AN ASSESSMENT OF AGRICULTURAL GREEN SCHEMES IN KAVANGO EAST REGION IN NAMIBIA

BY

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Declaration

I, Shimafo France Rudolf Haushiku (Student Number. 2015346402), declare that this mini-dissertation is my own unaided work. Any assistance that I have received has been duly acknowledged.

This mini-dissertation has not been submitted before for any degree or examination at University of Free State or any other Institution of Higher Learning.

Signature …… Date …….

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Abstract

The study focuses on Green Agricultural Schemes (GASs) in Northern Namibia with an aim of assessing the benefits, challenges, and opportunities of GASs farmers in Kavango East Region. Green schemes refers to a government programme aimed at increasing food production in rural areas through irrigation programmes, provision of inputs and provision of necessary services or infrastructure. The study investigated four GASs in Kavango East region, these are Uvhungu-vhungu, Shitemo, Shandikongoro, and Ndonga Linena. The study used qualitative research approach to collect data using interviews and to analyse and present data.

The results of the study show that the GAS small-scale farmers in Kavango East region have plenty of physical, economic, and infrastructural opportunities that promotes farming and benefit the farmers' to a large extent. The results also show that the government has a positive GAS policy that ensure that the small scale farmers are supported technically, financially, and materially. The results of the study indicated that GASs have improved local people's social and economic livelihoods. Apart from benefitting the farmers and the local community, GAS products have found their way into regional, national, and international markets. The study revealed that GAS farmers face a host of natural, human, economic, financial, and leadership challenges that threaten the existence of the GASs programme in Namibia.

The study recommended that GAS small-scale farmers must be given long term payment period so that the farmers get opportunities to become fully equipped with modern farming resources to increase their performance and productivity. The government must introduce GAS annual reports so that the GAS are subjected to regular government audits to end financial mismanagement. Small-scale farmers in GASs should not only be trained farming knowledge and skills but should also be trained marketing skills or business accounting so that they are enabled to effectively sell their products and calculate their income and expenditures.

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Acronyms

CLRA - Communal Land Reform Act

FAO – Food and Agriculture Organisation

GAS – Green Agricultural Scheme

GDP – Gross Domestic Product

LEDCs – Less Economically Developed Countries

NDP – National Development Plan

CHAPTER ONE
INTRODUCTION

1.0 Introduction

The study focuses on Green Agricultural Schemes (GASs) in Northern Namibia and aims to assess the benefits, challenges, and opportunities of GASs farmers in the Kavango East Region of Namibia. This chapter introduces the study and lays the foundation of issues discussed in the dissertation. The chapter has sections. There is a presentation of background issues to orient the study so that it is viewed to be related to the GAS concept on the global scene. This is followed by a problem statement that outlines problems related to the Namibian GAS case while showing the need for conducting the study. The chapter goes on to highlight information related to the research that includes the rationale, objectives, significance, limitations and delimitations of the study. The chapter also provide an outline of the whole research study and end with concluding remarks.

1.1 Background of the Study

Agriculture is a common economic activity in both low-income and middle-income countries. In a book entitled 'Agricultural Development and Economic Transformation: Promoting Growth and Poverty Reduction, (Mellor 2017:17) states that "in the low-income countries rapid growth in the large agricultural sector has a dominant impact on the overall growth rate, the decline in poverty, and the speed of economic transformation". According to Moyo, Bah, & Verdier-Chouchane (2015:37), "agriculture is an important sector of the African economy whose significance in the economy varies across African countries. The GAS concept was borrowed from Green Revolutions that were successful in rapidly developing countries like Bangladesh, China, India, Pakistan, and Indonesia, where monitoring of agricultural processes were effective and highly efficient (Tshuma, 2015:180). Similarly on an annex entitled Relevant Rural Development Projects in JICA, (2002:214), the GAS concept in Africa was started as small scale irrigation projects in Ghana to provide technical assistance to farmers involved in the programme and to develop sustainable rural agriculture systems that reduce poverty.

Therefore, the main aim of the GAS projects was to increase production and alleviate poverty experienced by poor rural populations. On the aims of GAS programmes in Africa, Dorward et al (2009) quoted in Shapi (2017:1) maintains that growth in agriculture in developing countries contribute "to Gross Domestic Product, foreign exchange earnings, employment

creation, income generation, and poverty reduction". The implication is GAS contribute to economic growth. Consequently, Namibia adopted the GAS programme at the beginning of the 21st century using the Namibian Green Scheme policy.

1.1.1 Namibia Green Scheme Policy

GAS policy was introduced in Namibia as part of the Dry Land Crop Production Programme to make sure that there is food security at household level (Iita, 2012:13). The Namibia Green Scheme programme aimed to improve agricultural production through irrigation in Karas (Southern Namibia), Kavango, Omusati and Zambezi regions (Northern Namibia). Most of the Green Scheme projects are in the Northern regions, which are densely populated and has 70% of its population rely directly or indirectly on farming (Fiebiger et al (2010:1).

According GRN (2008:4) that outline the Green Scheme Policy of Namibia, the GASs were started to achieve the following objectives:

- To increase agricultural production in Namibia, which would increase agricultural sector contribution to Namibia's Gross Domestic Product (GDP).
- To promote investments in agronomy and in food production industry.
- To encourage both private and private sectors to invest in agriculture.
- To promote food security at household, community, regional, and national level.
- To diversify agricultural production as well as products for local consumption and for export.
- To promote agricultural research and adaptation of appropriate agricultural technology to ensure increases in productivity.
- To promote value addition and job creation.
- To promote skills development and transfer of technology.

According to Iita (2012:4), it is Vision 2030 that made the Government of the Republic of Namibia "to devise programmes and projects to ensure food security at national and household level". Consequently, the Ministry of Agriculture, Water, and Forestry (MAWF) was mandated to ensure the success of the GASs objectives by implementing GAS strategies.

According to GRN (2008:5), the GASs seeks to achieve the objectives through the following implementation strategies:

- By increasing irrigated agricultural land to full potential.
- By continuously identifying agricultural land that can be put under irrigation.
- By ensuring the development of a variety of agriculture projects in irrigated areas.

- By promoting the development of storage facilities as well as marketing infrastructure near Green Scheme Projects.
- By mobilising capital from both public and private sectors.
- By ensuring capacity building to promote productivity and competitiveness.
- By conducting research and development, technology and adaptation.
- By implementing good agricultural practices.
- By promoting effective and efficient use of water and land resources.
- By diversifying agricultural products and promoting agricultural exports.

GRN (2008:6) states that the Green Scheme objectives and action plans had to be achieved by targeting groups and beneficiaries such as investors and irrigation experts, emerging commercial irrigation farmers, rural communities living near the projects, and farmland owners with entitlement to land. Furthermore, GRN (2008:7-8) maintains that the nature of the targeted groups required several farming models to be adopted. These included private development in communal areas, private development in commercial areas, state development in communal areas, state development in commercial areas, and commercial irrigation development in communal areas.

Additionally, GRN (2008:10-12) highlighted that there are four types of Green Scheme Projects management structures, namely, lease agreement (government owned property), lease agreement (government and private sector jointly owned property), management of the government owned project, and profit sharing agreement.

Finally, a variety of stakeholders who included ministries and agencies were given responsibilities or roles to play in agro-marketing development and other Green Scheme Projects promotion mechanisms (GRN, 2008:14-17).

1.1.2 Green Agriculture Schemes Projects in Namibia

AGRIBUSDEV (2015:9-11) lists fourteen (14) existing Green Scheme projects in Namibia, namely, Etunda, Hardap, Kalimbeza, Mashare, Musese, Ndonga Linena, Orange River, Shadikongoro, Shitemo, Sikondo, Uvhungu vhungu, Katima, Liselo, and Tandjieskoppe Green Scheme projects. According to Shapi (2017:2) who investigated challenges small scale farmers face in Namibian GAS, the Namibian government embarked on GASs to increase the productivity of agricultural resources, a main source of livelihood for majority of poor people. Furthermore, Shapi (2017:2) maintains that opportunities for the GASs were presented by the presence of nearby perennial rivers such as The Zambezi River, Kunene River, and Okavango

River for the Northern regions and the presence of Orange River, Naute Dam, Hardap Dam, and Neckartal Dam for the Southern region.

Iita (2012:7) presented twelve (12) GASs in Namibia, their location and size of land allocated. This means GASs in Namibia differ in size and are found in different locations. Most of the Green Agricultural Schemes are in the two Kavango regions, Kavango West with three, while Kavango East has four (Iita, 2012:7). This makes Kavango East to be the region with most Green Scheme projects and thus qualify to be investigated.

Similarly Shapi (2017:3) tabulated various Green schemes and their sizes in hectares. From that table, the four GASs in Kavango East region rural areas that were investigated in this study are Uvhungu-vhungu (825 hectares), Shitemo (1000 hectares), Shandikongoro (590 hectares), and Ndonga Linena (1000hectares).

1.1.3 Main features of Green Agriculture Schemes in Kavango East region

According to AGRIBUSDEV (2015:10 - 11), Kavango East region has the following GASs:

1.1.3.1 Ndonga Linena Green Scheme Project

According to AGRIBUSDEV (2015:10), Ndonga Linena is located 75 Kilometres east of Rundu (the main urban settlement in Kavango East). The farm covers 1000 hectares of land. Only 506 hectares is utilised, 332 hectares is under commercial farming while 174 hectares is used by small scale farmers. There are fourteen (14) small scale farmers, each occupying 12 hectares of land. Ndonga Linena project is managed by Shikunino Trading Enterprises Pvt Ltd, which obtained a profit sharing agreement with the Ministry of Agriculture, Water and Forestry (MAWF).

1.1.3.2 Shadikongoro Green Scheme Project

According to AGRIBUSDEV (2015:10), Shadikongoro project is located 180 kilometres east of Rundu. The farm covers approximately 590 hectares of land. Almost 300 hectares are used for commercial farming while the remaining 90 hectares are occupied by small scale rural farmers. There are fourteen (14) small scale farmers who share 90 hectares in the Shadikongoro project. Twelve of the small scale farmers have six (6) hectares each while two (2) of the small scale farmers have nine (9) hectares each. Shadikongoro is managed by the Agriculture Business Development Agency (AGRIBUSDEV), a state owned enterprise that was awarded a contract by the Ministry of Agriculture, Water, and Forestry.

1.1.3.3 Shitemo Green Scheme Project

According to AGRIBUSDEV (2015:10), Shitemo project is located 80 kilometres east of Rundu. The farm covers 1000 hectares of land. Only 420 hectares of the land is under irrigation.

Shitemo has a small section for five (5) small scale farmers each with three (3) hectares of land because the rest of the area is being used by AGRI-PRO Namibia Pvt Ltd. The company obtained a lease agreement from Ministry of Agriculture, Water, and Forestry when there was evidence that previous beneficiaries of the project were failing to utilise it.

1.1.3.4 Uvhungu-vhungu Green Scheme Project

According to AGRIBUSDEV (2015:11), Uvhungu-vhungu is located 10 kilometres east of Rundu. The farm covers 825 hectares of land. Only 380 hectares is under production. About 320 hectares is used for commercial farming while 60 hectares is use by ten (10) small scale farmers. The project is managed by AGRIBUSDEV through a contract awarded by the Ministry of Agriculture, Water, and Forestry. The rest of the land that is currently not being utilised is being developed into a dairy farm.

1.2 Problem statement

Shapi (2017:2) believes that the idea of GAS in Namibia intended to boost the country's food production capabilities by increasing area under irrigation. This suggests that GAS projects provide a variety of farming opportunities for small scale farmers in Namibia. From observation, it seems that the beneficiaries of the GAS are not producing agricultural products at a rate expected from small scale commercial farming activities that use irrigation techniques. One wonder if these GASs have achieved their objectives. The researcher still has to determine if there are any opportunities available for the small scale farming communities participating in the GAS programmes. The researcher still has to determine if there are any benefits to be derived from participating in GASs. Apart from low agricultural production observed by the researcher, there seemed to be challenges faced by the small scale farmers involved in the GAS programmes in Kavango East region. It seemed as if more information would be found if a thorough investigation is conducted on Green Scheme projects in the Kavango East region of Namibia.

Therefore, the aim of the study was to focus on opportunities, benefits, and challenges of the GAS projects in order to expose its positive and negative impacts in the Kavango east region in particular and in Namibia in general.

1.3 Objectives of the research

The study has the following objectives:

The primary objective of the study was to assess the benefits, challenges, and opportunities of GASs farmers in Kavango East Region.

The study had the following secondary objectives.

i. To identify opportunities available for the small scale GAS farmers in Kavango east region.
ii. To examine factors responsible for the success or failure of the GAS projects in Namibia.
iii. To appraise the benefits of the GASs in Namibia.
iv. To analyse challenges faced by GAS small scale farmers in Namibia.

1.4 Significance of the study

The study adds to the literature that is already available on GAS which makes it a useful reference to future students and researchers studying rural development or related issues. Rural planners and policy makers may find the findings and recommendations of the study helpful when drawing programmes similar to GAS in future. The small scale farmers participating in GAS stand to benefit since their challenges will be exposed and they are likely to receive assistance from stakeholders interested in their plight. The study greatly benefits the researcher who acquired valuable research skills that is necessary at work and future academic endeavours.

1.5 Delimitations of the study

The study was conducted among the four Green Scheme projects in Kavango East region. Kavango East was selected because of its nearness to the researcher's place of residence, which made it easier for the researcher to move to and from the Green Scheme Projects during data collection.

1.6 Structure of the study

The study has five chapters.

Chapter one is an introduction to the study. It gives background information that eventually narrows to the issues under investigation. The chapter has the research problem as well as issues discussed in the whole study. The chapter provides justifications for the study and the aim of the study. This chapter has significance of the study, study objectives, and delimitation of the study.

Chapter two is the literature review that looks at variables of the study and what has been written by previous researchers on issues related to the study. The literature review has theories related to study objectives.

Chapter three is the research methodology. It has methods used in the data collection and data analysis processes. The methodology presents the research approach chosen by the researcher to highlight its appropriateness. It presents population of the study, sampling techniques, the sample used in the study, and the research instruments. The chapter also has research ethics that were considered in the study.

Chapter four has data presentation, analysis and discussion. Findings of the study are presented systematically using the themes that emerged from the data analysis and the format of the research objectives. There are discussion of the findings to link the findings to the literature review.

Chapter five has conclusions and recommendations. There are summaries of findings derived from the data presentation followed research based conclusions that concludes the whole thesis. The chapter clearly states whether the research objectives have been achieved or not. Recommendations proposed in this chapter also suggests any areas identified for further research.

Each of the five chapters of the mini-dissertation begins with an introduction and ends with a conclusion to establish a connection between the previous chapter and the next chapter.

1.7 Conclusion

Chapter one has laid the foundation to the whole study by presenting the what, the why, and the where aspects of the study including justifications. The chapter has issues the researcher planned to focus on to give orientation of the study to readers. The chapter has a background that exposed the importance of agriculture in general. The GASs in Namibia are then systematically presented to highlight its inauguration, aims, implementation strategies, target groups, and types of GAS projects. Names, location and main features of GASs in Namibia are also part of the background. This introduction also included the rationale for GASs in Namibia, associate problems, issues under investigation, significance of the study, delimitation of the study, and structure of the study. The next chapter reviews articles, journals, and books with information related to this research study. It is an expansion of most issues highlighted in this chapter.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

The literature review is a follow up to what has been introduced in the sections above. It presents views and findings from previous research done on assessments of Agricultural Green Scheme projects elsewhere. The literature review quotes current accredited books and journals on Agricultural Green Schemes in general for comparison with findings to be conducted in Namibia. This chapter is divided into sections that includes importance of agriculture in general, the GAS concept from general to specific, factors responsible for success or failure of GASs, benefits of GASs and challenges experienced.

2.2 Importance of agriculture

From the 18th century Agricultural Revolution, agriculture became an important economic sector throughout the whole world. According to Boateng (2011:17), agriculture is the dominant activity for the majority of world populations that promotes sustainable rural development goals. Mellor and Dorosh (2010:5) maintains that "A high rate of agricultural growth has far reaching positive implications for economic development of low-income countries in terms of increasing employment and accelerating poverty reduction. High agricultural growth also helps to avoid the creation of mega-cities with large slum populations". From Mellor's point of view, the big role agriculture play in world economies, places agriculture at the forefront of development processes since it promotes the growth of all other sectors of the economy. This view is supported by Boateng (2011:18), who highlighted relationships between expansion in agriculture and other non-agricultural growth using case studies. In Taiwan, India and Philippines agricultural growth was promoted by agriculture based technologies, in Argentina agriculture made governments to expand the area under agriculture production, and in Colombia and Costa Rica exports of agriculture products became the basis for agriculture expansion (Boateng, 2011:18).

Currently, agriculture is the dominant economic activity in Africa, where agriculture is perceived to reduce poverty, lower food prices and stimulate industrial growth (Moro, Bah & Verdier – Chouchane, 2015:37). In such a case, agriculture in Africa is mainly done for poverty alleviation purposes. Monchuk (2014:1) maintains that in the last two decades, Africa's economic growth focused on achieving poverty alleviation by providing support to poor households and assisting them to invest in productive and capital forming activities. The case

is different in developed and middle income developing countries where poverty reduction involve income transfers, established social welfare systems, and or targeted job creation programmes (Binger, 2014:1). Furthermore, Binger (2014:16) suggested that other measures that can be used to accelerate poverty reduction in LDCs includes establishment of agricultural commodity insurance, promotion of export diversification, and efforts by LDCs to eradicate dumping of food produced in developed countries. In line with this, United Nations (2002:5) argues that poverty reduction strategies only succeeds if they are accompanied by policies that sustain rapid economic growth and improve income distribution. It still needs to be determined if these poverty alleviation strategies are in line with the Agricultural Green Schemes in Kavango East, Namibia.

According to Isala (2016:7) who highlighted the state of agriculture in Namibia, agriculture in Namibia consists of commercial and subsistence sector. The commercial sector has both small scale holder and large scale holder farmers, depending on the size of land the farmers occupy. Similarly, Iiyambo (2019:9) maintain that agriculture in Namibia is made up of commercial, referring to freehold land tenure, where owners have title deeds, and communal, referring to land owned by communities and not individuals. All writers suggest that agriculture is two-fold, either commercial or subsistence (communal). To enhance these agricultural practices, there are various agriculture policies and principles that exist globally, among these is the GAS.

2.3 Green Agriculture Scheme Concept

Green Agriculture Scheme refers to a Namibian government initiative aimed at increasing agronomic and food production in rural areas through development of irrigation (Isala, 2016:10).

2.3.1 The Green Scheme elsewhere

There are several GASs in both the developed and developing world. This study discusses the best GAS practices in the developed world and in Africa for comparison with findings to be made in the Namibian investigations.

One of the best practices in Green Agriculture Schemes in the developed and in newly developed countries is Indonesia. According to Leimona et al (2015:18), Indonesia developed its Green scheme agriculture programmes as a result of the institution of a New Order (before 2000) that had the National Agenda 21 of 1997 followed by several national development programmes to revitalise agriculture. This shows that the aims of Green Agriculture Schemes in newly developed countries and those in developing countries differ considerably.

Developing countries increase agriculture production to reduce poverty while developed and rapidly developing countries increase agricultural production for export purposes.

Indonesian GAS was promoted by direct government regulation to reduce negative impacts from farming, indirect subsidies for agricultural inputs especially organic fertiliser, massive training of farmers, and certification of organic farmers (Leimona et al, 2015:23-35). Additionally, Leimona et al (2015:54) believe that the Indonesian Green technology improved access to information as well as financial support to green agriculture technology and information for smallholders. Therefore, provision of economic and human inputs as well as incentives made the GAS in Indonesia to be considered as one of the best practices in the world. The same approach may or may not work in the Namibian GASs, which has to be determined. One of the best Green Agriculture Scheme in Africa, South of the Sahara, is in Gauteng province, South Africa, the Tswane Greenfield Development. According to PAGE (2017:45), the Tswane Green Agricultural Scheme near Johannesburg is worked by 25 households, who are provided with a plot of land to live and farm as well as rainwater harvesting tanks, solar water heater, greenhouse, bio-septic tank and poultry infrastructure. Therefore, provision of storage tanks and basic chicken farming facilities could have been one of the reasons why Tswane GAS worked well. Such higher level assistance might be missing in Namibian GASs, which makes them not to work well in comparison to Indonesia and Tswane GASs.

PAGE (2017:45) maintains that the Tswane Green Agriculture Scheme trains farmers to understand farming economics and produce quality products. This promoted increase in production of quality products. As a result, Tswane Green Agriculture Scheme is successful because of full government financial, material, and technical support.

2.2.2 The Green Agriculture Scheme in Namibia

Strategies for economic growth have been attempted in many countries. A working paper (number 207) by Mashindano and Maro (2011:4) entitled ‘Growth without poverty reduction in Tanzania: Reasons for the mismatch’ presented the Tanzanian five year National Strategy for Growth and Reduction of Poverty (NSGRP) known as MKUKUTA in Swahili. As such there are a variety of strategies that are being used to ensure agricultural success. One such initiative is the GAS programme. According to Kandjeke (2013:1), the Namibian GAS known as the “Green Scheme Policy” is part of the national food security and self-sufficiency initiative by the Namibian government to reduce poverty through the development of irrigation agriculture in specific rural communities. This show that the programme is not for all areas but for selected communities. There is need to determine if these selected farming communities

are taking advantage of the initiative or not? There is also a need to determine the impacts of these GAS programmes on the selected communities?

Iita (2012) generally presented the GAS programme as a milestone that is designed to lead Namibian agribusiness to success and to poverty reduction. This suggests that the GAS has a lot of agricultural opportunities to beneficiaries. According to GRN (2008:6), the GAS in Namibia beneficiaries includes investors with irrigation expertise, rural communities, emerging commercial farmers, and individuals legally entitled to land. Endunde (2017:17) states that GAS are operated by many service providers on lease agreement and or profit sharing agreement to produce crops under irrigation. The question now is, did these GAS beneficiaries in Namibia utilise the opportunities presented by the GAS initiatives. Recent research has generally shown that GAS in Kavango East region have achieved their goals (Isala, 2016; Subasubani, 2012) but a study by Mughongora (2018) believed otherwise and then conducted an investigation to establish why the GASs in Kavango East region have not achieved their goals. This study took a different dimension by conducting a new investigation that focuses on factors responsible for success or failure of the GAS, their benefits and challenges experienced by the GAS.

GRN (2008:1) maintains that the Namibia GAS was handed over to the Ministry of Agriculture, Water and Forestry for implementation in order to realise the goals of the Namibian National Development Plan, Vision 2030. According to Kandjeke (2013:3), the GAS is used by the Namibian government to improve farmers' agricultural and technological skills so that farmers diversify their farming activities and start producing goods for both local and international markets. Agricultural research together with increasing investment in agriculture were also part of the aims of the GAS policy (Kandjeke, 2013:2). Additionally, Endunde (2017:18) noted that the GAS programme is designed to contribute to the country's GDP, to create employment, and to reduce poverty. The implication is that the GAS policy has many aims. The question is, are the GAS farmers in Kavango East properly taking advantage of this agricultural initiatives to achieve the GAS objectives or are there impediments?

GRN (2008:5) outlined the Namibia GAS Policy implementation strategies that included increasing areas that has potential for irrigation agriculture to full potential. The identified areas were then developed to suit full-fledged agriculture business ventures. The government then makes sure that infrastructure that support irrigation agriculture and marketing of products is developed and that capital is raised from both private and public sources to ensure productivity, research, technology transfer, and implementation of effective agricultural techniques (GRN, 2008:5). This shows that the Namibian GAS policy is well planned and capable of producing

positive results. According to Kandjeke (2013:3), the main beneficiaries of the programme are rural communities either interested in the programme or those living near identified GAS irrigation zones. This means that participation in GAS activities depended on application for participation and on the farmers' proximity to the identified GAS locations, which imply that anyone interested in farming could benefit from the GAS programme. From the general review of the GAS policy as presented by (GRN, 2008), the programme seems to have great potential for uplifting agriculture production and increasing income in rural communities. If that is the case, did the GAS programme live up to expectations?

2.4 Factors responsible for success or failure of the GAS projects

Mughongora (2018:20) classified factors responsible for GAS success or failure into "awareness, integration and capacity building of small scale farmers". In this regard, awareness refers to information dissemination to farmers in the form of weather news, marketing information, and best farming practices advice. Integration refers to bringing together small scale farmers with diverse skills and abilities. Capacity building of small scale farmers in rural areas refers to imparting agricultural skills to the farmers. A study by Bernard, Dulle, & Ngalapa (2014:1) highlighted that "key sources of information used by farmers are their family or parents, personal experience, neighbours and agricultural extension officers". This is an acknowledgement of integration and awareness as important factors responsible for success or failure of Green scheme programmes. However, none of the studies conducted in Kavango East region discussed the issue of capacity building. This study aimed to find out if there is any agricultural skills being imparted on GAS farmers' in Kavango East region.

A study conducted by Benard, Dulle, & Ngalapa (2014:3) in Tanzania revealed that information needed by small-scale farmers change from time to time because of changes in agriculture technologies, changes in the environment, changes in agriculture policies, and emergence of new innovations. With this in mind, there was still a need to determine if there is any awareness being conducted among the GAS farmers in Kavango East region.

Mughongora (2018:24) quotes a study conducted by Endunde (2017) on Ndonga Linena Green scheme, which indicated that 80% of the small scale farmers on Ndonga Linena Green scheme come from other regions not Kavango East, which is a form of integration. None of the previous studies indicated the existence of awareness programmes conducted with the small scale farmers on Green schemes in Kavango East region. Is there any form of awareness being conducted on small scale farmers in Kavango East region GASs?

On a different note, Tadaro (2012:10) claims that the main reason for the failure of the African agricultural programmes is that they depend on natural inputs such as rainfall and manure, which leads to low production. Eventually, changing weather conditions and climate change would negatively affect the African farmers (Tadaro, 2012:10). Similarly, Iiyambo (2019:48) states that the Namibian farming sector relies heavily on rainfall and that the negative impacts of this dependency on rainfall has been worsened by very hot climatic conditions, which makes the little rainfall available ineffective for farming purposes.

However, Sithole, Lagat, and Masuku (2014:159) maintains that it is the government intervention in small holder farming programmes through irrigation, agricultural reforms, and technological innovations that ensure success or failure of GAS programmes. In this case, Sithole, Lagat, and Masuku (2014:159) dismisses Tadaro (2012:8) and Iiyambo (2019:48) assertions because GASs farmers are assisted and supported by the government to acquire land, to access finance, to get agricultural inputs, and to do marketing (GRN, 2008:8). Therefore, this study also intended to investigate how the Namibian government support benefited Green Schemes in Kavango East region, which has not been clarified by previous studies.

2.5 Benefits of the GASs

According to Moro, Bah, and Verdier-Chouchane (2015:38), Asia and the pacific regions benefited most from GASs. The programme produced food surpluses, cereal production in the pacific quadrupled between 1960 and 1990, and Countries in Asia doubled their cereal production between 1970 and 1995 (Moyo, Bah & Verdier-Chouchane, 2015:38). In Africa, GASs are believed to have several benefits. According to Shapi (2017:1), any agriculture development reduces poverty, creates job opportunities, increases rural income generation abilities, and addresses inequalities in wealth distribution. Furthermore, Shapi (2017:1) argues that GASs food production ensure food security in the country since adequate food becomes available in both rural and urban areas, which leads to reduction in food prices and reduction in poverty.

Oumer et al (2014) quoted by Endunde (2017:25) maintains that in Ethiopia farmers to acquire farming skills and knowledge on how to use of agricultural technologies, and how to access credit, which increased women's productivity. Additionally, Boateng (2011:7) believes that small scale farming contribute to a country's Gross Domestic Production to a large extent. Additionally, World Bank (2008) quoted by Mughongora (2018:31) states that "GDP growth originating in agriculture is at leasttwice as effective in reducing poverty as GDP growth originating outside agriculture".

The writers above (Boateng, 2011:1; Endunde, 2017:25; Moyo, Bah and Verdier-Chouchane, 2015:38-39; Shapi, 2017: 29) show that there are significant benefits that can be accrued from GAS farming practices that changes people's lives and livelihoods. The question is, do all Green scheme programmes benefit in the same way since there are differences from one Green scheme to another? Is it always the case that production increase or income increases when a Green scheme is set up? Is it true that Green schemes reduces inequalities in wealth distribution? Benefits highlighted by previous writers can only be substantiated by further studies such as this study conducted on GASs in Kavango East region.

2.6 Challenges faced by GAS small scale farmers

GAS farmers worldwide face challenges. According to Benard, Dulle, & Ngalapa (2014:6), research has shown that small-scale farmers information needs in developing countries differ from "how and where to purchase agricultural equipment, information on seed varieties, marketing information, information on loans, weather conditions, irrigation and soil fertility". As a result, the farmers tend to depend on traditional seed varieties not applicable to their farming environments, which eventually produces low yields. Sithole, Lagat, and Masuku (2014:162) maintains that rural farmers either do not get correct information or they get correct information at the wrong time. This failure to get right information when it is necessary leads to a decline in the development of agriculture. Lwoga (2009) quoted by Mughongora (2018:22) believes that small scale farmers need information on crop production, pest control, animal diseases, marketing, and irrigation practices. Similarly, Fiebiger et al (2010:25) found out that GASs farmers in Northern Namibia have poorly performing extension services due to MAWF shortage of human resources to provide expert guidance in crop production.

The above writers (Fiebiger et al, 2010:25; Mughongora, 2018:22; Benard, Dulle, & Ngalapa (2014:6); Sithole, Lagat, and Masuku, 2014:162) show that information dissemination is crucial in farming for not only making the farmers' knowledgeable but to increase farming efficiency and productivity. Therefore, inefficient flow of information to small scale farmers is an obstacle to the achievement of the goals of the GAS projects. The writers reviewed above only highlighted information needed in small scale farming practices and the type of information the farmers need. The writers did not elaborate on the benefits the farmers derived from the information they have received.

Researchers indicated that small scale GAS farmers in Northern Namibia faced land degradation challenges (Boateng, 2011:6; Moyo, Bah & Verdier-Chouchane, 2015:42).

Moyo, Bah, and Verdier-Chouchane (2015:39) maintains that African countries increased the area under crop cultivation, which resulted in numerous environmental problems that includes loss of nutrients, desert encroachment, soil degradation, and massive deforestation. The writer does not provide a reason why there are environmental problems in Africa farming areas. Boateng (2011:6) added that farmers in most parts of Africa use traditional methods of farming that are ecologically unfriendly to natural vegetation and thus results in massive deforestation. These farming practices that are ecologically unfriendly reduce agricultural production and threaten the sustainability of Africa's agricultural production (Boateng, 2011:6). In this case, environmental challenges eventually cause economic problems such as land productivity, which eventually leads to shortage of food, hunger, and starvation.

In support of the above writers, Endunde (2017:16) states that 48% of farming land surfaces in Namibia's communal areas has limited resources and produces low yields due to continuous loss nutrients, which eventually make farmers pay more money for fertilisers and in the end lose profits. This means environmental challenges eventually leads to shortage of finance and shortage of inputs. The question now is, do the farming practices of GASs farmers in Kavango East region protect the environment? Are there any environmental challenges or problems related to environmental degradation in Kavango East region? This needed to be established.

Farmers in Africa are reported to be facing marketing challenges. Shapi (2017:3) believes that there is absence of market for agricultural inputs and outputs in Africa because of weak purchasing power and limited access to international markets. In line with this, Murphy (2012) quoted in Iiyambo (2019:14) highlighted that small scale farmers face a problem of exclusion meaning that they face difficulties in accessing markets where they can buy necessities and sell their crops. Similarly, Boateng (2011:26) argues that absence of proper transportation and storage facilities hinder small-scale farmers from accessing local and international markets. These writers show that farmers marketing challenges are also associated with other problems such as lack of transport and lack of storage infrastructure, which means the farmers loose profits and experience financial difficulties since their products are not marketed on time.

It is generally believed that agriculture depends on rainfall or availability of water supplies and if these are scarce then farmers experience challenges. Fiebiger et al (2010:32) maintains that in Namibia farmers face problems such as lack of water supplies for irrigation purposes because "water is pumped from the Calueque Dam in Angola to fill canals the Oshakati canal in Namibia to supply water to areas surrounding the Oshakati canal". Additionally, Fiebiger et al (2010:32) states that Oshakati canal is filled to capacity to minimise water evaporation caused by excessive heat. On the same issue, Iiyambo (2019:48) added that the hotter the Namibian

climatic conditions, the drier the land becomes and eventually there would be shortage of water for irrigation purposes. Do these views apply to the whole country or to specific areas that the above writers investigated? This may not be the case with Green schemes in Kavango East region where there is high annual rainfall and perennial water supply from the Kavango River.

2.7 Theoretical and conceptual Framework

2.7.1 Theory of social Darwinism highlighted in James (2006:45) states that the level of people's ability to survive is the main cause of their poverty or success. People either succeed or fail because of their ability to survive ("natural selection"). This is supported by Hurst (2010:21) who believe that people's productivity potential stems from their competitive association with other people who have different work abilities. According to Hurst (2010:21) social competition promotes production within the social system as people adapt to their environment. Those with inabilities fail while those with abilities survive. The theory and the success or failure of the Green Scheme programme have strong relationships. It clearly show that success or failure of any farming venture depends on the "survival of the fittest" Darwinism terminology, which was used in this study to determine factors influencing the success or failure of the Kavango East GAS projects.

2.7.2 Conceptual framework

The conceptual framework in figure 1 below guided the researcher's investigations of Kavango East GASs.

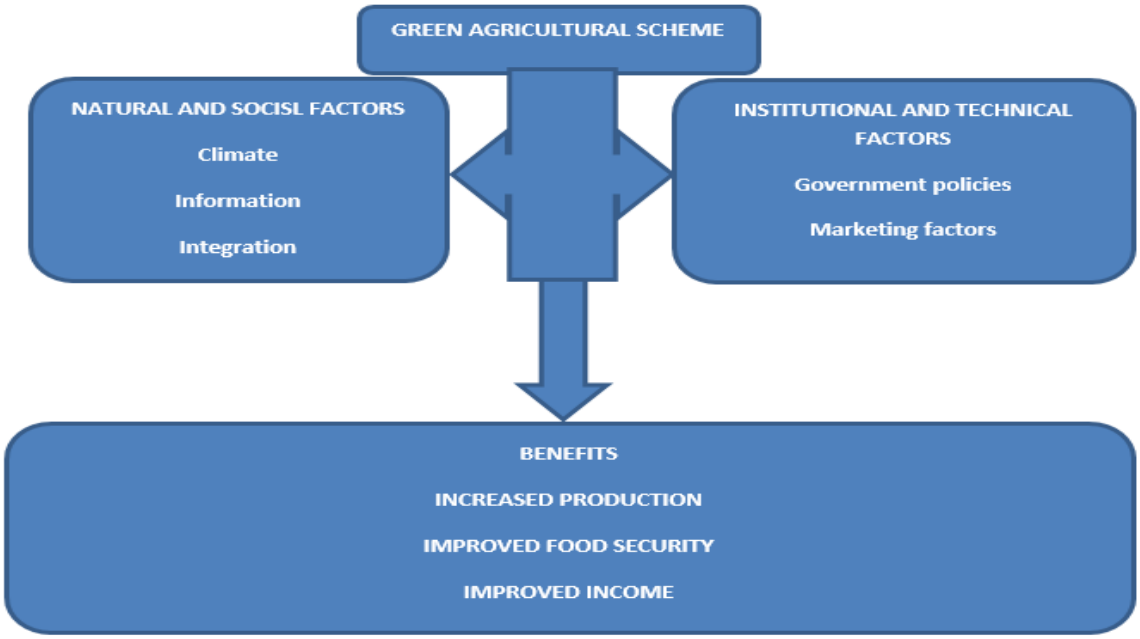

Figure 1: Conceptual Framework of the study

Source: Shimafo (2021:20)

Figure 1 show the natural, social, institutional and technical factors that influence the success or failure of Green schemes and the benefits expected from Green scheme programmes.

2.8. Conclusion

The Literature review has a variety of views on Green Schemes, the rationale behind the institution of the Green scheme policy, factors responsible for success or failure of the GAS projects, benefits of Green schemes, and challenges faced by Green schemes. The literature review has shown agriculture is an important global economic activity that is commonly pursued in developing countries for poverty alleviation purposes. The literature briefly exposed poverty alleviation in developed, middle income developing countries, and in poor countries, where GASs are common. According to literature GASs vary depending on the nature of the country where they are practised. The literature has presented different views on GASs and analysed them to show possible gaps in information. From the above review, there is a possibility that similar or different information on GAS may be discovered by conducting fresh assessments on GASs in Kavango East region, where studies still have to be done. The literature review also has a theoretical framework that presented the relevance to the study of the theory of social Darwinism. There is also a conceptual framework with major elements of GASs. The next section, the research methodology, has details of the methods that were used

to collect data on Agricultural Green Scheme programmes in Kavango East region of Namibia. The methodology section describes components of the methodology and provides justifications of the research components wherever necessary.

CHAPTER THREE
RESEARCH METHODOLOGY

3.0 Introduction

This chapter focuses on methodologies used to conduct the research on GAS in Kavango East region. It has details of procedures that were used in data collection as well as data analysis of GASs in Kavango East region. Basically, this chapter discusses the research design, population sampling, data collection strategies, data analysis procedures, and ethical considerations. In short, this chapter has details that answers why, who, what, how, and where aspects of the research (Borg & Gall, 2013:44).

3.1 Research design

According to Borg and Gall (2013:45), a research design is an overall strategy chosen by the researcher to be the plan of the research project. The research design acts as the blueprint for the collection, measurement and analysis of data in order to answer the research questions and address the research problem. Traditionally, there are three research methodologies that can be adopted by researchers in data collection and data analysis processes. These are quantitative, qualitative and mixed research approaches.

The quantitative research approach studies uses a large number of participants to study phenomena and then presents numerical data (Trochim, 2016:90). According to Borg and Gall (2013:46), the quantitative research approach has several advantages. Quantitative results can be tested which makes it more reliable. Its data presentation is straightforward and less open to error and subjectivity. Quantitative presentation is impressive since it uses advanced technical mathematical models (Trochim, 2016:90).

Borg and Gall (2013:46) also maintains that quantitative research, however, does not enable the researcher to examine broader themes and relationships in data collected because it focuses on numbers which make it unable to identify the true picture being presented by information gathered.

Trochim (2016:90) believe that quantitative research needs carefully developed hypothesis or a model set up for collecting and analysing data. This make it very difficult to use and highly likely to produce invalid results if it is not properly used. In most cases, hypothesis are subjective and often misleading (Trochim, 2016:90). This demerit among other factors has made the researcher to avoid using quantitative approach in this study.

Mixed research approach is a research approach that combines both qualitative and quantitative approaches. Since the mixed research approach borrows from both quantitative and qualitative approaches, this strengthen the validity and reliability of the research being conducted (Trochim, 2016:90). Mixed research make it possible for the researchers to conduct researches that would have been more difficult to accomplish using one research approach (Borg and Gall, 2013:46). The research data is very useful because the mixed research approach has very high chances of presenting a clearer understanding of the issues investigated (Borg & Gall, 2013:46).

The main challenge with mixed research approaches is that they do not have established traditions to be followed in the research process, which makes it very difficult for the researcher to defend the value or appropriateness of the mixed research procedures (Borg & Gall, 2013:46). In mixed research the researcher has to clarify why the approach is necessary to achieve the goals of the research which could not be achieved by qualitative or quantitative approaches alone (Trochim, 2016:90). This means the mixed research approach can be a very difficult methodological approach to inexperienced researchers, which is another reason why the researcher did not adopt the mixed research approach for this study.

The study used qualitative research approach to collect, analyse, and present data as justified below. Qualitative research approach collected non-numerical data on GASs in order to describe the GAS multiple realities using words.

The qualitative research approach has some strengths identified by the researcher. It allowed participants to be directly involved in the research, which produced unexpected important findings. At the same time, the qualitative research approach enable the researcher to use participants own understanding, feelings and opinions to create a research report (Trochim, 2016:90). As a result, the researcher understood the values, beliefs and assumptions of the participants which was very important in interpretation of findings from participant behaviours through direct research investigations. Qualitative research interviews covered a wide and broad spectrum of issues related to the research topic since it provides opportunities for the researcher and participants to interact (Flick, 2015:28). This made the researcher to thoroughly exhaust the issues under investigation by continuously probing the participants to clarify issues. This approach made participants to look at the issues being discussed from many different angles, which gave the researcher more insight on the issues under investigation than what was expected before the research investigations.

Qualitative research approach used came along with its challenges. The approach was time consuming and costly due to prolonged interview preparations and subsequent interaction with

participants. The researcher had to be highly skilled in communication to extract desired responses from the participants who sometimes give lengthy irrelevant verbal discourses. The qualitative research approach called upon the researcher to be an expert in public relations because the investigations were conducted in remote areas where the researcher is a stranger who must successfully extract meaningful responses from participants. The researcher applied for leave days to successfully accomplish the research investigations to avoid inconveniencing the participants of the study.

The qualitative research approach was suitable because it enabled the researcher to successfully investigate what people think, do or feel about what they did in their own natural farming environment. It proved to be the best approach when investigating peoples' lives, experiences and how they organise themselves. Qualitative data was collected on opportunities available for GAS farmers in Kavango east region, factors responsible for success or failure of GASs, challenges faced by GAS farmers and impacts of the GASs.

3.2 Unit of analysis

Khotari (2012:25) defines a unit of analysis as the total number of subjects that the researcher is interested in investigating. In this case, the researcher was interested in investigating three groups of people, namely households of small-scale farmers participating in four GAS programmes, managers of GAS and Agriculture Extension Officers in Kavango East Region. Each GAS in Namibia had 15 households, a manager for each scheme and an agriculture extension officer in each constituency. The four GAS in Kavango East are in three constituencies. This means the researcher had 60 households, four managers and three agriculture extension officers as the unit of analysis. This unit of analysis was selected because it was made up of people who had information that the researcher was interested in. These are people were either directly or indirectly participating in GAS activities and were capable of providing information that answered the research questions and addressed the research problem.

3.3 Sampling Design

Khotari (2012:28) maintain that a sample is a fraction of the population selected by the researcher for the purposes of a research study. This study selected three (3) households (one-fifth of the population) in each of the four Green Scheme areas of Kavango east, namely Shandikongoro, Shitemo, Ndonga Linena and Uvhungu vhungu. The researcher used purposive sampling technique to select respondents. Purposive sampling is when the researcher

choose respondents to include in the study based on their ability to provide information related to the research study (Khotari, 2012:29). According to Khotari (2012:29), purposive sampling is the selection by judgement. In purposive sampling, the sample is selected due to specific characteristics that the researcher is interested in (Borg & Gall, 2013:50). The use of purposive sampling reduced the cost and time of preparing the sample of the study. It made the researcher to choose the right people with information that addressed the research questions.

Therefore, apart from small scale farmers (their households), the researcher targeted other informants that included two GAS managers and an Agriculture Extension Officers in Kavango East region to have a sample of 16 participants, which is almost one-quarter of the unit of analysis.

According to Flick (2015:29), qualitative data is collected using a smaller sample to save interview time and also reduce the burden of analysing large quantities of data. A smaller sample was easy for the researcher to manage which created very high chances of getting results that addressed the research problem and answered the research questions. The sampling technique was suitable because it ignored the different characteristics of the people in the population of the study. This purposive sampling did not take into consideration the age or gender of the population but chose households involved in the Green Agriculture Scheme programme because they had information required by the researcher, which reduced delays.

3.4 Data Collection Strategy

3.4.1 Research instruments

Research instruments are tools used in the data collection process (Borg & Gall, 2013:54).The qualitative data was collected using semi-structured interviews. The researcher opted for interviews because travelling restrictions had been lifted and there are no longer COVID 19 lockdowns in Kavango East Region that recorded very low Corona virus cases. Interviews enabled the researcher to meet the respondents face to face, which provided the researcher with opportunities of recording both verbal and non-verbal communication. The researcher drew up lists of semi-structured interview questions, which collected diverse information that was verified by continuous probing of the participants. However, conducting interviews was another challenge on its own. Interviews were lengthy and time consuming. There were a lot of preparations needed at each GAS which made the investigations to take more time than the time the researcher anticipated. At the same time, the COVID-19 measures had to be implemented to satisfy current health legislations. The social distancing measures affected

recording of data on the researcher's audio because the researcher was 1.5 metres from the respondents and this produced a poor sound quality.

3.4.2 Data collection procedures

Approvals to conduct the research were acquired from the Free State University authorities and from the Namibian Ministry of Agriculture, Water and Forestry. Primary data was collected by the researcher in person at four Green Agriculture Scheme projects in Kavango East region using interviews. The researcher made appointments with the respondents. Appointments allowed the respondents to prepare for the interviews. Each of the respondents sanitised and wore face masks before the interviews. Social distancing was maintained throughout the interview. This was so as to avoid any contact between the researcher and the interviewees during dire and hush times of COVID-19. The researcher conducted face to face interviews with respondents using an interview guide which enabled the researcher to ask questions while observing verbal and non-verbal responses and recorded answers using an audio. Responses were recorded and then transcribed for easy analysis and storage. Secondary data was collected from accredited library books, journals and the internet. The collected data was stored and preserved in a personal computer for final data analysis.

3.5 Measurement map: *Table 1*

Objectives	Construct	Variable	Data source	Data questions	Themes
Objective 1: To identify opportunities available for the Green Scheme farmers in Kavango east region.	Opportunities	Poverty reduction	Interviews	What are the opportunities available for Green Scheme farmers?	Natural Economic Human
Objective 2: To examine factors responsible for the success or failure of the Green Scheme projects in Namibia.	Factors	Agriculture production	Primary sources (Interviews) & secondary sources	What factors promote or hinder agriculture production at the Green Agricultural Scheme?	Economic factors Physical factors Human factors
Objective 3: To examine the benefits of the Green Agricultural Schemes in Namibia.	Benefits	Impacts	Primary sources (Interviews) & secondary sources	What do people gain from the Green Agriculture Schemes?	Local Regional National
Objective 4: To identify challenges faced by Green Agricultural Schemes farmers in Namibia	Challenges	Impacts	Primary sources (Interviews) only	What problems are faced by the Green Agriculture Scheme farmers?	Physical Economic Human

3.6 Data analysis

Themes emerging from data collected were analysed using qualitative content analysis. To implement content analysis, the researcher went through the information checking for accuracy and completeness in order to identify errors and omissions. The process was repeated for the researcher to familiarise himself with the data. The studying of the data gave the researcher the

opportunity to draw conclusions and classify data into themes or categories based on the research questions. Descriptions of the themes were presented as findings of the study in the last chapters of this research report.

3.7 Limitations of the study

There were methodological limitations expected by the researcher. Limitations refer to those situations the researcher is not in control of, which may eventually affect research findings (Creswell, 2014:42). There were many participants in Green Agriculture Schemes in Kavango East region but the researcher only selected 16 participants for interview purposes. Therefore, there could be limitations in the sample. A larger sample in research studies can create opportunities for diverse views, opinions and conclusions (Creswell, 2014:43). In qualitative studies a large sample may create problems in data analysis and presentation since there would be large volumes of data for consideration.

The use of interviews on Green Agriculture Scheme participants may not have yielded the best results because the farmers were mostly busy and did not want their work to be interrupted. This could have affected the quality of responses given by participants during the lengthy interviews. The researcher had to make appointments so that the interviewees prepare for the research investigations at convenient times. There were chances where the researcher was likely to base his or her own personal feelings and opinions during the interpretation of findings. The investigations were conducted amid the COVID-19 restrictions, when travelling was considered risky.

3.8 Research ethics

Creswell (2014:157) maintain that ethical considerations were necessary in research to give the research moral principles that ensured that the research does not cause any harm to participants. This means that research ethics guided the researcher's relationships with people within the society where the research is conducted. The following ethics were considered in this study.

3.8. 1 No harm to participants

The researcher ensured that participants were not harmed in any way by the research study by ensuring anonymity and confidentiality. Khotari (2012:112) defines anonymity as the ability to keep identity of participants of the study a secret during and after the research investigations. Confidentiality is defined as keeping findings of the study for academic purposes only. It was the researcher's intention to keep research information confidential (Creswell, 2014:157). Anonymity was ensured by not disclosing any names of participants to anyone at any time

during and after research investigations. No names of participants appeared in this research report. Confidentiality was ensured by storing collected data in a protected personal computer with a password so that the information is always kept away from members of the public. The computer and hard copies of the research report are always locked up in a steel cabinet in a private office. Findings of the study were used for academic purposes only.

3.8.2 Impartiality

The researcher remained purposeful and impartial throughout the research process by avoiding unnecessary biasness and prejudices. Impartiality was ensured by treating all participants as equal which make their views and opinions to be considered in the study as they are without any favouritism. All findings were considered for data analysis regardless of who made the contribution (Khotari, 2012:112).

3.8.3 Voluntary participation

Participants were free to decide whether to be participants or not. Participants were given the right to withdraw from the study whenever they wish to do so without giving an excuse.

3.8.4 Informed Consent

Informed consent refers to a preliminary research process whereby the researcher sought permission from all stakeholders interested in the research including participants and Free State University ethics committee by clarifying issues under investigation. After granting of permission the researcher made the purpose of the research known to all participants so that the participants choose to participate in the study or not. This was done to enlist their cooperation. The researcher request participants' permission in writing using a consent form with the purpose of the research and ethical considerations. All participants had to sign the consent form to show their acceptance to be participants in the study.

3.10 Conclusion

This chapter has details and justifications of processes and procedures that were taken into consideration during data collection. It presents a plan of action that was used by the researcher to ensure success of the research study. The chapter highlighted different research approaches that a researcher can adopt in any research, to justify the qualitative methodology that the researcher eventually adopted. The study participants were selected using purposive sampling techniques and data was gathered using interviews following COVID 19 protocols. The chapter also presented techniques adopted by the researcher in data analysis. Issues that the researcher could not control are also highlighted as limitations of the study. The chapter ends with research

ethics that were considered throughout the research process. The results of the investigations done using the above methods are presented as findings of the research in the next chapter.

CHAPTER FOUR
DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 Introduction

Chapter three described methods used to collect data on GASs in Kavango East region. Data was collected from participants (small-scale farmers, managers and Agriculture Extension officers) involved in four GAS in Kavango East region, namely Shitemo, Shadikongoro, Ndonga Lineni and Uvhungu vhungu, using interviews. The interviews extracted information that helped the researcher to answer the research objectives.

A total of 13 interviews were conducted (One Agriculture extension officer and 12 small scale farmers) as opposed to 16 interviews that were previously proposed due to the reduction of small scale farmers participating in GAS. The managers that the researcher encountered had been newly transferred to the area and were not well versed with what the researcher was investigating. The research investigations produced results that are presented, analysed, and discussed in this chapter. The findings were analysed using content analysis and are presented in this chapter thematically for easy understanding. This chapter presents findings systematically starting with an outline of characteristics of the GAS in Kavango East region followed by findings that are presented using the format of the research objectives, which the researcher considered to be the main themes of the study. There are comments within the analysis of findings that link findings to the literature review to show the relationship between literature publications with what participants revealed. The findings are then briefly discussed to show any links between the data collected and the literature review. The researcher explored through every participants' response to ensure that impacts of GAS in Kavango East region are fully reported. The findings are presented qualitatively, using written descriptions only. The chapter end with a conclusion to link the chapter with the final chapter that concludes the study.

4.2 Characteristics of the Green Agriculture Schemes

The four GAS investigated were all established for the purpose of alleviating poverty and employment creation in different parts of Kavango East region. The four GAS investigated in Kavango East region of Namibia are located in three constituencies as shown in table 4.1 below.

Table 4.1: Green Agriculture Schemes investigated and participants

No	Green Agriculture Scheme	Constituency	Participants

1	**Ndonga Linena**	**Ndonga**	**3**
2	**Shadikongoro**	**Ndiyona**	**3**
3	**Shitemo**	**Ndonga**	**3**
4	**Uvhungu vhungu**	**Mukwe**	**1**

Table 4.1 above show that the four GAS investigated are located in three constituencies in Kavango East region. This show that the investigations covered a larger part of the Kavango East region, which makes findings reliable and worth presenting. The small-scale farmers interviewed were only 12 and an Agriculture Extension Officer to come up with 13 participants. Ndonga Linena, Shadikongoro, Shitemo had three small-scale farmers who participated from each GAS. Uvhungu vhungu had only one participant because the GAS is on the verge of collapsing and there are only two households still working on the farm. The number of small-scale farmers involved in GAS operations have decreased due to challenges faced by GAS small-scale farmers. This restricted the researchers' selection of participants since households that are currently participating in GAS were less than anticipated.

4.3 Research Findings and Discussions

Findings of the four main themes that emerged from the study are presented in this section. The themes presented were recognised through systematic qualitative phases which included data familiarisation, data coding, and thematic development as well as reviewing defined themes and finally naming the themes. The data that follows this section is presented in themes with transcribed quotations of the respondents being included to support the findings. The themes as well as sub-themes that emerged from data analysis and transcribed collected data are shown in Table 4.2 below.

Table 4.2: Themes and sub-themes that emerged from the study

THEMES	CONTENT	SUB-THEMES
Theme 1	**Opportunities available for the small scale GAS farmers.**	**1.1 Sub-theme 1: Natural.** **1.2 Sub-theme 2: Economic.** **1.3 Sub-theme 3: Human.**
Theme 2	**Factors responsible for success or failure of the GAS projects.**	**2.1 Sub-theme 1: Economic.** **2.2 Sub-theme 2: Physical.** **2.3 Sub-theme 3: Human.**

Theme 3	**Benefits of the GASs in Namibia.**	**3.1 Sub-theme 1: Local.** **3.2 Sub-theme 2: Regional.** **3.3 Sub-theme 3: National.**
Theme 4	**Challenges faced by GAS small scale farmers in Namibia.**	**4.1 Sub-theme 1: Physical.** **4.2 Sub-theme 2: Economic.** **4.3 Sub-theme 3: Human.**

Table 4.2 above shows four themes and associate sub-themes that emerged from the research investigations. Theme 1, opportunities available for the small scale GAS farmers, had sub-themes that were classified as natural, economic, and political opportunities. Theme 2, factors responsible for success or failure of the GAS projects, had sub-themes that were classified as economic, physical, and human factors. Theme 3, benefits of the GASs in Namibia, had sub-themes that were classified as local, regional, and national benefits. Theme 4, challenges faced by GAS small-scale farmers in Namibia, had sub-themes that were classified as physical, economic, and human challenges. Data associated with each theme and each sub-theme are presented as findings of the study below.

4.3.1 Theme 1: Opportunities available for the small scale GAS farmers in Kavango East region

The study was conducted to identify opportunities available for the small-scale GAS farmers in Kavango East region. Interactions between the researcher and participants revealed that there are opportunities available for small-scale GAS farmers in Kavango East region. The researcher identified natural, economic, and human opportunities that are available to GAS small scale farmers in Kavango East region.

Data show that GAS small-scale farmers in Kavango East region have the following opportunities available for their farming operations.

When the participants were asked if there were any opportunities available to boost their farming activities, responses showed that some opportunities are available for Kavango East small-scale GAS farmers.

In line with this, SSF 4 stated that:

> *"Our GAS plots are strategically located in an area with high rainfall patterns and close to Okavango River. During the rainy season water is always available for our crops and for irrigation purposes. There is always enough water."*

The same opinion was highlighted by other participants who believed that the GASs in Kavango East region have been blessed by perennial water sources and reliable summer rainfall.

When participants were asked if they receive any form of assistance locally and externally, it was revealed that GAS small scale farmers receive a lot of assistance. Participants showed that the small-scale GAS farmers have opportunities for loans and markets where they can sell their products. Majority of the participants indicated that there are also training opportunities available for the GAS small-scale farmers.

SSF 1 indicated that:

> *"GAS small-scale farmers used to get assistance from Agri-bank in the form of loans. There were cash loans and equipment loans. These were used during the farming season and after harvesting, these were returned to Agri-bank."*

Other participants highlighted that Agri-bank also used to help farmers with seeds and fertilisers.

SSF 4 added that:

> *"The small-scale GAS farmers have plenty of marketing options for their products. AMTA buys from us. There are other buyers like Namib Mills, Bokomo, and other small milling companies such as Kavango mills in Rundu, Malanga mills in Oshakati and Saka Mills in Rundu"*

SSF 8 stated that:

> *"Small-scale GAS farmers receives training organised by Ministry of Agriculture and Agri-bank. We use to attend six months training and some one day workshops at Mashare Agricultural Training Centre".*

SSF 5 added that:

> *"Workshops conducted by officials from Agri-bank intended to help GAS small-scale farmers farming knowledge and also help them to familiarise themselves with new technologies that are being introduced in farming".*

In line with this, SSF 7 stated that:

> *"A few years ago promising GAS small-scale farmers were financed by Agri-bank to go to Zimbabwe for a one year training course in Agronomy and Horticulture."*

The results show that small-scale GAS farmers in Kavango East region have suitable natural farming conditions along the Okavango River watershed. There is high rainfall that increases the productivity of the GASs. There is perennial water supply from Okavango River that can

be utilised for irrigation during the dry season. The small-scale GAS farmers have full support from the government that legalises their farming operations. The farmers have access to capital in the form of cash and equipment loans, which encourage GAS participation. There are also educational opportunities at training centres and regular workshops organised by stakeholders that enhances farming skills and knowledge in the region. There are marketing opportunities locally in the villages or along roadsides, regionally in nearby towns, and nationally in milling companies in Namibia. These give farmers many selling options. The GASs are located along the Trans-Caprivi Highway that connects Namibia to neighbouring SADC countries (Angola, Zambia, and Botswana) and to the sea port of Walvis Bay, which provides the GASs opportunities to participate in international trade.

The existence of countless natural and manmade opportunities in Kavango East GAS is supported by literature. Rank (2010:18) believe that a variety of opportunities have to be provided for individuals to achieve success in any economic activity. In this case, Kavango East has markets, transport, capital, and sources of information that can help the people to achieve success in their agriculture pursuits.

Literature agrees with findings on opportunities available for small-scale GAS farmers in Kavango East region. The Functionalist theory of social stratification states that certain economic activities need special skills and adequate knowledge for them to be successfully executed (Gusky, 2011:40). In this case, the GAS farming activities in Kavango East region needed skills and knowledge for them to be successfully executed. This means that even if a farmer is talented but without skills and knowledge then there are high chances that the farmer might fail. According to Beeghley (2010:14), training is the only way of gaining skills and knowledge. Similarly, findings show that the small-scale GAS farmers have been provided opportunities to get skills and knowledge through training and workshops.

4.3.2 Theme 2: Factors responsible for the success or failure of the GAS projects in Namibia

The study was conducted to examine factors responsible for the success or failure of the GAS projects in Namibia. Interactions between the researcher and participants revealed that there are factors responsible for success or failure of the GASs in Namibia. The research investigations found that there are several factors responsible for the success or failure of the GAS projects in Namibia as shown by the data collected in Kavango East GASs.

When the participants were asked what is making the GAS succeed or fail, it was found that there are economic, physical and human factors responsible for the success or failure of the GAS in Namibia.

SSF 6 cited availability of inputs as an important factor. SSF 6 stated that:

"Agri-bank is the key provider of most materials that we use in our farms. Agri-bank gives us seeds, fertilisers, tools, and equipment that we use in our work but we have to give them back their tools and equipment. We also pay back for the seeds and fertilisers. In the past, when we started, everything was provided and production was good but now things have changed".

SSF 4 cited the availability of markets as a motivating factor for the success of GASs. SSF 4 stated that:

"The small-scale GAS farmers have plenty of marketing options for their products. AMTA buys from us. There are other buyers like Namib Mills, Bokomo, and other small milling companies such as Kavango mills in Rndu, Malanga mills in Oshakati and Saka Mills in Rundu"

In line with this, the researcher asked SSF 10 why other small-scale GAS farmers have stopped operating when there are buyers ready to buy their products. SSF 10 believe that availability of capital promotes success or failure of GAS activities. SSF 10 stated that:

"Some GAS small-scale farmers sold their products to a milling company based in Ovamboland four years ago and they never got their money up to now. This made them to stop operating because they do not have money. Myself, I sold my products to mills in Rundu, I got paid and am still operating".

On physical conditions, it was revealed that availability of water supplies is another factor responsible for the success of the GAS operations. SSF 4 stated that:

"Our GAS plots are strategically located in an area with high rainfall patterns and close to Okavango River. During the rainy season water is always available for their crops and for irrigation purposes. There is always enough water."

However, SSF 9 pointed out that lack of adequate water supplies (shortage of irrigation water) in the dry season affects production on GASs. SSF 10 noted that:

"During the dry season, the level of water in the river is too low and this affects our irrigation and activities and therefore, contribute to low harvests".

SSF 5 stressed the need for skills as the main factor responsible for success of GAS small-scale farming activities. SSF 5 had this to say:

"Our profits in GAS vary from one farmer to the other depending on our farming skills and techniques. What we produce here depends on how you worked on your hectares. Those who work hard using skills we learnt at the training centre get good harvests. The more you harvest, the larger the profit you will get".

SSF 3 pointed out that changes in government policy that have taken place within the GAS have negatively affected their work. SSF 3 stated that:

> *"At the beginning when the GAS was under the Ministry of Agriculture, everything was done for us. We got all help we wanted from the Ministry. We benefited a lot. Now things have changed".*

In line with this SSF 2 added that

> *"Long time back, we used to benefit a lot when the GAS was still under direct government control. Now things have changed, GAS is now under Agriculture Business Development department that does not support us in the same way that we were supported by the Ministry of Agriculture. Marketing of our products is now done by GAS managers who sell for us and give us our money. Some of the managers do not even tell us how much money they get after selling. In the end the GAS get more money than what they give use. People we are now working with are no longer trustworthy".*

The results of the study indicate that there is availability of adequate water supplies from the good annual rainfall patterns and from the perennial Okavango River. There is availability of capital in the form of cash loans, input loans, and equipment loans from Agri-bank, the government, and Agriculture Business Development department. There are lucrative markets for GAS products locally, regionally, and nationally that are ready to buy from the farmers throughout the year. There is availability of a reliable transport network, the Trans-Caprivi Highway that links the GASs to Namibian towns and to neighbouring countries such as Angola, Botswana, and Zambia. There are agriculture training centres where the small scale farmers can go to acquire farming skills and knowledge to boost their farming operations as well as technological experiences. There are technical, financial, and material support that the farmers receive from the government.

Findings of the study partially agree with literature especially the theory of individualism (Rank, 2004:17). The theory believes that a free market system has opportunities for all individuals. In this case, findings of the study show that the small scale GAS farmers are free to market their produce anywhere, locally, regionally and nationally. Additionally, the theory of individualism highlights that individual desire to work in order to get basic needs including food is the only road to prosperity. Failure to work is due to lack of motivation and results in individual poverty. According to the theory, lack of hard work and lack of motivation result in poverty instead of prosperity (Rank, 2004:17). In this case, the theory only has two factors responsible for success or failure, hard work and motivation, which are not clearly revealed in

the study. However, the theory of individualism bring out factors that hinder individuals' from successfully achieving the GAS aims, which are to increase production and to alleviate poverty. Findings agree with the cultural theory of poverty (Mandell & Schram, 2003:81). The theory states that it is the environment where people live that determines their success or failure. It is behaviour people learn in their environment that shapes their behaviours and attitudes towards economic (Mandell & Schram, 2003:81). Similarly, findings of the study show that the Kavango East region natural and economic environment has greatly influenced GAS small scale farmers' farming activities. At the same time the availability of training and development of small-scale GAS farmers in Kavango East region agree with literature that emphasise that skills and knowledge are essential in any economic pursuit (Beeghley, 2010:14; Gusky, 2011:39).

4.3.3 Theme 3: Benefits of the GASs in Namibia

The study was conducted to appraise benefits of the GASs in Namibia. Interactions between the researcher and participants revealed that there are benefits of the GASs in Namibia. Participants revealed that the GASs benefited both local people and the entire region as well as neighbouring regions. In such a scenario, the researcher observed that GASs in Kavango East region benefits local people, the region and eventually the whole nation.

When the participants were asked the benefits of the GASs in Namibia, it was learnt that GASs have the following benefits.

SSF 8 indicated that:

> *"The GASs operations create jobs to local people especially during the time of ploughing, weeding, and harvesting. Local people who get part time jobs at the GAS learn a lot about agricultural production. It gives local youths training necessary for them to start their own farming. Members of GASs impart knowledge and skills about agriculture to the local community".*

SSF 7 stated that

> *"The GAS loan their equipment and machinery to local people for use when ploughing, building, and when doing any work at their compounds, which they cannot do without necessary equipment. Many villages around the GAS request for use of our tractors on regular basis, but they pay for it".*

SSF 1 added that:

> *"As GAS small-scale farmers, we reduce unemployment in Kavango East region and they produce variety of food crops for the local people. We sometimes sell our products to local people at cheap prices to help hungry community members".*

Additionally, SSF 3 stated that:

> *"In times of good harvests, we donate maize, cabbages, water melons, sweet potatoes, tomatoes and onions to vulnerable children, church groups and nearby schools. I remember times when we gave food to Diyana Combined School, Shadikongoro Combined School, and the distant Kadedere Hostel School. Donations to schools were usually given during sporting events. In the past, one GAS manager used to give primary schools grounded wheat powder for schools to make porridge for their learners so that they get energy".*

In line with this, SSF 2 believe that GASs also benefit the whole Kavango East region and the whole country. SSF 2 indicated that:

> *"We supply shops, hospitals and prisons with fresh agricultural products. Shop owners then sell these products in their shops countrywide. Some milling companies in this region and other regions that buy our products make bread, mealie meal and other products that are sold outside Kavango East region".*

SSF 9 indicated that:

> *"In times of good harvests, we set up market stalls along the road (Trans-Caprivi Highway) and sell our products to people passing by. These motorists buy a lot of our products and we never know how far our products go because this road is used by many people who come from different places".*

The results show that benefits of GAS to local populations includes access to cheap food supplies, which end hunger in surrounding villages, access to farming tools and equipment, which increased food production in the region, and access to farming knowledge or skills, which promoted farming activities in the region. The local people also got employment in GASs, which reduces unemployment in the region and brought income to the rural populations. Regionally, the GASs donated and supplied their products to schools, to disadvantaged children, to hospitals, and to prisons, which ensures food security in the region. This reduced malnutrition and outbreak of diseases that are related to poor nutrition. Nationally, the GASs supplied their products to big retail organisations, milling companies, and long distance travellers, which promotes food security in the entire country.

Findings on local, regional and national benefits of GASs in Namibia agrees with literature. According to Endunde (2017:18), the GAS programme is designed to contribute to the country's GDP, to create employment, and to reduce poverty. This is echoed by Kandjeke (2013:45) who maintains that the Namibian GAS known as the "Green Scheme Policy" is part of the national food security and self-sufficiency initiative by the Namibian government to

reduce poverty through the development of irrigation agriculture in specific rural communities. Similarly, Iita (2012:3) called the GAS programmes as a milestone that leads to Namibian agribusiness success and poverty reduction. Indeed the findings bear testimony that the GASs have brought benefits to local communities up to national level.

4.3.4 Theme 4: Challenges faced by GAS small scale farmers in Namibia

The study was conducted to analyse challenges faced by GAS small-scale farmers in Namibia. Interactions between the researcher and participants revealed that the GASs are experiencing challenges. The research investigations found that participants have challenges in the natural environment, economic challenges, and human problems that threaten the existence of GASs in Namibia.

When the participants were asked challenges that they face at the GASs, it was evident that the GASs that we see today are not the same as GASs of the olden days. Today's GASs face challenges unlike GASs at the beginning. Most participants remarked that GASs, *"were very good in the past, but nowadays things have changed"*

SSF 4 indicated that there are times when GASs face shortage of irrigation water by saying:

> *"During the dry season the level of water in the river is too low. This affect our irrigation processes and eventually leads to low harvests. Our income depends on how we harvest. Low harvests means low incomes and shortage of inputs. It will be problem after problem."*

SSF 10 pointed out that some buyers of GAS products are not trustworthy by saying that:

> *"Some of our farmers sold their products to Malanga milling company that is based in Oshakati four years ago and never got their money. This caused financial challenges among those affected and they have since stopped their farming operations due to shortage of capital".*

SSF 2 revealed that the challenges they face were caused by withdrawal of government support from GASs by saying that:

> *"At the beginning when GAS were under the control of the government (Ministry of Agriculture), we benefited a lot but now things have changed. The GAS farms are being run by Agriculture Business Development department that does not support us in the same way as the government did".*

When the participants were asked how the changes affected them, the following was revealed by the participants.

SSF 8 stated that:

"We (small scale farmers) are not satisfied with this change. Agriculture Business Development receive money directly from the buyers of our products. We (small scale farmers) do not even know how much our products fetched on the market. Then the GAS manager who represents Agriculture Business Development pay the small scale farmers thereafter".

SSF 7 echoed the same sentiments as those by SSF 8 and added that:

"Our buyers put their payments in Agriculture Business Development (GAS) accounts and GAS manager pays the small-scale farmers. GAS always get big money and what they pay us is very small. Even if we get some profit from the sales, every cent is used to pay expenses. We pay for electricity, we buy fuel for tractors, and we pay for using tractors. Finally, we pay workers who help us do the work on the farm".

In line with this SSF 5 expressed dissatisfaction by saying:

"We are not happy at all because some small-scale farmers do not get their payments on time. There are always some delays and this delays preparations for farming activities at the beginning of the growing season. Those who fail to start their farming on time experience low harvests, low income and their families are suffering from hunger".

On a similar issue, SSF 6 repeated aforesaid challenges and added that:

"Financial mismanagement is the main challenge faced by GAS small-scale farmers. GAS managers have become untrustworthy. The managers are being changed every time when there are complaints. For example, in 2020 Ndonga Linena farm changed GAS managers three times in one year because of mismanagement of funds.

Consequently, SSF 3 stated that:

"What we get from our work these days is not enough. Inputs supplied by Agriculture Business Development are expensive. We are now also expected to buy our own equipment. Equipment that we used to get on loan is no longer available. The little profit that we are getting cannot cater for all expenses. Now there is a lot of weeds in our plots, here we no longer have a tractor to remove all that grass".

SSF 1 maintained that the greatest challenge small-scale farmers faced in the past two farming seasons was outbreak of COVID 19. On this note, SSF 1 had this to say:

"Our (small-scale farmers) selling of products has been hampered by lack of customers due to travelling restrictions causes by the outbreak of COVID 19. We (producers) and our customers (buyers) are spending a lot of time at home due to lockdown measures. We are not selling anything and there is no income".

The results show that the GASs in Kavango East region has challenges. There is shortage of irrigation water in the dry season. Sometimes, there is flooding in the rainy season. The small-scale GAS farmers face shortage of capital, shortage of inputs, low production, and eventually low income. The change in the management of GASs (from direct government control to Agriculture Business Development department) brought financial mismanagement, lack of transparency and lack of accountability in GAS administration systems. As a result support for the GASs from the government (Ministry of Agriculture and Agri-bank) dwindled, which increased problems for the small-scale farmers who do not know how to handle challenges they face.

Some of the challenges that small-scale GAS farmers face agree with literature. Manjoro (2017:4) believe in the Marxist theory that "recommends poverty alleviation through improved structures of production and increased education and training. Education ensures that people embrace change and adapt". Manjoro (2017:3) added that the theory propose for a government welfare intervention that educates or train people so that they access basic requirements for their livelihoods. People living in disadvantaged circumstances usually have educational limitations that prevent them from achieving the goals of economic programmes that they pursue. Similarly, findings of the study show that small-scale GAS farmers in Kavango East region started facing challenges when the cash and equipment loan (capital and resources) from the government stopped. It is this limitation in education, capital and resources that triggered off a chain of challenges that are currently being faced by small-scale farmers in Kavango East GASs.

Other challenges faced by small-scale GAS farmers such as low production can be linked to the theory of social Darwinism (James, 2006:5), which is supported by (Hurst, 2010:21). Not every small-scale GAS farmer in Kavango East region experiences low production. This agrees with Social Darwinism that believes that the level of people's ability to survive is the main cause of their poverty or success. This is supported by Hurst (2010:21) who believe that people's productivity potential stems from their competitive association with other people who have different work abilities. According to Hurst (2010:21), social competition promotes production within the social system as people adapt to their environment. This is exactly what come out of the study. Numbers of small-scale GAS farmers in Kavango East is decreasing because some of the farmers are failing due to inability to increase production while others are succeeding because of their abilities.

4.4 Conclusion

The study made remarkable findings that are related to research objectives. The findings were then discussed and analysed while linking them to the literature review. It has been noted that the findings agree to some extent with the literature review, but there are noticeable differences. The chapter showed that not all GASs in Kavango East region are still operating as they operated in the olden days. The operations in some GASs seem to have declined. Consequently, participation in the research investigations was not as the researcher anticipated. The chapter highlighted that there are a variety of opportunities available for GAS farmers in Kavango East region. If these opportunities are fully taken advantage of GASs in Kavango East would have thrived. However, it was noted that there are also factors that hinder the success of the GASs. From the findings, it is clear that factors responsible for failure of GASs in Kavango East region are more than the factors influencing success. Despite numerous challenges that are being experienced, the GAS farmers, local populations, and neighbouring communities have derived some benefits from the GAS operations. The next chapter is the last chapter of the study that concludes the whole research. It has brief outlines of findings, conclusions derived from the study and recommendations put forward by participants.

CHAPTER FIVE
CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The study that is entitled 'An Assessment of Green Agricultural Schemes in Kavango East, Namibia' investigated GASs in Kavango East region of Namibia. The study aimed to assess the benefits, challenges, and opportunities of GASs farmers in Kavango East Region. To achieve this, the study intended to identify opportunities available for the small scale GAS farmers in Kavango East region, to examine factors responsible for success or failure of the GAS projects in Namibia, to appraise the benefits of the GASs in Namibia, and to analyse challenges faced by GAS small-scale farmers in Namibia.

The previous chapter presented and analytically discussed data collected in line with the above objectives. This chapter sums up the whole study. The chapter presents a summary of findings highlighted in the previous chapter and state recommendations that came out of the research investigations. The chapter is divided into sections, findings from the study, conclusions, recommendations, and a conclusion.

5.2 Findings from the study

This section presents findings from primary research and findings from literature review.

5.2.1 Findings from primary research

The results of the study show that small-scale GAS farmers in Kavango East region have plenty of opportunities. There are suitable natural farming conditions along the Okavango River watershed, where the GASs are located. The area receives reliable rainfall that promotes agricultural production. At the same time, Okavango River basin has perennial water channels that can be used for irrigation during the dry season. It was also found that the small-scale GAS farmers had full support from the government that was represented by the Ministry of Agriculture and Agri-bank. As a result, the farmers received cash and equipment loans. There are educational opportunities, where farmers are taught different farming skills and techniques at training centres and workshops organised by stakeholders. There are marketing opportunities locally in the villages, regionally in nearby towns and nationally in milling companies in Namibia, who all buy GAS products. There are opportunities for the GASs to participate in international trade. The GASs are located along the Trans-Caprivi Highway that connects Namibia to neighbouring SADC countries (Angola, Zambia, and Botswana) and to the sea port of Walvis Bay.

The results of the study indicate that there are a variety of factors that influence production at GASs in Kavango East region. There is availability of adequate water supplies from the good annual rainfall patterns and from the perennial Okavango River. There is availability of capital in the form of cash loan, inputs loans and equipment loans from a variety of stakeholders. Participants revealed that there are lucrative markets for GAS products locally, regionally and nationally that are ready to buy from the farmers throughout the year. There is availability of a reliable transport network, the Trans-Caprivi Highway that links the GASs to Namibian towns and to neighbouring countries such as Angola, Botswana, and Zambia. There are agriculture training centres where the small scale farmers can go to acquire farming skills and knowledge to boost their farming operations and technological experience. The results also show that the government has a positive GAS policy that ensure that the small scale farmers are supported technically, financially, and materially.

The results of the study show that there are benefits of GASs in Namibia. The local people buy cheap food crops from the small-scale GAS farmers. This has raised people's living standards and ended hunger in surrounding villages. The local people are given the opportunity to loan farming tools and equipment from the GASs. This has increased food production in the region and thus eradicated poverty, hunger and starvation. The farmers involved in GASs impart farming knowledge and skills to the local community members. Above all, the GASs employs local people, which reduces unemployment in the region and brought income to the rural populations.

The GASs also benefited the region and the entire country of Namibia. It was revealed that GAS small-scale farmers donate and supply their products to schools, hospitals and prisons within Kavango east region. The farmers also give food handouts to children living in disadvantaged circumstances. This has ensured food security and promoted health in the region. Nationally, the GASs have supplied their products to big retail organisations that have shops in every region of Namibia. The GASs have sold their products to milling companies, which manufacture bread and mealie meal that is sold throughout the whole country. The road side markets established by GAS farmers sell products to travellers from all over Namibia. It can therefore, be concluded that GASs in Kavango East region have promoted food security in Namibia.

The study findings on challenges faced by GAS small-scale farmers show that the GASs in Kavango East region is in serious need of assistance. A myriad of challenges were revealed during investigations. It was found that level of water in the Okavango River decrease when the small-scale farmers desperately need irrigation water for their winter crops. Similarly, some

rainy seasons cause flooding in GASs located in low lying areas. Economically, the small-scale GAS farmers face shortage of capital, which is caused by low production and low income. To make matters worse Agri-bank has since stopped giving the small-scale farmers loans (in cash and in kind). This lead to shortage of inputs, which explains the decrease in production at the GASs. Participants complained about the change in the management of GASs from direct government control to Agriculture Business Development department. This has brought financial mismanagement, lack of transparency and lack of accountability in GASs administration systems. It was reported that the new GAS management in Namibia is not as supportive as the government was to the plight of the small-scale farmers. It was found that the small-scale farmers do not have adequate knowledge on how to handle challenges they face. The challenges threaten the existence of the GAS programme in Namibia.

5.2.2 Findings from literature review

The literature review made the following findings on opportunities available for GAS farmers. According to Rank (2004:17), a variety of opportunities has to be provided for individuals to achieve success in any economic activity. According to the Functionalist theory of social stratification, certain duties and responsibilities (agriculture economic activities) in society need special skills and adequate knowledge (education opportunities) for them to be successfully executed (Gusky, 2011:40). According to Beeghley (2010:14), gaining skills and knowledge require training and sacrifice (training opportunities and personal effort).

The literature review made the following findings on factors responsible for success of GASs. According to the theory of individualism, a free market system (availability of markets) has to be created to provide opportunities for all individuals taking part in an economic activity (Rank, 2004:17). Additionally, the theory of individualism highlights that individuals (farmers') desire to work to get basic needs including food is the only road to prosperity. According to Rank (2004:18), lack of hard work and lack of motivation result in poverty instead of prosperity, which leads to failure of GASs.

The cultural theory of poverty states that it is the environment where people live that determines their success or failure (Mandell & Schram, 2003:81). It is behaviour people learn in their environment that shapes their behaviours and attitudes towards economic (Mandell & Schram, 2003:81). At the same time the availability of training and development of small-scale GAS farmers in Kavango East region are in line with literature that emphasise that skills and knowledge are essential in any economic pursuit (Beeghley, 2010:14; Gusky, 2011:39).

The literature review made the following findings on benefits of GASs in Namibia. According to Mashindano and Maro (2011:9), agriculture promotes economic growth and increases in

income that eventually reduce poverty. This is echoed by Kandjeke (2013:45) who maintain that the Namibian GAS known as the "Green Scheme Policy" is part of the national food security and self-sufficiency initiative by the Namibian government to reduce poverty through the development of irrigation agriculture in specific rural communities. Similarly, Iita (2012:3) called the programme a milestone that leads to Namibian agribusiness success and poverty reduction.

The literature review made the following findings on challenges faced by GAS small-scale farmers in Namibia. According to Manjoro (2017:3), the Marxist theory that "recommends poverty alleviation through improved structures of production and increased education and training. Education ensures that people embrace change and adapt". Manjoro (2017:3) added that the theory advocate for government welfare intervention to aid people to re-engineer themselves through education so that they access basic requirements for their upkeep. People living in disadvantaged circumstances usually have educational limitations that prevent them from achieving the goals of economic programmes that they pursue and thus need government assistance. Low production in Kavango East region can also be linked to the theory of social Darwinism (James, 2006:5), which is supported by (Hurst, 2010:21). This agrees with Social Darwinism believes that the level of people's ability to survive is the main cause of their poverty or success. This is supported by Hurst (2010: 21), who believe that people's productivity potential stems from their competitive association with other people who have different work abilities. According to Hurst (2010:21), social competition promotes production within the social system as people adapt to their environment. Therefore, those who are unable fail while those who are able survive. In every economic activity some succeed, some fail (Hurst, 2010: 22).

5.3 Conclusions

The study has shown that GASs in Kavango East region started on a high note with countless opportunities and factors that promoted successful farming operations. This shows that the region has great agriculture potential and needs to get maximum support from all stakeholders. According to findings, the GASs in Kavango East region benefited the small-scale farmers, local inhabitants, neighbouring regions, and Namibia as a whole. This show that the agriculture sector in Namibia is capable of ensuring food security and eradicating poverty. Basing on this, it can be concluded that rural poverty in Kavango East region has been reduced through participation in GASs. However, challenges currently faced by the small-scale GAS farmers now leaves a lot to be desired.

Findings of the study show that GASs in Kavango East region are gradually collapsing due to changes that have taken place. The current GASs no longer have the same level of performance as the GASs of past days. The productivity of the GAS has decreased with the passage of time. Even though farming is still taking place, the current circumstances are no longer favourable to the expected lucrative agricultural development and poverty alleviation initiatives. Findings indicate that participants strongly desire an immediate return to the original performance of GASs. It can be concluded that GASs are the best ways that can be used in Namibia to reduce poverty if correct mechanisms are put in place to address challenges faced by the small-scale GAS farmers. Considering all this, it can be concluded that the objectives of the study have been achieved.

5.4 Recommendations

Based on the findings of the study, the researcher suggest that the following recommendations be adopted to prevent the demise of the GASs in Kavango East region specifically and in Namibia in general.

- To increase opportunities available to small scale GAS farmers, the researcher suggests that small-scale farmers in GASs should be guaranteed by the Ministry of Agriculture, Water and Forestry so that GASs acquire tools, equipment, machinery, and other farming inputs on Hire Purchase credit facilities from established local farming inputs suppliers such as Brotons Investments, Bijou Suppliers Company, and Agri-forum that operate in Kavango east region. Hire Purchase credit facilities allow the GAS small-scale farmers long term payment period and give the farmers opportunities to become fully equipped with modern farming resources, which is likely to increase their performance and productivity.
- It has been noted that GASs in Namibia have a new Agriculture Business Development management that replaced the previous management of the Ministry of Agriculture. To ensure the effectiveness of the Agriculture Business Development management of GASs, the government must introduce GASs annual reports so that the GASs are audited regularly by the government to reduce financial mismanagement.
- Small-scale farmers in GASs should not only be trained farming knowledge and skills but should also be trained marketing skills or business accounting so that they are enabled to effectively sell their products and calculate their income as well as

expenditures. This helps the farmers to determine if their farming operations are making profit or loss.

5.5 Conclusion

This chapter conclude the whole study. The chapter looked at findings from primary research, findings from literature review, conclusions and recommendations. The chapter has shown that the objectives of the study has been achieved to a large extent. The desire to analyse challenges faced by GAS small-scale farmers in Namibia has been achieved. The desire to identify opportunities available for the small-scale GAS farmers in Kavango East region has been achieved. The desire to examine factors responsible for the success or failure of the GAS projects in Namibia has been achieved to appraise the benefits of the GASs in Namibia has been achieved.

In the course of research investigations, areas for possible further research has been identified. Further research may be done on impact of the establishment of GAS in Kavango East region on the environment. Such a study is necessary to determine if there are any conservation measures that should be put in place in areas with GASs in Namibia. Further research may be done on impact of GAS in Kavango East region on the economy. Such a study is necessary to measure the contribution that the GAS has made to the Gross Domestic product and Gross National product of Namibia. There is still a need to assess GASs performance in other regions of Namibia, which is likely to be different from that of Kavango East region.

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Appendices

INTERVIEW GUIDE

My name is France Rudolph Shimafo. I am conducting a research investigation on Agricultural Green Schemes in Kavango East Region. You have been selected to participate in the research and if you are free and willing, may you please spare you time to answer some questions that will guide my research investigations. This research is purely for academic purposes only. No names of participants will be disclosed anywhere and in the research report. Feel very free to give as much information as possible.

SECTION A BIOGRAPHIC INFORMATION

i. **Gender**: Male ☐ Female ☐

ii. **Age:** 18 - 25 ☐ 25 – 30 ☐ 31 - 35 ☐ ; 36 – 40 ☐ ; 41 – 45 ☐; 46 – 50 ☐; Above 50 ☐

iii. **Position**: Manager ☐ Small scale Farmer ☐ AGRITEX ☐

iv. **Number of years participating in Agriculture Green Scheme production**?

Less than 1 year ☐; 1-5 years ☐; 6-10 years ☐ 11-15 years ☐

15 years + ☐

v. **Highest Level of Education**: Less than secondary ☐ ;Secondary ☐; Completed secondary ☐ Certificate / Diploma ☐ ; Bachelor ☐

For diplomas and certificates, specify……

vi. **Place of birth**: Kavango East Region ☐

Other

(Specify)……...

SECTION B: GREEN AGRICULTURE SCHEME QUESTIONS

QUESTIONS FOR THE MANAGER

1. When did the Green Agriculture Scheme started?
2. How did the Green Agriculture Scheme start?
3. Give reasons why the Green Agriculture Scheme was started in this area?
4. Did the Green Agriculture Scheme benefitted the local people?

5. Why did the Green agriculture Scheme made those achievements?
6. What challenges did the Green Agriculture Scheme face since its beginning?
7. In your opinion, has the Green Agriculture Scheme succeeded in achieving its objectives or not?
8. Why do you say so?

QUESTIONS FOR SMALL SCALE FARMERS

1. What are the main products at this Green Agriculture Scheme?
2. Where do you get inputs?
3. How do you get the inputs?
4. Where do you sell your products?
5. Are you satisfied with production taking place at This Green Scheme?
6. What good things has the Green Agriculture Scheme brought to the people in the local community and in Kavango East region?
7. What challenges do you face in your farming activities?

QUESTIONS FOR AGRICULTURE EXTENSION OFFICERS

1. What opportunities are available for the Green Agriculture Schemes in your area?
2. Did the Green Agriculture Schemes benefit local communities?
3. Why do you think it benefited or not benefited?
4. To what extent are you involved in Green Agriculture Scheme activities?
5. In your opinion, has the Green Agriculture Scheme succeeded in achieving its objectives or not?
6. Why do you say so?

REQUEST FOR PERMISSION TO CONDUCT RESEARCH FROM GATEKEEPERS

Dear: University of the Free State

I am supposed to do a research investigation in partial fulfilment of the Master's degree in Development studies. Therefore, I would like to request permission to conduct a research investigation in Kavango East Region of Namibia. Below are details of the proposed investigations.

DATE: August 2021

TITLE OF THE RESEARCH PROJECT: Reducing Rural Poverty through Participating in Agricultural Green Schemes: Case Study, Kavango East Region, Namibia

PRINCIPAL INVESTIGATOR: Shimafo France Rudolf, +264816196887

FACULTY AND DEPARTMENT: Faculty of Economic Management Sciences, Centre for Development Support.

STUDY LEADER NAME AND CONTACT NUMBER: Dr Andreas Wienecke, +264818813029

WHAT IS THE AIM / PURPOSE OF THE STUDY?

The research intended to find out the level of participation of the small scale farmers in the GAS programme in order to assess the benefits, challenges and opportunities of GASs farmers in Kavango East region.

WHO IS DOING THE RESEARCH?

I France Rudolf Shimafo (Student number 2015346402) will be doing the research. I am employed by the Namibian Ministry of Education, Art and Culture as a rural secondary school teacher.

HAS THE STUDY RECEIVED ETHICAL APPROVAL? The researcher is still applying for approval.

WHO IS INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

The researcher will invites three groups of participants to take part in the study. These are small scale farmers in GAS, managers of GAS and Agriculture Extension Officials in Kavango East Region.

These people has information that answers research questions because they are either directly or indirectly participating in GAS activities. This study will select 3 households in each of the four Green Scheme areas of Kavango east, namely Shandikongoro, Shitemo, Ndonga Linena and Uvhungu vhungu, as the sample of the study using a stratified random sampling technique. Stratified sampling will be used because the researcher had a specific group of participants, in this case households participating in Green Scheme programme, which were randomly selected depending on their availability and willingness to take part in the research investigations. Apart from small scale farmers, the researcher targeted other informants, including two GAS managers and two Agriculture Extension Officers in Kavango East region to come up with a sample of 16 participants.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

Participants will act as interviewees, who are expected to respond to suggested interview questions on the interview guide attached to the research proposal send together with this application. Participants are expected to have answered all their face to face interview questions in approximately 25 to 30 minutes. To complete face to face interviews with 16 participants is expected to take 8 hours

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

There are no payments to be given to participants. Apart from possibilities of receive assistance from stakeholders as a result of increasing exposure of GAS challenges there are no other tangible benefits the communities under investigation should expect. The researcher will ensure that participants are not harmed in any way by the research study. Their participation will be kept confidential because no names of participants will appear in the research report.

WHAT IS THE POTENTIAL RISKS TAKING PART IN THIS STUDY?

Participants work commitments may be disturbed by the presence of the researcher for interview purposes. Some activities are likely to stop.

To overcome this, the researcher has to make appointments so that interviews are conducted at convenient times. Those not selected to participate may be jealousy since they would also be willing to contribute to the study.

The researcher informs every GAS member the purpose of the research and the limited number of participants to reduce discomfort among non-participants. The researcher is a stranger in the GAS areas this may make participants and non-participants suspicious of the presence of an unknown researcher in their area. This may make the participants to withhold some information which may affect research findings. The researcher has to fully make the purpose of the research known to participants using a detailed consent form.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Confidentiality will be maintained throughout the research process. No names of participants will appear in this research report.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

Data will be stored in a password protected personal computer. Both the computer and hard copies of participants' responses will be stored by the researcher for a period of five years in a locked cupboard in my own private office for academic purposes only. Storing data for five years is necessary in case there may be a need for further research. After five years hard copies of participant responses will be destroyed. All electronic information will be deleted from the computer. Keeping data for such a long time may cause discomfort to the participants

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICPATING IN THIS STUDY?

There are no payments to be given to participants. Apart from possibilities of receive assistance from stakeholders as a result of increasing exposure of GAS challenges there are no other tangible benefits the communities under investigation should expect. The researcher is from another area within the region and has to fund his travelling and subsistence during the course of the investigations. Since the researcher is a stranger, non-participants may influence participants to resist investigations in some way unanticipated by the researcher. This may create enmity between participants and non-participants.

In such a scenario, the researcher has to bring someone known to the participants to help in explaining the purpose of the research in order to get participants' consent. The participants have to sign a consent agreement to ensure their compliance during investigations.

HOW WILL THE INSTITUTION BE INFORMED OF THE RESULTS OF THE STUDY?

The institution, University of the Free State, will be informed of the results of the study via turnitin and submission of hard copies of the findings to the university in person. The findings will be submitted for grading purposes and for university archives.

Should the University require any further information or want to contact the researcher about any aspect of this study, please contact France Rudolf Shimafo on +264816196887 or e-mail to francerudolfshimafo@gmail.com.

Yours sincerely

Name: Shimafo France Rudolf Signature …….

RESEARCH STUDY INFORMATION LEAFLET

DATE: August 2021

TITLE OF THE RESEARCH PROJECT: Reducing Rural Poverty through Participating in Agricultural Green Schemes: Case Study, Kavango East Region, Namibia

PRINCIPAL INVESTIGATOR: Shimafo France Rudolf, +264816196887

FACULTY AND DEPARTMENT: Faculty of Economic Management Sciences, Centre for Development Support.

STUDY LEADER NAME AND CONTACT NUMBER: Dr Andreas Wienecke, +264818813029

WHAT IS THE AIM / PURPOSE OF THE STUDY?

The research intended to find out the level of participation of the small scale farmers in the GAS programme in order to assess the benefits, challenges and opportunities of GASs farmers in Kavango East region.

WHO IS DOING THE RESEARCH?

I France Rudolf Shimafo (Student number 2015346402) will be doing the research. I am employed by the Namibian Ministry of Education, Art and Culture as a rural secondary school teacher.

HAS THE STUDY RECEIVED ETHICAL APPROVAL? The research has been approved by Research Ethics Committee of the UFS. Copy of the approval letter can be obtained from the researcher.

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

As small scale GAS farmers in this area, you are aware of what is taking place in GASs in Kavango East region. For this reason you are being invited to take part in the research investigations.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

Participants will be interviewed separately using face to face interviews that would take approximately 25 to 30 minutes. To complete face to face interviews with 16 participants is expected to take 8 hours, which means the researcher will interview participants on separate days if one day is not enough. No children will be interviewed. Participation in this study is

voluntary. Participants are free to decide whether to be participants or not. Participants have the right to withdraw from the study whenever they wish to do so without giving an excuse.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

There are no payments to be given to participants. Apart from possibilities of receive assistance from other stakeholders interested in the findings of the research, there are no other tangible benefits the communities under investigation should expect. The researcher will ensure that participants are not harmed in any way by the research study. Their participation will be kept confidential because no names of participants will appear in the research report.

WHAT IS THE POTENTIAL RISKS TAKING PART IN THIS STUDY?

Participants work commitments may be disturbed by the presence of the researcher for interview purposes. Some activities are likely to stop. However, the researcher will have to make appointments so that interviews are conducted at times suitable for each participant at a place the participant feels comfortable.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

Confidentiality will be maintained throughout the research process. No names of participants will appear in this research report. Collected data will be stored in a password protected personal computer so that the information is always kept away from members of the public.

The computer and hard copies of the research report will always be locked up in a steel cabinet in a private office until the UFS approves and are satisfied with the results. At that time the audio tapes used to collect data and hard copies of the data will be destroyed. Data stored in personal computer will be deleted.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICPATING IN THIS STUDY?

There are no payments for participation. There may be some assistance that may be given to the GAS by stakeholders interested in the findings of the study

HOW WILL PARTICIPANTS BE INFORMED OF THE RESULTS OF THE STUDY?

If you would like to be informed of the results of the study please contact France Rudolf Shimafo on +264816196887 or e-mail to francerudolfshimafo@gmail.com.

Since you have been fully informed about the research study you can now sign the declaration below.

DECLARATION BY PARTICIPANT

I, _____, (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participating in the study that is stated above. I was

given sufficient opportunity to ask questions and I am prepared to participate in the study. I agree to the recording of the interview during data collection. I have received a signed copy of this informed consent agreement.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

Full Name(s) of Researcher(s): _____

Signature of Researcher: _____ Date: _____

Yours sincerely

Name Shimafo France Rudolf Signature ……

Thank you for taking time to read this information sheet and for participating in this study

INFORMED CONSENT

Supervisor: Dr Andreas Wienecke

E-mail: awiennam@gmail.com

Windhoek

Namibia

Contact: +264818813029

2 August 2020

Researcher: Shimafo France Rudolf

P .O.Box 2131

Rundu

Namibia

Contact: +264816196887

E-mail: francerudolfshimafo@gmail.com

Dear Participant

RE: INFORMED CONSENT

I am a Master of Development Studies student at the University of the Free State. I am writing this letter to invite you to take part in my research studies. My research project entitled: Reducing rural poverty through participating in Agricultural Green Schemes: Case study, Kavango East Region in Namibia.

The study is aimed to assess the benefits, challenges and opportunities of the Green Agriculture scheme farmers in the Kavango East Region.

Study procedures: The study will involve three groups. The overall participants will be 16, first involves interviewing the small-scale farmers those who work in the Agriculture Green schemes, the Managers in the Green schemes and the Agriculture extension officers from the

main office of the Ministry of Agriculture in order to gain the understanding of technical issues concerning the Agriculture green schemes.

Benefits: There are no payments to be given to participants. Apart from possibilities of receive assistance from other stakeholders interested in the findings of the research, there are no other tangible benefits the communities under investigation should expect. The researcher will ensure that participants are not harmed in any way by the research study. Their participation will be kept confidential because no names of participants will appear in the research report.

Confidentiality: Confidentiality will be maintained throughout the research process. No names of participants will appear in this research report. Collected data will be stored in a password protected personal computer so that the information is always kept away from members of the public.

The computer and hard copies of the research report will always be locked up in a steel cabinet in a private office until the UFS approves and are satisfied with the results. At that time the audio tapes used to collect data and hard copies of the data will be destroyed. Data stored in personal computer will be deleted

Risks: Participants work commitments may be disturbed by the presence of the researcher for interview purposes. Some activities are likely to stop. However, the researcher will have to make appointments so that interviews are conducted at times suitable for each participant at a place the participant feels comfortable

Voluntary participation: Participation in this study is voluntary and you are under no obligation to conduct the interview. If you have any concerns with the way the research is being conducted, please feel free to contact and discuss it with my supervisor, whose contact details are given above.

Please feel free to ask any questions on any aspect of this study that is unclear to you.

Yours sincerely,

Shimafo France

Supervisor: Dr. Andreas Wienecke

CONSENT TO PARTICIPATE IN THIS STUDY (SMALL-SCALE FARMERS)

I, _____ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read (or had explained to me) and understood the study as explained in the information sheet. I have had sufficient opportunity to ask questions and am prepared to participate in the study. I understand that my participation is voluntary and that I am free to withdraw at any time without penalty (if applicable). I am aware that the findings of this study will be anonymously processed into a research report, journal publications and/or conference proceedings.

I agree to the recording of the *insert specific data collection method*.

I have received a signed copy of the informed consent agreement.

Full Name of Participant: _____

Signature of Participant: _____Date: _____

Full Name(s) of Researcher(s): _____

Signature of Researcher: _____Date: _____

INFORMED CONSENT PAGE (BENEFICIARIES)

Study: Reducing rural poverty through participating in Agricultural Green schemes: Case study Kavango East Region.

Researcher: Shimafo France Rudolf

By signing below, I agree to the following statements:

1) I have read and understood the attached information sheet giving details of the project.

2) I have had the opportunity to ask the researcher any questions that I had about the project and my involvement in it, and I understand my role in the project.

3) My decision to consent is entirely voluntary, and I understand that I am free to withdraw at any time without giving a reason.

4) I understand that data gathered in this project may form the basis of a report or other form of publication or presentation.

5) I have given the researcher permission to audio record the interview.

6) I understand that my name will not be used in any report, publication or presentation and that every effort will be made to protect my confidentiality.

Participant's Signature[1]: _____ Date: _____

Researcher's Signature: _____ Date: _____

Please fill in and return this page. Keep the letter above for future reference.----------

Please only sign this form if you agree to participate in the study.

Editor's Letter

[1] Please do not write your name to maintain anonymity

A FOURWRITERS
EMPIRE CC

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luise@afourwritersempire.com
writersempire

To whom it may concern,

This is to certify that the language editing of this paper or thesis has been done by Luise Shikongo, pursuing her Masters in English and Applied Linguistics. She is an internal Editor under a Namibian registered company -A Four Writers Empire.

The research paper/ thesis is very well structured, ideas are clear and the writing is concise and argumentative. Moreover, the literature review is comprehensive and **SHIMAFO FRANCE RUDOLF HAUSHIKU (2015346402)** managed to successfully discuss the significance of his research, from both a theoretical and an applied perspective.

Furthermore, both research questions are derived and sustained by the literature review, and are pertinent to his proposed study. His study titled: Reducing Rural Poverty through Participating in Agricultural Green Schemes: Case Study, Kavango East Region in Namibia, investigated four Green Agricultural Schemes (GASs) in Kavango East region, these are Uvhungu-vhungu, Shitemo, Shandikongoro, and Ndonga Linena. The study adopted a qualitative research approach to collect data whilst using interviews to analyse and present data from a sample of 16 participants.

I am thus reachable at +264817869475 for any further questions.

Yours faithfully,

Luise Shikongo

Luise Shikongo
.....