analysis commenced, it will not be possible to withdraw.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The collected data will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

WHAT ARE THE POTENTIAL RISKS FOR TAKING PART IN THIS STUDY?

There are no known potential risks for participating in this study. However, participation in this study may result in loss of work time. In this regard, the semi-structured interview will be conducted at a time and date that is convenient for you.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during the semi-structured interview, may be used for other academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

Yours sincerely



Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Thank you for taking the time to read this information sheet and for participating in this study.

CONSENT TO PARTICIPATE IN THIS STUDY

I, the undersigned, _____ (participant's full names to be included), (the "**Participant**") confirm that I voluntarily agree to participate in the research study referred to as the

_____ (the "**Study**") in relation to

and which Study is being conducted by _____
(insert the name of the researcher), (the "**Researcher**").

I, the undersigned Participant, further confirm that—

1. the Researcher has explained the nature, procedure, potential benefits and anticipated inconvenience of my participation in the Study;
2. I have read (or had explained to me) and understood the Study as explained in the attached information sheet;
3. I have had sufficient opportunity to ask questions and am prepared to participate in the Study;
4. I understand that my participation in the Study is entirely voluntary and that I am free to withdraw at any time without penalty (if applicable);
5. I voluntarily provide the UFS and the Researcher with my personal information and consent to the UFS and the Researcher collecting, disclosing and processing my personal information in order to conduct the Study and any related activities in relation thereto;
6. I hereby acknowledge and confirm that I understand the purpose for which the UFS and the Researcher may collect, store, use, delete, destroy, outsource, transfer or otherwise process, as the context and circumstances may require and as contemplated in terms of POPIA, my personal information as set out herein;
7. I am aware that the findings of the Study will be anonymously processed into a research report, journal publications and/or conference proceedings and that my personal information will be aggregated and identified at such stage;
8. I also give the UFS permission to share, without notification, the collected data with other researchers at the UFS or other Higher Education Institutions. This permission is dependent on the same principles of ethical research practices, anonymity/confidentiality, safekeeping of information, and other issues listed above applying.

I, the Participant, agree to the recording of the semi-structured interview.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

Full Name(s) of Researcher(s): _____

Signature of Researcher: _____ Date: _____

Attachment 29: POPIA compliant consent form – Environment Department



RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM

DATE: The venue and time will be determined at your convenience

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

WHO IS DOING THE RESEARCH?

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this information leaflet and consent form, which outlines details concerning my PhD study, I am requesting permission for your participation in my study through a semi-structured interview.

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

RESEARCHER'S NAME AND CONTACT NUMBER(S):

Researcher: Redemption Chatanga Student number: 2017493467 Contact number: +266 62509044 / +266 50644457

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain a perspective from the director heading the Department of Environment regarding community participation in climate change policy formulation and participation. The Department of Environment is the only department under the Ministry of Environment, Tourism, and Culture mandated to ensure that the Kingdom of Lesotho adopts policies designed to protect and enhance the natural and cultural environment. Because of the Department's role in environmental policy, the researcher requests your participation in a semi-structured interview.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

Your perspective will be obtained during the semi-structured interview. The semi-structured interview ranges between 90 to 120 minutes. Responses during this semi-structured interview will be recorded (with permission) for data analysis purposes.

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Participation is voluntary, and you are under no obligation to consent to participation. There is no penalty or loss of benefit for non-participation. You are free to withdraw at any time and without giving a reason during the interview. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. However, once the interview is concluded and data analysis commenced, it will not be possible to withdraw.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The collected data will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

WHAT ARE THE POTENTIAL RISKS FOR TAKING PART IN THIS STUDY?

There are no known potential risks for participating in this study. However, participation in this study may result in loss of work time. In this regard, the semi-structured interview will be conducted at a time and date that is convenient for you.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during the semi-structured interview, may be used for other academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

Yours sincerely



Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Thank you for taking the time to read this information sheet and for participating in this study.



CONSENT TO PARTICIPATE IN THIS STUDY

I, the undersigned, _____ (participant's full names to be included), (the "**Participant**") confirm that I voluntarily agree to participate in the research study referred to as the

_____ (the "**Study**") in relation to

and which Study is being conducted by _____
(insert the name of the researcher), (the "**Researcher**").

I, the undersigned Participant, further confirm that–

1. the Researcher has explained the nature, procedure, potential benefits and anticipated inconvenience of my participation in the Study;
2. I have read (or had explained to me) and understood the Study as explained in the attached information sheet;
3. I have had sufficient opportunity to ask questions and am prepared to participate in the Study;
4. I understand that my participation in the Study is entirely voluntary and that I am free to withdraw at any time without penalty (if applicable);
5. I voluntarily provide the UFS and the Researcher with my personal information and consent to the UFS and the Researcher collecting, disclosing and processing my personal information in order to conduct the Study and any related activities in relation thereto;
6. I hereby acknowledge and confirm that I understand the purpose for which the UFS and the Researcher may collect, store, use, delete, destroy, outsource, transfer or otherwise process, as the context and circumstances may require and as contemplated in terms of POPIA, my personal information as set out herein;
7. I am aware that the findings of the Study will be anonymously processed into a research report, journal publications and/or conference proceedings and that my personal information will be aggregated and identified at such stage;
8. I also give the UFS permission to share, without notification, the collected data with other researchers at the UFS or other Higher Education Institutions. This permission is dependent on the same principles of ethical research practices, anonymity/confidentiality, safekeeping of information, and other issues listed above applying.

I, the Participant, agree to the recording of the semi-structured interview.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

Full Name(s) of Researcher(s): _____

Signature of Researcher: _____ Date: _____

RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM

DATE: The venue and time will be determined at your convenience

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

WHO IS DOING THE RESEARCH?

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this information leaflet and consent form, which outlines details concerning my PhD study, I am requesting permission for your participation in my study through a semi-structured interview.

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

RESEARCHER'S NAME AND CONTACT NUMBER(S):

Researcher: Redemption Chatanga Student number: 2017493467 Contact number: +266 62509044 / +266 50644457

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain the Maseru District Administrator's (DA) perspective regarding community participation in climate change policy formulation and implementation. The Maseru DA is selected because the office heads the Maseru District. The office of the DA oversees the local District committees on behalf of the central government. Therefore, the researcher requests your participation in a semi-structured interview to provide a district perspective regarding community participation in climate change policy formulation and implementation.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

Your perspective will be obtained during the semi-structured interview. The semi-structured interview ranges between 90 to 120 minutes. Responses during this semi-structured interview will be recorded (with permission) for data analysis purposes.

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Participation is voluntary, and you are under no obligation to consent to participation. There is no penalty or loss of benefit for non-participation. You are free to withdraw at any time and without giving a reason during the interview. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. However, once the interview is concluded and data analysis commenced, it will not be possible to withdraw.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The collected data will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

WHAT ARE THE POTENTIAL RISKS FOR TAKING PART IN THIS STUDY?

There are no known potential risks for participating in this study. However, participation in this study may result in loss of work time. In this regard, the semi-structured interview will be conducted at a time and date that is convenient for you.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during the semi-structured interview, may be used for other academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

Yours sincerely



Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Thank you for taking the time to read this information sheet and for participating in this study.



CONSENT TO PARTICIPATE IN THIS STUDY

I, the undersigned, _____ (participant's full names to be included), (the "**Participant**") confirm that I voluntarily agree to participate in the research study referred to as the

_____ (the "**Study**") in relation to

and which Study is being conducted by _____
(insert the name of the researcher), (the "**Researcher**").

I, the undersigned Participant, further confirm that–

1. the Researcher has explained the nature, procedure, potential benefits and anticipated inconvenience of my participation in the Study;
2. I have read (or had explained to me) and understood the Study as explained in the attached information sheet;
3. I have had sufficient opportunity to ask questions and am prepared to participate in the Study;
4. I understand that my participation in the Study is entirely voluntary and that I am free to withdraw at any time without penalty (if applicable);
5. I voluntarily provide the UFS and the Researcher with my personal information and consent to the UFS and the Researcher collecting, disclosing and processing my personal information in order to conduct the Study and any related activities in relation thereto;
6. I hereby acknowledge and confirm that I understand the purpose for which the UFS and the Researcher may collect, store, use, delete, destroy, outsource, transfer or otherwise process, as the context and circumstances may require and as contemplated in terms of POPIA, my personal information as set out herein;
7. I am aware that the findings of the Study will be anonymously processed into a research report, journal publications and/or conference proceedings and that my personal information will be aggregated and identified at such stage;
8. I also give the UFS permission to share, without notification, the collected data with other researchers at the UFS or other Higher Education Institutions. This permission is dependent on the same principles of ethical research practices, anonymity/confidentiality, safekeeping of information, and other issues listed above applying.

I, the Participant, agree to the recording of the semi-structured interview.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

Full Name(s) of Researcher(s): _____

Signature of Researcher: _____ Date: _____

Attachment 31: POPIA compliant consent form – Decentralisation Department



RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM

DATE: The venue and time will be determined at your convenience

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

WHO IS DOING THE RESEARCH?

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this information leaflet and consent form, which outlines details concerning my PhD study, I am requesting permission for your participation in my study through a semi-structured interview.

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

RESEARCHER'S NAME AND CONTACT NUMBER(S):

Researcher: Redemption Chatanga Student number: 2017493467 Contact number: +266 62509044 / +266 50644457

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain the director Decentralisation's perspective regarding community participation in climate change policy formulation and implementation. The Decentralisation Department is selected to participate in this study because it is one of the central government departments in the Ministry of Local Government and Chieftainship (MLGC) mandated to enable local governments to be responsible for service delivery and development within their mandate. The director's perspective, whose role is to ensure that the Department's mandate is fulfilled is critical. The researcher requests your participation in a semi-structured interview.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

Your perspective will be obtained during the semi-structured interview. The semi-structured interview ranges between 90 to 120 minutes. Responses during this semi-structured interview will be recorded (with permission) for data analysis purposes.

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Participation is voluntary, and you are under no obligation to consent to participation. There is no penalty or loss of benefit for non-participation. You are free to withdraw at any time and without giving a reason during the interview. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. However, once the interview is concluded and data analysis commenced, it will not be possible to withdraw.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The collected data will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

WHAT ARE THE POTENTIAL RISKS FOR TAKING PART IN THIS STUDY?

There are no known potential risks for participating in this study. However, participation in this study may result in loss of work time. In this regard, the semi-structured interview will be conducted at a time and date that is convenient for you.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during the semi-structured interview, may be used for other academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

Yours sincerely



Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Thank you for taking the time to read this information sheet and for participating in this study.

CONSENT TO PARTICIPATE IN THIS STUDY

I, the undersigned, _____ (*participant's full names to be included*), (the "**Participant**") confirm that I voluntarily agree to participate in the research study referred to as the

_____ (the "**Study**") in relation to

and which Study is being conducted by _____
(*insert the name of the researcher*), (the "**Researcher**").

I, the undersigned Participant, further confirm that–

1. the Researcher has explained the nature, procedure, potential benefits and anticipated inconvenience of my participation in the Study;
2. I have read (or had explained to me) and understood the Study as explained in the attached information sheet;
3. I have had sufficient opportunity to ask questions and am prepared to participate in the Study;
4. I understand that my participation in the Study is entirely voluntary and that I am free to withdraw at any time without penalty (if applicable);
5. I voluntarily provide the UFS and the Researcher with my personal information and consent to the UFS and the Researcher collecting, disclosing and processing my personal information in order to conduct the Study and any related activities in relation thereto;
6. I hereby acknowledge and confirm that I understand the purpose for which the UFS and the Researcher may collect, store, use, delete, destroy, outsource, transfer or otherwise process, as the context and circumstances may require and as contemplated in terms of POPIA, my personal information as set out herein;
7. I am aware that the findings of the Study will be anonymously processed into a research report, journal publications and/or conference proceedings and that my personal information will be aggregated and identified at such stage;
8. I also give the UFS permission to share, without notification, the collected data with other researchers at the UFS or other Higher Education Institutions. This permission is dependent on the same principles of ethical research practices, anonymity/confidentiality, safekeeping of information, and other issues listed above applying.

I, the Participant, agree to the recording of the semi-structured interview.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

Full Name(s) of Researcher(s): _____

Signature of Researcher: _____ Date: _____

Attachment 32: POPIA compliant consent form – Chieftainship Department

RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM

DATE: The venue and time will be determined at your convenience

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

WHO IS DOING THE RESEARCH?

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this information leaflet and consent form, which outlines details concerning my PhD study, I am requesting permission for your participation in my study through a semi-structured interview.

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

RESEARCHER'S NAME AND CONTACT NUMBER(S):

Researcher: Redemption Chatanga Student number: 2017493467 Contact number: +266 62509044 / +266 50644457

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain the director Chieftainship's perspective regarding community participation in climate change policy formulation and implementation. The director Chieftainship Department is selected to participate in this study because the Department is part of the central government in the Ministry of Local Government and Chieftainship (MLGC). The Department ensures that chiefs and local authorities work in harmony and facilitates chiefs' participation in the local government decentralisation process. It is deemed critical for this study to get a perspective from the director Chieftainship because of the director's coordinating and leading role in executing the Department's mandate. The researcher, thus, requests your participation in a semi-structured interview.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

Your perspective will be obtained during the semi-structured interview. The semi-structured interview ranges between 90 to 120 minutes. Responses during this semi-structured interview will be recorded (with permission) for data analysis purposes.

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Participation is voluntary, and you are under no obligation to consent to participation. There is no penalty or loss of benefit for non-participation. You are free to withdraw at any time and without giving a reason during the interview. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. However, once the interview is concluded and data analysis commenced, it will not be possible to withdraw.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The collected data will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

WHAT ARE THE POTENTIAL RISKS FOR TAKING PART IN THIS STUDY?

There are no known potential risks for participating in this study. However, participation in this study may result in loss of work time. In this regard, the semi-structured interview will be conducted at a time and date that is convenient for you.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during the semi-structured interview, may be used for other academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

Yours sincerely



Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Thank you for taking the time to read this information sheet and for participating in this study.

CONSENT TO PARTICIPATE IN THIS STUDY

I, the undersigned, _____ (participant's full names to be included), (the "**Participant**") confirm that I voluntarily agree to participate in the research study referred to as the

_____ (the "**Study**") in relation to

and which Study is being conducted by _____
(insert the name of the researcher), (the "**Researcher**").

I, the undersigned Participant, further confirm that–

1. the Researcher has explained the nature, procedure, potential benefits and anticipated inconvenience of my participation in the Study;
2. I have read (or had explained to me) and understood the Study as explained in the attached information sheet;
3. I have had sufficient opportunity to ask questions and am prepared to participate in the Study;
4. I understand that my participation in the Study is entirely voluntary and that I am free to withdraw at any time without penalty (if applicable);
5. I voluntarily provide the UFS and the Researcher with my personal information and consent to the UFS and the Researcher collecting, disclosing and processing my personal information in order to conduct the Study and any related activities in relation thereto;
6. I hereby acknowledge and confirm that I understand the purpose for which the UFS and the Researcher may collect, store, use, delete, destroy, outsource, transfer or otherwise process, as the context and circumstances may require and as contemplated in terms of POPIA, my personal information as set out herein;
7. I am aware that the findings of the Study will be anonymously processed into a research report, journal publications and/or conference proceedings and that my personal information will be aggregated and identified at such stage;
8. I also give the UFS permission to share, without notification, the collected data with other researchers at the UFS or other Higher Education Institutions. This permission is dependent on the same principles of ethical research practices, anonymity/confidentiality, safekeeping of information, and other issues listed above applying.

I, the Participant, agree to the recording of the semi-structured interview.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

Full Name(s) of Researcher(s): _____

Signature of Researcher: _____ Date: _____

Attachment 33: POPIA compliant consent form – National Climate Change Committee



RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM

DATE: The venue and time will be determined at your convenience

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

WHO IS DOING THE RESEARCH?

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this information leaflet and consent form, which outlines details concerning my PhD study, I am requesting permission for your participation in my study through a semi-structured interview.

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

RESEARCHER'S NAME AND CONTACT NUMBER(S):

Researcher: Redemption Chatanga Student number: 2017493467 Contact number: +266 62509044 / +266 50644457

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain a perspective from a member of the National Climate Change Committee (NCCC) on community participation in climate change policy formulation and implementation. A member of the NCCC is selected to participate in this study because the NCCC offers expert advice regarding climate change issues. This Committee plays a key role in enhancing stakeholder participation, coordination, and dialogue regarding climate change policy formulation and implementation. Thus, the NCCC's perspective regarding community participation as stakeholders in climate governance is deemed critical. Thus, the researcher requests your participation in a semi-structured interview for this study.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

Your perspective will be obtained during the semi-structured interview. The semi-structured interview ranges between 90 to 120 minutes. Responses during this semi-structured interview will be recorded (with permission) for data analysis purposes.

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Participation is voluntary, and you are under no obligation to consent to participation. There is no penalty or loss of benefit for non-participation. You are free to withdraw at any time and without giving a reason during the interview. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. However, once the interview is concluded and data analysis commenced, it will not be possible to withdraw.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The collected data will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

WHAT ARE THE POTENTIAL RISKS FOR TAKING PART IN THIS STUDY?

There are no known potential risks for participating in this study. However, participation in this study may result in loss of work time. In this regard, the semi-structured interview will be conducted at a time and date that is convenient for you.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during the semi-structured interview, may be used for other academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer.

Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

Yours sincerely



Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Thank you for taking the time to read this information sheet and for participating in this study.



CONSENT TO PARTICIPATE IN THIS STUDY

I, the undersigned, _____ (*participant's full names to be included*), (the "**Participant**") confirm that I voluntarily agree to participate in the research study referred to as the

_____ (the "**Study**") in relation to

and which Study is being conducted by _____
(*insert the name of the researcher*), (the "**Researcher**").

I, the undersigned Participant, further confirm that–

1. the Researcher has explained the nature, procedure, potential benefits and anticipated inconvenience of my participation in the Study;
2. I have read (or had explained to me) and understood the Study as explained in the attached information sheet;
3. I have had sufficient opportunity to ask questions and am prepared to participate in the Study;
4. I understand that my participation in the Study is entirely voluntary and that I am free to withdraw at any time without penalty (if applicable);
5. I voluntarily provide the UFS and the Researcher with my personal information and consent to the UFS and the Researcher collecting, disclosing and processing my personal information in order to conduct the Study and any related activities in relation thereto;
6. I hereby acknowledge and confirm that I understand the purpose for which the UFS and the Researcher may collect, store, use, delete, destroy, outsource, transfer or otherwise process, as the context and circumstances may require and as contemplated in terms of POPIA, my personal information as set out herein;
7. I am aware that the findings of the Study will be anonymously processed into a research report, journal publications and/or conference proceedings and that my personal information will be aggregated and identified at such stage;
8. I also give the UFS permission to share, without notification, the collected data with other researchers at the UFS or other Higher Education Institutions. This permission is dependent on the same principles of ethical research practices, anonymity/confidentiality, safekeeping of information, and other issues listed above applying.

I, the Participant, agree to the recording of the semi-structured interview.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

Full Name(s) of Researcher(s): _____

Signature of Researcher: _____ Date: _____

Attachment 34: POPIA compliant consent form – Parliament Natural Resources, Tourism, Land and Portfolio Committee



RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM

DATE: The venue and time will be determined at your convenience

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

WHO IS DOING THE RESEARCH?

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this information leaflet and consent form, which outlines details concerning my PhD study, I am requesting permission for your participation in my study through a semi-structured interview.

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

RESEARCHER'S NAME AND CONTACT NUMBER(S):

Researcher: Redemption Chatanga Student number: 2017493467 Contact number: +266 62509044 / +266 50644457

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain a perspective from a member of the Parliament and Natural Resources, Tourism and Land Portfolio Committee on community participation in climate change policy formulation and implementation. A member of the Kingdom of Lesotho (KOL). Parliament and Natural Resources, Tourism and Land Portfolio Committee is selected to participate in a semi-structured interview because the Committee's responsibilities include oversight of the National Climate Change Policy's (NCCP) implementation and reviewing the legislation supporting the implementation of the NCCP. Given these responsibilities, the researcher requests your participation in a semi-structured interview.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

Your perspective will be obtained during the semi-structured interview. The semi-structured interview ranges between 90 to 120 minutes. Responses during this semi-structured interview will be recorded (with permission) for data analysis purposes.

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Participation is voluntary, and you are under no obligation to consent to participation. There is no penalty or loss of benefit for non-participation. You are free to withdraw at any time and without giving a reason during the interview. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. However, once the interview is concluded and data analysis commenced, it will not be possible to withdraw.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The collected data will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

WHAT ARE THE POTENTIAL RISKS FOR TAKING PART IN THIS STUDY?

There are no known potential risks for participating in this study. However, participation in this study may result in loss of work time. In this regard, the semi-structured interview will be conducted at a time and date that is convenient for you.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during the semi-structured interview, may be used for other academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer.

Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

Yours sincerely



Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Thank you for taking the time to read this information sheet and for participating in this study.



CONSENT TO PARTICIPATE IN THIS STUDY

I, the undersigned, _____ (*participant's full names to be included*), (the "**Participant**") confirm that I voluntarily agree to participate in the research study referred to as the

_____ (the "**Study**") in relation to

and which Study is being conducted by _____
(*insert the name of the researcher*), (the "**Researcher**").

I, the undersigned Participant, further confirm that–

1. the Researcher has explained the nature, procedure, potential benefits and anticipated inconvenience of my participation in the Study;
2. I have read (or had explained to me) and understood the Study as explained in the attached information sheet;
3. I have had sufficient opportunity to ask questions and am prepared to participate in the Study;
4. I understand that my participation in the Study is entirely voluntary and that I am free to withdraw at any time without penalty (if applicable);
5. I voluntarily provide the UFS and the Researcher with my personal information and consent to the UFS and the Researcher collecting, disclosing and processing my personal information in order to conduct the Study and any related activities in relation thereto;
6. I hereby acknowledge and confirm that I understand the purpose for which the UFS and the Researcher may collect, store, use, delete, destroy, outsource, transfer or otherwise process, as the context and circumstances may require and as contemplated in terms of POPIA, my personal information as set out herein;
7. I am aware that the findings of the Study will be anonymously processed into a research report, journal publications and/or conference proceedings and that my personal information will be aggregated and identified at such stage;
8. I also give the UFS permission to share, without notification, the collected data with other researchers at the UFS or other Higher Education Institutions. This permission is dependent on the same principles of ethical research practices, anonymity/confidentiality, safekeeping of information, and other issues listed above applying.

I, the Participant, agree to the recording of the semi-structured interview.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

Full Name(s) of Researcher(s): _____

Signature of Researcher: _____ Date: _____

Attachment 35: POPIA compliant consent form – National University of Lesotho, Geography and Environmental Science department



RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM

DATE: The venue and time will be determined at your convenience

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

WHO IS DOING THE RESEARCH?

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this information leaflet and consent form, which outlines details concerning my PhD study, I am requesting permission for your participation in my study through a semi-structured interview.

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

RESEARCHER'S NAME AND CONTACT NUMBER(S):

Researcher: Redemption Chatanga Student number: 2017493467 Contact number: +266 62509044 / +266 50644457

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain a perspective on community participation during climate change policy formulation and implementation from an individual academic in the Department of Geography and Environmental Science at the National University of Lesotho. Your experience, skills, and expertise in climate change form the basis for your participation in this study. The researcher requests your participation in a semi-structured interview.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

Your perspective will be obtained during the semi-structured interview. The semi-structured interview ranges between 90 to 120 minutes. Responses during this semi-structured interview will be recorded (with permission) for data analysis purposes.

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Participation is voluntary, and you are under no obligation to consent to participation. There is no penalty or loss of benefit for non-participation. You are free to withdraw at any time and without giving a reason during the interview. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. However, once the interview is concluded and data analysis commenced, it will not be possible to withdraw.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The collected data will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

WHAT ARE THE POTENTIAL RISKS FOR TAKING PART IN THIS STUDY?

There are no known potential risks for participating in this study. However, participation in this study may result in loss of work time. In this regard, the semi-structured interview will be conducted at a time and date that is convenient for you.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during the semi-structured interview, may be used for other academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

Yours sincerely



Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Thank you for taking the time to read this information sheet and for participating in this study.



CONSENT TO PARTICIPATE IN THIS STUDY

I, the undersigned, _____ (*participant's full names to be included*), (the "**Participant**") confirm that I voluntarily agree to participate in the research study referred to as the

_____ (the "**Study**") in relation to

and which Study is being conducted by _____
(*insert the name of the researcher*), (the "**Researcher**").

I, the undersigned Participant, further confirm that–

1. the Researcher has explained the nature, procedure, potential benefits and anticipated inconvenience of my participation in the Study;
2. I have read (or had explained to me) and understood the Study as explained in the attached information sheet;
3. I have had sufficient opportunity to ask questions and am prepared to participate in the Study;
4. I understand that my participation in the Study is entirely voluntary and that I am free to withdraw at any time without penalty (if applicable);
5. I voluntarily provide the UFS and the Researcher with my personal information and consent to the UFS and the Researcher collecting, disclosing and processing my personal information in order to conduct the Study and any related activities in relation thereto;
6. I hereby acknowledge and confirm that I understand the purpose for which the UFS and the Researcher may collect, store, use, delete, destroy, outsource, transfer or otherwise process, as the context and circumstances may require and as contemplated in terms of POPIA, my personal information as set out herein;
7. I am aware that the findings of the Study will be anonymously processed into a research report, journal publications and/or conference proceedings and that my personal information will be aggregated and identified at such stage;
8. I also give the UFS permission to share, without notification, the collected data with other researchers at the UFS or other Higher Education Institutions. This permission is dependent on the same principles of ethical research practices, anonymity/confidentiality, safekeeping of information, and other issues listed above applying.

I, the Participant, agree to the recording of the semi-structured interview.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

Full Name(s) of Researcher(s): _____

Signature of Researcher: _____ Date: _____

Attachment 36: POPIA compliant consent form – National University of Lesotho Political and Administrative Studies Department



RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM

DATE: The venue and time will be determined at your convenience

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

WHO IS DOING THE RESEARCH?

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this information leaflet and consent form, which outlines details concerning my PhD study, I am requesting permission for your participation in my study through a semi-structured interview.

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

RESEARCHER'S NAME AND CONTACT NUMBER(S):

Researcher: Redemption Chatanga Student number: 2017493467 Contact number: +266 62509044 / +266 50644457

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain a perspective on community participation during climate change policy formulation and implementation from an individual academic member working in the Department of Political and Administrative Studies at the National University of Lesotho. Your experience, skills, and expertise in public policy and public administration form the basis of your participation in this study. Thus, the researcher requests your participation in a semi-structured interview.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

Your perspective will be obtained during the semi-structured interview. The semi-structured interview ranges between 90 to 120 minutes. Responses during this semi-structured interview will be recorded (with permission) for data analysis purposes.

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Participation is voluntary, and you are under no obligation to consent to participation. There is no penalty or loss of benefit for non-participation. You are free to withdraw at any time and without giving a reason during the interview. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. However, once the interview is concluded and data analysis commenced, it will not be possible to withdraw.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The collected data will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

WHAT ARE THE POTENTIAL RISKS FOR TAKING PART IN THIS STUDY?

There are no known potential risks for participating in this study. However, participation in this study may result in loss of work time. In this regard, the semi-structured interview will be conducted at a time and date that is convenient for you.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during the semi-structured interview, may be used for other academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

Yours sincerely



Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Thank you for taking the time to read this information sheet and for participating in this study.

CONSENT TO PARTICIPATE IN THIS STUDY

I, the undersigned, _____ (participant's full names to be included), (the "**Participant**") confirm that I voluntarily agree to participate in the research study referred to as the

_____ (the "**Study**") in relation to

and which Study is being conducted by _____
(insert the name of the researcher), (the "**Researcher**").

I, the undersigned Participant, further confirm that–

1. the Researcher has explained the nature, procedure, potential benefits and anticipated inconvenience of my participation in the Study;
2. I have read (or had explained to me) and understood the Study as explained in the attached information sheet;
3. I have had sufficient opportunity to ask questions and am prepared to participate in the Study;
4. I understand that my participation in the Study is entirely voluntary and that I am free to withdraw at any time without penalty (if applicable);
5. I voluntarily provide the UFS and the Researcher with my personal information and consent to the UFS and the Researcher collecting, disclosing and processing my personal information in order to conduct the Study and any related activities in relation thereto;
6. I hereby acknowledge and confirm that I understand the purpose for which the UFS and the Researcher may collect, store, use, delete, destroy, outsource, transfer or otherwise process, as the context and circumstances may require and as contemplated in terms of POPIA, my personal information as set out herein;
7. I am aware that the findings of the Study will be anonymously processed into a research report, journal publications and/or conference proceedings and that my personal information will be aggregated and identified at such stage;
8. I also give the UFS permission to share, without notification, the collected data with other researchers at the UFS or other Higher Education Institutions. This permission is dependent on the same principles of ethical research practices, anonymity/confidentiality, safekeeping of information, and other issues listed above applying.

I, the Participant, agree to the recording of the semi-structured interview.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

Full Name(s) of Researcher(s): _____

Signature of Researcher: _____ Date: _____

Attachment 37: POPIA compliant consent form – United Nations Development Programme- Unit Head



RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM

DATE: The venue and time will be determined at your convenience

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

WHO IS DOING THE RESEARCH?

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this information leaflet and consent form, which outlines details concerning my PhD study, I am requesting permission for your participation in my study through a semi-structured interview.

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

RESEARCHER'S NAME AND CONTACT NUMBER(S):

Researcher: Redemption Chatanga Student number: 2017493467 Contact number: +266 62509044 / +266 50644457

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain the Climate Change Unit head's perspective on community participation in climate change policy formulation and participation. The UNDP is chosen because it is an important international body that is concerned with climate change. The UNDP assists many countries, such as the Kingdom of Lesotho (KOL), to strengthen new frameworks for climate change. Of relevance to this study is the Climate Change Unit, which falls under a bigger unit called the UNDP Energy and Environment Unit, which is mandated with helping to implement initiated climate change programs by the KOL government ministries and departments. The head unit oversees the implementation of climate change programs at the community level. Thus, the researcher requests your participation in a semi-structured interview.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

Your perspective will be obtained during the semi-structured interview. The semi-structured interview ranges between 90 to 120 minutes. Responses during this semi-structured interview will be recorded (with permission) for data analysis purposes.

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Participation is voluntary, and you are under no obligation to consent to participation. There is no penalty or loss of benefit for non-participation. You are free to withdraw at any time and without giving a reason during the interview. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. However, once the interview is concluded and data analysis commenced, it will not be possible to withdraw.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The collected data will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

WHAT ARE THE POTENTIAL RISKS FOR TAKING PART IN THIS STUDY?

There are no known potential risks for participating in this study. However, participation in this study may result in loss of work time. In this regard, the semi-structured interview will be conducted at a time and date that is convenient for you.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during the semi-structured interview, may be used for other academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

Yours sincerely



Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Thank you for taking the time to read this information sheet and for participating in this study.

CONSENT TO PARTICIPATE IN THIS STUDY

I, the undersigned, _____ (participant's full names to be included), (the "**Participant**") confirm that I voluntarily agree to participate in the research study referred to as the

_____ (the "**Study**") in relation to

and which Study is being conducted by _____
(insert the name of the researcher), (the "**Researcher**").

I, the undersigned Participant, further confirm that–

1. the Researcher has explained the nature, procedure, potential benefits and anticipated inconvenience of my participation in the Study;
2. I have read (or had explained to me) and understood the Study as explained in the attached information sheet;
3. I have had sufficient opportunity to ask questions and am prepared to participate in the Study;
4. I understand that my participation in the Study is entirely voluntary and that I am free to withdraw at any time without penalty (if applicable);
5. I voluntarily provide the UFS and the Researcher with my personal information and consent to the UFS and the Researcher collecting, disclosing and processing my personal information in order to conduct the Study and any related activities in relation thereto;
6. I hereby acknowledge and confirm that I understand the purpose for which the UFS and the Researcher may collect, store, use, delete, destroy, outsource, transfer or otherwise process, as the context and circumstances may require and as contemplated in terms of POPIA, my personal information as set out herein;
7. I am aware that the findings of the Study will be anonymously processed into a research report, journal publications and/or conference proceedings and that my personal information will be aggregated and identified at such stage;
8. I also give the UFS permission to share, without notification, the collected data with other researchers at the UFS or other Higher Education Institutions. This permission is dependent on the same principles of ethical research practices, anonymity/confidentiality, safekeeping of information, and other issues listed above applying.

I, the Participant, agree to the recording of the semi-structured interview.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

Full Name(s) of Researcher(s): _____

Signature of Researcher: _____ Date: _____

Attachment 38: POPIA compliant consent form – United Nations Development Programme- Project Manager



RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM

DATE: The venue and time will be determined at your convenience

TITLE OF THE RESEARCH PROJECT: Community participation in climate change policy formulation and implementation in Lesotho

WHO IS DOING THE RESEARCH?

My name is Redemption Chatanga (student number, 2017493467), a PhD student in the Department of Public Administration and Management, Faculty of Economic and Management Sciences at the University of the Free State. With this information leaflet and consent form, which outlines details concerning my PhD study, I am requesting permission for your participation in my study through a semi-structured interview.

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Study Leader: Dr. Maréve Biljohn

Contact number: +27(0)514017185

RESEARCHER'S NAME AND CONTACT NUMBER(S):

Researcher: Redemption Chatanga Student number: 2017493467 Contact number: +266 62509044 / +266 50644457

AIM OF THE STUDY

This study explores community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the University of the Free State yet. A copy of the approval letter will be provided once issued and before proceeding with data collection.

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study seeks to obtain the Climate Change Unit head's perspective on community participation in climate change policy formulation and participation. The UNDP is chosen because it is an important international body that is concerned with climate change. The UNDP assists many countries, such as the Kingdom of Lesotho (KOL), to strengthen new frameworks for climate change. Of relevance to this study is the Climate Change Unit, which falls under a bigger unit called the UNDP Energy and Environment Unit, which is mandated with helping to implement initiated climate change programs by the KOL government ministries and departments. The environment project manager's (who reports to the Climate Change Unit head) perspective is deemed critical because of the manager's coordinating role in the implementation of UNDP climate change programs at the grassroots. Thus, the researcher requests your participation in a semi-structured interview.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

Your perspective will be obtained during the semi-structured interview. The semi-structured interview ranges between 90 to 120 minutes. Responses during this semi-structured interview will be recorded (with permission) for data analysis purposes.

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Participation is voluntary, and you are under no obligation to consent to participation. There is no penalty or loss of benefit for non-participation. You are free to withdraw at any time and without giving a reason during the interview. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. However, once the interview is concluded and data analysis commenced, it will not be possible to withdraw.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Participation is entirely voluntary, and there are no immediate and direct financial benefits for participating in this study. However, through your participation in this study, you will contribute to the development of a contextual participation strategy to enhance community participation in future climate change policy formulation and implementation processes. This strategy will provide the Lesotho government with a contextual understanding of indigenous knowledge systems, communities' level of knowledge, as well as understanding and awareness for effective participation in future climate change policy formulation and implementation. The collected data will only be used for academic and research purposes. Upon conclusion of the study, the findings will be published on scholarly platforms so that other interested parties may learn from the research.

WHAT ARE THE POTENTIAL RISKS FOR TAKING PART IN THIS STUDY?

There are no known potential risks for participating in this study. However, participation in this study may result in loss of work time. In this regard, the semi-structured interview will be conducted at a time and date that is convenient for you.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Responses captured will be treated as confidential and will only be used for this study. Your answers will be given a fictitious code or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Apart from the research supervisor, your answers may be reviewed by people responsible for ensuring that the research was done properly, a transcriber, external coder, and members of the Research Ethics Committee. Nevertheless, every person involved in this study is required to sign a confidentiality agreement. Otherwise, records that identify you will be available only to people (the researcher, study leader, translator, and research assistants) working on the study unless you permit other people to see the records. Please be informed that the anonymous data collected during the semi-structured interview, may be used for other academic purposes, such as research reports, journal articles, and conference presentations. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

The researcher will store hard copies of your responses for five years in a locked cupboard/filing cabinet at the researcher's home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After 5 years elapsed, hard copy documents will be destroyed, and electronically stored information deleted from the computer.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Participation in the study is entirely voluntary. There are no immediate and direct financial benefits for participating in this study.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS OF THE STUDY?

Upon conclusion of the study, a copy of the findings and recommendations will be provided to the Manonyane Principal Chief's office and the Lesotho Ministry of Energy and Meteorology. Alternatively, you may contact the researcher (Redemption Chatanga) for any aspect of the study or the final research findings at +266 62509044 / +266 50644457 / redemutoozi@gmail.com. Should you have any concerns about how the research has been conducted, you may contact Dr. Maréve Biljohn at +27(0)514017185 / BiljohnMIM@ufs.ac.za.

Yours sincerely



Researcher: Redemption Chatanga

Tel: +266 62509044 / +266 50644457 / Email: redemutoozi@gmail.com

Thank you for taking the time to read this information sheet and for participating in this study.

CONSENT TO PARTICIPATE IN THIS STUDY

I, the undersigned, _____ (participant's full names to be included), (the "**Participant**") confirm that I voluntarily agree to participate in the research study referred to as the

_____ (the "**Study**") in relation to

and which Study is being conducted by _____

(insert the name of the researcher), (the "**Researcher**").

I, the undersigned Participant, further confirm that–

1. the Researcher has explained the nature, procedure, potential benefits and anticipated inconvenience of my participation in the Study;
2. I have read (or had explained to me) and understood the Study as explained in the attached information sheet;
3. I have had sufficient opportunity to ask questions and am prepared to participate in the Study;
4. I understand that my participation in the Study is entirely voluntary and that I am free to withdraw at any time without penalty (if applicable);
5. I voluntarily provide the UFS and the Researcher with my personal information and consent to the UFS and the Researcher collecting, disclosing and processing my personal information in order to conduct the Study and any related activities in relation thereto;
6. I hereby acknowledge and confirm that I understand the purpose for which the UFS and the Researcher may collect, store, use, delete, destroy, outsource, transfer or otherwise process, as the context and circumstances may require and as contemplated in terms of POPIA, my personal information as set out herein;
7. I am aware that the findings of the Study will be anonymously processed into a research report, journal publications and/or conference proceedings and that my personal information will be aggregated and identified at such stage;
8. I also give the UFS permission to share, without notification, the collected data with other researchers at the UFS or other Higher Education Institutions. This permission is dependent on the same principles of ethical research practices, anonymity/confidentiality, safekeeping of information, and other issues listed above applying.

I, the Participant, agree to the recording of the semi-structured interview.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

Full Name(s) of Researcher(s): _____

Signature of Researcher: _____ Date: _____

Attachment 39: Focus group question schedule for the Manonyane councillors

Village name			
Number of participants			
Place			
Date		Time	
Focus group discussion number			

1. Welcome.
2. Researcher introduces herself.
3. The title of the study is introduced: Community participation in climate change policy formulation and implementation in Lesotho.
4. Explanation of the research aim and objectives.
The study aims to explore community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes. The study has the following research objectives:
 - (i) To analyse systems, governance, and participatory theories influencing community participation in climate change policy formulation, implementation, and governance.
 - (ii) To explore how policy nudging could be used to enhance community participation in climate change policy formulation and implementation and governance.
 - (iii) To assess how community awareness and understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation.
 - (iv) To explore how the use of indigenous knowledge systems in climate change policy formulation and implementation facilitates community participation in climate governance.
 - (v) To determine the nature of community participation in climate change policy processes.
 - (vi) To present a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes.
5. The researcher requests permission to record the discussion with a voice recorder.
6. The researcher explains the order of the discussion.
7. Participants are informed that the focus group discussion will range between 90 to 120 minutes.
8. Participants are informed that they will receive the outcomes of this discussion upon the researcher concluding the study, which is expected to be at the beginning of 2022.
9. Participants are informed that their responses will be treated with confidentiality. This means that they may be quoted during the reporting of the findings, but such quotes will not be attributed to them by name.

Instructions:

1. Kindly turn off your cell phone or put it on silent.
2. Please answer the questions honestly and openly (there is no right or wrong answer)

SECTION A: DETERMINING THE NATURE OF COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION

Explanation: Climate change occurs when human activity indirectly or directly alters the composition of the global atmosphere in addition to natural climate variations observed over comparable time periods. Community participation (active involvement) during climate change policy formulation and implementation include amongst others (e.g. information, consultation, deliberation, co-production, participatory techniques, governance, policy nudging, and facilitation). Putting community participation into practice requires new explicit and formal participatory methodologies that seek to include each actor in a multilateral and inter-consensus policy process (agenda setting, policy formulation, policy adoption, policy implementation, and policy evaluation).

Policy agenda setting: refers to defining policy problems.

Policy formulation: refers to crafting alternative courses of action to address the problem.

Policy adoption: refers to choosing the best alternative course of action.

Policy implementation: refers to carry out, fulfil, and complete the achievement of objectives set forth during policy adoption.

Policy evaluation: refers to assessing the importance and impact of a policy for redirection to another new problem or to terminate it to conclude the policy process.

1.	How do your communities participate in the National Climate Change Policy (NCCP) formulation and implementation during the following policy stages?	
	Agenda setting	
	Policy formulation	
	Policy adoption	
	Policy implementation	
	Policy evaluation	
2.	Which of the following participatory techniques are used by your communities to articulate their preferred courses of alternatives regarding climate change policy and its implementation?	
	Beneficiary assesment	
	Briefs	
	Community presentations	
	Consensus building	
	Facilitation	
	Focus group discussions	
	Interviews	
	Media	
	PRA	
	Participatory technology	
	PRA techniques	
	Public meetings	
	Public hearings	
	Surveys	
	Workshops	
	Others	
3.	To ensure communities are part of the climate change policy processes, how do you work with the following actors?	
	Councillors	
	Experts	
	Politicians	
	Public administrators	
	Other	
4.	Elaborate on any challenges (if any) you face when co-ordinating community participation in climate change policy processes?	

SECTION B: HOW COMMUNITY AWARENESS REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community awareness of climate change is defined as the community's understanding of climate change in terms of its definition, causes, impacts, risks, and planned responses (mitigation and adaptation) based on information or experience. Having information and experience will lead to communities being well informed and critically conscious about climate change.

1.	How do communities use the following participatory techniques to enhance their awareness of climate change?		
		Cause and impact diagrams	
		Cultural transects	
		Participatory mapping	
		Vulnerability maps	
		Other	
2.	How do communities get informed of the following climate change causes?		
		Air pollution	
		Deforestation	
		Cimate variability	
		Industrialisation	
		Poor agricultural practices	
		Ozone depletion	
		Temperature changes	
		Urbanisation	
		Weather changes	
		Wild fires	
		Other	
3.	How do communities get informed of the following climate change risks?		
		Extreme weather events	
		Floods	
		Food insecurity	
		Insufficient access to drinking water	
		Land degradation	
		Loss of biodiveristy	
		Loss of rural livelihoods	
		Reduced agricultural production	
		Other	
4.	How do communities get informed of the following climate change impacts for them and the environment?		
		Compromised agricultural production	
		Cyclones	
		Drought	
		Floods	
		Heatwaves	
		Health impacts	
		Significant loss of biodiversity and ecosystems	
		Weather insecurity problems	
		Wildfire	
		Other	

SECTION C: HOW COMMUNITY UNDERSTANDING REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community understanding of climate change is having knowledge about climate change's (i) definition ii) causes, iii) likelihood and severity of expected impacts, iv) policy process, v) risks, vi) planned future adaptation and mitigation responses. The word understanding means (i) having knowledge about a situation or subject, (ii) the ability to comprehend something, (iii) sympathetic awareness or tolerance, (iv) an informal agreement between people, and (v) having reason to believe in something. In some instances, community understanding of climate change is referred to as scientific understanding of climate change.

1.	In your view, what are communities' understanding of the causes of climate change?	
2.	How do communities you work with get informed of climate change decision-making processes?	
3.	How do communities understand climate change risks for themselves and their environment?	
4.	Which of the following participatory techniques do communities participate in to enhance their understanding of climate change?	
	Cause and impact diagram	
	Consensus building	
	Facilitation	
	Participatory technology	
	PRA techniques	
	Public meetings	
	Public hearings	
	Resources mapping	
	Transects	
	Other	

SECTION D: HOW THE USE OF INDIGENOUS KNOWLEDGE SYSTEMS IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION FACILITATE COMMUNITY PARTICIPATION IN CLIMATE GOVERNANCE

Explanation: Social factors comprise indigenous knowledge systems, which include culture, for example, beliefs (physical things are given meanings, religion, rituals, identity, art, stories that create outlooks and behaviour), norms (e.g. agricultural practices), values (e.g. family and wealth), and indigenous knowledge (local knowledge and local experiences). Accordingly, this study is limited to indigenous knowledge systems that focus on climate change. During climate change policy formulation and implementation, the use of indigenous knowledge systems will allow officials to learn from relaxed and unhurried interactions, while establishing rapport with communities as a motivation to change their behaviour towards participation in climate change policy processes.

1.	How do your communities consider the following climate change values (community principles) to adapt to climate change?	
	Cultural values	
	Family	
	Historical information	
	Natural resources (eg. Traditional land, flora, fauna)	
	Wealth	
	Other	
2.	Which of the following participatory techniques are used (if any) by communities to enable consideration of community values into climate change adaptation programmes organised by the government?	
	Impact diagrams	
	Historical calenders	
	Seasonal calenders	
	Other	
3.	In your current climate change adaptation responses, how do communities use the following community norms to adapt to climate change?	
	Cattle grazing	

		Cutting trees for firewood and building houses	
		Collecting grass for thatching houses	
		History about agricultural practices	
		Wildfires	
		Other	
4.	How do communities use the following participatory techniques (if any) to document norms that relate to climate change?		
		Seasonal calendars	
		Timeline	
		Trend analysis	
		Other	
5.	What is your view of community indigenous knowledge (traditional knowledge) in your current climate change adaptation strategies regarding the following:		
		Behaviour of animals	
		Birds attributed to climate change	
		Observing climate variability	
		Studying the environment	
		Studying weather	
		The direction of wind	
		Type of clouds	
		Vegetation	
		Wind direction	
		Other	
6.	How do communities make climate change projections regarding the following:		
		Appropriate crop mix	
		Appropriate farming methods	
		Forecast expected rainfall	
		Other	
7.	How do your communities use the following participatory techniques (if any) to ensure indigenous knowledge is part of climate change adaptation strategies?		
		Focus group discussions	
		Impact diagram	
		Mapping	
		Other	
8.	What are the communities' beliefs regarding the use of the following culture (set customs and beliefs) to adapt to climate change?		
		Art	
		Collective community achievements	
		Identity	
		Physical things meaning	
		Rituals	
		Stories	
		Other	
9.	How do your communities use the following to inform government officials about community indigenous knowledge systems (values, culture, norms, and indigenous knowledge)?		
		Institutions	

		New legislation	
		Regulations	
		Specify other	
10.	How do communities contribute to climate change adaptation programmes facilitated by government officials in the following phases of co-production?		
		Co-planning	
		Co-designing	
		Co-implementing	
		Co-evaluating	

SECTION E: EXPLORING HOW POLICY NUDGING COULD BE USED TO ENHANCE COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION, IMPLEMENTATION, AND GOVERNANCE

Explanation: Nudging occurs when small, transparent gestures are applied in policymaking with the aim of affecting behaviour change that supports the policy. The concept of nudging seeks to advance community participation during the policy process. Hence, policy nudging suggests ways, when, and how to apply nudging.

1.	What is your view on the use of the following nudges to encourage communities to participate in climate change decisions and implementation?		
		Education	
		Feedback	
		Incentives	
		Information	
		Persuasion	

SECTION F: PRESENTING A CONTEXTUAL PARTICIPATION STRATEGY FOR ENHANCING COMMUNITY PARTICIPATION IN FUTURE CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION PROCESSES

Explanation: The way participation is done in other policies may have a long-lasting impact on how communities view participation. Related memories of poor experiences and outcomes in participation in other government policies may demotivate people from participation. Resultantly, participation may be difficult, especially when one has to use the time allocated for bread and butter issues.

1.	What do you think could be done to enhance community participation in the future climate change decision making process and implementation?		
2.	What do you think could be done by other actors (experts, politicians, councillors, and public administrators) to enhance the coordination and facilitation of community participation during climate change policy processes?		
3.	Do you have any final remarks towards the establishment of a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes?		

Attachment 40: Semi-structured interview schedule for the Manonyane councillors

Village name			
Number of participants			
Place			
Date		Time	
Interview number			

1. Welcome.
2. Researcher introduces herself.
3. The title of the study is introduced: Community participation in climate change policy formulation and implementation in Lesotho.
4. Explanation of the research aim and objectives.
The study aims to explore community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes. The study has the following research objectives:
 - (i) To analyse systems, governance, and participatory theories influencing community participation in climate change policy formulation, implementation, and governance.
 - (ii) To explore how policy nudging could be used to enhance community participation in climate change policy formulation and implementation and governance.
 - (iii) To assess how community awareness and understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation.
 - (iv) To explore how the use of indigenous knowledge systems in climate change policy formulation and implementation facilitates community participation in climate governance.
 - (v) To determine the nature of community participation in climate change policy processes.
 - (vi) To present a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes.
5. The researcher requests permission to record the discussion with a voice recorder.
6. The researcher explains the order of the discussion.
7. Participants are informed that they will receive the outcomes of this discussion upon the researcher concluding the study, which is expected to be at the beginning of 2022.
8. Participants are informed that their responses will be treated with confidentiality. This means that they may be quoted during the reporting of the findings, but such quotes will not be attributed to them by name.

Instructions:

1. Kindly turn off your cell phone or put it on silent.
2. Please answer the questions honestly and openly (there is no right or wrong answer)

SECTION A: DETERMINING THE NATURE OF COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION

Explanation: Climate change occurs when human activity indirectly or directly alters the composition of the global atmosphere in addition to natural climate variations observed over comparable time periods. Community participation (active involvement) during climate change policy formulation and implementation include amongst others (e.g. information, consultation, deliberation, co-production, participatory techniques, governance, policy nudging, and facilitation). Putting community participation into practice requires new explicit and formal participatory methodologies that seek to include each actor in a multilateral and inter-consensus policy process (agenda setting, policy formulation, policy adoption, policy implementation, and policy evaluation).

Policy agenda setting: refers to defining policy problems.

Policy formulation: refers to crafting alternative courses of action to address the problem.

Policy adoption: refers to choosing the best alternative course of action.

Policy implementation: refers to carry out, fulfil, and complete the achievement of objectives set forth during policy adoption.

Policy evaluation: refers to assessing the importance and impact of a policy for redirection to another new problem or to terminate it to conclude the policy process.

1.	How does your community participate in government programmes aiming to define climate change problems using the following participatory techniques?																				
	<table border="1"> <tr><td>Consensus building</td><td></td></tr> <tr><td>Facilitation</td><td></td></tr> <tr><td>Focus group discussions</td><td></td></tr> <tr><td>Interviews</td><td></td></tr> <tr><td>Participatory technology</td><td></td></tr> <tr><td>Public hearings</td><td></td></tr> <tr><td>PRA techniques</td><td></td></tr> <tr><td>Workshops</td><td></td></tr> <tr><td>Other</td><td></td></tr> </table>	Consensus building		Facilitation		Focus group discussions		Interviews		Participatory technology		Public hearings		PRA techniques		Workshops		Other			
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Facilitation																					
Focus group discussions																					
Interviews																					
Participatory technology																					
Public hearings																					
PRA techniques																					
Workshops																					
Other																					
2.	During policy formulation, which of the following participatory techniques are used by your communities to articulate their preferred courses of alternatives regarding climate change adaptation measures?																				
	<table border="1"> <tr><td>Consensus building</td><td></td></tr> <tr><td>Facilitation</td><td></td></tr> <tr><td>Focus group discussions</td><td></td></tr> <tr><td>PRA techniques</td><td></td></tr> <tr><td>Public hearings</td><td></td></tr> <tr><td>Workshops</td><td></td></tr> <tr><td>Other</td><td></td></tr> </table>	Consensus building		Facilitation		Focus group discussions		PRA techniques		Public hearings		Workshops		Other							
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Facilitation																					
Focus group discussions																					
PRA techniques																					
Public hearings																					
Workshops																					
Other																					
3.	During policy adoption, how do communities participate to choose alternative courses of action regarding climate change decisions, using the following participatory techniques?																				
	<table border="1"> <tr><td>Briefs</td><td></td></tr> <tr><td>Community presentations</td><td></td></tr> <tr><td>Consensus building</td><td></td></tr> <tr><td>Focus group discussions</td><td></td></tr> <tr><td>Interviews</td><td></td></tr> <tr><td>Media</td><td></td></tr> <tr><td>PRA</td><td></td></tr> <tr><td>Participatory technology</td><td></td></tr> <tr><td>PRA techniques</td><td></td></tr> <tr><td>Public meetings</td><td></td></tr> </table>	Briefs		Community presentations		Consensus building		Focus group discussions		Interviews		Media		PRA		Participatory technology		PRA techniques		Public meetings	
Briefs																					
Community presentations																					
Consensus building																					
Focus group discussions																					
Interviews																					
Media																					
PRA																					
Participatory technology																					
PRA techniques																					
Public meetings																					

		Public hearings	
		Others	
4.	During policy implementation, elaborate on how communities participate in the implementation of policy programmes using the following participatory techniques.		
		Briefs	
		Facilitation	
		Media	
		Participatory technology	
		PRA techniques	
		Workshops	
		Other	
5.	Using the following participatory techniques, how do your communities participate during policy evaluation?		
		Beneficiary assessment	
		Focus group discussions	
		Interviews	
		Polls	
		PRA techniques	
		Public meetings	
		Surveys	
		Workshops	
		Other	
6.	To ensure communities are part of the climate change policy processes, how do you work with the following actors?		
		Chiefs	
		Experts	
		Politicians	
		Public administrators	
		Other	
7.	Elaborate on any challenges you face when co-ordinating community participation in climate change policy processes?		

SECTION B: HOW COMMUNITY AWARENESS REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community awareness of climate change is defined as the community's understanding of climate change in terms of its definition, causes, impacts, risks, and planned responses (mitigation and adaptation) based on information or experience. Having information and experience will lead to communities being well informed and critically conscious about climate change.

1.	Do you believe that adequate awareness of climate change can lead to communities feeling motivated to participate in future climate change decision making and implementation?							
	No		Yes		Not sure		Other	
2.	How do communities use the following participatory techniques to enhance their awareness of climate change?							
					Cause and impact diagrams			
					Cultural transects			
					Participatory mapping			
					Vulnerability maps			
					Other			
3.	How do communities get informed of the following climate change causes?							

	Air pollution	
	Deforestation	
	Climate variability	
	Industrialisation	
	Poor agricultural practices	
	Ozone depletion	
	Temperature changes	
	Urbanisation	
	Weather changes	
	Wild fires	
Other		
4.	How do communities get informed of the following climate change risks?	
	Extreme weather events	
	Floods	
	Food insecurity	
	Insufficient access to drinking water	
	Land degradation	
	Loss of biodiversity	
	Loss of rural livelihoods	
	Reduced agricultural production	
Other		
5.	How do communities get informed of the following climate change impacts for them and the environment?	
	Compromised agricultural production	
	Cyclones	
	Drought	
	Floods	
	Heatwaves	
	Health impacts	
	Significant loss of biodiversity and ecosystems	
	Weather insecurity problems	
	Wildfires	
	Other	

SECTION C: HOW COMMUNITY UNDERSTANDING REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community understanding of climate change is having knowledge about climate change's (i) definition ii) causes, iii) likelihood and severity of expected impacts, iv) policy process, v) risks, vi) planned future adaptation and mitigation responses. The word understanding means (i) having knowledge about a situation or subject, (ii) the ability to comprehend something, (iii) sympathetic awareness or tolerance, (iv) an informal agreement between people, and (v) having reason to believe in something. In some instances, community understanding of climate change is referred to as scientific understanding of climate change.

1.	Which knowledge do communities have about the likelihood and severity of expected climate change impacts?
2.	In your view, what are communities' understanding of the causes of climate change?

3.	How do communities you work with get informed of climate change decision-making processes?		
4.	In your opinion, what is community's understanding of climate change risks for themselves and their environment?		
5.	Which of the following participatory techniques do communities participate in to enhance their understanding of climate change?		
		Cause and impact diagram	
		Consensus building	
		Facilitation	
		Participatory technology	
		PRA techniques	
		Public meetings	
		Public hearings	
		Resources mapping	
		Transects	
		Other	

SECTION D: HOW THE USE OF INDIGENOUS KNOWLEDGE SYSTEMS IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION FACILITATE COMMUNITY PARTICIPATION IN CLIMATE GOVERNANCE

Explanation: Social factors comprise indigenous knowledge systems, which include culture, for example, beliefs (physical things are given meanings, religion, rituals, identity, art, stories that create outlooks and behaviour), norms (e.g. agricultural practices), values (e.g. family and wealth), and indigenous knowledge (local knowledge and local experiences). Accordingly, this study is limited to indigenous knowledge systems that focus on climate change. During climate change policy formulation and implementation, the use of indigenous knowledge systems will allow officials to learn from relaxed and unhurried interactions, while establishing rapport with communities as a motivation to change their behaviour towards participation in climate change policy processes.

1.	How do your communities consider the following climate change values (community principles) to adapt to climate change?		
		Cultural values	
		Family	
		Historical information	
		Natural resources (e.g. Traditional land, flora, fauna)	
		Wealth	
		Other	
2.	Which of the following participatory techniques are used by communities to consider community values in climate change adaptation programmes organised by the government?		
		Impact diagrams	
		Historical calendars	
		Seasonal calendars	
		Other	
3.	In your current climate change adaptation responses, how do communities use the following community norms to adapt to climate change?		
		Cattle grazing	
		Cutting trees for firewood and building houses	
		Collecting grass for thatching houses	
		History about agricultural practices	
		Wildfires	
		Other	
4.	How do communities use the following participatory techniques to document norms that relate to climate change?		

		Seasonal calendars	
		Timeline	
		Trend analysis	
		Other	
5.	What is your view on using community indigenous knowledge (traditional knowledge) in your current climate change adaptation strategies regarding the following:		
		Behaviour of animals	
		Birds attributed to climate change	
		Observing climate variability	
		Studying the environment	
		Studying weather	
		Type of clouds	
		Vegetation	
		Wind direction	
		Other	
6.	How do communities make climate change projections regarding the following:		
		Appropriate crop mix	
		Appropriate farming methods	
		Forecast expected rainfall	
		Other	
7.	How do your communities use the following participatory techniques to ensure indigenous knowledge is part of climate change adaptation strategies?		
		Focus group discussions	
		Impact diagram	
		Mapping	
		Other	
8.	What are the communities' beliefs about using the following culture (set customs and beliefs) to adapt to climate change?		
		Art	
		Collective community achievements	
		Identity	
		Physical things meaning	
		Rituals	
		Stories	
		Other	
9.	Which of the following participatory techniques are used by your communities to talk about community culture, which assists in climate change adaptation?		
		Consensus building	
		Interviews	
		Presentation to communities	
		Public hearings	
		Public meetings	
		PRA technique	
		Other	
10.	How do your communities use the following to inform government officials about community indigenous knowledge systems (values, culture, norms, and indigenous knowledge)?		

		Institutions	
		New legislation	
		Regulations	
		Specify other	
11.	How do communities contribute to climate change adaptation programmes facilitated by government officials in the following co-production phases?		
		Co-planning	
		Co-designing	
		Co-implementing	
		Co-evaluating	
12.	Which of the following participatory techniques are used by your communities to co-produce climate change adaptation strategies with government officials?		
		Beneficiary assessment	
		Briefings	
		Community presentations	
		Consensus building	
		Facilitation	
		Focus group discussions	
		Interviews	
		Media	
		Participatory technology	
		Polls	
		PRA techniques	
		Public hearings	
		Public meetings	
		Surveys	
		Workshops	
		Other	
13.	Elaborate on any challenges your communities face when using indigenous knowledge systems as a way of adapting to climate change?		

SECTION E: EXPLORING HOW POLICY NUDGING COULD BE USED TO ENHANCE COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION, IMPLEMENTATION, AND GOVERNANCE

Explanation: Nudging occurs when small, transparent gestures are applied in policymaking with the aim of affecting behaviour change that supports the policy. The concept of nudging seeks to advance community participation during the policy process. Hence, policy nudging suggests ways, when, and how to apply nudging.

1.	What is your view on using the following nudges to encourage community participation in climate change decisions and implementation?		
		Education	
		Feedback	
		Incentives	

		Information	
		Persuasion	
2.	Of the following participatory techniques, which ones would you recommend to be used to encourage communities to co-plan, co-design, co-implement, and co-evaluate nudges before being implemented?		
		Briefs	
		Consensus building	
		Interviews	
		Facilitation	
		Focus group discussions	
		Media	
		Polls	
		Public hearing	
		Surveys	
		Workshops	
		Other	

SECTION F: PRESENTING A CONTEXTUAL PARTICIPATION STRATEGY FOR ENHANCING COMMUNITY PARTICIPATION IN FUTURE CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION PROCESSES

Explanation: The way participation occurs for other policies may have a long-lasting impact on how communities view participation. Related memories of poor experiences and outcomes in participation in other government policies may demotivate people from participation. Resultantly, participation may be difficult, especially when one has to use the time allocated for bread and butter issues.

1.	Do you think community participation during climate change policy processes is needed? Motivate your answer.							
		No		Yes		Not sure		Other
2.	What do you think can be done to persuade communities to understand the importance of participation in the formulation of climate change policies?							
3.	In your opinion, which participatory techniques could be used to enhance community participation in future climate change policy decisions, and ultimately successful implementation?							
4.	What could be done to enhance community participation in future climate change decision making processes and implementation?							
5.	What could be done by other actors (experts, politicians, councillors, chiefs, and public administrators) to enhance the coordination and facilitation of community participation during climate change policy processes?							
6.	Do you have any final remarks towards the establishment of a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes?							

Attachment 41: Focus group question schedule –Manonyane chiefs

Village name			
Number of participants			
Place			
Date		Time	
Focus group discussion number			

1. Welcome.
2. Researcher introduces herself.
3. The title of the study is introduced: Community participation in climate change policy formulation and implementation in Lesotho.
4. Explanation of the research aim and objectives.
The study aims to explore community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes. The study has the following research objectives:
 - (i) To analyse systems, governance, and participatory theories influencing community participation in climate change policy formulation, implementation, and governance.
 - (ii) To explore how policy nudging could be used to enhance community participation in climate change policy formulation and implementation and governance.
 - (iii) To assess how community awareness and understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation.
 - (iv) To explore how the use of indigenous knowledge systems in climate change policy formulation and implementation facilitates community participation in climate governance.
 - (v) To determine the nature of community participation in climate change policy processes.
 - (vi) To present a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes.
5. The researcher requests permission to record the discussion with a voice recorder.
6. The researcher explains the order of the discussion.
7. Participants are informed that the focus group discussion will range between 90 to 120 minutes.
8. Participants are informed that they will receive the outcomes of this discussion upon the researcher concluding the study, which is expected to be at the beginning of 2022.
9. Participants are informed that their responses will be treated with confidentiality. This means that they may be quoted during the reporting of the findings, but such quotes will not be attributed to them by name.

Instructions:

1. Kindly turn off your cell phone or put it on silent.
2. Please answer the questions honestly and openly (there is no right or wrong answer)

SECTION A: DETERMINING THE NATURE OF COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION

Explanation: Climate change occurs when human activity indirectly or directly alters the composition of the global atmosphere in addition to natural climate variations observed over comparable time periods. Community participation (active involvement) during climate change policy formulation and implementation include amongst others (e.g. information, consultation, deliberation, co-production, participatory techniques, governance, policy nudging, and facilitation). Putting community participation into practice requires new explicit and formal participatory methodologies that seek to include each actor in a multilateral and inter-consensus policy process (agenda setting, policy formulation, policy adoption, policy implementation, and policy evaluation).

Policy agenda setting: refers to defining policy problems.

Policy formulation: refers to crafting alternative courses of action to address the problem.

Policy adoption: refers to choosing the best alternative course of action.

Policy implementation: refers to carry out, fulfil, and complete the achievement of objectives set forth during policy adoption.

Policy evaluation: refers to assessing the importance and impact of a policy for redirection to another new problem or to terminate it to conclude the policy process.

1.	How do your communities participate in the National Climate Change Policy (NCCP) formulation and implementation during the following policy stages?	
	Agenda setting	
	Policy formulation	
	Policy adoption	
	Policy implementation	
	Policy evaluation	
2.	Which of the following participatory techniques are used by your communities to articulate their preferred courses of alternatives regarding climate change policy and its implementation?	
	Beneficiary assesment	
	Briefs	
	Community presentations	
	Consensus building	
	Facilitation	
	Focus group discussions	
	Interviews	
	Media	
	PRA	
	Participatory technology	
	PRA techniques	
	Public meetings	
	Public hearings	
	Surveys	
	Workshops	
	Others	
3.	To ensure communities are part of the climate change policy processes, how do you work with the following actors?	
	Councillors	
	Experts	
	Politicians	
	Public administrators	
	Other	
4.	Elaborate on any challenges (if any) you face when co-ordinating community participation in climate change policy processes?	

SECTION B: HOW COMMUNITY AWARENESS REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community awareness of climate change is defined as the community's understanding of climate change in terms of its definition, causes, impacts, risks, and planned responses (mitigation and adaptation) based on information or experience. Having information and experience will lead to communities being well informed and critically conscious about climate change.

1.	How do communities use the following participatory techniques to enhance their awareness of climate change?		
		Cause and impact diagrams	
		Cultural transects	
		Participatory mapping	
		Vulnerability maps	
		Other	
2.	How do communities get informed of the following climate change causes?		
		Air pollution	
		Deforestation	
		Climate variability	
		Industrialisation	
		Poor agricultural practices	
		Ozone depletion	
		Temperature changes	
		Urbanisation	
		Weather changes	
		Wild fires	
		Other	
3.	How do communities get informed of the following climate change risks?		
		Extreme weather events	
		Floods	
		Food insecurity	
		Insufficient access to drinking water	
		Land degradation	
		Loss of biodiversity	
		Loss of rural livelihoods	
		Reduced agricultural production	
		Other	
4.	How do communities get informed of the following climate change impacts for them and the environment?		
		Compromised agricultural production	
		Cyclones	
		Drought	
		Floods	
		Heatwaves	
		Health impacts	
		Significant loss of biodiversity and ecosystems	
		Weather insecurity problems	
		Wildfire	
		Other	

SECTION C: HOW COMMUNITY UNDERSTANDING REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community understanding of climate change is having knowledge about climate change's (i) definition ii) causes, iii) likelihood and severity of expected impacts, iv) policy process, v) risks, vi) planned future adaptation and mitigation responses. The word understanding means (i) having knowledge about a situation or subject, (ii) the ability to comprehend something, (iii) sympathetic awareness or tolerance, (iv) an informal agreement between people, and (v) having reason to believe in something. In some instances, community understanding of climate change is referred to as scientific understanding of climate change.

1.	In your view, what are communities' understanding of the causes of climate change?	
2.	How do communities you work with get informed of climate change decision-making processes?	
3.	How do communities understand climate change risks for themselves and their environment?	
4.	Which of the following participatory techniques do communities participate in to enhance their understanding of climate change?	
	Cause and impact diagram	
	Consensus building	
	Facilitation	
	Participatory technology	
	PRA techniques	
	Public meetings	
	Public hearings	
	Resources mapping	
	Transects	
	Other	

SECTION D: HOW THE USE OF INDIGENOUS KNOWLEDGE SYSTEMS IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION FACILITATE COMMUNITY PARTICIPATION IN CLIMATE GOVERNANCE

Explanation: Social factors comprise indigenous knowledge systems, which include culture, for example, beliefs (physical things are given meanings, religion, rituals, identity, art, stories that create outlooks and behaviour), norms (e.g. agricultural practices), values (e.g. family and wealth), and indigenous knowledge (local knowledge and local experiences). Accordingly, this study is limited to indigenous knowledge systems that focus on climate change. During climate change policy formulation and implementation, the use of indigenous knowledge systems will allow officials to learn from relaxed and unhurried interactions, while establishing rapport with communities as a motivation to change their behaviour towards participation in climate change policy processes.

1.	How do your communities consider the following climate change values (community principles) to adapt to climate change?	
	Cultural values	
	Family	
	Historical information	
	Natural resources (eg. Traditional land, flora, fauna)	
	Wealth	
	Other	
2.	Which of the following participatory techniques are used (if any) by communities to enable consideration of community values into climate change adaptation programmes organised by the government?	
	Impact diagrams	
	Historical calenders	
	Seasonal calenders	
	Other	
3.	In your current climate change adaptation responses, how do communities use the following community norms to adapt to climate change?	
	Cattle grazing	

		Cutting trees for firewood and building houses	
		Collecting grass for thatching houses	
		History about agricultural practices	
		Wildfires	
		Other	
4.	How do communities use the following participatory techniques (if any) to document norms that relate to climate change?		
		Seasonal calendars	
		Timeline	
		Trend analysis	
		Other	
5.	What is your view of community indigenous knowledge (traditional knowledge) in your current climate change adaptation strategies regarding the following:		
		Behaviour of animals	
		Birds attributed to climate change	
		Observing climate variability	
		Studying the environment	
		Studying weather	
		The direction of wind	
		Type of clouds	
		Vegetation	
		Wind direction	
		Other	
6.	How do communities make climate change projections regarding the following:		
		Appropriate crop mix	
		Appropriate farming methods	
		Forecast expected rainfall	
		Other	
7.	How do your communities use the following participatory techniques (if any) to ensure indigenous knowledge is part of climate change adaptation strategies?		
		Focus group discussions	
		Impact diagram	
		Mapping	
		Other	
8.	What are the communities' beliefs regarding the use of the following culture (set customs and beliefs) to adapt to climate change?		
		Art	
		Collective community achievements	
		Identity	
		Physical things meaning	
		Rituals	
		Stories	
		Other	
9.	How do your communities use the following to inform government officials about community indigenous knowledge systems (values, culture, norms, and indigenous knowledge)?		
		Institutions	

		New legislation	
		Regulations	
		Specify other	
10.	How do communities contribute to climate change adaptation programmes facilitated by government officials in the following phases of co-production?		
		Co-planning	
		Co-designing	
		Co-implementing	
		Co-evaluating	

SECTION E: EXPLORING HOW POLICY NUDGING COULD BE USED TO ENHANCE COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION, IMPLEMENTATION, AND GOVERNANCE

Explanation: Nudging occurs when small, transparent gestures are applied in policymaking with the aim of affecting behaviour change that supports the policy. The concept of nudging seeks to advance community participation during the policy process. Hence, policy nudging suggests ways, when, and how to apply nudging.

1.	What is your view on the use of the following nudges to encourage communities to participate in climate change decisions and implementation?		
		Education	
		Feedback	
		Incentives	
		Information	
		Persuasion	

SECTION F: PRESENTING A CONTEXTUAL PARTICIPATION STRATEGY FOR ENHANCING COMMUNITY PARTICIPATION IN FUTURE CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION PROCESSES

Explanation: The way participation is done in other policies may have a long-lasting impact on how communities view participation. Related memories of poor experiences and outcomes in participation in other government policies may demotivate people from participation. Resultantly, participation may be difficult, especially when one has to use the time allocated for bread and butter issues.

1.	What do you think could be done to enhance community participation in the future climate change decision making process and implementation?		
2.	What do you think could be done by other actors (experts, politicians, councillors, and public administrators) to enhance the coordination and facilitation of community participation during climate change policy processes?		
3.	Do you have any final remarks towards the establishment of a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes?		

Attachment 42: Semi-structured interview schedule – Manonyane chiefs

Village name			
Number of participants			
Place			
Date		Time	
Interview Number			

1. Welcome.
2. Researcher introduces herself.
3. The title of the study is introduced: Community participation in climate change policy formulation and implementation in Lesotho.
4. Explanation of the research aim and objectives.
The study aims to explore community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes. The study has the following research objectives:
 - (i) To analyse systems, governance, and participatory theories influencing community participation in climate change policy formulation, implementation, and governance.
 - (ii) To explore how policy nudging could be used to enhance community participation in climate change policy formulation and implementation and governance.
 - (iii) To assess how community awareness and understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation.
 - (iv) To explore how the use of indigenous knowledge systems in climate change policy formulation and implementation facilitates community participation in climate governance.
 - (v) To determine the nature of community participation in climate change policy processes.
 - (vi) To present a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes.
5. The researcher requests permission to record the discussion with a voice recorder.
6. The researcher explains the order of the discussion.
7. Participants are informed that they will receive the outcomes of this discussion upon the researcher concluding the study, which is expected to be at the beginning of 2022.
8. Participants are informed that their responses will be treated with confidentiality. This means that they may be quoted during the reporting of the findings, but such quotes will not be attributed to them by name.

Instructions:

1. Kindly turn off your cell phone or put it on silent.
2. Please answer the questions honestly and openly (there is no right or wrong answer)

SECTION A: DETERMINING THE NATURE OF COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION

Explanation: Climate change occurs when human activity indirectly or directly alters the composition of the global atmosphere in addition to natural climate variations observed over comparable time periods. Community participation (active involvement) during climate change policy formulation and implementation include amongst others (e.g. information, consultation, deliberation, co-production, participatory techniques, governance, policy nudging, and facilitation). Putting community participation into practice requires new explicit and formal participatory methodologies that seek to include each actor in a multilateral and inter-consensus policy process (agenda setting, policy formulation, policy adoption, policy implementation, and policy evaluation).

Policy agenda setting: refers to defining policy problems.

Policy formulation: refers to crafting alternative courses of action to address the problem.

Policy adoption: refers to choosing the best alternative course of action.

Policy implementation: refers to carry out, fulfil, and complete the achievement of objectives set forth during policy adoption.

Policy evaluation: refers to assessing the importance and impact of a policy for redirection to another new problem or to terminate it to conclude the policy process.

1. How does your community participate in government programmes aiming to define climate change problems using the following participatory techniques?

	Consensus building	
	Facilitation	
	Focus group discussions	
	Interviews	
	Participatory technology	
	Public hearings	
	PRA techniques	
	Workshops	
	Other	

2. During policy formulation, which of the following participatory techniques are used by your community to articulate preferred courses of alternatives regarding climate change adaptation measures?

	Consensus building	
	Facilitation	
	Focus group discussions	
	PRA techniques	
	Public hearings	
	Workshops	
	Other	

3. During policy adoption, how does your community participate to choose alternative courses of action regarding climate change decisions, using the following participatory techniques?

	Briefs	
	Community presentations	
	Consensus building	
	Focus group discussions	
	Interviews	
	Media	
	Participatory technology	
	PRA techniques	
	Public meetings	
	Public hearings	
	Others	

4.	During policy implementation, elaborate on how your community participate in the implementation of policy programmes using the following participatory techniques.		
		Briefs	
		Facilitation	
		Media	
		Participatory technology	
		PRA techniques	
		Workshops	
		Other	
5.	Using the following participatory techniques, how does your community participate during policy evaluation?		
		Beneficiary assessment	
		Focus group discussions	
		Interviews	
		Polls	
		PRA techniques	
		Public meetings	
		Surveys	
		Workshops	
Other			
6.	To ensure your community is part of the climate change policy processes, how do you work with the following actors?		
		Councillors	
		Experts	
		Politicians	
		Public administrators	
		Other	
7.	Elaborate on any challenges you face when co-ordinating community participation in climate change policy processes?		

SECTION B: HOW COMMUNITY AWARENESS REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community awareness of climate change is defined as the community's understanding of climate change in terms of its definition, causes, impacts, risks, and planned responses (mitigation and adaptation) based on information or experience. Having information and experience will lead to communities being well informed and critically conscious about climate change.

1.	Do you believe that adequate awareness of climate change can lead to communities feeling motivated to participate in future climate change decision making and implementation?								
		No		Yes		Not sure		Other	
2.	How does your community use the following participatory techniques to enhance their awareness of climate change?								
		Cause and impact diagrams							
		Cultural transects							
		Participatory mapping							
		Vulnerability maps							
		Other							
3.	How does your community get informed of the following climate change causes?								
		Air pollution							
		Deforestation							

	Climate variability	
	Industrialisation	
	Poor agricultural practices	
	Ozone depletion	
	Temperature changes	
	Urbanisation	
	Weather changes	
	Wildfires	
	Other	
4.	How does your community get informed of the following climate change risks?	
	Extreme weather events	
	Floods	
	Food insecurity	
	Insufficient access to drinking water	
	Land degradation	
	Loss of biodiversity	
	Loss of rural livelihoods	
	Reduced agricultural production	
	Other	
6.	How does your community get informed of the following climate change impacts for them and the environment?	
	Compromised agricultural production	
	Cyclones	
	Drought	
	Floods	
	Heatwaves	
	Health impacts	
	Significant loss of biodiversity and ecosystems	
	Weather insecurity problems	
	Wildfires	
	Other	

SECTION C: HOW COMMUNITY UNDERSTANDING REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community understanding of climate change is having knowledge about climate change's (i) definition ii) causes, iii) likelihood and severity of expected impacts, iv) policy process, v) risks, vi) planned future adaptation and mitigation responses. The word understanding means (i) having knowledge about a situation or subject, (ii) the ability to comprehend something, (iii) sympathetic

awareness or tolerance, (iv) an informal agreement between people, and (v) having reason to believe in something. In some instances, community understanding of climate change is referred to as scientific understanding of climate change.		
1.	Which knowledge does your community have about the likelihood and severity of expected climate change impacts?	
2.	In your view, what are communities' understanding of the causes of climate change?	
3.	How does your community get informed of climate change decision-making processes?	
4.	What is your community's understanding of climate change risks for themselves and their environment?	
5.	Which of the following participatory techniques does your community participate in to enhance their understanding of climate change?	
		Cause and impact diagram
		Consensus building
		Facilitation
		Participatory technology
		PRA techniques
		Public meetings
		Public hearings
		Resources mapping
		Transects
		Other

SECTION D: HOW THE USE OF INDIGENOUS KNOWLEDGE SYSTEMS IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION FACILITATE COMMUNITY PARTICIPATION IN CLIMATE GOVERNANCE

Explanation: Social factors comprise indigenous knowledge systems, which include culture, for example, beliefs (physical things are given meanings, religion, rituals, identity, art, stories that create outlooks and behaviour), norms (e.g. agricultural practices), values (e.g. family and wealth), and indigenous knowledge (local knowledge and local experiences). Accordingly, this study is limited to indigenous knowledge systems that focus on climate change. During climate change policy formulation and implementation, the use of indigenous knowledge systems will allow officials to learn from relaxed and unhurried interactions, while establishing rapport with communities as a motivation to change their behaviour towards participation in climate change policy processes.

1.	How does your community consider the following climate change values (community principles) to adapt to climate change?	
		Cultural values
		Family
		Historical information
		Natural resources (e.g. Traditional land, flora, fauna)
		Wealth
		Other
2.	Which of the following participatory techniques are used by your community to consider community values in climate change adaptation programmes organised by the government?	
		Impact diagrams
		Historical calendars
		Seasonal calendars
		Other
3.	In your current climate change adaptation responses, how are the following community norms used by your community to adapt to climate change?	
		Cattle grazing
		Cutting trees for firewood and building houses
		Collecting grass for thatching houses
		History about agricultural practices

		Wildfires	
		Other	
4.	How does your community use the following participatory techniques to document norms that relate to climate change?		
		Seasonal calendars	
		Timeline	
		Trend analysis	
		Other	
5.	What is your view of using community indigenous knowledge (traditional knowledge) in your current climate change adaptation strategies regarding the following:		
		Behaviour of animals	
		Birds attributed to climate change	
		Observing climate variability	
		Studying the environment	
		Studying weather	
		Type of clouds	
		Vegetation	
		Wind direction	
		Other	
6.	How does your community make climate change projections regarding the following:		
		Appropriate crop mix	
		Appropriate farming methods	
		Forecast expected rainfall	
		Other	
7.	How does your community use the following participatory techniques to ensure indigenous knowledge is part of climate change adaptation strategies?		
		Focus group discussions	
		Impact diagram	
		Mapping	
		Other	
8.	What are the community's beliefs about using the following culture (set customs and beliefs) to adapt to climate change?		
		Art	
		Collective community achievements	
		Identity	
		Physical things meaning	
		Rituals	
		Stories	
		Other	
9.	Which of the following participatory techniques, are used by your community to talk about community culture which assists in climate change adaptation?		
		Consensus building	
		Interviews	
		Presentation to communities	
		Public hearings	
		Public meetings	
		PRA technique	

		Other	
10.	How does your community use the following to inform government officials about community indigenous knowledge systems (values, culture, norms, and indigenous knowledge)?		
		Institutions	
		New legislation	
		Regulations	
		Specify other	
11.	How does your community contribute to climate change adaptation programmes facilitated by government officials in the following co-production phases?		
		Co-planning	
		Co-designing	
		Co-implementing	
		Co-evaluating	
12.	Which of the following participatory techniques are used by your community to co-produce climate change adaptation strategies with government officials?		
		Beneficiary assessment	
		Briefings	
		Community presentations	
		Consensus building	
		Facilitation	
		Focus group discussions	
		Interviews	
		Media	
		Participatory technology	
		Polls	
		PRA techniques	
		Public hearings	
		Public meetings	
		Surveys	
		Workshops	
		Other	
13.	Which challenges are faced by your community when using indigenous knowledge systems to adapt to climate change?		

SECTION E: USING POLICY NUDGING TO ENHANCE COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION, IMPLEMENTATION, AND GOVERNANCE

Explanation: Nudging occurs when small, transparent gestures are applied in policymaking with the aim of affecting behaviour change that supports the policy. The concept of nudging seeks to advance community participation during the policy process. Hence, policy nudging suggests ways, when, and how to apply nudging.

1.	What is your view on using the following nudges to encourage your community to participate in climate change decisions and implementation?		
		Education	
		Feedback	

		Incentives	
		Information	
		Persuasion	
2.	Of the following participatory techniques, which ones would you recommend to be used to encourage your community to co-plan, co-design, co-implement, and co-evaluate nudges before being implemented?		
		Briefs	
		Consensus building	
		Interviews	
		Facilitation	
		Focus group discussions	
		Media	
		Polls	
		Public hearing	
		Surveys	
		Workshops	
		Other	

SECTION F: PRESENTING A CONTEXTUAL PARTICIPATION STRATEGY FOR ENHANCING COMMUNITY PARTICIPATION IN FUTURE CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION PROCESSES

Explanation: The way participation occurs for other policies may have a long-lasting impact on how communities view participation. Related memories of poor experiences and outcomes in participation in other government policies may demotivate people from participation. Resultantly, participation may be difficult, especially when one has to use the time allocated for bread and butter issues.

1.	Do you think community participation during climate change policy processes is needed? Motivate your answer.								
		No		Yes		Not sure		Other	
2.	What do you think can be done to persuade communities to understand the importance of participation in the formulation of climate change policies?								
3.	In your opinion, which participatory techniques could be used to enhance community participation in future climate change policy decisions, and ultimately successful implementation?								
4.	What do you think could be done to enhance community participation in future climate change decision making processes and implementation?								
5.	What could be done by other actors (experts, politicians, councillors, chiefs, and public administrators) to enhance the coordination and facilitation of community participation during climate change policy processes?								
6.	Do you have any final remarks towards the establishment of a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes?								

Attachment 43: Focus group question schedule – Manonyane communities

Village name			
Number of participants			
Place			
Date		Time	
Focus group discussion number			

1. Welcome.
2. Researcher introduces herself.
3. The title of the study is introduced: Community participation in climate change policy formulation and implementation in Lesotho.
4. Explanation of the research aim and objectives.

The study aims to explore community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes. The study has the following research objectives:

 - (i) To analyse systems, governance, and participatory theories influencing community participation in climate change policy formulation, implementation, and governance.
 - (ii) To explore how policy nudging could be used to enhance community participation in climate change policy formulation and implementation and governance.
 - (iii) To assess how community awareness and understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation.
 - (iv) To explore how the use of indigenous knowledge systems in climate change policy formulation and implementation facilitates community participation in climate governance.
 - (v) To determine the nature of community participation in climate change policy processes.
 - (vi) To present a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes.
5. The researcher requests permission to record the discussion with a voice recorder.
6. The researcher explains the order of the discussion.
7. Participants are informed that the focus group discussion will range between 90 to 120 minutes.
8. Participants are informed that they will receive the outcomes of this discussion upon the researcher concluding the study, which is expected to be at the beginning of 2022.
9. Participants are informed that their responses will be treated with confidentiality. This means that they may be quoted during the reporting of the findings, but such quotes will not be attributed to them by name.

Instructions:

1. Kindly turn off your cell phone or put it on silent.
2. Please answer the questions honestly and openly (there is no right or wrong answer)

SECTION A: DETERMINING THE NATURE OF COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION

Explanation: Climate change occurs when human activity indirectly or directly alters the composition of the global atmosphere in addition to natural climate variations observed over comparable time periods. Community participation (active involvement) during climate change policy formulation and implementation include amongst others (e.g. information, consultation, deliberation, co-production, participatory techniques, governance, policy nudging, and facilitation). Putting community participation into practice requires new explicit and formal participatory methodologies that seek to include each actor in a multilateral and inter-consensus policy process (agenda setting, policy formulation, policy adoption, policy implementation, and policy evaluation).

Policy agenda setting: refers to defining policy problems.

Policy formulation: refers to crafting alternative courses of action to address the problem.

Policy adoption: refers to choosing the best alternative course of action.

Policy implementation: refers to carry out, fulfil, and complete the achievement of objectives set forth during policy adoption.

Policy evaluation: refers to assessing the importance and impact of a policy for redirection to another new problem or to terminate it to conclude the policy process.

1.	How do you participate in the National Climate Change Policy (NCCP) formulation and implementation during the following policy stages?

Agenda setting	
Policy formulation	
Policy adoption	
Policy implementation	
Policy evaluation	
Other	

2.	Which of the following participatory techniques do you use to articulate your preferred courses of alternatives regarding climate change policy and its implementation?

Beneficiary assessment	
Briefs	
Community presentations	
Consensus building	
Focus group discussions	
Interviews	
Media	
PRA techniques	
Polls	
Participatory technology	
PRA techniques	

	Public meetings	
	Public hearings	
	Surveys	
	Workshops	
	Other	
3.	To ensure you are part of the climate change policy processes, how do you work with the following actors?	
	Councillors	
	Chiefs	
	Experts	
	Politicians	
	Public administrators	
	Other	
4.	Elaborate on any challenges you face when participating in community participation in climate change policy processes?	

SECTION B: HOW COMMUNITY AWARENESS REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community awareness of climate change is defined as the community's understanding of climate change in terms of its definition, causes, impacts, risks, and planned responses (mitigation and adaptation) based on information or experience. Having information and experience will lead to communities being well informed and critically conscious about climate change.

1.	How do you use the following participatory techniques to enhance your awareness of climate change?	
	Cause and impact diagrams	
	Cultural transects	
	Participatory mapping	
	Vulnerability maps	
	Other	
2.	How do you get informed of the following climate change causes?	
	Air pollution	
	Deforestation	
	Climate variability	
	Industrialisation	
	Poor agricultural practices	
	Ozone depletion	
	Temperature changes	

		Urbanisation	
		Weather changes	
		Wildfires	
		Other	
3.	How do you get informed of the following climate change risks?		
		Extreme weather events	
		Floods	
		Food insecurity	
		Insufficient access to drinking water	
		Land degradation	
		Loss of biodiversity	
		Loss of rural livelihoods	
		Reduced agricultural production	
		Other	
4.	How do you get informed of the following climate change impacts for you and the environment?		
		Compromised agricultural production	
		Cyclones	
		Drought	
		Floods	
		Health impacts	
		Heatwaves	
		Significant loss of biodiversity and ecosystems	
		Weather insecurity problems	
		Wildfire	
		Other	

SECTION C: HOW COMMUNITY UNDERSTANDING REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community understanding of climate change is having knowledge about climate change's (i) definition ii) causes, iii) likelihood and severity of expected impacts, iv) policy process, v) risks, vi) planned future adaptation and mitigation responses. The word understanding means (i) having knowledge about a situation or subject, (ii) the ability to comprehend something, (iii) sympathetic awareness or tolerance, (iv) an informal agreement between people, and (v) having reason to believe in something. In some instances, community understanding of climate change is referred to as scientific understanding of climate change.

1.	What is your view of climate change impacts?		
2.	What is your understanding of the causes of climate change?		
3.	How do you get informed of climate change decision-making processes?		
4.	What is your understanding of climate change risks for yourself and the environment?		
5.	Which of the following participatory techniques do you participate in to enhance your understanding of climate change?		
		Cause and impact diagram	
		Consensus building	
		Facilitation	
		Participatory technology	
		PRA techniques	
		Public meetings	
		Public hearings	
		Resources mapping	
		Transects	
		Other	

SECTION D: HOW THE USE OF INDIGENOUS KNOWLEDGE SYSTEMS IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION FACILITATE COMMUNITY PARTICIPATION IN CLIMATE GOVERNANCE

Explanation: Social factors comprise indigenous knowledge systems, which include culture, for example, beliefs (physical things are given meanings, religion, rituals, identity, art, stories that create outlooks and behaviour), norms (e.g. agricultural practices), values (e.g. family and wealth), and indigenous knowledge (local knowledge and local experiences). Accordingly, this study is limited to indigenous knowledge systems that focus on climate change. During climate change policy formulation and implementation, the use of indigenous knowledge systems will allow officials to learn from relaxed and unhurried interactions, while establishing rapport with communities as a motivation to change their behaviour towards participation in climate change policy processes.

1.	How do you consider the following climate change values (community principles) to adapt to climate change?	
	Cultural values	
	Family	
	Historical information	
	Natural resources (eg. Traditional land, flora, fauna)	
	Wealth	
	Other	
2.	Which of the following participatory techniques do you use (if any) to consider community values in climate change adaptation programmes organised by the government?	

		Impact diagrams	
		Historical calendars	
		Seasonal calendars	
		Other	
3.	In your current climate change adaptation responses, how do you use the following community norms to adapt to climate change?		
		Cattle grazing	
		Cutting trees for firewood and building houses	
		Collecting grass for thatching houses	
		History about agricultural practices	
		Wildfires	
		Other	
4.	How do you use the following participatory techniques (if any) to document norms that relate to climate change?		
		Seasonal calendars	
		Timeline	
		Trend analysis	
		Other	
5.	How do you use the following community indigenous knowledge (traditional knowledge) in your current climate change adaptation strategies:		
		Behaviour of animals	
		Birds attributed to climate change	
		Observing climate variability	
		Studying the environment	
		Studying weather	
		Type of clouds	
		Vegetation	
		Wind direction	
		Other	
6.	To adapt to climate change, how do you use indigenous knowledge to make decisions about the following:		
		Appropriate crop mix	
		Appropriate farming methods	
		Forecast expected rainfall	
		Other	

7.	How do you use the following participatory techniques (if any) to ensure indigenous knowledge is part of climate change adaptation strategies?		
		Focus group discussions	
		Impact diagram	
		Mapping	
		Other	
8.	What are your beliefs regarding the use of the following culture (set customs and beliefs) to adapt to climate change?		
		Art	
		Collective community achievements	
		Identity	
		Physical things meaning	
		Rituals	
		Stories	
		Other	
9.	How do you use the following to inform government officials about community indigenous knowledge systems (values, culture, norms, and indigenous knowledge)?		
		Institutions	
		New legislation	
		Regulations	
		Specify other	
10.	How do you contribute to climate change adaptation programmes facilitated by government officials in the following phases of co-production?		
		Co-planning	
		Co-designing	
		Co-implementing	
		Co-evaluating	

SECTION E: EXPLORING HOW POLICY NUDGING COULD BE USED TO ENHANCE COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION, IMPLEMENTATION, AND GOVERNANCE

Explanation: Nudging occurs when small, transparent gestures are applied in policymaking with the aim of affecting behaviour change that supports the policy. The concept of nudging seeks to advance community participation during the policy process. Hence, policy nudging suggests ways, when, and how to apply nudging.

1.	What is your view on using the following nudges to motivate you to participate in climate change decisions and implementation?		
		Education	
		Feedback	
		Incentives	
		Information	
		Persuasion	

SECTION F: PRESENTING A CONTEXTUAL PARTICIPATION STRATEGY FOR ENHANCING COMMUNITY PARTICIPATION IN FUTURE CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION PROCESSES

Explanation: The way participation is done in other policies may have a long-lasting impact on how communities view participation. Related memories of poor experiences and outcomes in participation in other government policies may demotivate people from participation. Resultantly, participation may be difficult, especially when one has to use the time allocated for bread and butter issues.

1.	What do you think could be done to enhance community participation in the future climate change decision making process and implementation?
2.	What do you think could be done by other actors (experts, politicians, councillors, chiefs, and public administrators) to enhance the coordination and facilitation of community participation during climate change policy processes?
3.	Do you have any final remarks towards the establishment of a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes?

Attachment 44: Semi-structured interview schedule – Parliament and Natural Resources, Tourism and Land Portfolio

Committee Members and National Climate Change Committee

Committee's name			
Position			
Place			
Date		Time	
Interview Number			

1. Welcome.

2. Researcher introduces herself.

3. The title of the study is introduced: Community participation in climate change policy formulation and implementation in Lesotho.

4. Explanation of the research aim and objectives.

The study aims to explore community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes. The study has the following research objectives:

(i) To analyse systems, governance, and participatory theories influencing community participation in climate change policy formulation, implementation, and governance.

(ii) To explore how policy nudging could be used to enhance community participation in climate change policy formulation and implementation and governance.

(iii) To assess how community awareness and understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation.

(iv) To explore how the use of indigenous knowledge systems in climate change policy formulation and implementation facilitates community participation in climate governance.

(v) To determine the nature of community participation in climate change policy processes.

(vi) To present a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes.

5. The researcher requests permission to record the discussion with a voice recorder.

6. The researcher explains the order of the discussion.

7. Participants are informed that they will receive the outcomes of this discussion upon the researcher concluding the study, which is expected to be at the beginning of 2022.

8. Participants are informed that their responses will be treated with confidentiality. This means that they may be quoted during the reporting of the findings, but such quotes will not be attributed to them by name.

Instructions:

1. Kindly turn off your cell phone or put it on silent.

2. Please answer the questions honestly and openly (there is no right or wrong answer)

SECTION A: DETERMINING THE NATURE OF COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION

Explanation: Climate change occurs when human activity indirectly or directly alters the composition of the global atmosphere in addition to natural climate variations observed over comparable time periods. Community participation (active involvement) during climate change policy formulation and implementation include amongst others (e.g. information, consultation, deliberation, co-production, participatory techniques, governance, policy nudging, and facilitation). Putting community participation into practice requires new explicit and formal participatory methodologies that seek to include each actor in a multilateral and inter-consensus policy process (agenda setting, policy formulation, policy adoption, policy implementation, and policy evaluation).

Policy agenda setting: refers to defining policy problems.

Policy formulation: refers to crafting alternative courses of action to address the problem.

Policy adoption: refers to choosing the best alternative course of action.

Policy implementation: refers to carry out, fulfil, and complete the achievement of objectives set forth during policy adoption.

Policy evaluation: refers to assessing the importance and impact of a policy for redirection to another new problem or to terminate it to conclude the policy process.

1.	What is the committee's role in ensuring community participation in the National Climate Change Policy (NCCP) formulation and implementation during the following policy stages?	
	Agenda Setting	
	Policy formulation	
	Policy Adoption	
	Policy Implementation	
	Policy Evaluation	
2.	How does the committee ensure communities have influence and capacity (resources) when participating during the NCCP formulation and implementation in relation to the following concepts of community participation?	
	Collaboration	
	Co-production	
	Cross-sector collaboration	
	Deliberation	
	Democratisation	
	Other	
3.	How does the committee ensure each of the following groups of actors have influence, capacity (resources), and autonomy in playing its facilitative role regarding community participation in the NCCP policy processes?	
	Community representative	
	Experts	
	Politicians	
	Public administrators	
	Other	
4.	Elaborate on any challenges you face when co-ordinating community participation in the NCCP processes?	

SECTION B: HOW COMMUNITY AWARENESS REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community awareness of climate change is defined as the community's understanding of climate change in terms of its definition, causes, impacts, risks, and planned responses (mitigation and adaptation) based on information or experience. Having information and experience will lead to communities being well informed and critically conscious about climate change.

1.	What is your view of community awareness of climate change?	
2.	How do you ensure that ministries accountable to this committee keep communities informed of the following climate causes?	
	Air pollution	
	Deforestation	
	Climate variability	

		Industrialisation	
		Ozone depletion	
		Poor agricultural practices	
		Temperature changes	
		Urbanisation	
		Weather changes	
		Wildfires	
		Other	
3.	How do you ensure that ministries accountable to this committee keep communities informed of the following climate change risks?		
		Extreme weather events	
		Floods	
		Food insecurity	
		Insufficient access to drinking water	
		Land degradation	
		Loss of biodiversity	
		Loss of rural livelihoods	
		Reduced agricultural production	
		Other	
4.	How do you ensure that ministries accountable to this committee keep communities informed of the following climate change impacts for them and the environment?		
		Compromised agricultural production	
		Cyclones	
		Drought	
		Floods	
		Health impacts	
		Heatwaves	
		Significant loss of biodiversity and ecosystems	
		Water insecurity problems	
		Wildfires	
		Other	

SECTION C: HOW COMMUNITY UNDERSTANDING REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community understanding of climate change is having knowledge about climate change's (i) definition ii) causes, iii) likelihood and severity of expected impacts, iv) policy process, v) risks, vi) planned future adaptation and mitigation responses. The word understanding means (i) having knowledge about a situation or subject, (ii) the ability to comprehend something, (iii) sympathetic awareness or tolerance, (iv) an informal agreement between people, and (v) having reason to believe in something. In some instances, community understanding of climate change is referred to as scientific understanding of climate change.

1.	How do you use the following concepts in relation to your committee's mandate?		
		Community awareness of climate change	
		Community understanding of climate change	
		Community understanding of environmental issues	
		Public understanding of environmental issues	

2.	In your oversight role, how does this committee ensure the ministries accountable to it facilitate community understanding of climate change regarding the following?	
	Community understanding of climate change causes	
	Community understanding of climate change impacts	
	Community awareness of climate change decision making processes	
	Community understanding of climate change risks for themselves and their environment	
	Other	

SECTION D: HOW THE USE OF INDIGENOUS KNOWLEDGE SYSTEMS IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION FACILITATE COMMUNITY PARTICIPATION IN CLIMATE GOVERNANCE

Explanation: Social factors comprise indigenous knowledge systems, which include culture, for example, beliefs (physical things are given meanings, religion, rituals, identity, art, stories that create outlooks and behaviour), norms (e.g. agricultural practices), values (e.g. family and wealth), and indigenous knowledge (local knowledge and local experiences). Accordingly, this study is limited to indigenous knowledge systems that focus on climate change. During climate change policy formulation and implementation, the use of indigenous knowledge systems will allow officials to learn from relaxed and unhurried interactions, while establishing rapport with communities as a motivation to change their behaviour towards participation in climate change policy processes.

1.	What is your view on including the following community values in the NCCP and its implementation?	
	Cultural values	
	Family	
	Historical information	
	Natural resources (Traditional land, flora, and fauna)	
	Wealth	
	Other	
2.	Which of the following participatory techniques are recommended by your committee to enable consideration of community values in your current climate change decision making process and implementation?	
	Historical calendars	
	Impact diagrams	
	Seasonal calendars	
	Other	
3.	In your current climate change decision making processes, how does this committee promote using the following community norms to promote bottom-up mitigation and adaptation responses?	
	Cattle grazing	
	Collecting grass for thatching houses	
	Cutting trees for firewood and building houses	
	History about agricultural practices	
	Wildfires	
	Other	
4.	Which of the following participatory techniques are recommended by this committee to ensure community norms are documented for use when making climate change decisions and during the implementation of those decisions?	
	Seasonal calendars	
	Timeline	
	Trend analysis	
	Other	

5.	How does this committee promote using the following indigenous knowledge in your current NCCP and its implementation to form part of climate change projections?		
		Behaviour of animals	
		Birds attributed to climate change	
		Observing climate variability	
		Studying the environment	
		Studying weather	
		The direction of wind	
		Type of clouds	
		Vegetation	
		Other	
6.	What is done by this committee to ensure community indigenous knowledge is part of the NCCP and its implementation?		
7.	How does this committee promote using the following culture in your current national climate change decision making process and implementation programmes?		
		Art	
		Collective community achievements	
		Identity	
		Physical things given meaning	
		Rituals	
		Stories	
		Other	
8.	Which of the following participatory techniques are used to incorporate community culture into the NCCP formulation and implementation?		
		Consensus building	
		Interviews	
		PRA techniques	
		Presentation to communities	
		Public hearings	
		Public meetings	
		Other	
9.	How does your committee promote the incorporation of indigenous knowledge systems (values, culture, norms, and indigenous knowledge) into the NCCP using the following?		
		Institutions	
		New legislation	
		Regulations	
		Other	
10.	Which role does this committee play in climate change policy co-governance processes to facilitate community participation in the following phases of co-producing the national climate change policy?		
		Co-planning	
		Co-designing	
		Co-implementing	
		Co-evaluating	
11.	If yes to question 10, which of the following participatory techniques are recommended by your committee to encourage community co-governance in the NCCP formulation and implementation?		

		Beneficiary assessment	
		Briefings	
		Consensus building	
		Facilitation	
		Focus group discussions	
		Interviews	
		Media	
		Participatory technology	
		Polls	
		PRA techniques	
		Presentations to communities	
		Public hearings	
		Public meetings	
		Surveys	
		Workshops	
		Other	
12.	Elaborate on any challenges you face when using indigenous knowledge systems in the NCCP formulation and implementation?		

SECTION E: EXPLORING HOW POLICY NUDGING COULD BE USED TO ENHANCE COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION, IMPLEMENTATION, AND GOVERNANCE

Explanation: Nudging occurs when small, transparent gestures are applied in policymaking with the aim of affecting behaviour change that supports the policy. The concept of nudging seeks to advance community participation during the policy process. Hence, policy nudging suggests ways, when, and how to apply nudging.

1.	How does your committee use policy nudging during the NCCP formulation and implementation?		
2.	What is your view on the use of the following nudges to encourage communities to participate in climate change decisions and implementation?		
		Education	
		Feedback	
		Information	
		Incentives	
		Persuasion	
3.	What is your view on using the following regulations to ensure communities are involved in climate change decisions and their implementation?		
		Bans	
		Compliance rules	
		Restrictions	
		Other	
4.	What is your view on using the following participatory techniques to ensure communities are involved in climate change decisions and their implementation?		
		Briefs	
		Consensus building	

	Facilitation	
	Focus group discussions	
	Interviews	
	Media	
	Polls	
	Public hearing	
	Surveys	
	Workshops	
	Other	

SECTION F: PRESENTING A CONTEXTUAL PARTICIPATION STRATEGY FOR ENHANCING COMMUNITY PARTICIPATION IN FUTURE CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION PROCESSES

Explanation: The way participation is done in other policies may have a long-lasting impact on how communities view participation. Related memories of poor experiences and outcomes in participation in other government policies may demotivate people from participation. Resultantly, participation may be difficult, especially when one has to use the time allocated for bread and butter issues.

1.	Do you think community participation during climate change policy processes is needed? Motivate your answer.							
	No		Yes		Not sure		Other	
2.	What do you think can be done to persuade communities to understand the importance of participation in the formulation of climate change policies?							
3.	In your opinion, which participatory techniques could be used to enhance the participation of communities in future climate change policy decisions, and ultimately successful implementation?							
4.	What could be done to enhance community participation in the future climate change decision making process and implementation?							
5.	What could be done by other actors (experts, politicians, community representatives, and public administrators) to enhance the co-ordination and facilitation of community participation in climate change policy formulation and implementation?							
6.	Do you have any final remarks towards the establishment of a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes?							

Attachment 45: Semi-structured interview schedule – Meteorology and Climate department, Ministry of Energy and

Meteorology

Department name			
Position			
Place			
Date		Time	
Interview Number			

1. Welcome.

2. Researcher introduces herself.

3. The title of the study is introduced: Community participation in climate change policy formulation and implementation in Lesotho.

4. Explanation of the research aim and objectives.

The study aims to explore community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes. The study has the following research objectives:

(i) To analyse systems, governance, and participatory theories influencing community participation in climate change policy formulation, implementation, and governance.

(ii) To explore how policy nudging could be used to enhance community participation in climate change policy formulation and implementation and governance.

(iii) To assess how community awareness and understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation.

(iv) To explore how the use of indigenous knowledge systems in climate change policy formulation and implementation facilitates community participation in climate governance.

(v) To determine the nature of community participation in climate change policy processes.

(vi) To present a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes.

5. The researcher requests permission to record the discussion with a voice recorder.

6. The researcher explains the order of the discussion.

7. Participants are informed that they will receive the outcomes of this discussion upon the researcher concluding the study, which is expected to be at the beginning of 2022.

8. Participants are informed that their responses will be treated with confidentiality. This means that they may be quoted during the reporting of the findings, but such quotes will not be attributed to them by name.

Instructions:

1. Kindly turn off your cell phone or put it on silent.

2. Please answer the questions honestly and openly (there is no right or wrong answer)

SECTION A: DETERMINING THE NATURE OF COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION

Explanation: Climate change occurs when human activity indirectly or directly alters the composition of the global atmosphere in addition to natural climate variations observed over comparable time periods. Community participation (active involvement) during climate change policy formulation and implementation include amongst others (e.g. information, consultation, deliberation, co-production, participatory techniques, governance, policy nudging, and facilitation). Putting community participation into practice requires new explicit and formal participatory methodologies that seek to include each actor in a multilateral and inter-consensus policy process (agenda setting, policy formulation, policy adoption, policy implementation, and policy evaluation).

Policy agenda setting: refers to defining policy problems.

Policy formulation: refers to crafting alternative courses of action to address the problem.

Policy adoption: refers to choosing the best alternative course of action.

Policy implementation: refers to carry out, fulfil, and complete the achievement of objectives set forth during policy adoption.

Policy evaluation: refers to assessing the importance and impact of a policy for redirection to another new problem or to terminate it to conclude the policy process.

1.	How does the department facilitate community participation in the National Climate Change Policy (NCCP) formulation and implementation during the following policy stages?		
		Agenda Setting	
		Policy formulation	
		Policy Adoption	
		Policy Implementation	
		Policy Evaluation	
2.	How does the department use the following participatory techniques to facilitate community participation during agenda setting to define climate change problems?		
		Consensus building	
		Facilitation	
		Focus group discussions	
		Interviews	
		Participatory technology	
		PRA techniques	
		Public hearings	
		Workshops	
		Other	
3.	How does the department use the following participatory techniques to facilitate community participation to ensure communities articulate their preferred courses of alternatives regarding climate change mitigation and adaptation measures during policy formulation?		
		Consensus building	
		Facilitation	
		Focus group discussions	
		PRA techniques	
		Public hearings	
		Workshops	
		Other	
4.	During policy adoption, how does your department use the following participatory techniques to ensure communities articulate their preferred courses of alternatives regarding climate change adaptation measures?		
		Briefs	
		Consensus building	
		Focus group discussions	
		Interviews	

		Media	
		Participatory technology	
		PRA techniques	
		Presentation to communities	
		Public meetings	
		Public hearings	
		Other	
5.	How does the department use the following participatory techniques to facilitate community participation during policy implementation?		
		Briefs	
		Facilitation	
		Media	
		Participatory technology	
		PRA techniques	
		Workshops	
		Other	
6.	During policy evaluation, how does the department facilitate community participation using the following participatory techniques?		
		Beneficiary assessment	
		Focus group discussions	
		Interviews	
		Polls	
		PRA techniques	
		Public meetings	
		Surveys	
		Workshops	
		Other	
7.	How do you work with the following actors to ensure communities are part of the climate change policy processes?		
		Community representative	
		Experts	
		Politicians	
		Public administrators	
		Other	
8.	Are there any challenges you face when co-ordinating community participation in the NCCP processes?		

SECTION B: HOW COMMUNITY AWARENESS REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community awareness of climate change is defined as the community's understanding of climate change in terms of its definition, causes, impacts, risks, and planned responses (mitigation and adaptation) based on information or experience. Having information and experience will lead to communities being well informed and critically conscious about climate change.

1.	What is your view of community awareness of climate change?	
2.	How does the Meteorology and Climate department use the following participatory techniques to enhance community awareness of climate change?	
	Cause and impact diagrams	
	Cultural transects	

		Participatory mapping	
		Vulnerability maps	
		Other	
3.	How does your department ensure communities are informed of the following climate change causes?		
		Air pollution	
		Climate variability	
		Deforestation	
		Industrialisation	
		Ozone depletion	
		Poor agricultural practices	
		Temperature changes	
		Urbanisation	
		Weather changes	
		Wildfires	
		Other	
4.	How does the department ensure communities are informed of the following climate change risks?		
		Extreme weather events	
		Food insecurity	
		Floods	
		Insufficient access to drinking water	
		Land degradation	
		Loss of biodiversity	
		Loss of rural livelihoods	
		Reduced agricultural production	
		Other	
5.	What is done by your department to ensure communities are informed of the following climate change impacts for them and the environment?		
		Compromised agricultural production	
		Cyclones	
		Drought	
		Floods	
		Heatwaves	
		Health impacts	
		Significant loss of biodiversity and ecosystems	
		Water insecurity problems	
		Wildfires	
		Other	

SECTION C: HOW COMMUNITY UNDERSTANDING REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community understanding of climate change is having knowledge about climate change's (i) definition ii) causes, iii) likelihood and severity of expected impacts, iv) policy process, v) risks, vi) planned future adaptation and mitigation responses. The word understanding means (i) having knowledge about a situation or subject, (ii) the ability to comprehend something, (iii) sympathetic awareness or tolerance, (iv) an informal agreement between people, and (v) having reason to believe in something. In some instances, community understanding of climate change is referred to as scientific understanding of climate change.

1.	How do you use the following concepts in relation to your department's mandate?

		Community awareness of climate change	
		Community understanding of climate change	
		Community understanding of environmental issues	
		Public understanding of environmental issues	
2.	What is the unit's role in ensuring community understanding of climate change regarding the following?		
		Community understanding of climate change impacts	
		Community understanding of climate change causes	
		Community awareness of climate change decision making processes	
		Community understanding of climate change risks for themselves and their environment?	
		Other	
3.	Which of the following participatory techniques are used by your department to enhance community understanding of climate change?		
		Cause and impact diagram	
		Consensus building	
		Facilitation	
		Participatory technology	
		PRA techniques	
		Public meetings	
		Public hearings	
		Resources mapping	
		Transects	
		Other	

SECTION D: HOW THE USE OF INDIGENOUS KNOWLEDGE SYSTEMS IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION FACILITATE COMMUNITY PARTICIPATION IN CLIMATE GOVERNANCE

Explanation: Social factors comprise indigenous knowledge systems, which include culture, for example, beliefs (physical things are given meanings, religion, rituals, identity, art, stories that create outlooks and behaviour), norms (e.g. agricultural practices), values (e.g. family and wealth), and indigenous knowledge (local knowledge and local experiences). Accordingly, this study is limited to indigenous knowledge systems that focus on climate change. During climate change policy formulation and implementation, the use of indigenous knowledge systems will allow officials to learn from relaxed and unhurried interactions, while establishing rapport with communities as a motivation to change their behaviour towards participation in climate change policy processes.

1.	What is your view of the following community values when making the national climate change policy and its implementation?		
		Cultural values	
		Historical information	
		Family	
		Natural resources (Traditional land, flora, and fauna)	
		Wealth	
		Other	
2.	Which of the following participatory techniques are used by your department to enable consideration of community values in your current climate change decision making process and implementation?		
		Historical calendars	
		Impact diagrams	
		Seasonal calendars	
		Other	

3.	In your current climate change decision making processes, how do you use the following community norms to promote bottom-up mitigation and adaptation responses?		
		Cattle grazing	
		Collecting grass for thatching houses	
		Cutting trees for firewood and building houses	
		History about agricultural practices	
		Wildfires	
		Other	
4.	How does your department use the following participatory techniques to document community norms for use when making climate change decisions and during the implementation of those decisions?		
		Seasonal calendars	
		Timeline	
		Trend analysis	
		Other	
5.	How does your department use indigenous knowledge in your current national climate change decision making and implementation to form part of climate change projections such as the following:		
		Behaviour of animals	
		Birds attributed to climate change	
		Observing climate variability	
		Studying the environment	
		Studying weather	
		The direction of wind	
		Type of clouds	
		Vegetation	
		Other	
6.	How does your department use the following participatory techniques to ensure community indigenous knowledge is part of climate change decisions and implementation?		
		Focus group discussions	
		Impact diagrams	
		Mapping	
		Other	
7.	How does your department use the following culture in your current climate change decision making process and implementation programmes?		
		Art	
		Collective community achievements	
		Identity	
		Physical things given meaning	
		Rituals	
		Stories	
		Other	
8.	Which of the following participatory techniques are used by your department to incorporate community culture into the NCCP formulation and implementation?		
		Consensus building	
		Interviews	
		PRA techniques	

		Presentation to communities	
		Public hearings	
		Public meetings	
		Other	
9.	How does your department promote the incorporation of indigenous knowledge systems (values, culture, norms, and indigenous knowledge) into the NCCP using the following?		
		Institutions	
		New legislation	
		Regulations	
		Other	
10.	Which role does your department play in climate change policy co-governance processes to facilitate community participation in the following phases of co-producing the NCCP?		
		Co-planning	
		Co-designing	
		Co-implementing	
		Co-evaluating	
11.	If yes to question 10, which of the following participatory techniques are used by your department to encourage community co-governance in the NCCP formulation and implementation?		
		Beneficiary assessment	
		Briefings	
		Consensus building	
		Facilitation	
		Focus group discussions	
		Interviews	
		Media	
		Participatory technology	
		Polls	
		PRA techniques	
		Presentations to communities	
		Public hearings	
		Public meetings	
		Workshops	
		Surveys	
		Other	
12.	Elaborate on any challenges you face when using indigenous knowledge systems in the NCCP formulation and implementation?		

SECTION E: EXPLORING HOW POLICY NUDGING COULD BE USED TO ENHANCE COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION, IMPLEMENTATION, AND GOVERNANCE

Explanation: Nudging occurs when small, transparent gestures are applied in policymaking with the aim of affecting behaviour change that supports the policy. The concept of nudging seeks to advance community participation during the policy process. Hence, policy nudging suggests ways, when, and how to apply nudging.

1.	How does your department use policy nudging during the NCCP formulation and implementation?

2.	What is your view on the use of the following nudges to encourage your community to participate in climate change decisions and implementation?		
		Education	
		Information	
		Feedback	
		Incentives	
		Persuasion	
3.	What is your view on using the following regulations to ensure communities are involved in climate change decisions and their implementation?		
		Bans	
		Compliance rules	
		Restrictions	
		Other	
4.	What is your view on using the following participatory techniques to ensure communities are involved in climate change decisions and their implementation?		
		Briefs	
		Consensus building	
		Facilitation	
		Focus group discussions	
		Interviews	
		Media	
		Polls	
		Public hearing	
		Surveys	
		Workshops	
		Other	

SECTION F: PRESENTING A CONTEXTUAL PARTICIPATION STRATEGY FOR ENHANCING COMMUNITY PARTICIPATION IN FUTURE CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION PROCESSES

Explanation: The way participation is done in other policies may have a long-lasting impact on how communities view participation. Related memories of poor experiences and outcomes in participation in other government policies may demotivate people from participation. Resultantly, participation may be difficult, especially when one has to use the time allocated for bread and butter issues.

1.	Do you think community participation during climate change policy processes is needed? Motivate your answer.							
		No		Yes		Not sure		Other
2.	What do you think can be done to persuade communities to understand the importance of participation in the formulation of climate change policies?							
3.	In your opinion, which participatory techniques could be used to enhance the participation of communities in future climate change policy decisions, and ultimately successful implementation?							
4.	What could be done to enhance community participation in the future climate change decision making process and implementation?							
5.	What could be done by other actors (experts, politicians, community representatives, and public administrators) to enhance the co-ordination and facilitation of community participation in climate change policy formulation and implementation?							

6.	Do you have any final remarks towards the establishment of a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes?

Attachment 46: Semi-structured interview schedule – Environment Department, Ministry of Environment, Tourism and Culture

Department name			
Position			
Place			
Date		Time	
Interview Number			

1. Welcome.
2. Researcher introduces herself.
3. The title of the study is introduced: Community participation in climate change policy formulation and implementation in Lesotho.
4. Explanation of the research aim and objectives.
The study aims to explore community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes. The study has the following research objectives:
 - (i) To analyse systems, governance, and participatory theories influencing community participation in climate change policy formulation, implementation, and governance.
 - (ii) To explore how policy nudging could be used to enhance community participation in climate change policy formulation and implementation and governance.
 - (iii) To assess how community awareness and understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation.
 - (iv) To explore how the use of indigenous knowledge systems in climate change policy formulation and implementation facilitates community participation in climate governance.
 - (v) To determine the nature of community participation in climate change policy processes.
 - (vi) To present a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes.
5. The researcher requests permission to record the discussion with a voice recorder.
6. The researcher explains the order of the discussion.
7. Participants are informed that they will receive the outcomes of this discussion upon the researcher concluding the study, which is expected to be at the beginning of 2022.
8. Participants are informed that their responses will be treated with confidentiality. This means that they may be quoted during the reporting of the findings, but such quotes will not be attributed to them by name.

Instructions:

1. Kindly turn off your cell phone or put it on silent.
2. Please answer the questions honestly and openly (there is no right or wrong answer)

SECTION A: DETERMINING THE NATURE OF COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION

Explanation: Climate change occurs when human activity indirectly or directly alters the composition of the global atmosphere in addition to natural climate variations observed over comparable time periods. Community participation (active involvement) during climate change policy formulation and implementation include amongst others (e.g. information, consultation, deliberation, co-production, participatory techniques, governance, policy nudging, and facilitation). Putting community participation into practice requires new explicit and formal participatory methodologies that seek to include each actor in a multilateral and inter-consensus policy process (agenda setting, policy formulation, policy adoption, policy implementation, and policy evaluation).

Policy agenda setting: refers to defining policy problems.

Policy formulation: refers to crafting alternative courses of action to address the problem.

Policy adoption: refers to choosing the best alternative course of action.

Policy implementation: refers to carry out, fulfil, and complete the achievement of objectives set forth during policy adoption.

Policy evaluation: refers to assessing the importance and impact of a policy for redirection to another new problem or to terminate it to conclude the policy process.

1.	What is the department's role in ensuring community participation in the National Climate Change Policy (NCCP) formulation and implementation during the following policy stages?																			
		<table border="1"> <tr><td>Agenda Setting</td><td></td></tr> <tr><td>Policy formulation</td><td></td></tr> <tr><td>Policy Adoption</td><td></td></tr> <tr><td>Policy Implementation</td><td></td></tr> <tr><td>Policy Evaluation</td><td></td></tr> </table>	Agenda Setting		Policy formulation		Policy Adoption		Policy Implementation		Policy Evaluation									
Agenda Setting																				
Policy formulation																				
Policy Adoption																				
Policy Implementation																				
Policy Evaluation																				
2.	How does the department use the following participatory techniques to facilitate community participation during agenda setting to define climate change problems?																			
		<table border="1"> <tr><td>Consensus building</td><td></td></tr> <tr><td>Facilitation</td><td></td></tr> <tr><td>Focus group discussions</td><td></td></tr> <tr><td>Interviews</td><td></td></tr> <tr><td>Participatory technology</td><td></td></tr> <tr><td>PRA techniques</td><td></td></tr> <tr><td>Public hearings</td><td></td></tr> <tr><td>Workshops</td><td></td></tr> <tr><td>Other</td><td></td></tr> </table>	Consensus building		Facilitation		Focus group discussions		Interviews		Participatory technology		PRA techniques		Public hearings		Workshops		Other	
Consensus building																				
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Focus group discussions																				
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Participatory technology																				
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Workshops																				
Other																				
3.	How does the department use the following participatory techniques to ensure communities articulate their preferred courses of alternatives regarding climate change mitigation and adaptation measures during policy formulation?																			
		<table border="1"> <tr><td>Consensus building</td><td></td></tr> <tr><td>Facilitation</td><td></td></tr> <tr><td>Focus group discussions</td><td></td></tr> <tr><td>PRA techniques</td><td></td></tr> <tr><td>Public hearings</td><td></td></tr> <tr><td>Workshops</td><td></td></tr> <tr><td>Other</td><td></td></tr> </table>	Consensus building		Facilitation		Focus group discussions		PRA techniques		Public hearings		Workshops		Other					
Consensus building																				
Facilitation																				
Focus group discussions																				
PRA techniques																				
Public hearings																				
Workshops																				
Other																				
4.	During policy adoption, how does your department use the following participatory techniques to ensure communities articulate their preferred courses of alternatives regarding climate change adaptation measures?																			
		<table border="1"> <tr><td>Briefs</td><td></td></tr> <tr><td>Consensus building</td><td></td></tr> <tr><td>Focus group discussions</td><td></td></tr> <tr><td>Interviews</td><td></td></tr> <tr><td>Media</td><td></td></tr> </table>	Briefs		Consensus building		Focus group discussions		Interviews		Media									
Briefs																				
Consensus building																				
Focus group discussions																				
Interviews																				
Media																				

		Participatory technology	
		PRA techniques	
		Presentation to communities	
		Public meetings	
		Public hearings	
		Other	
5.	How does the department use the following participatory techniques to facilitate community participation during policy implementation?		
		Briefs	
		Facilitation	
		Media	
		Participatory technology	
		PRA techniques	
		Workshops	
		Other	
6.	During policy evaluation, how does the department facilitate community participation using the following participatory techniques?		
		Beneficiary assessment	
		Focus group discussions	
		Interviews	
		Polls	
		PRA techniques	
		Public meetings	
		Surveys	
		Workshops	
		Other	
7.	How do you work with the following actors to ensure communities are part of the climate change policy processes?		
		Community representative	
		Experts	
		Politicians	
		Public administrators	
		Other	
8.	Elaborate on any challenges you face when co-ordinating community participation in the NCCP processes?		

SECTION B: HOW COMMUNITY AWARENESS REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community awareness of climate change is defined as the community's understanding of climate change in terms of its definition, causes, impacts, risks, and planned responses (mitigation and adaptation) based on information or experience. Having information and experience will lead to communities being well informed and critically conscious about climate change.

1.	What is your view of community awareness of climate change?		
2.	How does the Environment department use the following participatory techniques to enhance community awareness of climate change?		
		Cause and impact diagrams	
		Cultural transects	
		Participatory mapping	
		Vulnerability maps	

	Other	
3.	How does your department ensure communities are informed of the following climate change causes?	
	Air pollution	
	Climate variability	
	Deforestation	
	Industrialisation	
	Ozone depletion	
	Poor agricultural practices	
	Temperature changes	
	Urbanisation	
	Weather changes	
	Wildfires	
	Other	
4.	How does the department ensure communities are informed of the following climate change risks?	
	Extreme weather events	
	Floods	
	Food insecurity	
	Insufficient access to drinking water	
	Land degradation	
	Loss of biodiversity	
	Loss of rural livelihoods	
	Reduced agricultural production	
	Other	
5.	What is done by your department to ensure communities are informed of the following climate change impacts for them and the environment?	
	Compromised agricultural production	
	Cyclones	
	Drought	
	Floods	
	Health impacts	
	Heatwaves	
	Significant loss of biodiversity and ecosystems	
	Water insecurity problems	
	Wildfires	
	Other	

SECTION C: HOW COMMUNITY UNDERSTANDING REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community understanding of climate change is having knowledge about climate change's (i) definition ii) causes, iii) likelihood and severity of expected impacts, iv) policy process, v) risks, vi) planned future adaptation and mitigation responses. The word understanding means (i) having knowledge about a situation or subject, (ii) the ability to comprehend something, (iii) sympathetic awareness or tolerance, (iv) an informal agreement between people, and (v) having reason to believe in something. In some instances, community understanding of climate change is referred to as scientific understanding of climate change.

1.	How do you use the following concepts in relation to your department's mandate?	
	Community understanding of climate change	
	Community awareness of climate change	

		Community understanding of environmental issues	
		Public understanding of environmental issues	
2.	What is done by your department to ensure community understanding of climate change regarding the following?		
		Community understanding of climate change causes	
		Community understanding of climate change impacts	
		Community awareness of climate change decision making processes	
		Community understanding of climate change risks for themselves and their environment	
		Other	
3.	Which of the following participatory techniques are used by your department to enhance community understanding of climate change?		
		Cause and impact diagram	
		Consensus building	
		Facilitation	
		Participatory technology	
		PRA techniques	
		Public meetings	
		Public hearings	
		Resources mapping	
		Transects	
		Other	

SECTION D: HOW THE USE OF INDIGENOUS KNOWLEDGE SYSTEMS IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION FACILITATE COMMUNITY PARTICIPATION IN CLIMATE GOVERNANCE

Explanation: Social factors comprise indigenous knowledge systems, which include culture, for example, beliefs (physical things are given meanings, religion, rituals, identity, art, stories that create outlooks and behaviour), norms (e.g. agricultural practices), values (e.g. family and wealth), and indigenous knowledge (local knowledge and local experiences). Accordingly, this study is limited to indigenous knowledge systems that focus on climate change. During climate change policy formulation and implementation, the use of indigenous knowledge systems will allow officials to learn from relaxed and unhurried interactions, while establishing rapport with communities as a motivation to change their behaviour towards participation in climate change policy processes.

1.	What is your view of the following community values when making the NCCP and its implementation?		
		Cultural values	
		Family	
		Historical information	
		Natural resources (Traditional land, flora, and fauna)	
		Wealth	
		Other	
2.	Which of the following participatory techniques are used by your department to enable consideration of community values in your current climate change decision making process and implementation?		
		Historical calendars	
		Impact diagrams	
		Seasonal calendars	
		Other	
3.	In your current climate change decision making processes, how do you use the following community norms to promote bottom-up mitigation and adaptation responses?		

		Cattle grazing	
		Collecting grass for thatching houses	
		Cutting trees for firewood and building houses	
		History about agricultural practices	
		Wildfires	
		Other	
4.	How does your department use the following participatory techniques to ensure community norms are documented for use when making climate change decisions and during the implementation of those decisions?		
		Seasonal calendars	
		Timeline	
		Trend analysis	
		Other	
5.	How does your department use indigenous knowledge in your current national climate change decision making and implementation to form part of climate change projections such as the following:		
		Behaviour of animals	
		Birds attributed to climate change	
		Observing climate variability	
		Studying the environment	
		Studying weather	
		The direction of wind	
		Type of clouds	
		Vegetation	
		Other	
6.	How does your department use the following participatory techniques to ensure community indigenous knowledge is part of climate change decisions and implementation?		
		Focus group discussions	
		Impact diagrams	
		Mapping	
		Other	
7.	How does your department use the following culture in your current climate change decision making process and implementation programmes?		
		Art	
		Collective community achievements	
		Identity	
		Physical things given meaning	
		Rituals	
		Stories	
		Other	
8.	Which of the following participatory techniques are used by your department to incorporate community culture into the NCCP formulation and implementation?		
		Consensus building	
		Interviews	
		PRA techniques	
		Presentation to communities	
		Public hearings	

		Public meetings	
		Other	
9.	How does your department promote the incorporation of indigenous knowledge systems (values, culture, norms, and indigenous knowledge) into the national climate change policy using the following?		
		Institutions	
		New legislation	
		Regulations	
		Other	
10.	Which role does your department play in climate change policy co-governance processes to facilitate community participation in the following phases of co-producing the national climate change policy?		
		Co-planning	
		Co-designing	
		Co-implementing	
		Co-evaluating	
11.	If yes to question 14, which of the following participatory techniques are used by your department to encourage community co-governance in the NCCP formulation and implementation?		
		Beneficiary assessment	
		Briefings	
		Consensus building	
		Facilitation	
		Focus group discussion	
		Interviews	
		Media	
		Participatory technology	
		Polls	
		PRA techniques	
		Presentations to communities	
		Public hearings	
		Public meetings	
		Workshops	
		Surveys	
		Other	
12.	Elaborate on any challenges you face when using indigenous knowledge systems in the NCCP formulation and implementation?		

SECTION E: EXPLORING HOW POLICY NUDGING COULD BE USED TO ENHANCE COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION, IMPLEMENTATION, AND GOVERNANCE

Explanation: Nudging occurs when small, transparent gestures are applied in policymaking with the aim of affecting behaviour change that supports the policy. The concept of nudging seeks to advance community participation during the policy process. Hence, policy nudging suggests ways, when, and how to apply nudging.

1.	How does your department use policy nudging during the NCCP formulation and implementation?
2.	What is your view on the use of the following nudges to encourage communities to participate in climate change decisions and implementation?

		Education	
		Information	
		Feedback	
		Incentives	
		Persuasion	
3.	What is your view on using the following regulations to ensure communities are involved in climate change decisions and their implementation?		
		Bans	
		Compliance rules	
		Restrictions	
		Other	
4.	What is your view on using the following participatory techniques to ensure communities are involved in climate change decisions and their implementation?		
		Briefs	
		Consensus building	
		Facilitation	
		Focus group discussion	
		Interviews	
		Media	
		Polls	
		Public hearing	
		Surveys	
		Workshops	
		Other	

SECTION F: PRESENTING A CONTEXTUAL PARTICIPATION STRATEGY FOR ENHANCING COMMUNITY PARTICIPATION IN FUTURE CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION PROCESSES

Explanation: The way participation is done in other policies may have a long-lasting impact on how communities view participation. Related memories of poor experiences and outcomes in participation in other government policies may demotivate people from participation. Resultantly, participation may be difficult, especially when one has to use the time allocated for bread and butter issues.

1.	Do you think community participation during climate change policy processes is needed? Motivate your answer.							
		No		Yes		Not sure		Other
2.	What do you think can be done to persuade communities to understand the importance of participation in the formulation of climate change policies?							
3.	In your opinion, which participatory techniques could be used to enhance the participation of communities in future climate change policy decisions, and ultimately successful implementation?							
4.	What could be done to enhance community participation in the future climate change decision making process and implementation?							
5.	What could be done by other actors (experts, politicians, community representatives, and public administrators) to enhance the co-ordination and facilitation of community participation in climate change policy formulation and implementation?							
6.	Do you have any final remarks towards the establishment of a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes?							

Attachment 47: Semi-structured interview schedule – Maseru District Office, Ministry of Local Government and

Chieftainship

District's name			
Position			
Place			
Date		Time	
Interview Number			

1. Welcome.

2. Researcher introduces herself.

3. The title of the study is introduced: Community participation in climate change policy formulation and implementation in Lesotho.

4. Explanation of the research aim and objectives.

The study aims to explore community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes. The study has the following research objectives:

(i) To analyse systems, governance, and participatory theories influencing community participation in climate change policy formulation, implementation, and governance.

(ii) To explore how policy nudging could be used to enhance community participation in climate change policy formulation and implementation and governance.

(iii) To assess how community awareness and understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation.

(iv) To explore how the use of indigenous knowledge systems in climate change policy formulation and implementation facilitates community participation in climate governance.

(v) To determine the nature of community participation in climate change policy processes.

(vi) To present a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes.

5. The researcher requests permission to record the discussion with a voice recorder.

6. The researcher explains the order of the discussion.

7. Participants are informed that they will receive the outcomes of this discussion upon the researcher concluding the study, which is expected to be at the beginning of 2022.

8. Participants are informed that their responses will be treated with confidentiality. This means that they may be quoted during the reporting of the findings, but such quotes will not be attributed to them by name.

Instructions:

1. Kindly turn off your cell phone or put it on silent.

2. Please answer the questions honestly and openly (there is no right or wrong answer)

SECTION A: DETERMINING THE NATURE OF COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION

Explanation: Climate change occurs when human activity indirectly or directly alters the composition of the global atmosphere in addition to natural climate variations observed over comparable time periods. Community participation (active involvement) during climate change policy formulation and implementation include amongst others (e.g. information, consultation, deliberation, co-production, participatory techniques, governance, policy nudging, and facilitation). Putting community participation into practice requires new explicit and formal participatory methodologies that seek to include each actor in a multilateral and inter-consensus policy process (agenda setting, policy formulation, policy adoption, policy implementation, and policy evaluation).

Policy agenda setting: refers to defining policy problems.

Policy formulation: refers to crafting alternative courses of action to address the problem.

Policy adoption: refers to choosing the best alternative course of action.

Policy implementation: refers to carry out, fulfil, and complete the achievement of objectives set forth during policy adoption.

Policy evaluation: refers to assessing the importance and impact of a policy for redirection to another new problem or to terminate it to conclude the policy process.

1.	How does the Maseru district office (MDO) facilitate community participation in the National Climate Change Policy (NCCP) formulation and implementation during the following policy stages?		
		Agenda setting	
		Policy formulation	
		Policy adoption	
		Policy implementation	
		Policy evaluation	
2.	How does the MDO use the following participatory techniques to facilitate community participation during agenda setting to define climate change problems?		
		Consensus building	
		Facilitation	
		Focus group discussion	
		Interviews	
		Participatory technology	
		PRA techniques	
		Public hearings	
		Workshops	
		Other	
3.	During policy formulation, which of the following participatory techniques are used by the MDO to ensure communities articulate preferred courses of alternatives regarding climate change mitigation and adaptation measures?		
		Consensus building	
		Facilitation	
		Focus group discussions	
		PRA techniques	
		Public hearings	
		Workshops	
		Other	
4.	During policy adoption, how does the MDO use the following participatory techniques to ensure communities choose alternative courses of action regarding climate change decisions?		
		Briefs	
		Community presentations	
		Consensus building	
		Focus group discussions	
		Interviews	

		Media	
		PRA	
		Participatory technology	
		PRA techniques	
		Public meetings	
		Public hearings	
		Others	
5.	Using the following participatory techniques, how does the MDO facilitate community participation during policy evaluation?		
		Beneficiary assessment	
		Focus group discussion	
		Interviews	
		Polls	
		PRA techniques	
		Public meetings	
		Workshops	
		Other	
6.	How do you work with the following actors to encourage community participation in the respective policy stages?		
		Experts	
		Community representatives	
		Politicians	
		Public administrators	
		Other	
7.	Elaborate on any challenges you face when co-ordinating community participation in the NCCP processes?		

SECTION B: HOW COMMUNITY AWARENESS REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community awareness of climate change is defined as the community's understanding of climate change in terms of its definition, causes, impacts, risks, and planned responses (mitigation and adaptation) based on information or experience. Having information and experience will lead to communities being well informed and critically conscious about climate change.

1.	How are the following participatory techniques used by the MDO to enhance community awareness of climate change?		
		Cause and impact diagrams	
		Cultural transects	
		Participatory mapping	
		Vulnerability maps	
		Other	
2.	What is done by the MDO to ensure communities are informed of the following climate change causes?		
		Air pollution	
		Climate variability	
		Deforestation	
		Industrialisation	
		Ozone depletion	
		Poor agricultural practices	
		Temperature changes	
		Urbanisation	

		Weather changes	
		Wildfires	
		Other	
3.	What is done by the MDO to ensure that communities are informed of the following climate change risks for them and the environment?		
		Extreme weather events	
		Floods	
		Food insecurity	
		Insufficient access to drinking water	
		Land degradation	
		Loss of biodiversity	
		Loss of rural livelihoods	
		Reduced agricultural production	
		Other	
4.	What is done by the MDO to ensure communities are informed of the following climate change impacts for them and the environment?		
		Compromised agricultural production	
		Cyclones	
		Drought	
		Floods	
		Heatwaves	
		Significant loss of biodiversity and ecosystems	
		Weather insecurity problems	
		Other	

SECTION C: HOW COMMUNITY UNDERSTANDING REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community understanding of climate change is having knowledge about climate change's (i) definition ii) causes, iii) likelihood and severity of expected impacts, iv) policy process, v) risks, vi) planned future adaptation and mitigation responses. The word understanding means (i) having knowledge about a situation or subject, (ii) the ability to comprehend something, (iii) sympathetic awareness or tolerance, (iv) an informal agreement between people, and (v) having reason to believe in something. In some instances, community understanding of climate change is referred to as scientific understanding of climate change.

1.	What is done by the MDO to ensure communities understand climate change impacts?		
		Community understanding of climate change impacts	
		Community understanding of climate change causes	
		Community awareness of climate change decision-making processes	
		Community understanding of climate change risks for themselves and their environment?	
		Other	
2.	Which of the following participatory techniques are used by the MDO to enhance community understanding of climate change?		
		Cause and impact diagram	
		Consensus building	

	Facilitation	
	Participatory technology	
	PRA techniques	
	Public meetings	
	Public hearings	
	Resources mapping	
	Transects	
	Other	

SECTION D: HOW THE USE OF INDIGENOUS KNOWLEDGE SYSTEMS IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION FACILITATE COMMUNITY PARTICIPATION IN CLIMATE GOVERNANCE

Explanation: Social factors comprise indigenous knowledge systems, which include culture, for example, beliefs (physical things are given meanings, religion, rituals, identity, art, stories that create outlooks and behaviour), norms (e.g. agricultural practices), values (e.g. family and wealth), and indigenous knowledge (local knowledge and local experiences). Accordingly, this study is limited to indigenous knowledge systems that focus on climate change. During climate change policy formulation and implementation, the use of indigenous knowledge systems will allow officials to learn from relaxed and unhurried interactions, while establishing rapport with communities as a motivation to change their behaviour towards participation in climate change policy processes.

1.	How does the MDO coordinate communities to document the following climate change values (community principles) for inclusion in climate change policy formulation and its implementation?	
	Cultural values	
	Family	
	Historical information	
	Natural resources (Traditional land, flora, and fauna)	
	Wealth	
	Other	
2.	Which of the following participatory techniques are used by the MDO, to enable consideration of community values in the NCCP and its implementation?	
	Historical calendars	
	Impact diagrams	
	Seasonal calendars	
	Other	
3.	How does the MDO coordinate community participation in the national climate change policy formulation and implementation using the following community norms to promote bottom-up policy alternatives?	
	Cattle grazing	
	Cutting trees for firewood and building houses	
	Collecting grass for thatching houses	
	History about agricultural practices	
	Wildfires	
	Other	
4.	How does the MDO use the following participatory techniques to enable documentation of community norms that relate to climate change into the NCCP?	
	Seasonal calendars	
	Timeline	
	Trend analysis	
	Other	

5.	How does the MDO coordinate communities to get information on the following community indigenous knowledge (traditional knowledge) for inclusion in the NCCP and its implementation:	
		Behaviour of animals
		Birds attributed to climate change
		Observing climate variability
		Studying the environment
		Studying weather
		Type of clouds
		Vegetation
		Wind direction
		Other
6.	How does the MDO use the following participatory techniques to ensure community indigenous knowledge is part of the NCCP?	
		Focus group discussions
		Impact diagram
		Mapping
		Other
7.	How does the MDO coordinates using the following community culture (set customs and beliefs) in the NCCP and its implementation?	
		Art
		Collective community achievements
		Identity
		Physical things meaning
		Rituals
		Stories
		Other
8.	Which of the following participatory techniques are used by the MDO to incorporate community culture in the NCCP and its implementation?	
		Consensus building
		Interviews
		Presentation to communities
		Public hearings
		Public meetings
		PRA technique
		Other
9.	How does the MDO use the following to promote the incorporation of community indigenous knowledge systems (values, culture, norms, and indigenous knowledge) in climate change policies?	
		Institutions
		New legislation
		Regulations
		Other
10.	How does the MDO assist in NCCP co-governance processes to facilitate community participation in the following co-production phases?	
		Co-planning

		Co-designing	
		Co-implementing	
		Co-evaluating	
11.	Which of the following participatory techniques are used by the MDO to encourage community co-governance in climate change decision making and implementation?		
		Beneficiary assessment	
		Briefings	
		Community presentations	
		Consensus building	
		Facilitation	
		Focus group discussions	
		Interviews	
		Media	
		Polls	
		PRA techniques	
		Public hearings	
		Public meetings	
		Surveys	
		Workshops	
		Other	
SECTION E: USING POLICY NUDGING TO ENHANCE COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION, IMPLEMENTATION, AND GOVERNANCE Explanation: Nudging occurs when small, transparent gestures are applied in policymaking with the aim of affecting behaviour change that supports the policy. The concept of nudging seeks to advance community participation during the policy process. Hence, policy nudging suggests ways, when, and how to apply nudging.			
1.	How does the MDO use policy nudging during the NCCP formulation and implementation?		
2.	What is your view on using the following nudges to encourage community participation in climate change policy formulation and implementation?		
		Education	
		Feedback	
		Incentives	
		Information	
		Persuasion	
3.	What is your view on using the following regulations to ensure communities are involved in climate change policy formulation and implementation?		
		Bans	
		Compliance rules	
		Restrictions	
		Other	
4.	What is your view on using the following participatory techniques to ensure communities are involved in climate change policy formulation and implementation?		

	Briefs	
	Consensus building	
	Interviews	
	Facilitation	
	Focus group discussions	
	Media	
	Polls	
	Public hearing	
	Surveys	
	Other	

SECTION F: PRESENTING A CONTEXTUAL PARTICIPATION STRATEGY FOR ENHANCING COMMUNITY PARTICIPATION IN FUTURE CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION PROCESSES

Explanation: The way participation occurs for other policies may have a long-lasting impact on how communities view participation. Related memories of poor experiences and outcomes in participation in other government policies may demotivate people from participation. Resultantly, participation may be difficult, especially when one has to use the time allocated for bread and butter issues.

1.	Do you think community participation during climate change policy processes is needed? Motivate your answer.							
		No		Yes		Not sure		Other
2.	What do you think can be done to persuade communities to understand the importance of participation in the formulation of climate change policies?							
3.	In your opinion, which participatory techniques could be used to enhance community participation in future climate change policy decisions, and ultimately successful implementation?							
4.	What do you think could be done to enhance community participation in future climate change decision making processes and implementation?							
5.	What could be done by other actors (experts, politicians, councillors, chiefs, and public administrators) to enhance the coordination and facilitation of community participation during climate change policy formulation and implementation?							
6.	Do you have any final remarks towards the establishment of a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes?							

Attachment 48: Semi-structured interview schedule –Decentralisation Department, Ministry of Local Government and Chieftainship

Department's name			
Position			
Place			
Date		Time	
Interview Number			

1. Welcome.
2. Researcher introduces herself.
3. The title of the study is introduced: Community participation in climate change policy formulation and implementation in Lesotho.
4. Explanation of the research aim and objectives.
The study aims to explore community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes. The study has the following research objectives:
 - (i) To analyse systems, governance, and participatory theories influencing community participation in climate change policy formulation, implementation, and governance.
 - (ii) To explore how policy nudging could be used to enhance community participation in climate change policy formulation and implementation and governance.
 - (iii) To assess how community awareness and understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation.
 - (iv) To explore how the use of indigenous knowledge systems in climate change policy formulation and implementation facilitates community participation in climate governance.
 - (v) To determine the nature of community participation in climate change policy processes.
 - (vi) To present a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes.
5. The researcher requests permission to record the discussion with a voice recorder.
6. The researcher explains the order of the discussion.
7. Participants are informed that they will receive the outcomes of this discussion upon the researcher concluding the study, which is expected to be at the beginning of 2022.
8. Participants are informed that their responses will be treated with confidentiality. This means that they may be quoted during the reporting of the findings, but such quotes will not be attributed to them by name.

Instructions:

1. Kindly turn off your cell phone or put it on silent.
2. Please answer the questions honestly and openly (there is no right or wrong answer)

SECTION A: DETERMINING THE NATURE OF COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION

Explanation: Climate change occurs when human activity indirectly or directly alters the composition of the global atmosphere in addition to natural climate variations observed over comparable time periods. Community participation (active involvement) during climate change policy formulation and implementation include amongst others (e.g. information, consultation, deliberation, co-production, participatory techniques, governance, policy nudging, and facilitation). Putting community participation into practice requires new explicit and formal participatory methodologies that seek to include each actor in a multilateral and inter-consensus policy process (agenda setting, policy formulation, policy adoption, policy implementation, and policy evaluation).

Policy agenda setting: refers to defining policy problems.

Policy formulation: refers to crafting alternative courses of action to address the problem.

Policy adoption: refers to choosing the best alternative course of action.

Policy implementation: refers to carry out, fulfil, and complete the achievement of objectives set forth during policy adoption.

Policy evaluation: refers to assessing the importance and impact of a policy for redirection to another new problem or to terminate it to conclude the policy process.

1.	How does the Decentralisation department facilitate community participation in the National Climate Change Policy (NCCP) formulation and implementation during the following policy stages?	
		Agenda setting
		Policy formulation
		Policy adoption
		Policy implementation
		Policy evaluation
2.	How does the Decentralisation department use the following participatory techniques to facilitate community participation during agenda setting to define climate change problems?	
		Consensus building
		Facilitation
		Focus group discussion
		Interviews
		Participatory technology
		PRA techniques
		Public hearings
		Workshops
		Other
3.	During policy formulation, which of the following participatory techniques are used by the department to ensure communities articulate preferred courses of alternatives regarding climate change mitigation and adaptation measures?	
		Consensus building
		Facilitation
		Focus group discussions
		PRA techniques
		Public hearings
		Workshops
		Other
4.	During policy adoption, how does the department use the following participatory techniques to ensure communities choose alternative courses of action regarding climate change decisions?	
		Briefs
		Community presentations
		Consensus building
		Focus group discussions
		Interviews

		Media	
		PRA	
		Participatory technology	
		PRA techniques	
		Public meetings	
		Public hearings	
		Others	
5.	Using the following participatory techniques, how does the Decentralisation department facilitate community participation during policy evaluation?		
		Beneficiary assessment	
		Focus group discussion	
		Interviews	
		Polls	
		PRA techniques	
		Public meetings	
		Workshops	
		Other	
6.	How do you work with the following actors to encourage community participation in the respective policy stages?		
		Experts	
		Community representatives	
		Politicians	
		Public administrators	
		Other	
7.	Elaborate on any challenges you face when co-ordinating community participation in the national climate change policy processes?		

SECTION B: HOW COMMUNITY AWARENESS REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community awareness of climate change is defined as the community's understanding of climate change in terms of its definition, causes, impacts, risks, and planned responses (mitigation and adaptation) based on information or experience. Having information and experience will lead to communities being well informed and critically conscious about climate change.

1.	How are the following participatory techniques used by the Decentralisation department to enhance community awareness of climate change?		
		Cause and impact diagrams	
		Cultural transects	
		Participatory mapping	
		Vulnerability maps	
		Other	
2.	What is done by the department to ensure that communities are informed of the following climate change causes?		
		Air pollution	
		Deforestation	
		Climate variability	
		Industrialisation	
		Poor agricultural practices	

		Ozone depletion	
		Temperature changes	
		Urbanisation	
		Weather changes	
		Wildfires	
		Other	
3.	What is done by the department to ensure that communities are informed of the following climate change risks for them and the environment?		
		Extreme weather events	
		Floods	
		Food insecurity	
		Insufficient access to drinking water	
		Land degradation	
		Loss of biodiversity	
		Loss of rural livelihoods	
		Reduced agricultural production	
		Other	
4.	What is done by the department to ensure communities are informed of the following climate change impacts for them and the environment?		
		Compromised agricultural production	
		Cyclones	
		Drought	
		Floods	
		Heatwaves	
		Significant loss of biodiversity and ecosystems	
		Weather insecurity problems	
		Other	

SECTION C: HOW COMMUNITY UNDERSTANDING REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community understanding of climate change is having knowledge about climate change's (i) definition ii) causes, iii) likelihood and severity of expected impacts, iv) policy process, v) risks, vi) planned future adaptation and mitigation responses. The word understanding means (i) having knowledge about a situation or subject, (ii) the ability to comprehend something, (iii) sympathetic awareness or tolerance, (iv) an informal agreement between people, and (v) having reason to believe in something. In some instances, community understanding of climate change is referred to as scientific understanding of climate change.

1.	What is done by the department to ensure communities understand the following regarding climate change?		
		Community understanding of climate change impacts	
		Community understanding of climate change causes	
		Community awareness of climate change decision-making processes	
		Community understanding of climate change risks for themselves and their environment?	
		Other	
2.	Which of the following participatory techniques are used by the department to enhance community understanding of climate change?		
			Cause and impact diagram

	Consensus building	
	Facilitation	
	Participatory technology	
	PRA techniques	
	Public meetings	
	Public hearings	
	Resources mapping	
	Transects	
	Other	

SECTION D: HOW THE USE OF INDIGENOUS KNOWLEDGE SYSTEMS IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION FACILITATE COMMUNITY PARTICIPATION IN CLIMATE GOVERNANCE

Explanation: Social factors comprise indigenous knowledge systems, which include culture, for example, beliefs (physical things are given meanings, religion, rituals, identity, art, stories that create outlooks and behaviour), norms (e.g. agricultural practices), values (e.g. family and wealth), and indigenous knowledge (local knowledge and local experiences). Accordingly, this study is limited to indigenous knowledge systems that focus on climate change. During climate change policy formulation and implementation, the use of indigenous knowledge systems will allow officials to learn from relaxed and unhurried interactions, while establishing rapport with communities as a motivation to change their behaviour towards participation in climate change policy processes.

1.	How does the department coordinate communities to document the following climate change values (community principles) for inclusion in climate change policy formulation and its implementation?	
	Cultural values	
	Family	
	Historical information	
	Natural resources (Traditional land, flora, and fauna)	
	Wealth	
	Other	
2.	Which of the following participatory techniques are used by the department to enable consideration of community values in the NCCP and its implementation?	
	Impact diagrams	
	Historical calendars	
	Seasonal calendars	
	Other	
3.	How does the department coordinate community participation in the national climate change policy formulation and implementation using the following community norms to promote bottom-up policy alternatives?	
	Cattle grazing	
	Cutting trees for firewood and building houses	
	Collecting grass for thatching houses	
	History about agricultural practices	
	Wildfires	
	Other	
4.	How does the department use the following participatory techniques to enable documentation of community norms that relate to climate change into the NCCP?	
	Seasonal calendars	
	Timeline	
	Trend analysis	
	Other	

5.	How does the department coordinate communities to get information on the following community indigenous knowledge (traditional knowledge) for inclusion in the NCCP and its implementation:	
	Behaviour of animals	
	Birds attributed to climate change	
	Observing climate variability	
	Studying the environment	
	Studying weather	
	Type of clouds	
	Vegetation	
	Wind direction	
	Other	
6.	How does the department use the following participatory techniques to ensure community indigenous knowledge is part of the NCCP?	
	Focus group discussion	
	Impact diagram	
	Mapping	
	Other	
7.	How does the department coordinate community participation using the following community culture (set customs and beliefs) in the NCCP and its implementation?	
	Art	
	Collective community achievements	
	Identity	
	Physical things meaning	
	Rituals	
	Stories	
	Other	
8.	Which of the following participatory techniques are used by the department to incorporate community culture in the NCCP and its implementation?	
	Consensus building	
	Interviews	
	Presentation to communities	
	Public hearings	
	Public meetings	
	PRA technique	
	Other	
9.	How does the department use the following to promote the incorporation of community indigenous knowledge systems (values, culture, norms, and indigenous knowledge) in climate change policies?	
	Institutions	
	New legislation	
	Regulations	
	Specify other	
10.	How does the department assist in NCCP co-governance processes to facilitate community participation in the following co-production phases?	
	Co-planning	

		Co-designing	
		Co-implementing	
		Co-evaluating	
11.	Which of the following participatory techniques are used by the department to encourage community co-governance in climate change decision making and implementation?		
		Beneficiary assessment	
		Briefings	
		Community presentations	
		Consensus building	
		Facilitation	
		Focus group discussions	
		Interviews	
		Media	
		Polls	
		PRA techniques	
		Public hearings	
		Public meetings	
		Surveys	
		Workshops	
		Other	
SECTION E: USING POLICY NUDGING TO ENHANCE COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION, IMPLEMENTATION, AND GOVERNANCE Explanation: Nudging occurs when small, transparent gestures are applied in policymaking with the aim of affecting behaviour change that supports the policy. The concept of nudging seeks to advance community participation during the policy process. Hence, policy nudging suggests ways, when, and how to apply nudging.			
1.	How does the department use policy nudging during the NCCP formulation and implementation?		
2.	What is your view on using the following nudges to encourage community participation in climate change policy formulation and implementation?		
		Education	
		Feedback	
		Incentives	
		Information	
		Persuasion	
3.	What is your view on using the following regulations to ensure communities are involved in climate change policy formulation and implementation?		
		Bans	
		Compliance rules	
		Restrictions	
		Other	
4.	What is your view on using the following participatory techniques to ensure communities are involved in climate change policy formulation and implementation?		
		Briefs	

	Consensus building	
	Interviews	
	Facilitation	
	Focus group discussions	
	Media	
	Polls	
	Public hearing	
	Surveys	
	Other	

SECTION F: PRESENTING A CONTEXTUAL PARTICIPATION STRATEGY FOR ENHANCING COMMUNITY PARTICIPATION IN FUTURE CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION PROCESSES

Explanation: The way participation occurs for other policies may have a long-lasting impact on how communities view participation. Related memories of poor experiences and outcomes in participation in other government policies may demotivate people from participation. Resultantly, participation may be difficult, especially when one has to use the time allocated for bread and butter issues.

1.	Do you think community participation during climate change policy processes is needed? Motivate your answer.							
	No		Yes		Not sure		Other	
2.	What do you think can be done to persuade communities to understand the importance of participation in the formulation of climate change policies?							
3.	In your opinion, which participatory techniques could be used to enhance community participation in future climate change policy decisions, and ultimately successful implementation?							
4.	What do you think could be done to enhance community participation in future climate change decision making processes and implementation?							
5.	What could be done by other actors (experts, politicians, councillors, chiefs, and public administrators) to enhance the coordination and facilitation of community participation during climate change policy formulation and implementation?							
6.	Do you have any final remarks towards the establishment of a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes?							

Attachment 49: Semi-structured interview schedule – Chieftainship Department, Ministry of Local Government and Chieftainship

District office			
Position			
Place			
Date		Time	
Interview Number			

1. Welcome.
2. Researcher introduces herself.
3. The title of the study is introduced: Community participation in climate change policy formulation and implementation in Lesotho.
4. Explanation of the research aim and objectives.
The study aims to explore community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes. The study has the following research objectives:
 - (i) To analyse systems, governance, and participatory theories influencing community participation in climate change policy formulation, implementation, and governance.
 - (ii) To explore how policy nudging could be used to enhance community participation in climate change policy formulation and implementation and governance.
 - (iii) To assess how community awareness and understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation.
 - (iv) To explore how the use of indigenous knowledge systems in climate change policy formulation and implementation facilitates community participation in climate governance.
 - (v) To determine the nature of community participation in climate change policy processes.
 - (vi) To present a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes.
5. The researcher requests permission to record the discussion with a voice recorder.
6. The researcher explains the order of the discussion.
7. Participants are informed that they will receive the outcomes of this discussion upon the researcher concluding the study, which is expected to be at the beginning of 2022.
8. Participants are informed that their responses will be treated with confidentiality. This means that they may be quoted during the reporting of the findings, but such quotes will not be attributed to them by name.

Instructions:

1. Kindly turn off your cell phone or put it on silent.
2. Please answer the questions honestly and openly (there is no right or wrong answer)

SECTION A: DETERMINING THE NATURE OF COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION

Explanation: Climate change occurs when human activity indirectly or directly alters the composition of the global atmosphere in addition to natural climate variations observed over comparable time periods. Community participation (active involvement) during climate change policy formulation and implementation include amongst others (e.g. information, consultation, deliberation, co-production, participatory techniques, governance, policy nudging, and facilitation). Putting community participation into practice requires new explicit and formal participatory methodologies that seek to include each actor in a multilateral and inter-consensus policy process (agenda setting, policy formulation, policy adoption, policy implementation, and policy evaluation).

Policy agenda setting: refers to defining policy problems.

Policy formulation: refers to crafting alternative courses of action to address the problem.

Policy adoption: refers to choosing the best alternative course of action.

Policy implementation: refers to carry out, fulfil, and complete the achievement of objectives set forth during policy adoption.

Policy evaluation: refers to assessing the importance and impact of a policy for redirection to another new problem or to terminate it to conclude the policy process.

1.	How does the Chieftainship department support chiefs to facilitate community participation in the National Climate Change Policy (NCCP) formulation and implementation during the following policy stages?																		
	<table border="1"> <tr><td>Agenda setting</td><td></td></tr> <tr><td>Policy formulation</td><td></td></tr> <tr><td>Policy adoption</td><td></td></tr> <tr><td>Policy implementation</td><td></td></tr> <tr><td>Policy evaluation</td><td></td></tr> </table>	Agenda setting		Policy formulation		Policy adoption		Policy implementation		Policy evaluation									
Agenda setting																			
Policy formulation																			
Policy adoption																			
Policy implementation																			
Policy evaluation																			
2.	How does the Chieftainship department support chiefs to facilitate community participation during agenda setting through the following participatory techniques?																		
	<table border="1"> <tr><td>Consensus building</td><td></td></tr> <tr><td>Facilitation</td><td></td></tr> <tr><td>Focus group discussions</td><td></td></tr> <tr><td>Interviews</td><td></td></tr> <tr><td>PRA techniques</td><td></td></tr> <tr><td>Participatory technology</td><td></td></tr> <tr><td>Public hearings</td><td></td></tr> <tr><td>Workshops</td><td></td></tr> <tr><td>Other</td><td></td></tr> </table>	Consensus building		Facilitation		Focus group discussions		Interviews		PRA techniques		Participatory technology		Public hearings		Workshops		Other	
Consensus building																			
Facilitation																			
Focus group discussions																			
Interviews																			
PRA techniques																			
Participatory technology																			
Public hearings																			
Workshops																			
Other																			
3.	During policy formulation, which of the following participatory techniques are used by the department in supporting chiefs to ensure communities articulate preferred courses of alternatives regarding climate change mitigation and adaptation measures?																		
	<table border="1"> <tr><td>Consensus building</td><td></td></tr> <tr><td>Facilitation</td><td></td></tr> <tr><td>Focus group discussions</td><td></td></tr> <tr><td>PRA techniques</td><td></td></tr> <tr><td>Public hearings</td><td></td></tr> <tr><td>Workshops</td><td></td></tr> <tr><td>Other</td><td></td></tr> </table>	Consensus building		Facilitation		Focus group discussions		PRA techniques		Public hearings		Workshops		Other					
Consensus building																			
Facilitation																			
Focus group discussions																			
PRA techniques																			
Public hearings																			
Workshops																			
Other																			
4.	During policy adoption, how does this department support chiefs to ensure communities choose alternative courses of action regarding climate change decisions?																		
	<table border="1"> <tr><td>Briefs</td><td></td></tr> <tr><td>Community presentations</td><td></td></tr> <tr><td>Consensus building</td><td></td></tr> <tr><td>Focus group discussions</td><td></td></tr> <tr><td>Interviews</td><td></td></tr> </table>	Briefs		Community presentations		Consensus building		Focus group discussions		Interviews									
Briefs																			
Community presentations																			
Consensus building																			
Focus group discussions																			
Interviews																			

		Media	
		PRA	
		Participatory technology	
		PRA techniques	
		Public meetings	
		Public hearings	
		Others	
5.	Using the following participatory techniques, how does this Chieftainship department support chiefs to facilitate community participation during policy evaluation?		
		Beneficiary assessment	
		Focus group discussion	
		Interviews	
		Polls	
		PRA techniques	
		Public meetings	
		Workshops	
		Other	
6.	In addition to working with the chiefs, how do you work with the following actors to encourage community participation in the respective policy stages?		
		Experts	
		Community representatives	
		Politicians	
		Public administrators	
		Other	
7.	Elaborate on any challenges you face when working with the chiefs to co-ordinate community participation in the NCCP processes?		

SECTION B: HOW COMMUNITY AWARENESS REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community awareness of climate change is defined as the community's understanding of climate change in terms of its definition, causes, impacts, risks, and planned responses (mitigation and adaptation) based on information or experience. Having information and experience will lead to communities being well informed and critically conscious about climate change.

1.	How does this department assist chiefs to use the following participatory techniques to enhance community awareness of climate change?		
		Cause and impact diagrams	
		Cultural transects	
		Participatory mapping	
		Vulnerability maps	
		Other	
2.	What is done by the department to assist chiefs to ensure that communities are informed of the following climate change causes?		
		Air pollution	
		Climate variability	
		Deforestation	
		Industrialisation	

		Ozone depletion	
		Poor agricultural practices	
		Temperature changes	
		Urbanisation	
		Weather changes	
		Wildfires	
		Other	
3.	How does the department assist chiefs to ensure that communities are informed of the following climate change risks for them and the environment?		
		Extreme weather events	
		Floods	
		Food insecurity	
		Insufficient access to drinking water	
		Land degradation	
		Loss of biodiversity	
		Loss of rural livelihoods	
		Reduced agricultural production	
		Other	
4.	What is done by the department to ensure communities are informed of the following climate change impacts for them and the environment?		
		Compromised agricultural production	
		Cyclones	
		Drought	
		Floods	
		Heatwaves	
		Significant loss of biodiversity and ecosystems	
		Weather insecurity problems	
		Other	

SECTION C: HOW COMMUNITY UNDERSTANDING REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community understanding of climate change is having knowledge about climate change's (i) definition ii) causes, iii) likelihood and severity of expected impacts, iv) policy process, v) risks, vi) planned future adaptation and mitigation responses. The word understanding means (i) having knowledge about a situation or subject, (ii) the ability to comprehend something, (iii) sympathetic awareness or tolerance, (iv) an informal agreement between people, and (v) having reason to believe in something. In some instances, community understanding of climate change is referred to as scientific understanding of climate change.

1.	How does the department assist chiefs to ensure communities understand the following regarding climate change?		
		Community understanding of climate change causes	
		Community understanding of climate change impacts	
		Community awareness of climate change decision-making processes	
		Community understanding of climate change risks for themselves and their environment?	
		Other	
2.	How does this department assist chiefs to use the following participatory techniques to enhance community understanding of climate change?		

	Cause and impact diagram	
	Consensus building	
	Facilitation	
	Participatory technology	
	PRA techniques	
	Public meetings	
	Public hearings	
	Resources mapping	
	Transects	
	Other	

SECTION D: HOW THE USE OF INDIGENOUS KNOWLEDGE SYSTEMS IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION FACILITATE COMMUNITY PARTICIPATION IN CLIMATE GOVERNANCE

Explanation: Social factors comprise indigenous knowledge systems, which include culture, for example, beliefs (physical things are given meanings, religion, rituals, identity, art, stories that create outlooks and behaviour), norms (e.g. agricultural practices), values (e.g. family and wealth), and indigenous knowledge (local knowledge and local experiences). Accordingly, this study is limited to indigenous knowledge systems that focus on climate change. During climate change policy formulation and implementation, the use of indigenous knowledge systems will allow officials to learn from relaxed and unhurried interactions, while establishing rapport with communities as a motivation to change their behaviour towards participation in climate change policy processes.

1.	How does the department assist chiefs to coordinate communities to document the following climate change values (community principles) for inclusion in climate change policy formulation and its implementation?	
	Cultural values	
	Family	
	Historical information	
	Natural resources (Traditional land, flora, and fauna)	
	Wealth	
	Other	
2.	How are chiefs supported by this department to use the following participatory techniques to enable consideration of community values in the NCCP and its implementation?	
	Impact diagrams	
	Historical calendars	
	Seasonal calendars	
	Other	
3.	How are chiefs supported by the department to coordinate community participation in the NCCP formulation and implementation using the following community norms to promote bottom-up policy alternatives?	
	Cattle grazing	
	Collecting grass for thatching houses	
	Cutting trees for firewood and building houses	
	History about agricultural practices	
	Wildfires	
	Other	
4.	How does the department support the chiefs to use the following participatory techniques to enable documentation of community norms that relate to climate change into the NCCP?	
	Seasonal calendars	
	Timeline	
	Trend analysis	

		Other	
5.	How does the department support chiefs to coordinate communities to get information on the following community indigenous knowledge (traditional knowledge) for inclusion in the NCCP and its implementation:		
		Behaviour of animals	
		Birds attributed to climate change	
		Observing climate variability	
		Studying the environment	
		Studying weather	
		Type of clouds	
		Vegetation	
		Wind direction	
		Other	
6.	How are chiefs supported by this department to use the following participatory techniques to ensure community indigenous knowledge is part of the NCCP?		
		Focus group discussion	
		Impact diagram	
		Mapping	
		Other	
7.	What is done by this department to support chiefs to coordinate community participation using the following community culture (set customs and beliefs) in the NCCP and its implementation?		
		Art	
		Collective community achievements	
		Identity	
		Physical things meaning	
		Rituals	
		Stories	
		Other	
8.	How does the department support chiefs when they use the following participatory techniques to incorporate community culture in the NCCP and its implementation?		
		Consensus building	
		Interviews	
		Presentation to communities	
		Public hearings	
		Public meetings	
		PRA technique	
		Other	
9.	How does the department use the following to promote the incorporation of community indigenous knowledge systems (values, culture, norms, and indigenous knowledge) in climate change policies?		
		Institutions	
		New legislation	
		Regulations	
		Specify other	
10.	How does the department assist in NCCP co-governance processes to facilitate community participation in the following co-production phases?		
		Co-planning	

		Co-designing	
		Co-implementing	
		Co-evaluating	
11.	Which of the following participatory techniques are used by the department to encourage community co-governance in climate change decision making and implementation?		
		Beneficiary assessment	
		Briefings	
		Community presentations	
		Consensus building	
		Facilitation	
		Focus group discussion	
		Interviews	
		Media	
		Polls	
		PRA techniques	
		Public hearings	
		Public meetings	
		Surveys	
		Workshops	
		Other	
SECTION E: USING POLICY NUDGING TO ENHANCE COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION, IMPLEMENTATION, AND GOVERNANCE Explanation: Nudging occurs when small, transparent gestures are applied in policymaking with the aim of affecting behaviour change that supports the policy. The concept of nudging seeks to advance community participation during the policy process. Hence, policy nudging suggests ways, when, and how to apply nudging.			
1.	What is your view on using the following nudges to encourage community participation in climate change policy formulation and implementation?		
		Education	
		Feedback	
		Incentives	
		Information	
		Persuasion	
2.	What is your view on using the following regulations to ensure communities are involved in climate change policy formulation and implementation?		
		Bans	
		Compliance rules	
		Restrictions	
		Other	
3.	What is your view on using the following participatory techniques to ensure communities are involved in climate change policy formulation and implementation?		
		Briefs	
		Consensus building	

	Facilitation	
	Focus group discussion	
	Interviews	
	Media	
	Polls	
	Public hearing	
	Surveys	
	Other	

SECTION F: PRESENTING A CONTEXTUAL PARTICIPATION STRATEGY FOR ENHANCING COMMUNITY PARTICIPATION IN FUTURE CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION PROCESSES

Explanation: The way participation occurs for other policies may have a long-lasting impact on how communities view participation. Related memories of poor experiences and outcomes in participation in other government policies may demotivate people from participation. Resultantly, participation may be difficult, especially when one has to use the time allocated for bread and butter issues.

1.	Do you think community participation during climate change policy processes is needed? Motivate your answer.							
		No		Yes		Not sure		Other
2.	What do you think can be done to persuade communities to understand the importance of participation in the formulation of climate change policies?							
3.	In your opinion, which participatory techniques could be used to enhance community participation in future climate change policy decisions, and ultimately successful implementation?							
4.	What do you think could be done to enhance community participation in future climate change decision making processes and implementation?							
5.	What could be done by other actors (experts, politicians, councillors, chiefs, and public administrators) to enhance the coordination and facilitation of community participation during climate change policy formulation and implementation?							
6.	Do you have any final remarks towards the establishment of a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes?							

Attachment 50: Semi-structured interview schedule – Geography and Environmental Science department, National University of Lesotho.

Department's name			
Number of participants			
Place			
Date		Time	
Interview Number			

1. Welcome.
2. Researcher introduces herself.
3. The title of the study is introduced: Community participation in climate change policy formulation and implementation in Lesotho.
4. Explanation of the research aim and objectives.
The study aims to explore community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes. The study has the following research objectives:
 - (i) To analyse systems, governance, and participatory theories influencing community participation in climate change policy formulation, implementation, and governance.
 - (ii) To explore how policy nudging could be used to enhance community participation in climate change policy formulation and implementation and governance.
 - (iii) To assess how community awareness and understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation.
 - (iv) To explore how the use of indigenous knowledge systems in climate change policy formulation and implementation facilitates community participation in climate governance.
 - (v) To determine the nature of community participation in climate change policy processes.
 - (vi) To present a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes.
5. The researcher requests permission to record the discussion with a voice recorder.
6. The researcher explains the order of the discussion.
7. Participants are informed that they will receive the outcomes of this discussion upon the researcher concluding the study, which is expected to be at the beginning of 2022.
8. Participants are informed that their responses will be treated with confidentiality. This means that they may be quoted during the reporting of the findings, but such quotes will not be attributed to them by name.

Instructions:

1. Kindly turn off your cell phone or put it on silent.
2. Please answer the questions honestly and openly (there is no right or wrong answer)

SECTION A: DETERMINING THE NATURE OF COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION

Explanation: Climate change occurs when human activity indirectly or directly alters the composition of the global atmosphere in addition to natural climate variations observed over comparable time periods. Community participation (active involvement) during climate change policy formulation and implementation include amongst others (e.g. information, consultation, deliberation, co-production, participatory techniques, governance, policy nudging, and facilitation). Putting community participation into practice requires new explicit and formal participatory methodologies that seek to include each actor in a multilateral and inter-consensus policy process (agenda setting, policy formulation, policy adoption, policy implementation, and policy evaluation).

Policy agenda setting: refers to defining policy problems.

Policy formulation: refers to crafting alternative courses of action to address the problem.

Policy adoption: refers to choosing the best alternative course of action.

Policy implementation: refers to carry out, fulfil, and complete the achievement of objectives set forth during policy adoption.

Policy evaluation: refers to assessing the importance and impact of a policy for redirection to another new problem or to terminate it to conclude the policy process.

1.	How do you think communities should participate in climate change policy processes during each of the policy stages?	Agenda Setting	
		Policy formulation	
		Policy Adoption	
		Policy Implementation	
		Policy Evaluation	
2.	What is your view on the use of the following participatory techniques to facilitate community participation during agenda setting to define climate change problems?	Consensus building	
		Facilitation	
		Focus group discussion	
		Interviews	
		Participatory technology	
		PRA techniques	
		Public hearings	
		Workshops	
		Other	
3.	What is your view on the use of the following techniques to encourage community participation during policy formulation?	Consensus building	
		Facilitation	
		Focus group discussion	
		PRA techniques	
		Public hearings	
		Workshops	
		Other	
4.	What is your view on the use of the following participatory techniques to facilitate community participation during the policy adoption stage?	Briefs	
		Consensus building	
		Focus group discussion	
		Interviews	
		Media	
		Participatory technology	
		PRA techniques	

		Presentation to communities	
		Public meetings	
		Public hearings	
		Other	
5.	What is your view on the use of the following participatory techniques to facilitate community participation during policy implementation?		
		Briefs	
		Facilitation	
		Participatory technology	
		PRA techniques	
		Media	
		Workshops	
		Other	
6.	What is your view on the use of the following participatory techniques to encourage community participation during climate change policy evaluation?		
		Beneficiary assessment	
		Focus group discussion	
		Interviews	
		PRA techniques	
		Polls	
		Public meetings	
		Surveys	
		Workshops	
		Other	
7.	What do you think the following actors could do to ensure communities are part of the climate change policy processes?		
		Experts	
		Community representative	
		Politicians	
		Public administrators	
		Other	
8.	What do you think are the challenges of community participation in climate change policy processes?		

SECTION B: HOW COMMUNITY AWARENESS REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community awareness of climate change is defined as the community's understanding of climate change in terms of its definition, causes, impacts, risks, and planned responses (mitigation and adaptation) based on information or experience. Having information and experience will lead to communities being well informed and critically conscious about climate change.

1.	What is your view of community awareness of climate change?		
2.	What is your view on using the following participatory techniques to enhance community awareness of climate change?		
		Cause and impact diagrams	
		Cultural transects	
		Participatory mapping	
		Vulnerability maps	
		Other	
3.	What do you think could be done to ensure that communities are informed of the following climate change causes?		

		Air pollution	
		Climate variability	
		Deforestation	
		Industrialisation	
		Ozone depletion	
		Poor agricultural practices	
		Temperature changes	
		Urbanisation	
		Weather changes	
		Wildfires	
		Other	
4.	What do you think could be done to inform communities of the following climate change risks?		
		Extreme weather events	
		Floods	
		Food insecurity	
		Insufficient access to drinking water	
		Land degradation	
		Loss of biodiversity	
		Loss of rural livelihoods	
		Reduced agricultural production	
		Other	
5.	What do you think could be done to inform communities of the following climate change impacts for them and the environment?		
		Compromised agricultural production	
		Cyclones	
		Drought	
		Floods	
		Heatwaves	
		Health impacts	
		Significant loss of biodiversity and ecosystems	
		Water insecurity problems	
		Wildfires	
		Other	

SECTION C: HOW COMMUNITY UNDERSTANDING REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community understanding of climate change is having knowledge about climate change's (i) definition ii) causes, iii) likelihood and severity of expected impacts, iv) policy process, v) risks, vi) planned future adaptation and mitigation responses. The word understanding means (i) having knowledge about a situation or subject, (ii) the ability to comprehend something, (iii) sympathetic awareness or tolerance, (iv) an informal agreement between people, and (v) having reason to believe in something. In some instances, community understanding of climate change is referred to as scientific understanding of climate change.

1.	How do you view the following concepts in relation to climate change?		
		Community awareness of climate change	
		Community understanding of climate change	
		Community understanding of environmental issues	
		Public understanding of environmental issues	

2.	What do you think could be done to ensure community understanding of climate change regarding the following?		
		Community understanding of climate change causes	
		Community understanding of climate change impacts	
		Community awareness of climate change policy decision making processes	
		Community awareness of climate change risks for themselves and the environment	
		Other	
3.	What is your view of the following participatory techniques to enhance community understanding of climate change?		
		Cause and impact diagram	
		Consensus building	
		Facilitation	
		Participatory technology	
		PRA techniques	
		Public meetings	
		Public hearings	
		Resources mapping	
		Transects	
		Other	

SECTION D: HOW THE USE OF INDIGENOUS KNOWLEDGE SYSTEMS IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION FACILITATE COMMUNITY PARTICIPATION IN CLIMATE GOVERNANCE

Explanation: Social factors comprise indigenous knowledge systems, which include culture, for example, beliefs (physical things are given meanings, religion, rituals, identity, art, stories that create outlooks and behaviour), norms (e.g. agricultural practices), values (e.g. family and wealth), and indigenous knowledge (local knowledge and local experiences). Accordingly, this study is limited to indigenous knowledge systems that focus on climate change. During climate change policy formulation and implementation, the use of indigenous knowledge systems will allow officials to learn from relaxed and unhurried interactions, while establishing rapport with communities as a motivation to change their behaviour towards participation in climate change policy processes.

1.	What is your view on using the following community values when making climate change decisions and their implementation?		
		Cultural values	
		Family	
		Historical information	
		Natural resources (Traditional land, flora, and fauna)	
		Wealth	
		Other	
2.	How can the following participatory techniques be used to enable consideration of community values during climate change policy formulation and implementation?		
		Historical calendars	
		Impact diagrams	
		Seasonal calendars	
		Other	
3.	What is your view on using the following community norms to promote bottom-up climate change policy alternatives regarding mitigation and adaptation?		
		Cattle grazing	
		Collecting grass for thatching houses	

		Cutting trees for firewood and building houses	
		History about agricultural practices	
		Wildfires	
		Other	
4.	How can the following participatory techniques be used to document community norms for use in climate change policy and implementation?		
		Seasonal calendars	
		Trend analysis	
		Timeline	
		Other	
5.	What is your view on using indigenous knowledge in climate change policy and implementation processes to assist communities in the following:		
		Behaviour of animals	
		Birds attributed to climate change	
		Observing climate variability	
		Studying the environment	
		Studying weather	
		The direction of wind	
		Type of clouds	
		Vegetation	
		Other	
6.	What is your view on using indigenous knowledge in climate change policy and implementation to form part of climate change projections such as the following:		
		Appropriate crop mix	
		Appropriate farming methods	
		Forecast expected rainfall	
		Other	
7.	What is your view on using the following participatory techniques to ensure community indigenous knowledge is part of climate change policy and implementation?		
		Focus group discussion	
		Impact diagrams	
		Mapping	
		Other	
8.	What is your view on using the following community culture in climate change policy and implementation?		
		Art	
		Collective community achievements	
		Identity	
		Physical things given meaning	
		Rituals	
		Stories	
		Other	
9.	What is your view on using the following participatory techniques to incorporate community culture in climate change policy and implementation?		
		Consensus building	
		Interviews	
		PRA techniques	

		Presentation to communities	
		Public hearings	
		Public meetings	
		Other	
10.	What is your view on incorporating indigenous knowledge systems (values, culture, norms, and indigenous knowledge) in climate change policy using the following?		
		Institutions	
		New legislation	
		Regulations	
		Other	
11.	What is your view of community participation in the following co-production phases regarding climate change policy as part of co-governance?		
		Co-planning	
		Co-designing	
		Co-implementing	
		Co-evaluating	
12.	What is your view on using the following participatory techniques to encourage community co-governance in climate change decision making and implementation?		
		Beneficiary assessment	
		Briefings	
		Consensus building	
		Facilitation	
		Focus group discussion	
		Interviews	
		Media	
		Polls	
		Participatory technology	
		PRA techniques	
		Presentations to communities	
		Public hearings	
		Public meetings	
		Surveys	
		Workshops	
		Other	
13.	In your view, what are some of the challenges encountered when using indigenous knowledge systems in climate change policy and implementation?		

SECTION E: EXPLORING HOW POLICY NUDGING COULD BE USED TO ENHANCE COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION, IMPLEMENTATION, AND GOVERNANCE

Explanation: Nudging occurs when small, transparent gestures are applied in policymaking with the aim of affecting behaviour change that supports the policy. The concept of nudging seeks to advance community participation during the policy process. Hence, policy nudging suggests ways, when, and how to apply nudging.

1.	What is your view on the use of the following nudges to encourage your community to participate in climate change decisions and implementation?

		Education	
		Feedback	
		Incentives	
		Information	
		Persuasion	
2.	In your opinion, to which extent should the following regulations be used to ensure communities are involved in climate change decisions and their implementation?		
		Bans	
		Compliance rules	
		Restrictions	
		Other	
3.	How should the following participatory techniques be used to encourage communities to co-plan, co-design, co-implement, and co-evaluate nudges before nudges are implemented?		
		Briefs	
		Consensus building	
		Facilitation	
		Focus group discussion	
		Interviews	
		Media	
		Polls	
		Public hearing	
		Surveys	
		Workshops	
		Other	

SECTION F: PRESENTING A CONTEXTUAL PARTICIPATION STRATEGY FOR ENHANCING COMMUNITY PARTICIPATION IN FUTURE CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION PROCESSES

Explanation: The way participation is done in other policies may have a long-lasting impact on how communities view participation. Related memories of poor experiences and outcomes in participation in other government policies may demotivate people from participation. Resultantly, participation may be difficult, especially when one has to use the time allocated for bread and butter issues.

1.	Do you think community participation during climate change policy processes is needed? Motivate your answer.							
		No		Yes		Not sure		Other
2.	What do you think can be done to persuade communities to understand the importance of participation in the formulation of climate change policies?							
3.	In your opinion, which participatory techniques could be used to enhance the participation of communities in future climate change policy decisions, and ultimately successful implementation?							
4.	What could be done to enhance community participation in the future climate change decision making process and implementation?							
5.	What could be done by other actors (experts, politicians, community representatives, and public administrators) to enhance the co-ordination and facilitation of community participation in climate change policy formulation and implementation?							
6.	Do you have any final remarks towards the establishment of a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes?							

**Attachment 51: Semi-structured interview schedule – Political Science and Public Administration department,
National University of Lesotho**

Department's name			
Number of participants			
Place			
Date		Time	
Interview Number			

1. Welcome.
2. Researcher introduces herself.
3. The title of the study is introduced: Community participation in climate change policy formulation and implementation in Lesotho.
4. Explanation of the research aim and objectives.
The study aims to explore community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes. The study has the following research objectives:
 - (i) To analyse systems, governance, and participatory theories influencing community participation in climate change policy formulation, implementation, and governance.
 - (ii) To explore how policy nudging could be used to enhance community participation in climate change policy formulation and implementation and governance.
 - (iii) To assess how community awareness and understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation.
 - (iv) To explore how the use of indigenous knowledge systems in climate change policy formulation and implementation facilitates community participation in climate governance.
 - (v) To determine the nature of community participation in climate change policy processes.
 - (vi) To present a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes.
5. The researcher requests permission to record the discussion with a voice recorder.
6. The researcher explains the order of the discussion.
7. Participants are informed that they will receive the outcomes of this discussion upon the researcher concluding the study, which is expected to be at the beginning of 2022.
8. Participants are informed that their responses will be treated with confidentiality. This means that they may be quoted during the reporting of the findings, but such quotes will not be attributed to them by name.

Instructions:

1. Kindly turn off your cell phone or put it on silent.
2. Please answer the questions honestly and openly (there is no right or wrong answer)

SECTION A: DETERMINING THE NATURE OF COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION

Explanation: Climate change occurs when human activity indirectly or directly alters the composition of the global atmosphere in addition to natural climate variations observed over comparable time periods. Community participation (active involvement) during climate change policy formulation and implementation include amongst others (e.g. information, consultation, deliberation, co-production, participatory techniques, governance, policy nudging, and facilitation). Putting community participation into practice requires new explicit and formal participatory methodologies that seek to include each actor in a multilateral and inter-consensus policy process (agenda setting, policy formulation, policy adoption, policy implementation, and policy evaluation).

Policy agenda setting: refers to defining policy problems.

Policy formulation: refers to crafting alternative courses of action to address the problem.

Policy adoption: refers to choosing the best alternative course of action.

Policy implementation: refers to carry out, fulfil, and complete the achievement of objectives set forth during policy adoption.

Policy evaluation: refers to assessing the importance and impact of a policy for redirection to another new problem or to terminate it to conclude the policy process.

1.	How do you think communities should participate in climate change policy processes during each of the policy stages?	
	Agenda Setting	
	Policy formulation	
	Policy Adoption	
	Policy Implementation	
	Policy Evaluation	
2.	What is your view on the use of the following participatory techniques to facilitate community participation during agenda setting to define climate change problems?	
	Consensus building	
	Facilitation	
	Focus group discussions	
	Interviews	
	Participatory technology	
	PRA techniques	
	Public hearings	
	Workshops	
	Other	
3.	What is your view on the use of the following techniques to encourage community participation during policy formulation?	
	Consensus building	
	Facilitation	
	Focus group discussion	
	PRA techniques	
	Public hearings	
	Workshops	
	Other	
4.	What is your view on the use of the following participatory techniques to facilitate community participation during the policy adoption stage?	
	Briefs	
	Consensus building	
	Focus group discussion	
	Interviews	
	Media	
	Participatory technology	
	PRA techniques	

		Presentation to communities	
		Public meetings	
		Public hearings	
		Other	
5.	What is your view on the use of the following participatory techniques to facilitate community participation during policy implementation?		
		Briefs	
		Facilitation	
		Participatory technology	
		PRA techniques	
		Media	
		Workshops	
		Other	
6.	What is your view on the use of the following participatory techniques to encourage community participation during climate change policy evaluation?		
		Beneficiary assessment	
		Focus group discussion	
		Interviews	
		PRA techniques	
		Polls	
		Public meetings	
		Surveys	
		Workshops	
		Other	
7.	What do you think the following actors could do to ensure communities are part of the climate change policy processes?		
		Experts	
		Community representative	
		Politicians	
		Public administrators	
		Other	
8.	What do you think are the challenges of community participation in climate change policy processes?		

SECTION B: HOW COMMUNITY AWARENESS REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community awareness of climate change is defined as the community's understanding of climate change in terms of its definition, causes, impacts, risks, and planned responses (mitigation and adaptation) based on information or experience. Having information and experience will lead to communities being well informed and critically conscious about climate change.

1.	What is your view of community awareness of climate change?		
2.	What is your view on using the following participatory techniques to enhance community awareness of climate change?		
		Cause and impact diagrams	
		Cultural transects	
		Participatory mapping	
		Vulnerability maps	
		Other	
3.	What do you think could be done to ensure that communities are informed of the following climate change causes?		

		Air pollution	
		Climate variability	
		Deforestation	
		Industrialisation	
		Ozone depletion	
		Poor agricultural practices	
		Temperature changes	
		Urbanisation	
		Weather changes	
		Wildfires	
		Other	
4.	What do you think could be done to inform communities of the following climate change risks?		
		Extreme weather events	
		Floods	
		Food insecurity	
		Insufficient access to drinking water	
		Land degradation	
		Loss of biodiversity	
		Loss of rural livelihoods	
		Reduced agricultural production	
		Other	
5.	What do you think could be done to inform communities of the following climate change impacts for them and the environment?		
		Compromised agricultural production	
		Cyclones	
		Drought	
		Floods	
		Heatwaves	
		Health impacts	
		Significant loss of biodiversity and ecosystems	
		Water insecurity problems	
		Wildfires	
		Other	

SECTION C: HOW COMMUNITY UNDERSTANDING REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community understanding of climate change is having knowledge about climate change's (i) definition ii) causes, iii) likelihood and severity of expected impacts, iv) policy process, v) risks, vi) planned future adaptation and mitigation responses. The word understanding means (i) having knowledge about a situation or subject, (ii) the ability to comprehend something, (iii) sympathetic awareness or tolerance, (iv) an informal agreement between people, and (v) having reason to believe in something. In some instances, community understanding of climate change is referred to as scientific understanding of climate change.

1.	How do you view the following concepts in relation to climate change?		
		Community awareness of climate change	
		Community understanding of climate change	
		Community understanding of environmental issues	

		Public understanding of environmental issues	
2.	What do you think could be done to ensure community understanding of climate change regarding the following?		
		Community understanding of climate change causes	
		Community understanding of climate change impacts	
		Community awareness of climate change policy decision making processes	
		Community understanding of climate change risks for themselves and their environment	
		Other	
3.	What is your view of the following participatory techniques to enhance community understanding of climate change?		
		Cause and impact diagram	
		Consensus building	
		Facilitation	
		Participatory technology	
		PRA techniques	
		Public meetings	
		Public hearings	
		Resources mapping	
		Transects	
		Other	

SECTION D: HOW THE USE OF INDIGENOUS KNOWLEDGE SYSTEMS IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION FACILITATE COMMUNITY PARTICIPATION IN CLIMATE GOVERNANCE

Explanation: Social factors comprise indigenous knowledge systems, which include culture, for example, beliefs (physical things are given meanings, religion, rituals, identity, art, stories that create outlooks and behaviour), norms (e.g. agricultural practices), values (e.g. family and wealth), and indigenous knowledge (local knowledge and local experiences). Accordingly, this study is limited to indigenous knowledge systems that focus on climate change. During climate change policy formulation and implementation, the use of indigenous knowledge systems will allow officials to learn from relaxed and unhurried interactions, while establishing rapport with communities as a motivation to change their behaviour towards participation in climate change policy processes.

1.	What is your view on using the following community values when making climate change decisions and their implementation?		
		Cultural values	
		Family	
		Historical information	
		Natural resources (Traditional land, flora, and fauna)	
		Wealth	
		Other	
2.	How can the following participatory techniques be used to enable consideration of community values during climate change policy formulation and implementation?		
		Historical calendars	
		Impact diagrams	
		Seasonal calendars	
		Other	
3.	What is your view on using the following community norms to promote bottom-up climate change policy alternatives regarding mitigation and adaptation?		
		Cattle grazing	

		Collecting grass for thatching houses	
		Cutting trees for firewood and building houses	
		History about agricultural practices	
		Wildfires	
		Other	
4.	How can the following participatory techniques be used to document community norms for use in climate change policy and implementation?		
		Seasonal calendars	
		Trend analysis	
		Timeline	
		Other	
5.	What is your view on using indigenous knowledge in climate change policy and implementation processes to assist communities in the following:		
		Behaviour of animals	
		Birds attributed to climate change	
		Observing climate variability	
		Studying the environment	
		Studying weather	
		The direction of wind	
		Type of clouds	
		Vegetation	
		Other	
6.	What is your view on using indigenous knowledge in climate change policy and its implementation to form part of climate change projections such as the following:		
		Appropriate crop mix	
		Appropriate farming methods	
		Forecast expected rainfall	
		Other	
7.	What is your view on using the following participatory techniques to ensure community indigenous knowledge is part of climate change policy and implementation?		
		Focus group discussions	
		Impact diagrams	
		Mapping	
		Other	
8.	What is your view on using the following community culture in climate change policy and implementation?		
		Art	
		Collective community achievements	
		Identity	
		Physical things given meaning	
		Rituals	
		Stories	
		Other	
9.	What is your view on using the following participatory techniques to incorporate community culture in climate change policy and implementation?		
		Consensus building	
		Interviews	

		PRA techniques	
		Presentation to communities	
		Public hearings	
		Public meetings	
		Other	
10.	What is your view on incorporating indigenous knowledge systems (values, culture, norms, and indigenous knowledge) in climate change policy using the following?		
		Institutions	
		New legislation	
		Regulations	
		Other	
11.	What is your view of community participation in the following co-production phases regarding climate change policy as part of co-governance?		
		Co-planning	
		Co-designing	
		Co-implementing	
		Co-evaluating	
12.	What is your view on using the following participatory techniques to encourage community co-governance in climate change decision making and implementation?		
		Beneficiary assessment	
		Briefings	
		Consensus building	
		Facilitation	
		Focus group discussions	
		Interviews	
		Media	
		Polls	
		Participatory technology	
		PRA techniques	
		Presentations to communities	
		Public hearings	
		Public meetings	
		Surveys	
		Workshops	
		Other	
13.	In your view, what are some of the challenges encountered when using indigenous knowledge systems in climate change policy and implementation?		

SECTION E: EXPLORING HOW POLICY NUDGING COULD BE USED TO ENHANCE COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION, IMPLEMENTATION, AND GOVERNANCE

Explanation: Nudging occurs when small, transparent gestures are applied in policymaking with the aim of affecting behaviour change that supports the policy. The concept of nudging seeks to advance community participation during the policy process. Hence, policy nudging suggests ways, when, and how to apply nudging.

1.	What is your view on the use of the following nudges to encourage your community to participate in climate change decisions and implementation?

		Education	
		Feedback	
		Incentives	
		Information	
		Persuasion	
2.	In your opinion, to which extent should the following regulations be used to ensure communities are involved in climate change decisions and their implementation?		
		Bans	
		Compliance rules	
		Restrictions	
		Other	
3.	How should the following participatory techniques be used to encourage communities to co-plan, co-design, co-implement, and co-evaluate nudges before nudges are implemented?		
		Briefs	
		Consensus building	
		Facilitation	
		Focus group discussions	
		Interviews	
		Media	
		Polls	
		Public hearing	
		Surveys	
		Workshops	
		Other	

SECTION F: PRESENTING A CONTEXTUAL PARTICIPATION STRATEGY FOR ENHANCING COMMUNITY PARTICIPATION IN FUTURE CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION PROCESSES

Explanation: The way participation is done in other policies may have a long-lasting impact on how communities view participation. Related memories of poor experiences and outcomes in participation in other government policies may demotivate people from participation. Resultantly, participation may be difficult, especially when one has to use the time allocated for bread and butter issues.

1.	Do you think community participation during climate change policy processes is needed? Motivate your answer.							
		No		Yes		Not sure		Other
2.	What do you think can be done to persuade communities to understand the importance of participation in the formulation of climate change policies?							
3.	In your opinion, which participatory techniques could be used to enhance the participation of communities in future climate change policy decisions, and ultimately successful implementation?							
4.	What could be done to enhance community participation in the future climate change decision making process and implementation?							
5.	What could be done by other actors (experts, politicians, community representatives, and public administrators) to enhance the co-ordination and facilitation of community participation in climate change policy formulation and implementation?							
6.	Do you have any final remarks towards the establishment of a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes?							

Attachment 52: Semi-structured interview schedule – United Nations Development Programme, Climate Change Unit

Unit name			
Position			
Place			
Date		Time	
Interview Number			

1. Welcome.
2. Researcher introduces herself.
3. The title of the study is introduced: Community participation in climate change policy formulation and implementation in Lesotho.
4. Explanation of the research aim and objectives.
The study aims to explore community participation in climate change policy by presenting a contextual participatory strategy towards such participation in future policy formulation and implementation processes. The study has the following research objectives:
 - (i) To analyse systems, governance, and participatory theories influencing community participation in climate change policy formulation, implementation, and governance.
 - (ii) To explore how policy nudging could be used to enhance community participation in climate change policy formulation and implementation and governance.
 - (iii) To assess how community awareness and understanding regarding climate change and climate change policy influence their participation in policy formulation and implementation.
 - (iv) To explore how the use of indigenous knowledge systems in climate change policy formulation and implementation facilitates community participation in climate governance.
 - (v) To determine the nature of community participation in climate change policy processes.
 - (vi) To present a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes.
5. The researcher requests permission to record the discussion with a voice recorder.
6. The researcher explains the order of the discussion.
7. Participants are informed that they will receive the outcomes of this discussion upon the researcher concluding the study, which is expected to be at the beginning of 2022.
9. Participants are informed that their responses will be treated with confidentiality. This means that they may be quoted during the reporting of the findings, but such quotes will not be attributed to them by name.

Instructions:

1. Kindly turn off your cell phone or put it on silent.
2. Please answer the questions honestly and openly (there is no right or wrong answer)

SECTION A: DETERMINING THE NATURE OF COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION

Explanation: Climate change occurs when human activity indirectly or directly alters the composition of the global atmosphere in addition to natural climate variations observed over comparable time periods. Community participation (active involvement) during climate change policy formulation and implementation include amongst others (e.g. information, consultation, deliberation, co-production, participatory techniques, governance, policy nudging, and facilitation). Putting community participation into practice requires new explicit and formal participatory methodologies that seek to include each actor in a multilateral and inter-consensus policy process (agenda setting, policy formulation, policy adoption, policy implementation, and policy evaluation).

Policy agenda setting: refers to defining policy problems.

Policy formulation: refers to crafting alternative courses of action to address the problem.

Policy adoption: refers to choosing the best alternative course of action.

Policy implementation: refers to carry out, fulfil, and complete the achievement of objectives set forth during policy adoption.

Policy evaluation: refers to assessing the importance and impact of a policy for redirection to another new problem or to terminate it to conclude the policy process.

1. How does the unit facilitate community participation in climate change decision making and implementation championed by the Lesotho government during the following policy stages?

Agenda Setting	
Policy formulation	
Policy Adoption	
Policy Implementation	
Policy Evaluation	

2. How does the unit use the following participatory techniques to facilitate community participation during agenda setting to define climate change problems?

Consensus building	
Facilitation	
Focus group discussion	
Interviews	
Participatory technology	
PRA techniques	
Public hearings	
Workshops	
Other	

3. How does the unit use the following participatory techniques to facilitate community participation to ensure communities articulate their preferred courses of alternatives regarding climate change mitigation and adaptation measures during policy formulation?

Consensus building	
Facilitation	
Focus group discussion	
PRA techniques	
Public hearings	
Workshops	
Other	

4. During policy adoption, how does your unit use the following participatory techniques to ensure communities articulate their preferred courses of alternatives regarding climate change adaptation measures?

Briefs	
Consensus building	
Focus group discussion	
Interviews	

		Media	
		Participatory technology	
		PRA techniques	
		Presentation to communities	
		Public meetings	
		Public hearings	
		Other	
5.	How does the unit use the following participatory techniques to facilitate community participation during policy implementation?		
		Briefs	
		Facilitation	
		Media	
		Participatory technology	
		PRA techniques	
		Workshops	
		Other	
6.	During policy evaluation, how does the unit facilitate community participation using the following participatory techniques?		
		Beneficiary assessment	
		Focus group discussion	
		Interviews	
		Polls	
		PRA techniques	
		Public meetings	
		Surveys	
		Workshops	
		Other	
7.	How do you work with the following actors to ensure communities are part of the climate change policy processes?		
		Community representative	
		Experts	
		Politicians	
		Public administrators	
		Other	
8.	Are there any challenges you face when co-ordinating community participation in climate change policy processes facilitated by the Lesotho government?		

SECTION B: HOW COMMUNITY AWARENESS REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community awareness of climate change is defined as the community's understanding of climate change in terms of its definition, causes, impacts, risks, and planned responses (mitigation and adaptation) based on information or experience. Having information and experience will lead to communities being well informed and critically conscious about climate change.

1.	What is your view of community awareness of climate change?		
2.	How does the unit use the following participatory techniques to enhance community awareness of climate change?		
		Cause and impact diagrams	
		Cultural transects	
		Participatory mapping	
		Vulnerability maps	

		Other	
3.	How does your unit complement the Lesotho government's efforts to ensure communities are informed of the following climate change causes?		
		Air pollution	
		Climate variability	
		Deforestation	
		Industrialisation	
		Ozone depletion	
		Poor agricultural practices	
		Temperature changes	
		Urbanisation	
		Weather changes	
		Wildfires	
		Other	
4.	How does the unit complement the Lesotho government's efforts in ensuring communities are informed of the following climate change risks?		
		Extreme weather events	
		Food insecurity	
		Floods	
		Insufficient access to drinking water	
		Land degradation	
		Loss of biodiversity	
		Loss of rural livelihoods	
		Reduced agricultural production	
		Other	
5.	What is done by your unit to ensure communities are informed of the following climate change impacts for them and the environment?		
		Compromised agricultural production	
		Cyclones	
		Drought	
		Floods	
		Health impacts	
		Heatwaves	
		Significant loss of biodiversity and ecosystems	
		Water insecurity problems	
		Wildfires	
		Other	

SECTION C: HOW COMMUNITY UNDERSTANDING REGARDING CLIMATE CHANGE AND CLIMATE CHANGE POLICY INFLUENCE THEIR PARTICIPATION IN POLICY FORMULATION AND IMPLEMENTATION

Explanation: Community understanding of climate change is having knowledge about climate change's (i) definition ii) causes, iii) likelihood and severity of expected impacts, iv) policy process, v) risks, vi) planned future adaptation and mitigation responses. The word understanding means (i) having knowledge about a situation or subject, (ii) the ability to comprehend something, (iii) sympathetic awareness or tolerance, (iv) an informal agreement between people, and (v) having reason to believe in something. In some instances, community understanding of climate change is referred to as scientific understanding of climate change.

1. How do you use the following concepts in relation to your unit's mandate?

		Community understanding of climate change	
		Community awareness of climate change	
		Community understanding of environmental issues	
		Public understanding of environmental issues	
2.	What is done by your unit to ensure community understanding of climate change regarding the following?		
		Community understanding of climate change causes	
		Community understanding of climate change impacts	
		Community awareness of climate change decision making processes	
		Community understanding of climate change risks for themselves and their environment	
		Other	
3.	Which of the following participatory techniques are used by your unit to enhance community understanding of climate change?		
		Cause and impact diagram	
		Consensus building	
		Facilitation	
		Participatory technology	
		PRA techniques	
		Public meetings	
		Public hearings	
		Resources mapping	
		Transects	
		Other	

SECTION D: HOW THE USE OF INDIGENOUS KNOWLEDGE SYSTEMS IN CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION FACILITATE COMMUNITY PARTICIPATION IN CLIMATE GOVERNANCE

Explanation: Social factors comprise indigenous knowledge systems, which include culture, for example, beliefs (physical things are given meanings, religion, rituals, identity, art, stories that create outlooks and behaviour), norms (e.g. agricultural practices), values (e.g. family and wealth), and indigenous knowledge (local knowledge and local experiences). Accordingly, this study is limited to indigenous knowledge systems that focus on climate change. During climate change policy formulation and implementation, the use of indigenous knowledge systems will allow officials to learn from relaxed and unhurried interactions, while establishing rapport with communities as a motivation to change their behaviour towards participation in climate change policy processes.

1.	What is your view of the following community values when making climate change decisions and their implementation?		
		Cultural values	
		Family	
		Historical information	
		Natural resources (Traditional land, flora, and fauna)	
		Wealth	
		Other	
2.	Which of the following participatory techniques are used by your unit to enable consideration of community values in your current climate implementation programmes?		
		Historical calendars	
		Impact diagrams	
		Seasonal calendars	
		Other	
3.	In your current climate change implementation programmes, how do you use the following community norms to promote bottom-up mitigation and adaptation responses?		
		Cattle grazing	

		Collecting grass for thatching houses	
		Cutting trees for firewood and building houses	
		History about agricultural practices	
		Wildfires	
		Other	
4.	How does your unit use the following participatory techniques to document community norms for use when implementing climate change programmes?		
		Seasonal calendars	
		Timeline	
		Trend analysis	
		Other	
5.	How does your unit use indigenous knowledge in your current climate change implementation processes to assist communities in the following:		
		Behaviour of animals	
		Birds attributed to climate change	
		Observing climate variability	
		Studying the environment	
		Studying weather	
		The direction of wind	
		Type of clouds	
		Vegetation	
		Other	
6.	How does your unit use the following participatory techniques to ensure community indigenous knowledge is part of climate change implementation programmes?		
		Focus group discussions	
		Impact diagrams	
		Mapping	
		Other	
7.	How does your unit use the following culture in your current climate change implementation programmes?		
		Art	
		Collective community achievements	
		Identity	
		Physical things given meaning	
		Rituals	
		Stories	
		Other	
8.	Which of the following participatory techniques are used by your unit to incorporate community culture when implementing climate change decisions?		
		Consensus building	
		Interviews	
		PRA techniques	
		Presentation to communities	
		Public hearings	
		Public meetings	
		Other	

9.	How does your unit assist the Lesotho government ministries and departments to promote the incorporation of indigenous knowledge systems (values, culture, norms, and indigenous knowledge) into the climate change policy using the following?																																	
		<table border="1"> <tr><td>Institutions</td><td></td></tr> <tr><td>New legislation</td><td></td></tr> <tr><td>Regulations</td><td></td></tr> <tr><td>Other</td><td></td></tr> </table>	Institutions		New legislation		Regulations		Other																									
Institutions																																		
New legislation																																		
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10.	Which role does your unit play in climate change policy co-governance processes to facilitate community participation in the following phases of co-production?																																	
		<table border="1"> <tr><td>Co-planning</td><td></td></tr> <tr><td>Co-designing</td><td></td></tr> <tr><td>Co-implementing</td><td></td></tr> <tr><td>Co-evaluating</td><td></td></tr> </table>	Co-planning		Co-designing		Co-implementing		Co-evaluating																									
Co-planning																																		
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11.	If yes to question 10, which of the following participatory techniques are used by your unit to encourage community co-governance in climate change decision making and implementation?																																	
		<table border="1"> <tr><td>Beneficiary assessment</td><td></td></tr> <tr><td>Briefings</td><td></td></tr> <tr><td>Consensus building</td><td></td></tr> <tr><td>Facilitation</td><td></td></tr> <tr><td>Focus group discussions</td><td></td></tr> <tr><td>Interviews</td><td></td></tr> <tr><td>Media</td><td></td></tr> <tr><td>Participatory technology</td><td></td></tr> <tr><td>Polls</td><td></td></tr> <tr><td>PRA techniques</td><td></td></tr> <tr><td>Presentations to communities</td><td></td></tr> <tr><td>Public hearings</td><td></td></tr> <tr><td>Public meetings</td><td></td></tr> <tr><td>Workshops</td><td></td></tr> <tr><td>Surveys</td><td></td></tr> <tr><td>Other</td><td></td></tr> </table>	Beneficiary assessment		Briefings		Consensus building		Facilitation		Focus group discussions		Interviews		Media		Participatory technology		Polls		PRA techniques		Presentations to communities		Public hearings		Public meetings		Workshops		Surveys		Other	
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Public meetings																																		
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Surveys																																		
Other																																		
12.	Elaborate on any challenges you face when using indigenous knowledge systems in climate change implementation programmes?																																	

SECTION E: EXPLORING HOW POLICY NUDGING COULD BE USED TO ENHANCE COMMUNITY PARTICIPATION IN CLIMATE CHANGE POLICY FORMULATION, IMPLEMENTATION, AND GOVERNANCE

Explanation: Nudging occurs when small, transparent gestures are applied in policymaking with the aim of affecting behaviour change that supports the policy. The concept of nudging seeks to advance community participation during the policy process. Hence, policy nudging suggests ways, when, and how to apply nudging.

1.	What is your understanding of policy nudging during climate change policy formulation and implementation?					
2.	What is your view on the use of the following nudges to encourage your community to participate in climate change decisions and implementation?					
		<table border="1"> <tr><td>Education</td><td></td></tr> <tr><td>Information</td><td></td></tr> </table>	Education		Information	
Education						
Information						

		Feedback	
		Incentives	
		Persuasion	
3.	What is your view on using the following policy nudges to ensure communities are involved in climate change decisions and their implementation?		
		Bans	
		Compliance rules	
		Restrictions	
		Other	
4.	What is your view on using the following policy nudges to ensure communities are involved in climate change decisions and their implementation?		
		Briefs	
		Consensus building	
		Facilitation	
		Focus group discussions	
		Interviews	
		Media	
		Polls	
		Public hearing	
		Surveys	
		Workshops	
		Other	

SECTION F: PRESENTING A CONTEXTUAL PARTICIPATION STRATEGY FOR ENHANCING COMMUNITY PARTICIPATION IN FUTURE CLIMATE CHANGE POLICY FORMULATION AND IMPLEMENTATION PROCESSES

Explanation: The way participation is done in other policies may have a long-lasting impact on how communities view participation. Related memories of poor experiences and outcomes in participation in other government policies may demotivate people from participation. Resultantly, participation may be difficult, especially when one has to use the time allocated for bread and butter issues.

1.	Do you think community participation during climate change policy processes is needed? Motivate your answer.							
		No		Yes		Not sure		Other
2.	What do you think can be done to persuade communities to understand the importance of participation in the formulation of climate change policies?							
3.	In your opinion, which participatory techniques could be used to enhance the participation of communities in future climate change policy decisions, and ultimately successful implementation?							
4.	What could be done to enhance community participation in the future climate change decision making process and implementation?							
5.	What could be done by other actors (experts, politicians, community representatives, and public administrators) to enhance the co-ordination and facilitation of community participation in climate change policy formulation and implementation?							
6.	Do you have any final remarks towards the establishment of a contextual participatory strategy for enhancing community participation in future climate change policy formulation and implementation processes?							

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25th July 2023

RE: DECLARATION

I hereby confirm that I performed text editing on the thesis entitled **Community Participation in Climate Change Policy Formulation and Implementation in Lesotho**.

I attended to the following: grammatical accuracy and spelling, stylistic consistency, general logic and argumentation, and technical correctness of references and quotations.

I did not make any contribution to the thesis argument because that is outside of the language editor's mandate.

Yours faithfully

A handwritten signature in blue ink, appearing to read 'Muringani'.

Bertha Muringani (PhD in LINGUISTICS)

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