

**INVESTIGATING THE IMPACT OF CAPACITY DEVELOPMENT INTERVENTIONS
FOR SMALLHOLDER FARMERS IN BA-PHALABORWA MUNICIPALITY IN THE
MOPANI DISTRICT, LIMPOPO, SOUTH AFRICA.**

by

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DECLARATION OF ORIGINALITY

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Declaration

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ABSTRACT

Capacity Development Intervention (CDI) entails transforming one's ability to perform a task and improve the performance of an individual in his organization or job. This study investigated the impact of Capacity Development Interventions for smallholder farmers in Ba-Phalaborwa municipality in the Mopani District of Limpopo Province in South Africa. The purpose of the study was to understand the contribution CDIs had made to the lives of the smallholder farmers, their sustainability and possibly how the implementation could be improved to optimize the impact. Mixed-method, quasi experimental design was used for the study, incorporating primary and secondary data. The data was collected through document analysis and a survey which involved administration of questionnaires to the farmers, Limpopo Department of Agriculture and Rural Development officials and training service providers. Additionally, observation techniques were used during field visits by assessing the state of production on the farms and during the interviews. The collected data was analysed using the Statistical Package for Social Scientist (SPSS).

The results of the study showed that CDIs contributed positively to the farmers through open market participation, understanding production techniques, knowledge of different role players in the industry and the importance of record keeping. However, this study revealed that most of the farmers did not practice record keeping and that the evaluation methods employed in assessing the contribution of CDIs to the smallholders are not as informative. The analysis of reports from the Limpopo Department of Agriculture and Rural Development revealed that the evaluation methods currently used by the government do not assess how far the initial programme objectives have been realised; rather the focus is if the targeted numbers to be trained have been attained. Thus, based on the findings from this study it is recommended that stern measures should be taken by the relevant organizations ensuring that the agreed targets are delivered and these evaluations have to be continuously done during CDIs implementation. The outcomes from this study seek to assist in the effective implementation of CDIs and formulation of relevant CDI frameworks that will enhance the productivity of smallholder farmers across the whole of South Africa and beyond.

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LIST OF ACRONYMS

AET:	Agricultural Education and Training
AGRA:	Alliance for Green Revolution in Africa
AU:	African Union
CAADP:	Comprehensive African Agricultural Development Programme
CASP:	Comprehensive Agriculture Support Programme
CDIs:	Capacity Development Interventions
CDSF:	Capacity Development Strategic Framework
DAFF:	Department of Agriculture Forestry and Fisheries
DTI:	Department of Trade and Industry
EWC:	Expropriation Without Compensation
FAO:	Food Agricultural Organization
FFS:	Farmer Field Schools
GGAP:	Global Good Agricultural Practices
IPM:	Integrated Pest Management
LDARD:	Limpopo Department of Agriculture and Rural Development
LEDA:	Limpopo Enterprise Development Agency
LIBSA:	Limpopo Business of South Africa
NWGSA:	National Wool Growers of South African
NDP:	National Development Plan
NERPO:	National Emergent Red Meat Producer's Organization
NEPAD:	African Unity-New Partnership for Africa Development
NGO:	Non-Governmental Organizations
NPC:	National Planning Commission

RDP:	Reconstruction Development Programme
ROI:	Return On Investment
SAPA:	South Africa Poultry Association
SAPPO:	South African Pork Producer's Organization
SEDA:	Small Enterprise Development Agency
SMMEs:	Small, Medium and Micro Enterprises
SSA:	Statistics South Africa
UFS:	University of Free State
UNCTD:	United Nations Conference on Trade and Development
UNDP:	United Nations Development Programme
UNEP:	United Nations Environmental Programme
UNICEF:	United Nations International Children's Emergency Fund

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CHAPTER 1: SETTING THE SCENE

1.1 Introduction

Food insecurity, poverty, negative impacts of climate change, increased natural disasters, unemployment, and excessive inequality are some of the challenges that are tearing Africa apart especially in Sub Sahara Africa where the worst effects are experienced (McGuigan, Reynolds and Wiedmer, 2002; USAID, 2014; Stroh de Martinez, Feddersen and Speicher,2016). Do capacity development initiatives have the key to unlock Africa's potential? The response by African countries in adopting the African Union-New Partnership for Africa Development's Capacity Development Strategic Framework (AU-NEPAD, CDSF) and the Comprehensive Africa Agriculture Development Programme (CAADP), clearly shows that African leaders believe in capacity development's ability to extricate Africa from the various challenges faced today (NEPAD, 2010). An understanding of Capacity Development Interventions (CDIs) implemented for the farmers would contribute towards improving sustainability of the farmers.

1.2 Background of the study

Agriculture is one of the key economic activities in many African countries, employing a large percentage of the rural population providing nations with food and income (Rapsomanikis, 2015). Within such agricultural-based economies, smallholder farmers are playing a critical role in the country's development and food security issues (Rapsomanikis, 2015). The success of these farmers has been anchored on their skill levels (marketing, farm management, technical operation), experience in farming, capacity to adapt to the changing environment and overall management styles (Khapayi and Celliers, 2016; August, 2013). The smallholder farmers' sector in South Africa is composed of land reform beneficiaries who have benefited from the land reform program embarked upon since 1994 to date (Mabaya *et al.*, 2010; Cousins, 2018). However, most of the small holder farmers face several challenges which include; lack of adequate knowledge and skills in farming as well as in the management of their agribusiness enterprises (Claassen *et al.*, 2014). Also, the small-scale farmer's production often lacks alignment with the market requirements.

In addition, these farmers sell unprocessed products resulting in them getting lower returns from their farming activities. In other words, some of the challenges that they are facing are induced (Laubscher, 2019) which require to be addressed from within. With the changing and unpredictable climate, farmers need to be equipped with skills and knowledge to build resilience as they adapt to the external stimuli (Chikaire *et al.*, 2015).

The government (the main role player) together with other institutions such as commodity organizations (Citrus Growers Association, South African Poultry Association, South African Pork Producer's Organization (SAPPO), National Emergent Red Meat Producer's Organization (NERPO), Grain SA and Cotton SA), NGOs and private sector have embarked on Capacity Development Interventions (CDIs) for these emerging farmers (Chikaire, *et. al*, 2015). These CDIs include training, mentorship, coaching, and skills development.

1.3 Problem statement

The land reform program aimed to redistribute land, capacitate and enable new entrants to farming, ensuring sustainable agriculture production. However, the majority of the recipients of land reform have little to no previous farming experience (Mabaya *et al*, 2010). Those coming from a farming background most likely could have been subsistence farmers possessing little production knowledge and skills to manage larger farms thus requiring capacity development (Chikozho and Managa, 2018). Most of the land reform beneficiaries are faced with a situation where they have land but fail to optimize land use and the available resources. Lower to non-educational levels are a distinguishing factor that impedes higher performance of smallholder farmers despite that they may have similar physical and resource environments like established commercial farmers (Chikaire *et al*/2015). If the low productivity of the farmers is to persist, difficulties are experienced in addressing challenges faced within the rural population. Exploring and understanding how far the implemented CDIs are helping the farmers and how best their effectiveness can be improved will assist in promoting the sustainability of the farmers and contribute more positively to their production.

1.4 Study area

South Africa is located at the southern tip of the African continent and has nine provinces. Ba-Phalaborwa municipality is within the Mopani District of Limpopo Province, as shown in Figure 1.1 along with other districts and municipalities found in the Northern Province. Farming is one of the important economic activities within the municipality apart from tourism and mining (Statistics South Africa: SSA, General Household Survey: GHS 2017a). In 2016, the total percentage of South African households who were involved in agricultural production activities was 15.6 %. Compared to other provinces, Limpopo had the highest percentage of these households involved in agricultural activities with 41.2 % whilst the least was Western Cape which had 2.8 % (SSA, GHS 2017a).

The farmers in Limpopo grow a range of crops that include grains, vegetables as well as fruits. According to the SSA 2016 General Household Survey, horticulture and fruit farming were the dominant agriculture production practices in Limpopo (SSA, GHS 2016). From the SSA examination of poverty trends report for 2001 to 2015, it is evident that Limpopo province is one of the poorest ranked at 8th position and the second least rich coming after Eastern Cape (SSA, 2017b). In 2016, Limpopo had 11.5 % multi-dimensionally poor households (SSA, 2017b). Multi-dimensional poverty refers to individual or household deprivation of health, education and good standards of living (United Nations, 2020). It is not restricted to income and consumption poverty only.

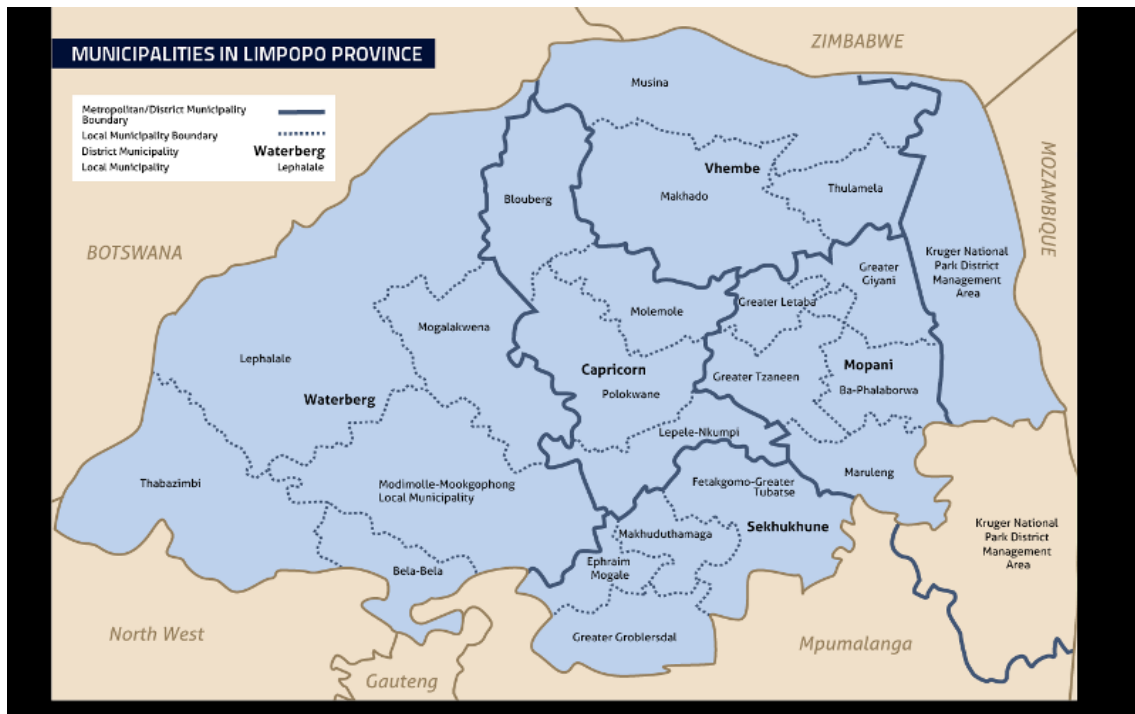


Figure 1.1: Limpopo Province Districts and Municipalities

Source: Adapted from www.municipalities.co.za

Capacity development entails training, mentorship, and coaching to enhance the skills and knowledge of the recipients (Chikaire *et al*/2015). When implementing CDIs, training can be offered alone or combined (training and mentorship) depending on gaps identified and financial resources available. Training includes workshops (accredited or not), any exposure visits, while mentorship constitutes both organization and farmer to farmer approaches. However, some CDIs are narrow and specific to a skill to be imparted or outcome to be attained such as market certification and market linkage.

1.5 Justification of the study

Capacity development is an increasingly important area in sustainable development within the agricultural sector (UNEP, 2002). This is after many studies have indicated that high productivity of the smallholder farmers contributes towards food security and poverty reduction amongst the rural people as well promote sustainability amid the rising negative climate change impacts (FAO, 2003; Yaseen *et al.*, 2015; Ouwatayo, 2019; Louw and Ndanga, 2010). In South Africa as well as most African countries' smallholder farmers are faced with various constraints which encompass

amongst others, financial, poor infrastructure, as well as limited knowledge and lack of technical expertise (Chikozho and Managa, 2018). Hence, every African government must ensure the success of smallholder farmers considering the potential the sector has for poverty alleviation and job creation as embedded within South Africa's National Development Plan (NDP), 2030 (NPC, 2011).

A deeper understanding of CDIs' strategies, objectives and performance particularly for those implemented in Ba-Phalaborwa Municipality, the approaches used, implementation processes and the challenges faced by all the stakeholders involved, will contribute in improving the effectiveness of the CDIs. Therefore, this study intends to explore efforts that could help in making the CDIs more effective and for smallholder farmers to become more competitive. The improvements should be noted in improved farm management and administration, reliable market linkages, business management compliance, increased farm incomes, reduced poverty, improved standards of living and positive overall performance of their enterprises. Evaluation of an intervention is crucial in that it helps to understand the extent to which outcomes were attained and inform stakeholders of the baseline for follow up projects as well as strengthen future interventions (Van der Werf, 2007). Conducting an evaluation helps to ensure that good capacity development practices are adhered to (FAO, 2012b).

1.6 Aim of the study

To investigate the impact of the CDIs offered and their contribution to smallholder farmer's sustainability in Ba-Phalaborwa municipality.

1.7 Objectives

- a) To investigate the implementation processes of CDIs for smallholder farmers in Ba-Phalaborwa municipality in Limpopo.
- b) To examine the impact of CDIs on good agricultural practices for smallholder farmers in Ba-Phalaborwa municipality in Limpopo.
- c) To evaluate the impact of CDIs on the sustainability of smallholder farmers in Ba-Phalaborwa municipality in Limpopo.

- d) To identify possible ways of improving the effectiveness of the CDIs and provide recommendations to the relevant authorities.

1.8 Research questions

- a) How do the stakeholders implement CDIs and what characterise the farmers and CDIs recipients in Ba-Phalaborwa municipality?
- b) In what ways have the CDIs implemented contributed to the sustainability of the smallholder farmers in Ba-Phalaborwa municipality?
- c) What are the challenges faced when implementing the CDIs by the different stakeholders?
- d) What recommendations can be made to improve the effectiveness of the CDIs?

1.9 Research design

The participants in this study were based in Ba-Phalaborwa Municipality and these farmers received various CDIs from different stakeholders that include agriculture department officials, government-appointed private companies and other relevant government bodies. The data was collected using a questionnaire, face to face interviews and observation methods; human interaction behaviour and field activities. The study incorporated a mixed-method approach so that the story could be fully told on the research findings and to maximize on complementing the qualitative and quantitative methods. The detailed methodology used will be elaborated on in Chapter 3.

1.10 Definitions

Despite the elusiveness of **Capacity** as it is used in various contexts, it is important to note that challenges exist in measuring *Capacity* before any intervention can take place (Brown, LaFond and Macintyre, 2001). Capacity is an integral component of development (Babu and Sengupta, 2006). In this study, the word *Capacity* will refer to the ability and skilfulness by the farmers in operating and managing his/her

business (Babu and Sengupta, 2006). This is what is targeted by an intervention and the outcome anticipated is a positive influence on *the Capacity* of such individuals. This can be equated to the human resource development within organizations whereby personnel are trained and developed for the success of the business (Swanson and Holton III, 2001).

1.10.1 Capacity development

This entails comprehensive strengthening and empowering individuals, organizations, communities, and countries in their abilities to enhance performance and outcomes (UNDP, 2008). Normally this is achieved through a planned intervention with set objectives and implementation timeframe. Although the UNDP differentiates capacity building and capacity development, this study does not and therefore will be used interchangeably in the text. Capacity Building can be implemented at different levels. This study will be centred on individual and organization levels with respect to the interventions that farmers have received.

1.10.2 Skill

Skill can be defined in various contexts but all have the same or similar meaning of what it is. This is the ability of performing a task or an activity well and to an extent with some expertise attached (Baliyan, Oitsile and Motlhabane, 2018). These can be further classified into soft skills or hard skills (Cimatti, 2016). Cimatti further indicated that soft skills are more related to the personal attributes of a person such as interpersonal skills, good leadership skills whereas hard skills are linked to the technical part of performing a task. In the human resources world, soft skills are considered to have more significance and are considered by many employers in today's world. This study will adopt the definition of skill as the ability to perform a task or an activity that is acquired through learning, mentorship and experience. These skills can also be honed over the years through exposure and further capacity development.

1.10.3 Smallholder farmers

They are defined differently and this varies from one country to the other according to the FAO. Significant differences can be noted in smallholder farms between countries and this often depicts varying stages of development for such countries. Reason being that the evolution of small farms is intertwined together with the process of economic development (Rapsomanikis, 2015). Within FAO's definition smallholder farmers have land size holding of 2 ha and below (Rapsomanikis, 2015).

In South Africa, the term "smallholder" or "small-scale" encompasses subsistence farmers. These are mostly found on communal land and they comprise "emerging" or "developing" commercial farmers (Van Averbeke and Mohamed, 2006). The term is perceived by many to be associated with backwardness or non-productiveness as well as other negative descriptions, however it does not necessarily mean small in land size holding (Kirsten and Van Zyl, 1998). On the other hand, the Department of Agriculture Fisheries and Forestry (DAFF), 2012 indicates that the definition varies with context, country and ecological zone. Therefore, the definition is not complete with land holdings only since some are not using all their land. Additionally, the difference in the farm enterprises also makes it difficult to have one definition that unanimously embraces all the smallholder farmers. There is no homogeneity when it comes to smallholder farmers (Pienaar and Traub, 2015). In this study, smallholder farmers include all the subsistence farmers on communal lands, subsistence farmers, small-scale farmers and emerging farmers. According to this definition, all the respondents interviewed in this study are classified as smallholder farmers.

Regardless of the varying definitions of smallholders from country to country, they have common roles and importance across such countries. They also operate in an economic environment and they run their farms as entrepreneurs or strive to do so (Rapsomanikis, 2015).

1.10.4 Sustainability

Sustainable production within agriculture entails farming to meet the food demands without compromising the future production capacity of the natural resources

(Rogers, 2008). The future generations should not be made worse off by today's production. Sustainable agriculture is achieved through the three main areas which are; a healthy environment, economic profitability and social equity. Producing more with less meaning that increasing productivity should be the slogan to meet the food demand (United Nations Conference on Trade and Development UNCTD, 2013). The three main dimensions of sustainable development are economic, social and environmental sustainability. There should be a balance among the three main areas of achieving sustainable agriculture.

1.11 Study Outline

This study is composed of five chapters. Chapter 1 gives an overview of the study including the background of the study area and core areas to be explored within the study. Chapter 2 gives a perspective on the themes surrounding the study by taking into consideration of how other countries have performed in their respective agricultural sectors and the different frameworks adopted by certain critical organizations in implementing Capacity Development Interventions including the work previously done by other researchers. Methodology and research design are contained in Chapter 3 which elaborates on the approach used to gather evidence to support arguments presented in this study. This is followed by Chapter 4 which presents the research findings and the analysis given the data collected during the study. Chapter 5 states the recommendations and conclusions and gives the researcher's perspective on the study supported by the analysis and findings presented.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter provides a review of literature on capacity development interventions for farmers. It begins by outlining the concept of capacity development and its importance complementing the basic definition presented in Chapter 1. This is followed by a description of capacity development frameworks used by the main players, international organizations that are involved in field such as the FAO and the UNDP. The literature for the study was drawn from academic journals, published information and articles from reputable publications within the agricultural industry mainly the FAO and the World Bank, UNDP as well as other relevant sources for rural and sustainable development. The review finally narrowed down to South Africa and the gaps identified within capacity development implementation will be discussed.

2.2 Capacity development concept explored

Capacity development can be understood as an outcome brought over time by change in the performance of the people, organizations and institutions through refined and strengthened ability (Kumari and Khanduri, 2019). The performance of a farm as a system with inputs, production processes and outputs, is affected by factors such as human capacity, infrastructure, markets, political and economic environments, natural environment and institutions. However, the level of expertise of the human capacity in understanding these factors and the optimization strategies thereof will determine the farm's performance (Baliyan, Oitsile and Motlhabane, 2018).

Human capital is pivotal in capacity development. The level of knowledge and understanding these economic agents have will help in determining the input-output combinations for an optimum return. According to Singh (2000), the inter-farm and inter-country performance differences in agriculture emanate from the different levels of human capital expertise. Oduro-ofori *et al.* (2015) observed that agricultural productivity improves with educational interventions. Both formal and non-formal educations are important in shaping the farmer's knowledge and understanding. Lopez and Valdes (2000); Mozumdar (2012); Paltasingh and Goyari (2018), also

agree that there is a positive relationship between the two phenomena. However, Asadullah and Rahman (2009) noted that empirically there is weak evidence that education has positive effects on agricultural productivity. Additionally, Chagwiza, Muradian and Reuben (2016) observed no difference in productivity of trained or untrained linseed farmers. On the other hand, Hasnah, Fleming and Coelli (2004) observed a surprisingly negative relationship. However, Reimers and Klasen (2013) also argue that published results with insignificant or at times surprisingly negative relationship of schooling on farm's productivity are indicative of the 'problematic reliance on enrolment and literacy indicators'. Reimers and Klasen (2013) further observed that after applying different methods of analysis such as advanced panel econometric analysis, a sizeable significant impact is noted.

Seventy percent of Africa's population lives in rural areas and these are susceptible to poverty and food insecurity (Stroh de Martinez, Feddersen and Speicher, 2016) and consequently even chronic hunger. Capacity development in Africa is thus critical to improve the performance of farmers and help to alleviate the sufferings thereof. Productivity has been of greatest concern in Africa given the global population increase projections to about nine billion by 2050 (UN, 2017). Globally, an annual increase in the demand for food by at least 20 % over the next 15 years is projected. This is perceived to be the largest increase and this could severely affect sub-Saharan Africa among other regions (FAO, 2011). One of the prime objectives of food systems is to feed people through sustainable means of production and methods that ensure high productivity as well as increased farm income and subsequently improving the food security status (Poole, 2017).

2.3 Capacity Development Intervention Framework

Capacity is developed at different levels which are individual, organization, sectorial, institutional and global. All these levels affect the performance of the farmers directly and indirectly. However, for this study the CDIs for the farmers were only considered at two levels namely individual and organizational. Capacity development is a long-term process, building cross-dimensionally, incrementally and gradually (FAO, 2012a). This process requires continuous and timely monitoring and robust well-crafted

external support to succeed. The figure below summarises the capacity development framework used by the FAO.

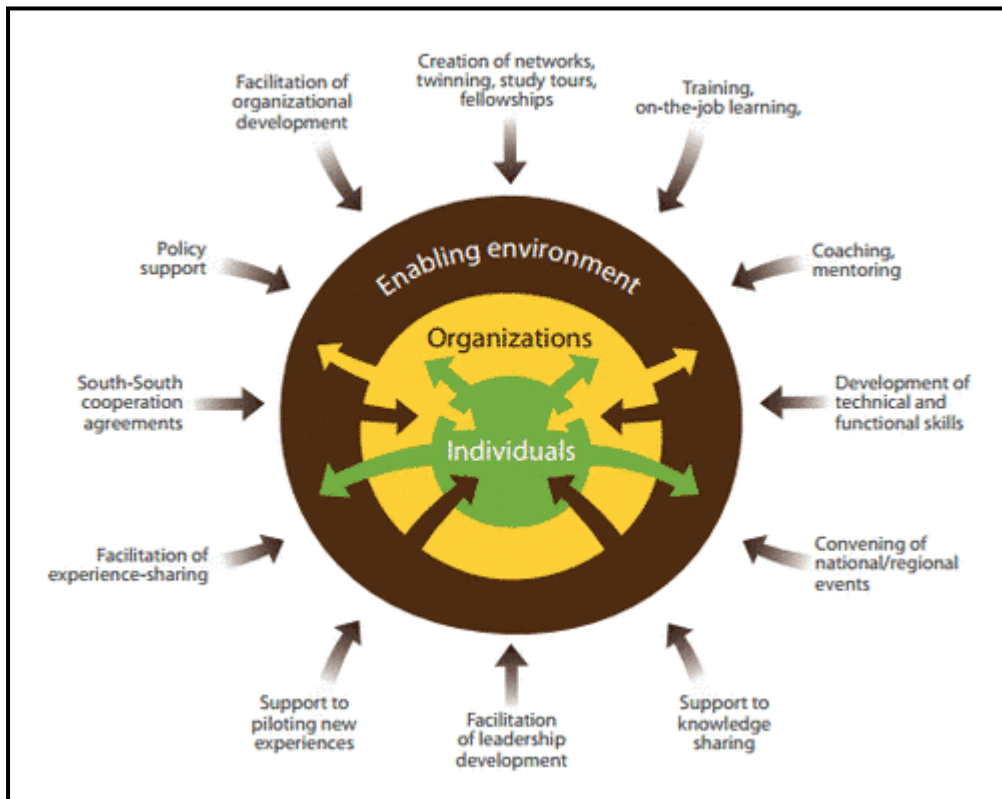


Figure 2.1: FAO's Capacity Development Framework

Source: Adapted from the FAO, 2012a

In Figure 2.1, the arrows feeding into the cycle are the interventions which can be designed at any level to improve performance of the targeted group which can be farmers or any human resource. From the framework, reference is made of South to South settings but it is important to note that farmers also have the external environment which is part of their system and it has an impact on their performance. The outer arrows (brown coloured) from Figure 2.1 depict this external environment. Therefore, apart from implementing capacity building interventions for farmers, other stakeholders involved do require capacity development at their levels as well, because they affect farmer's performance directly or indirectly. These stakeholders require capacity development in areas such as setting up the right institutions and a conducive policy environment which will promote the success of other projects to be implemented within the system (FAO, 2016).

2.3.1 Individual level

At this level competences of people are strengthened through provision of technical and soft skills targeted for individuals. Behaviours, motivation attitudes, inter and intra personal skills are also sharpened and this benefits the organizations they are attached to enhancing their effectiveness (Ogonowski and Bereuter, 2015).

2.3.2 Organizational level

'Competent individuals are not sufficient to make a capable organization', (FAO, 2010). Organizations can be defined as groups containing units of individuals who have a common goal or purpose that binds them together (FAO, 2010). Overall functionality and performance of an organization is the targeted area during the implementation of capacity development. These organizations can be at national, provincial, district, municipality or enterprise level. The success of the organization will still depend on the collective efforts of the individuals.

2.3.3 Enabling environment

This is the environment in which the organizations and individuals function in, they relate to the legislative environment, policies, institutional set up at national level or change in incentive systems, all within the country of operation. All these factors influence the functioning, performance and progress of the organizations and individuals (FAO, 2010; Ogonowski and Bereuter, 2015). Whether these interventions are offered to individual farmers or the government officials at a national level, they have certain steps and stages that they should follow to allow attainment of results. Figure 2.2 explains this phenomenon.

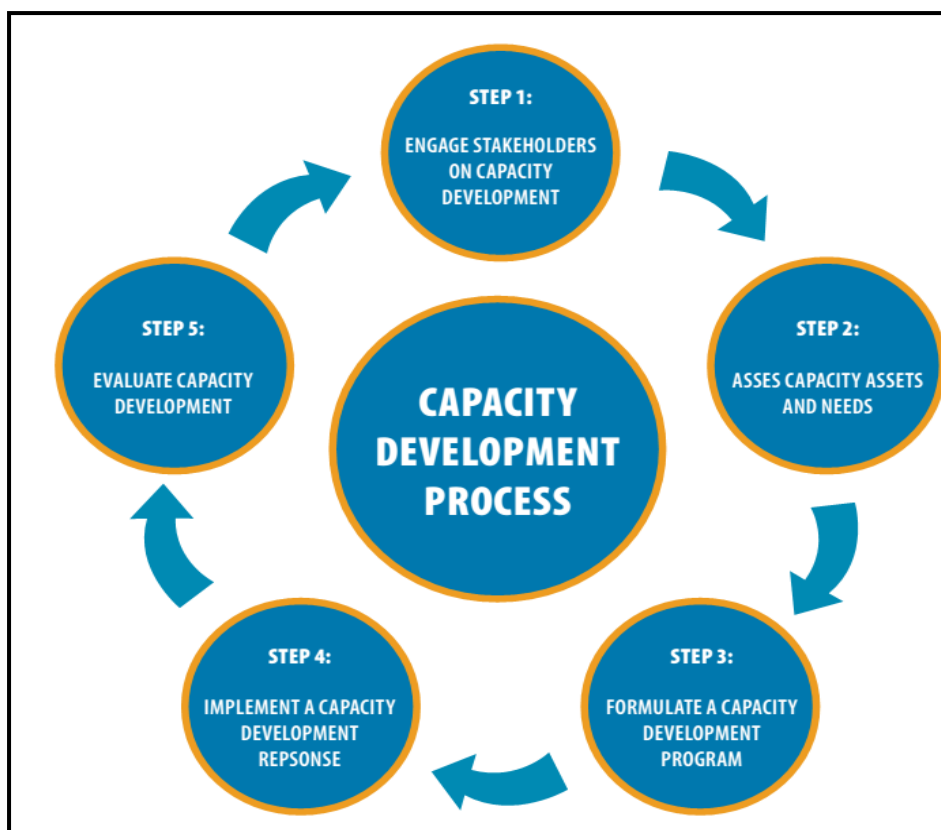


Figure 2.2: Five Step Capacity Development Cycle

Source: Adapted from UNDP, 2008

The framework presented in Figure 2.2 is recommended by the UNDP to aid in showing the efficacy of the financial investments made. Although all the steps are equally important, the evaluation part which can be done internally or externally is critical in asserting whether the project has reached its objectives or outcomes which reflect on the performance (UNDP, 2008). This helps in improving implementation of projects by understanding what is working and what is not.

2.4 CDIs from other studies

Capacity development investigated in this study embraces all the interventions that the farmers were given regardless of the provider, date when they received it and the level at which it was targeted. However, it is important to note that in some of the studies reviewed, focus is specifically given to one intervention which can be an innovation, adoption to technology, training, mentorship or a coaching intervention. Regardless of the differences, the basis of evaluation is the same, which is to find

how much the intervention has helped the people and the significance or contribution in improving the welfare of the farmers and their performance in general (alleviate poverty, increase income levels, increase productivity and or reduce food insecurity).

Traditionally a top-down approach in training the farmers has been used. This is whereby an outsider identifies an area the farmers need training in, rather than the bottom-up approach where the farmers identify the gaps themselves (Stewart *et. al.*, 2015). The introduction of Farmer Field Schools (FFS) changed the norm as this approach is bottom-up and more pragmatic as well as empowering since the problems addressed are identified by the farmers themselves rather than an outsider (Bautista-Solís, 2012). FFS were first introduced to Africa in Ghana, in 1995 with international facilitators brought to coordinate the groups and this gave birth to South-South initiative whereby countries share their experiences and challenges. This enhanced the outcomes of the FFS as countries facing similar challenges got to learn from each other (Bonan and Pagani, 2018).

In their study to investigate the significance of capacity building and training for sustainable livelihoods in Pakistan, Yaseen *et al.*, (2015) concluded that there was a significant increase in income for the farmers after receiving training from low income to medium and medium high. However, the systemic review of 19 published articles by Stewart *et.al.* (2015) indicated that the studies did not have concrete evidence to show that training intervention, innovations and any other capacity development interventions directly lead to the stated outcomes such as increased income or food security. In the same vein, Serin, Bayyurt and Civan (2009) found that in Turkey, both formal and informal education significantly have positive influences on the agricultural performance of the farmers. In India, Paltasingh and Goyari (2018) concluded that education enhanced farm's productivity for both Farmer Field Schools and formal education. Additionally, Ashraf and Qasim (2019) in their study revealed that as the farmers are more skilled, they tend to adopt modern technologies more easily and acquire other off-farm opportunities getting more income that improve their welfare. Access to extension services and non-formal training both increase the education and skills level for the farmers (Oduro-Ofori, Aboagye and Acquaye, 2014).

Governments play a crucial role in supporting all farmers, especially developing farmers. In Thailand, as well as in other Asian countries, the government provided relevant tools and support for the cooperatives to operate in, which includes legislation and government's hand in direct governance (Tanrattanaphong, 2015). This led to the success of their cooperatives in creating employment and their sustainability. The Co-operative Auditing Department and the Cooperative Promotion Department are the two specific departments within the Thailand's Ministry of Agriculture and Cooperatives that govern the cooperatives within the country (Tanrattanaphong, 2015) directly. This is one factor which has been noted by the Department of Trade and Industry (DTI) in South Africa to be lacking since no department is solely mandated to focus on cooperatives specifically (Okbandrias and Okem, 2016). Kenya, which has recently gained growth and evident success in some of the agricultural cooperatives, has an independent Ministry of Cooperative Development (Nyoro and Komo, 2005). This is the enabling environment as indicated by the FAO (2012) that has a direct influence on the success of the farmers.

2.5 South Africa's Agriculture Capacity Development

There are many stakeholders in the delivery of capacity development within the agricultural industry in South Africa that have evolved over the years. All stakeholders are participating and aimed at achieving reasonable sustainable community development through capacitating the farmers. These include government departments, government agencies, NGOs, private companies and individual philanthropists. In support to the above evolution of CDI stakeholders, Mabaya *et al* (2010) mentioned that reforms have been experienced in the Agricultural Education and Training (AET) by the traditional institutions such as universities, vocational schools and extension agencies. These reforms have seen the addition of new models of training, mentorship and coaching by NGOs which vary from individual organizations and cooperatives to large international organizations such as Food and Agricultural Organization (FAO) (Chikaire *et al*, 2015).

There are various CDIs that are used within the South African farming context. This includes the use of Department of Agriculture and Rural Development extension officials, Small Business and Development Agency (SEDA) officials, AgriSETA accredited service providers, community development organizations and other relevant producer organizations such as Grain SA. On the award winning ceremony of Grain SA in 2016 for emerging grain farmers of the year, the winning candidates alluded to training and development coupled with input support for positive contribution to their success (Kunz, 2018).

The Comprehensive Agricultural Support Programme (CASP) was launched in 2004 through the Department of Agriculture Fisheries and Forestry (DAFF), with one of the six pillars being training and capacity building of the farmers (DAFF, 2004). Under this pillar, services are outsourced to external experts in the field. Apart from targeting land beneficiaries, CASP reports also indicated that the hungry and vulnerable together with household and subsistence producers would also benefit from the programme (DAFF, 2004).

Extension services through the Department of Agriculture Forestry and Fisheries are another means through which farmers are capacitated. Chikaire *et al.* (2015) clearly indicate that capacity development of farmers through government officials (extension services) is a good vehicle in helping the farmers. They do however have some weaknesses. The weaknesses include lack of timely information dissemination, poor accountability and lack of specificity as they have a blanket nature of recommendations without being tailor made or farmer specific recommendations (Chikaire *et al.*, 2015). Additionally, individual successful farmers are now involved in training and mentorship of others. This farmer to farmer approach enhances the effectiveness of the program (Terablanche, 2011).

The Ramukumba *et al* (2012) study aimed at formulating strategies as to how best the Small Micro and Medium Enterprises (SMMEs) can be assisted for them to increase their production capacity and enhance the sustainability of their businesses. Since, smallholder farmers fall also within the category of SMMEs, these strategies are also relevant to them. The Ramukumba *et al* (2012) study noted that different CDIs should be adopted for the different farmers. In other words, the interventions should be tailor made to suit the needs and gaps of the identified farmer. This clearly

shows that CDIs are important, but the approaches used will then determine their effectiveness.

Cooperatives are known as vehicles for economic and social development (Tanrattanaphong, 2015). In South Africa, the increase of cooperatives registration ballooned over the years, characterized by a high failure rate as the registration was shown to be driven by government incentives (Okbandrias and Okem, 2016). A failure rate of 89% was evident in 2009 alone in the food and agriculture sector. This translated to a failure of 5415 out of 6089 registered cooperatives (Okbandrias and Okem, 2016). However, apart from the support (financial and non-financial) required by the cooperatives, competencies of the top management affect the extent to which the cooperative can succeed. The Figure 2.3 below indicates the surge experienced over the years in registration of cooperatives as well as those which were de-registered.

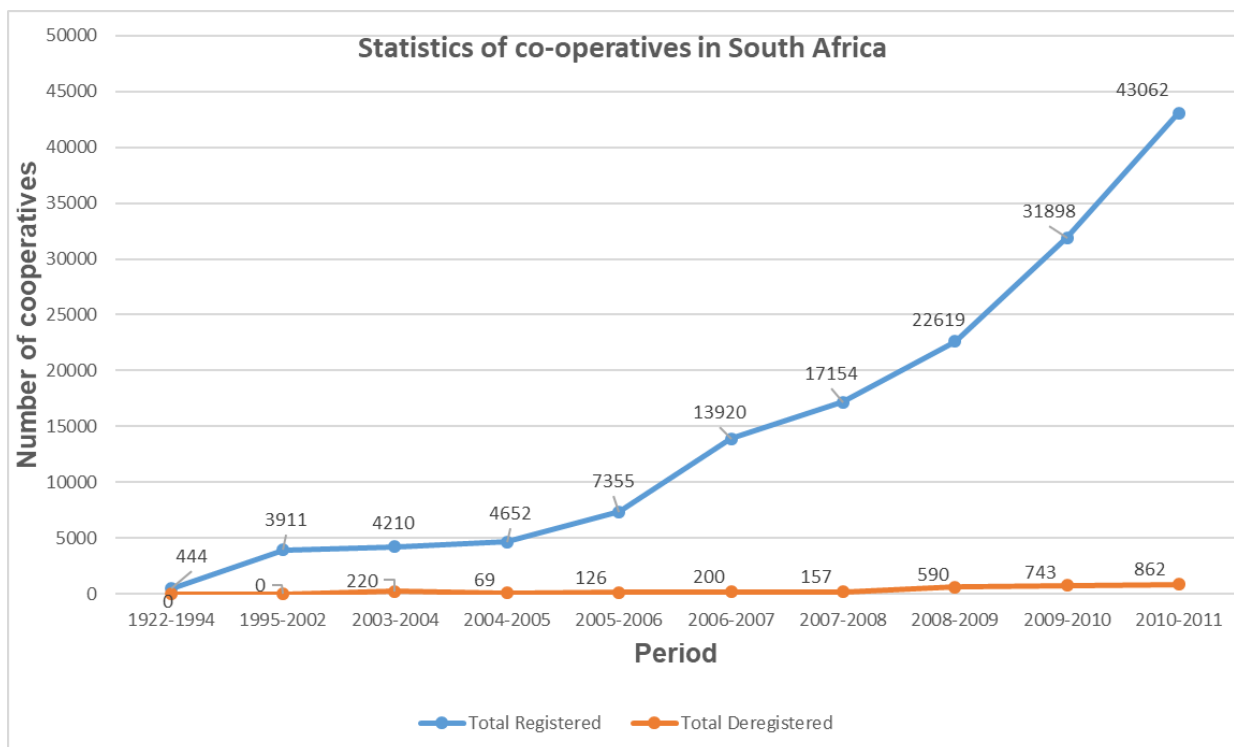


Figure 2.3: National statistics on registered and de-registered South African Cooperatives

Source: DTI, 2012

One of the factors that has been found leading to the failure of cooperatives in South Africa is the absence of continuous training as well as sector specific training (Okbandrias and Okem, 2016). This affects the administration and effective business plan development and implementation by the management committee. These are the key attributes that have been noted in the success of cooperatives in Thailand (Tanrattanaphong, 2015). Although the failure rate of the cooperatives has been high in South Africa, the support efforts given to the farmers by the commodity organizations such as SAPO, Grain SA, Cotton SA, Poultry SA, NERPO and other specific crop associations cannot be ignored. These organizations offer sector specific trainings accompanied with market linkages for their members. Therefore, regardless of an organization being a cooperative or sole proprietor with such assistance is bound to succeed.

The collective action with the associations helps to alleviate the marketing challenges faced by the farmers positively impacting their production (D'haese et.al. 2005). The National Wool Growers of South African (NWGSA) has made remarkable strides in training, mentorship and overall development of wool farmers in the communal areas. These communal farmers marketed wool (222 610kg) valued at R1 503 000 in 1997/98 season and this exceedingly increased in 2013/14 production year to R137 million (3.8 million kg wool) (De Beer and Tereblanche, 2015). This is attributed to the association's advisory strategies which is wholesome and encompasses the relevant areas that limit the farmers which include; training and mentoring on all technical production issues related to wool production, genetic improvement, developing of production related infrastructure, market access, management of predation and establishing farm business information system (De Beer and Tereblanche, 2015). In Transkei, which is now part of Eastern Cape province of South Africa, the NWGSA managed to build sheds for the struggling farmers and established a management committee who received training in managing and maintaining the shed and the operations (D'haese *et al.*, 2005). Apart from the provision of such useful infrastructure and support, D'haese *et al.*, 2005 argue that the successfulness of the intervention depends on the social capital within the village where the infrastructure is built.

Commodity associations in South Africa seem to use similar if not the same strategies in supporting the farmers. SAPO, amongst others, offers training,

mentorship and coaching of the smallholder farmers and cooperatives by the experienced commercial or retired farmers. They offer advice from starting up a piggery unit to marketing and farmers should affiliate with such organizations so that they can benefit from their services (Sishuba, 2015). Recently in Western Cape Department of Agriculture signed a Memorandum of Understanding (MOU), with commodity associations who will support the smallholder farmers with funding, mentorship, training, market access, equipment and infrastructure (Hartebeest, 2019). Independent evaluation has been conducted for this kind of support in the province and the approach has been noted to be a success.

2.6 Potential participation of youth in agriculture

Given that the African continent has the greatest number of youths compared to other continents, the future of Africa is thus in the hands of the youth (UNICEF, 2014; Alliance for Green Revolution Agriculture (AGRA), 2015; Elgoni, 2018). Statistical projections indicate that 42% of all global births will be accounted for in Africa come 2050 (UNICEF, 2014). The demographic transition anticipated, there is a potential of demographic dividend creation once the youth enter the productive sector (Elgoni, 2018). “The alternative to a youth dividend is a youth bulge, which is characterized by high youth unemployment and widespread protests—a recipe for political instability” (Africa Renewal, 2020). This calls for African governments to develop the correct public policies, investments and infrastructure which will harness this demographic bulge, creating youth dividend that will accelerate economic growth (UNICEF, 2014; Elgoni 2018). The trends indicate how the youth shun the agricultural industry because it is dirty and involves a lot of manual labour (Chipeta, 2013). Due to poverty, which characterize most African smallholder farmers, youth do not see this as a viable source of income and resort to alternative employment for a reliable income source (Muir-Leresche, 2013). However, this is the industry which holds the potential to benefit from youth dividend.

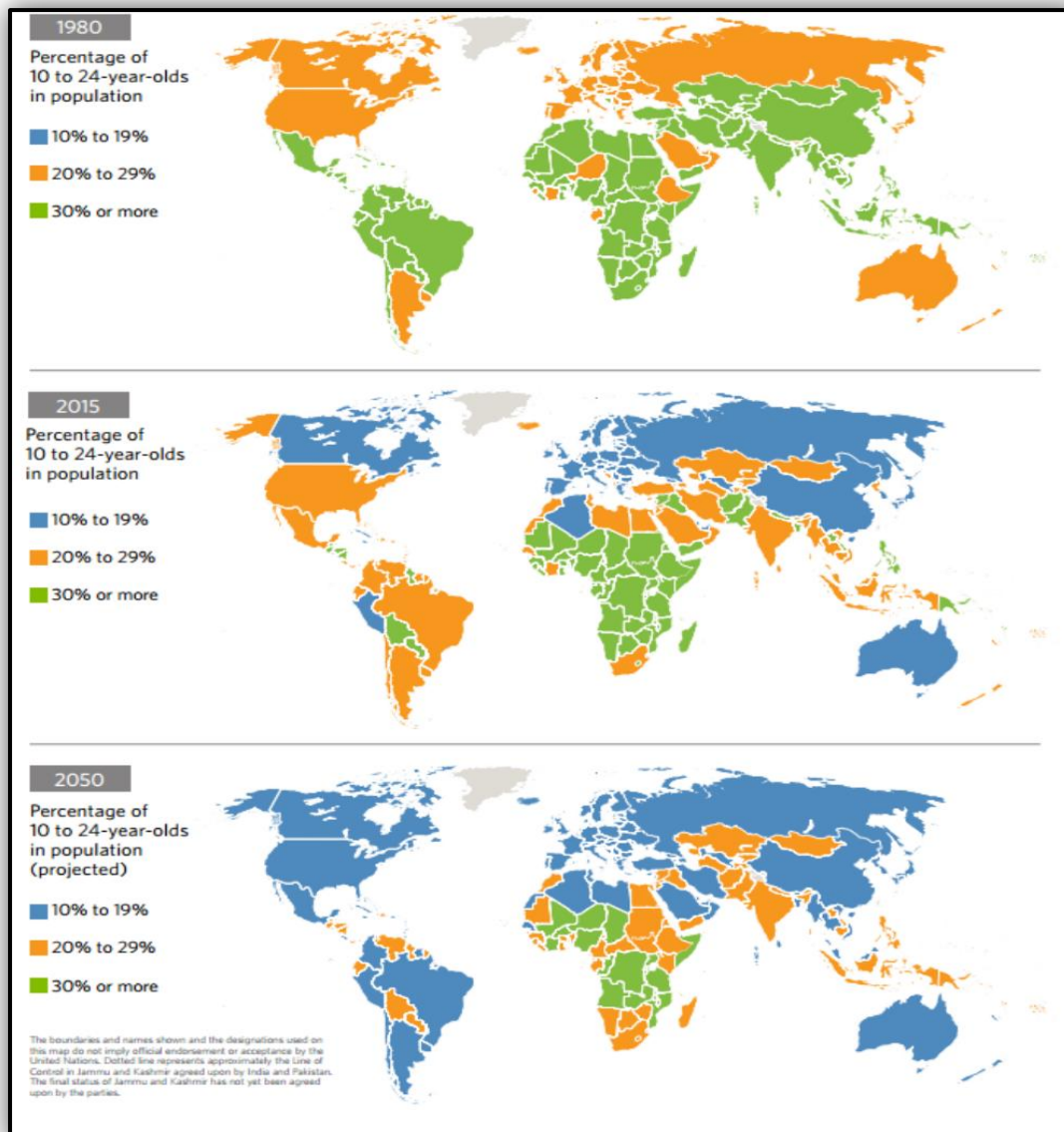


Figure 2.4: Young in the world: Changing in proportions 1980, 2015 and 2050

Source: USAID, 2019

Africa had large percentages of the young between 1980 and 2015 and these trends are projected to continue to increase in 2050 compared to the rest of the world (Figure 2.4). Rukuni and Zvavanyange, (2013) urge relevant stakeholders such as the government and non-state actors for a ‘re-configuration of agriculture, food systems and renewable natural resources sector’s workforce by ensuring that the youth are at the centre.’ This has the potential to curb the migration and unemployment challenges many countries are facing, promoting sustainable rural development.

The current South African President Mr. Cyril Ramaphosa canvassed for the introduction of entrepreneurship as a subject in schools to inculcate the entrepreneurial mind-set in the youth whilst they are still young (Khumalo, 2019). This is supported by Osiri (2015) who indicates that the Indian government has been nurturing entrepreneurship in school pupils which has helped in building their capacities and behaviours at individual level. These nurtured skills are the basis for their future careers and there has been a long-term benefit in the society and economy.

2.7 Summary

Evidently CDIs have proven to spur sustainable development as indicated by the various studies carried out globally. As smallholder farmers are at the core of many African agricultural based economies, their prioritisation for development is crucial in promoting sustainable rural development. Resources are widely used by different stakeholders in supporting these smallholder farmers and the importance of understanding the effectiveness of the different approaches used is of paramount importance. This enables effective ways to be adopted broadly and to optimise the potential of the smallholder farmers in contributing to economic mainstream.. The presented CD framework used by the FAO is more of a standard project management framework which is vital when implementing such programmes. This pre-planning helps in ensuring that corrective measures are taken once an obstacle is met along the way.

The chapter has unveiled the importance of youth inclusion in the agricultural industry for the sustainability of the sector. Africa has been noted to potentially benefit from its demographic dividend if the right policies are adopted. Transformation of the tradition known norm that associates agriculture with dirt and poverty could be an avenue to lure more youth to the sector. The youth's involvement in the sector could bring new innovations consequently resolving the unemployment challenges the continent faces.

The cooperative business model which has been identified as a vehicle for rural development since it creates employment for the members and providing services seem to have worked in other countries such as Thailand but the same cannot be

said for South Africa. With several challenges affecting farmers within the sector, relevant and appropriate CDIs for these cooperatives could positively redirect their future.

Few authors discovered an insignificant relationship between education levels and agricultural performance and their method of analysis was discovered to be flawed by other researchers. Majority of studies professed a positive linkage between education levels, capacity building and agricultural performance. Education empowers individuals within the agricultural sector. Empirical evidence has shown significant changes in farmers' income after adopting new ways of production such as Integrated Pest Management (IPM). Therefore, understanding and exploring CDIs helps in creating alternative ways that promote sustainability.

The need to answer the research questions and gain understanding of how much CDIs have impacted upon the lives of the farmers is explored in the coming chapter.

CHAPTER 3: METHODOLOGY

3.1 Introduction

This chapter presents the research methods and design adopted for the study in answering the research questions revealed in chapter 1. After discussing the research design, the population and sampling techniques are described followed by the data collection methods used. The data analysis strategies used to rearrange the raw information collected into a reporting format are discussed in this chapter as well as the ethical considerations that were followed before, during and after data collection.

3.2 Research design

A research design can be defined as a guide or an articulated plan followed by the researcher in trying to find answers to the research questions (Saunders et al., 2016). As indicated by Creswell (2009) the different research designs are adopted for every study depending on the data to be collected, the timing of the research, the research questions, type of the study and the method of analysis to be used. There is no one size fits all when choosing a research design since all studies vary in one way or the other. Participants' opinions play a crucial role in interpretive research design Creswell (2009), the researcher gets to have a great understanding with regards to the world of human experience. Blending of two research paradigms such as quantitative and qualitative enhances the results for interpretive research design. This uniquely creates an insight into a complex social phenomenon that is not available when using either quantitative or qualitative designs alone (Bhattacharjee, 2019). Additionally, it increases the intensity of observations and discussions in a way, making arguments more effective (Mackenzie and Knipe, 2006).

This study incorporated a mixed-method, quasi experimental design for collecting, analysing and interpreting the data. The assessment of impact of CDIs in a true experiment would have required a baseline and a control group in the pre-intervention and post-intervention period (Lani 2019; Handley et al. 2018; Barnes, 2019). However, in the current case there is no baseline survey that has been done by the researcher due to timing of the research which was done after the completion of the interventions. Hence, quasi-experimental design was used (White and

Sabarwal, 2014). Although this design has internal validity challenges, it is a reliable design in explaining causal relationships and tries to give a balance between internal validity and external validity (Barnes, 2019; Cresswell, 2009; Shadish, Cook and Campbell, 2002). In cases of small sample size and where it is not feasible to select subjects randomly and the unavailability of a control group like in the current study, this design is preferable.

3.3 Description of the study area

The study focuses on the assessment of CDIs implemented for the farmers in Ba-Phalaborwa municipality. Ba-Phalaborwa municipality is located within the district of Mopani in Limpopo Province. Phalaborwa municipality is situated 207 km North East of Polokwane, the provincial capital of Limpopo. It constitutes five agricultural service centres which are Manjenje, Lulekani, Ga-Selwana, Matiko xikaya and Benfarm (some of the centres are shown in Figure 3.1). This municipality's location is characterized by a dry and warm climate throughout the year with mild non-freezing winters. Farming operations within the municipality are diversified as they range from citrus, vegetable, and livestock farmers. This study selected respondents regardless of their enterprises since Capacity Development affects them all equally.

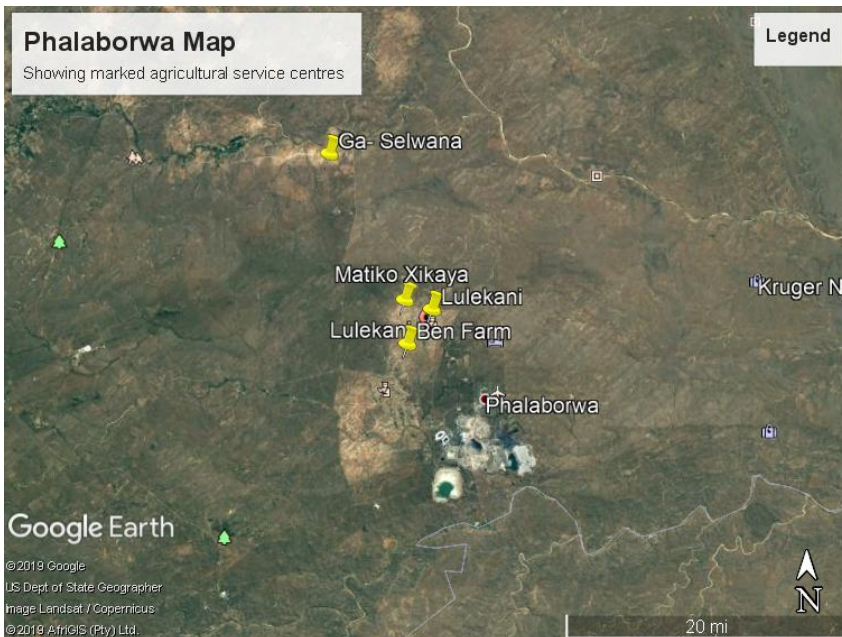


Figure 3.1: A map showing agricultural centres in Phalaborwa

3.4 Population

Conducting research on all the farmers in Phalaborwa municipality would have required a large amount of resources as well as time, all of which were not available for this study. In this case population refers to all the farmers within the municipality and the target population is that of trained farmers within Phalaborwa (Kadam and Bhalerao, 2010). However, the Limpopo Department of Agriculture at Phalaborwa did not have a consolidated database of all the farmers who had received training over the past years. These trainings were offered by government extension officers, government contracted training providers, agricultural colleges and other stakeholders such as Small Enterprise Development Agency (SEDA), NGOs or commodity associations.

3.5 Sample size and sampling techniques

When determining a sample size from which inferences on the entire population can be drawn from, there are factors to consider such as the accepted level of precision, adopted confidence level and variability level of the target population (Kadam and Bhalerao, 2010; Banerjee and Chaudhary, 2010). A sample size is determined given the factors above as well as the population size whether it is known, unknown or infinite. All these factors will determine the size of the sample. Other factors such as financial and time constraints also play a part in determining the sample size.

Non-probability and probability methods are used when selecting this subset of participant (sample). One of the attributes of a sample is that it should be representative of the population so that the results can be ethically and scientifically valid (Kadam and Bhalerao, 2010). This study used non-probability sampling method. Creswell (2013) recommends samples sizes of 20 to 50 participants for qualitative studies and statistical significance. In this study, a total of 54 farmers from five different agricultural service centres within the Phalaborwa municipality were included.

3.6 Data collection methods

The study incorporated data that was collected through both primary and secondary means. Primary data is collected through direct contact or communication with the

respondents of the study. However, secondary data entails information that has been collected already by other researchers or documents that are available from relevant organizations such as the LDARD (Saunders *et al.*, 2016). These documents can be in the form of reports, capacity building terms of reference for tender documents and databases of trained farmers, etc.

Since the study used the mixed method research design, data was gathered concurrently for both quantitative and qualitative methods to save resources. The different approaches applicable to both methods were used when collecting the information. A questionnaire (Appendix A) was used with open-ended and closed questions. The open-ended questions enabled the researcher to probe the interviewee to generate discussion leading to an in-depth understanding and insights to the subject matter. Some related questions arose unique to each scenario during the interviews. The questionnaires were administered individually and as a group with each person filling out their responses individually.

Surveys and face to face interviews dominated the data collection phase as all the 54 respondents met with the researcher during the data collection sessions and a questionnaire was used to gather information. This method incorporated the observation technique which includes assessing the crops in the field or the state of the livestock belonging to the farmers interviewed. In addition to this, farmers who had additional documents to support their answers made provision of them such as farm production records, financial records and advertising pamphlets. All this information gathered linked to the research questions of the study and effort was being made to ensure that much data is collected. Analysis of documents did not end at farm level since LDARD officials and two service providers were also interviewed and documents available were analysed.

3.7 Data analysis

3.7.1 Quantitative Analysis

The Statistical Package for Social Scientist (SPSS) was used to analyse data quantitatively. Descriptive statistics were used to analyse the frequencies and

percentages of the different variables in the study. These were quantified and used to explain the significance and relationships among the variables.

3.7.2 Qualitative analysis

Data collected was consolidated and categorized into meaningful information that explained any striking outcome or association. This information was then used to facilitate answering the research questions and/or enhance the quantitative analysis to give a better understanding of the study results (Creswell, 2007). Text analysis and document content review helped in understanding the capacity development implementations within Phalaborwa municipality and contributed toward the answering of the research questions.

3.8 Data storage and management

Data files related to the study will always be backed up on password protected computer discs and online using Google's cloud storage facility. Copies of each of the following will be kept:

- The Original data entry files, the ones captured soon after data collection
- The cleaned version of data entry files
- Corrected thesis versions clearly labelled and cleaned as per comments made and on-going analysis.
- Records of coding and progress on data analysis
- Tables and other analysed data in form of results
- Reports

All the information is important and will be archived as the study comes to completion (Muir-Leresche, 2009), and will be kept for five years within a password protected online cloud which could help for easy accessibility by the relevant people.

3.9 Validity

Due diligence was exercised during the designing and preparation of the instrumental tools for collecting data. Observation techniques were implemented when collecting the data whereby the way farmers responded to questions was noted verifying their answers. The income related questions seemingly made farmers uneasy and some were not willing to share the exact information. The questionnaire was piloted for the first few respondents and assessed if the information would suffice to answer the research questions.

3.10 Ethical statement

Decisions, behaviour and standards vary from one individual to the other and these relate to the moral choices one takes in any circumstance (Greener, 2008). However, when conducting research there are ethical expectations to be followed which aim at good standards and minimising risk to both the participants and the researcher (Israel and Hay, 2006). This study observed the required ethical considerations and followed good standards and practices when conducting the study.

This study obtained ethical clearance from UFS Ethics Committee before data collection commenced. The ethics clearance approval letter is attached in Appendix B (**UFS- HSD2019/0980**). Additionally, the Limpopo Department of Agriculture and Rural Development (LDRARD) head office approved working with the researcher (Appendix C), giving the researcher ease to conduct the study. The farmers were assured of their privacy and anonymity as they responded to the questionnaire. To prevent much time loss from their work due to the study, the farmers were approached during the times that were convenient to them as well as when they were already out doing their usual activities such as dipping the cattle and attending farmer's workshops. Few field visits were done in accordance to the farmer's schedule. During data collection, no ethical problems were encountered.

When signing the consent forms (Appendix D), the respondents were notified that their participation in the study is voluntary and they had the right to withdraw from the study anytime should they wish. Anonymity of the participants was maintained to allow the farmers to participate freely without holding back information and this is

taken to be the ethical norm (Walford, 2006). No questionnaire can be traced back to the respondent which guarantees their confidentiality. Questions that violated their privacy or lead to their discomfort in responding were avoided from the onset. The respondents were notified of the study and its objectives to remove any expectations and bring clarity if there were any assumptions.

3.11 Limitations of the study

A major limitation in this was that, due to financial and time constraints data collection was limited to farmers who could be accessed in locations close to the Department of Agriculture offices in Phalaborwa, farmers who attended the dip tanks and workshops. Coverage of farmers from all corners of the Phalaborwa municipality would have been more representative. Another limitation faced by this study was the lack of proper written records by the farmers as such vital information could not be gathered. An observation was also made in the study that most farmers did not seem to understand what capacity development interventions are. For example, site visits by extension officials and short term workshops were not classified as CDIs by some of the farmers. This in a way had an influence on their responses and was classified as a limitation of this study.

3.12 Summary

This chapter elaborated on the research design used for data collection and analysis which is a crucial step in validating results and obtaining ethical and scientifically acceptable results. The quasi-experiment design for data collection was explained as well as the sampling methods and ethical considerations that include anonymity of the participants. This chapter highlighted the approval of the study from the UFS ethics committee as well as the LDARD approval before commencement of field work. Both primary and secondary data was collected for analysis in the study. The next chapter will present the research findings, interpretation and analysing of the data collected from the study.

CHAPTER 4: RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the research findings of the data collected from 54 farmers who were the respondents in Ba-Phalaborwa municipality. The data was collected with the aim of evaluating the impact of the Capacity Building Interventions that were implemented for them by the different stakeholders. Data obtained in this study was collected through face to face interviews that were carried out in the five service centers of Ba-Phalaborwa municipality which are Lulekani, Manjenje, Ga-Selwane, Matiko Xikaya and Benfarm. Some farmers included in the study were selected randomly from the records of farmers using the dip tanks at Manjenje, Matiko Xikaya and Lulekani, whilst other respondents were contacted telephonically. Those consenting to participate in the study were visited directly at their projects or at locations convenient to them. The rest of the respondents were some of the farmers who had attended a workshop on water rights by the Department of Water and Sanitation at the Thusong center in Ga-Selwane village on the 26th of November 2019. All respondents participated in the study willingly and managed to answer the questions as required. Additional information used in this study was obtained from two Limpopo Department of Agriculture and Rural Development (LDRAD) officials and two Service providers.

4.2 Data Processing

The responses gathered from the administered questionnaires were analyzed using the Statistical Package for Social Scientist (SPSS) software version 14. The data was cleaned and analyzed through the calculations of means and percentages. The information was summarized through the plotting of graphs and construction of cross tabulation together with tables that gave a simpler presentation and understanding of the results.

4.3 Implementation of CDIs and demographic characteristics of the respondents

From the data collected it was noted that training authorities conducted skills audits before implementing the training. This is more of a participatory approach or bottom-up approach whereby the recipients are involved in the preliminary phases before training could commence. The training is aimed at closing the gaps identified during the skills audit phase. From the findings through analysis of documents available from LDARD, the reports do not indicate to what extent did the farmers benefit from implemented CDIs. Rather, they only show the extent of meeting the targeted number of farmers to be capacitated. The evaluation methods do not inform how much of the initially set goals were achieved. Thus, making it difficult to ascertain if the CDIs are truly benefiting the farmers or strategizing on the corrective measures to increase their impact and have more sustainable farmers.

Continuous monitoring and gathering of data coupled by thorough analysis will allow confronting any rising challenges in the early stages of implementation that can be resolved and attain better results. The evaluation should be measured against the pre-determined objectives set before implementation of a program. Supported by Suvedi and Stoep (2016) evaluation helps to understand whether the investment was worth it or not, based on the outcome. These evaluations should be made on extension programmes whose work is complemented by any other experts brought on board.

4.3.1 Age distribution

A total of 54 farmers participated voluntarily in this study. The ages of the farmers ranged from 23 to 86 years old (age spread depicted in Figure 4.1). The majority of respondents were in the 51⁺ age group with 27 individuals who represented 50 % of the total respondents (Figure 4.1). This was most likely because they are the generation that participated more in the farming before the end of apartheid era. The age groups 31-35 and 36-40 had the second greatest number of respondents with seven farmers each. This represented 13 % of the total number of respondents for each of the respective group (Figure 4.1). Possible reasons why the 31-35 and the 36 – 40 age groups had the second greatest number of respondents could be that

these age groups comprise individuals who are physically active enough to endure the demands of farming. Also, people in these age groups may have tried other economic opportunities elsewhere, which might not have worked in addition with the rising levels of unemployment, fewer job opportunities, farming offers a favourable option.

Lastly the 18-25 age groups had the least number of respondents (two) representing about 4 % of the total (Figure 4.1). The low number of participants in this age group could be that this constitutes the active youth some who are still studying, whilst others may still be discovering that their purpose in life is elsewhere and not in farming. The youth are not popular with agriculture which they consider dirty and being associated with hard labour. Mostly they associate agriculture with primary production only. This is supported by the FAO (2013) which also indicated that the participation of youth in agriculture is low due to poor technological advancement that characterises farming in Africa. Chipeta (2012) also supported the view saying farming remains unattractive to the African youth due to the technologies used which are laborious compared to those in developed nations.

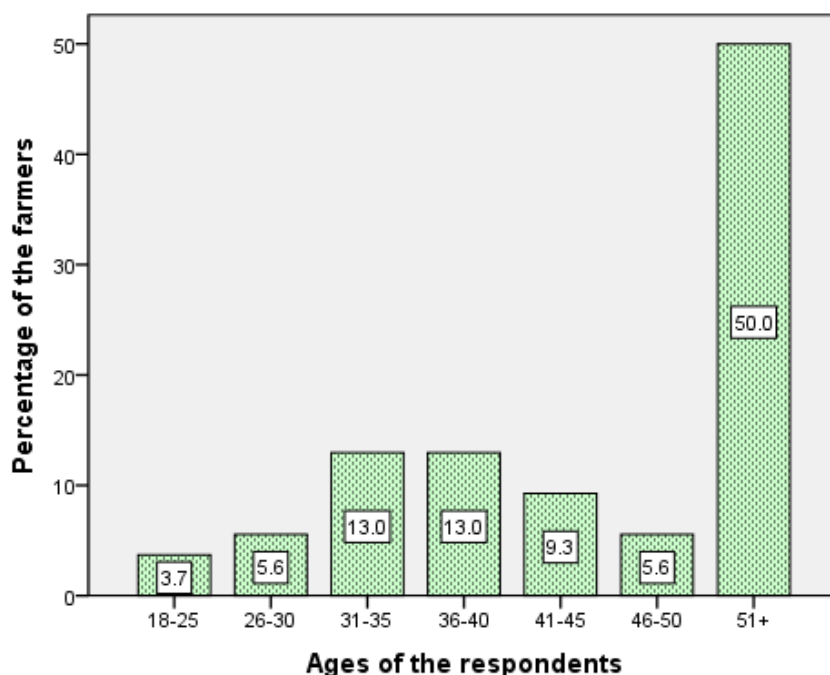


Figure 4.1: Shows age groups of the respondents who participated in the study

The average age of farmers in this study was 50 years which characterise the elderly in the farming sector. This is supported by USAID (2019) who found that the global average age of farmers is 60 years. The low participation of youth in agriculture can be attributed to difficulties in accessing capital to start farming as well as limited access to land and inputs compounded by a lack of experience. Ochilo *et al.* (2019), Bezu and Holden (2014) are also in agreement with this finding. Therefore, it is imperative to reduce the negative effects of the age gap in agriculture through the increase of youth's participation in industry.

It is important to note that from the findings farmers have been trained regardless of their age. This indicates that the farmers were freely to participate given they were in good health and were willing to do so. The selection processes implemented by the organizations could be deemed fair based on this finding as they were not segregating one because of their age. This criterion permits the trainees to participate freely.

4.3.2 Gender of the respondents

Among the 54 farmers interviewed, 24 % (n=13) were females and 76 % (n=41) were males. Those who received any form of intervention total 36 of the 54. Of the CDIs recipients, 10 are female and 26 are males. This could be attributed to the fact that men are more actively involved in farming activities. The other reason for the high number of males maybe that, men tends to take the leading role especially when they work together with their wives. In Nigeria women in agricultural make up 60-80 % of the labour force, but they do not have leading roles in decision making in the farming businesses (Ogunlela and Mukhtar, 2009). Oduol *et al.* (2017) highlights that gender suppression is highly noted for women under male headed families than women headed families. This can be supported by the observation that whenever there is a meeting, men are the ones to attend and that usually during farm visits the men are often the contact persons. In view of the previously mentioned possibilities, it is also highly probable that the number of female farmers maybe higher than the findings show above due to suppression of women in male headed families. Ogunlela and Mukhtar (2009) further argue the masculinity of men dominating in the sectors regardless of the active and similar roles being played by women with women's contributions going unnoticed.

Therefore, these findings suggest dominance of men in farming and decision making. The FAO also contributes by noting that women have complex roles within their families and the agriculture industry; they manage their roles between the household and the field. These include from cleaning the house, preparing food, and taking care of family members, fetching firewood and water, producing crops and tending the animals (FAO, 2011). This also suggests that the women from male headed households are not included when CDIs are implemented since they are overshadowed by their husbands; affecting sustainability and agricultural development.

4.3.3 Education levels

The findings from this study showed that 13 % of the respondents (seven farmers out of total 54) had not received any formal education (Figure 4.3). However, the greatest percentage of the respondents (33 %) representing 18 of the respondents were educated up to matric level. Whilst the lowest percentage of the respondents (7 %) representing 4 of the respondents were educated up to diploma level. Whereas, 31 % (n=17) of the respondents were educated up to grade 7 (Figure 4.3). Lastly, 15 % (n=8) of the interviewed farmers were educated up to secondary school level that is grade 8 to grade 11. Agriculture is one field that is known of having personnel with very low education levels. These minimal levels motivate and justify the need for training, coaching and development to equip farmers for successful business production and management.

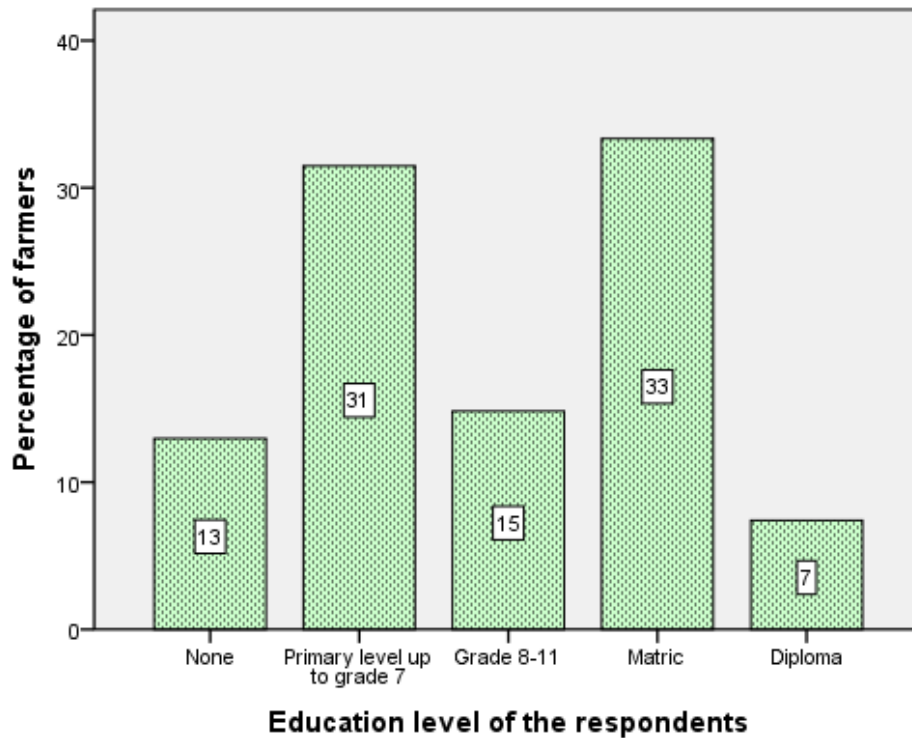


Figure 4.2: Distribution of the farmer’s level of education

4.3.4 Education level of the farmers and annual income received

The level of education of the farmer and annual income received from the farming operations was done to evaluate if level of education had an influence on the annual income. Since the collected annual income data was categorical, mid points for each income categories were calculated (Ali, 2019). This information was then summarised in a bar graph as shown in Figure 4.4 where income was plotted against the level of education. Although there is a drop in the income received by respondents educated up to matric level, Figure 4.4 shows that there was a general positive relationship between the level of education of farmers and annual income received. This clearly shows that education has an influence on the annual income received from farming activities. This observation was also previously supported by other researchers who reported that education helps to improve farming skills as well as productivity among other benefits (Weir, 1999; Paltasingh and Goyari 2018).

Once productivity is improved, this tends to have positive ripple effects on income, sustainability and other positive outcomes. The slight drop in income observed at matric level maybe due to the observation that most students matriculated with

minimum agricultural orientation and they leave the rural areas to explore other options available to them rather than contributing to the farming within their communities (AgriSETA, 2015).

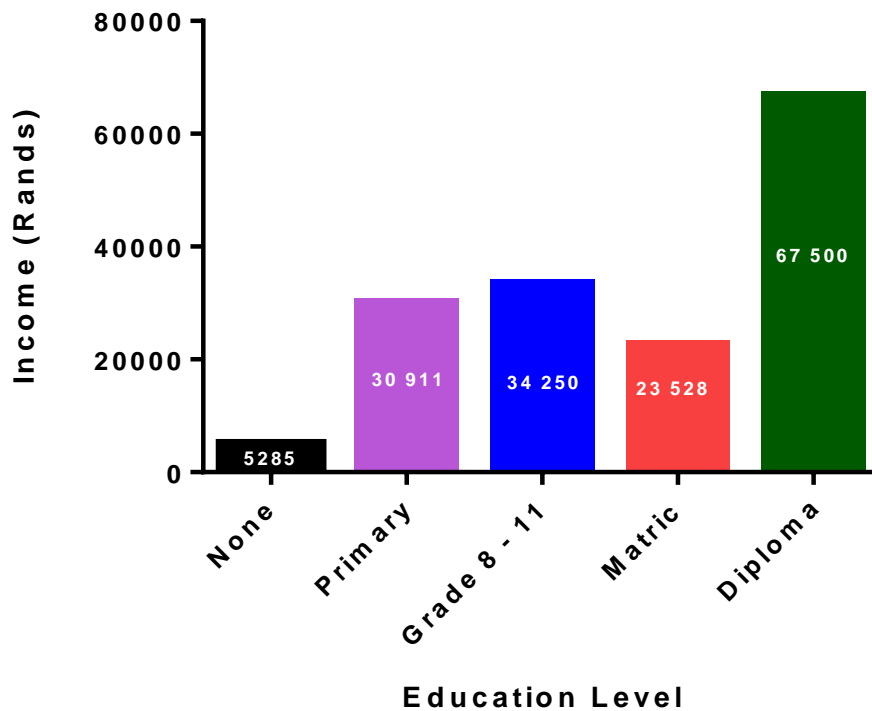


Figure 4.3: Relationship between annual income received and education level of the farmer

4.4 Good agricultural practices

The findings from this study indicated that farming practices in the Ba Phalaborwa Municipality were mostly of a mixed nature. However, during the data collection interviews, the dominant enterprise was taken into consideration. Horticulture was observed to be the dominant farming practice with 46 % (n=25) of the farmers interviewed practising this enterprise (Figure 4.5). Horticultural activities included growing crops such as okra, green beans, spinach, tomatoes, green pepper, baby marrow, chillies, habanero and butternuts. This was the dominant farming activity most likely because of the short production cycle of the horticultural crops which is normally three months. The second most common farming practice was large stock

production represented by 35 % (n=19) of the respondents. This was followed by small stock production with 15 % (n=8) of the respondents. Grain production and other farming practices such as fruit farming were among the least common practices in Ba Phalaborwa Municipality each with 2 % (n=1) of the respondents.

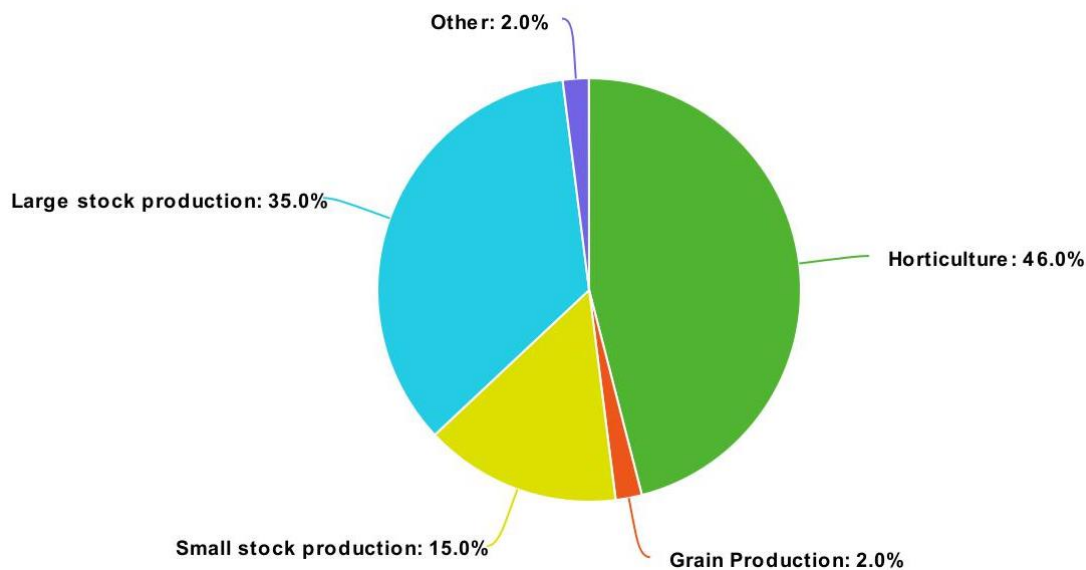


Figure 4.4: Farming practices in Ba Phalaborwa

4.4.1 Marketing of farm produce

The findings from the interviewed farmers showed that their farm produce has markets in the local communities as well as in the national open markets. Out of the 54 farmers interviewed, 48% (n=26) sold their products to the local community especially to hawkers who use small trucks and bakkies to buy from the farms directly (Figure 4.6). 52% (n=28) of the farmers sold their produce to local and the national open markets which include Johannesburg Fresh Produce and Tshwane Fresh Produce markets. However, it was observed that none of them sold to the nearby supermarkets, this may be attributed to a lack of infrastructure, poor marketing skills, and poor production planning for consistent supply which the supermarkets may require. This market information is summarized in Figure 4.6.

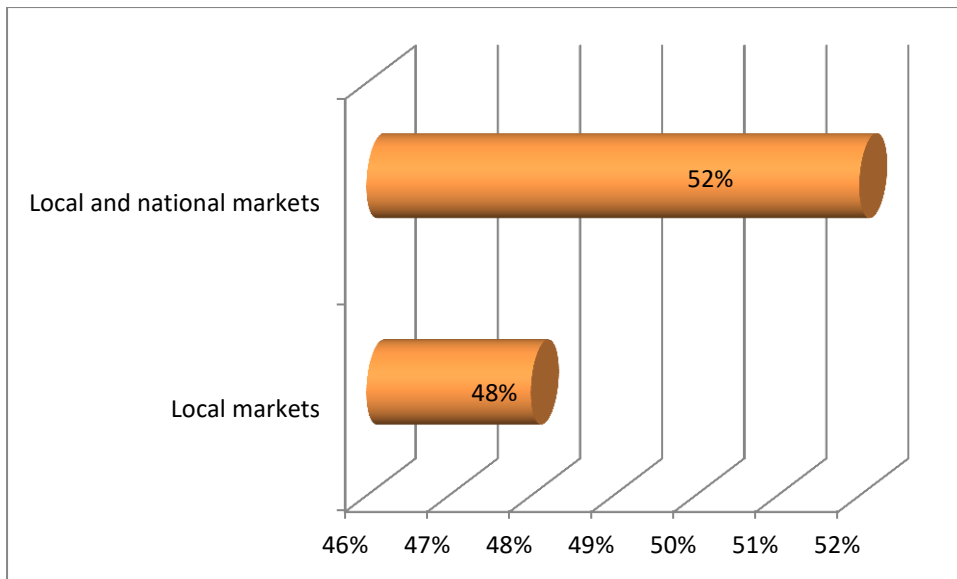


Figure 4.5: Shows markets to which farmers sell their output

Failure to penetrate other markets could be attributed to a lack of adequate market access requirements such as certifications for organic, Local and Global Good Agricultural Practices (GAP). These are closed markets which are only accessed when the producer meets certain requirements allowing them to be certified. These markets tend to have better prices and stable prices which may be set before production commences. Market access remains the major challenge that has hindered the success of the smallholder farmers. Chiputwa, Spielman and Qaim (2015) discovered that Fairtrade certifications improved the standards of living of the coffee farmers in Uganda. Kleeman, Abdulai and Buss (2014) also found that return on investment (ROI) for Organic and Global GAP certified farmers were higher indicating the benefits attached to these market access tools. The open national markets are good in that they are always available. However, the prices fluctuate frequently rendering them unreliable. Given that the farmers are price takers, they do not have enough if any bargaining power when selling their products in such markets. Thus, this has a negative impact on the overall income they receive in the end as well as the sustainability of their farming enterprise.

4.4.2 Farmer's years in operation

In some professionals, prolonged experience in the same industry or position means growth and improved performance in the job. However, this seems not to be the

case with the group of farmers interviewed. The farmers are still facing similar challenges regardless of the number of years they have been in operation. Their agricultural practices have not improved with experience and the history of their production cannot be tracked back as majority are not keeping farm records. The Farmers with records showed that they understand their production history better and have aimed to improve in every season. For example, one poultry farmer indicated that the mortality rate was very high when he started farming and only reduced after receiving a workshop on biosecurity and disease management. All this is possible to track if one keeps records. Figure 4.7 shows the distribution of the respondents according to the number of years they have been in operation. The highest percentage has been recorded for the range 3.1 to 5 years which makes 27 % (n=15) followed by the range 5.1 to 10 years with 24 % (n=13). The minimum score was recorded for the range of 15.1 to 20 years namely 9 % (n=5). The maximum number of years recorded was 30 and the minimum was 8 months approximated to 1 year.

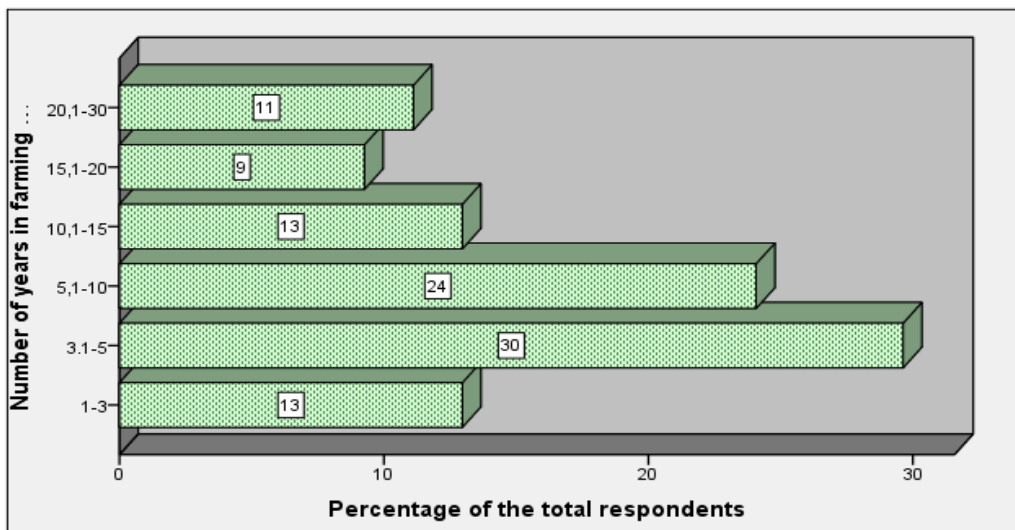


Figure 4.6: Distribution of number of years the farmers have been in operation

4.4.3 Farm size

Smallholder farming is characterised by holding land of 2 ha and less (FAO, 2017). However, this does not specify the amount of land the farmer is fully utilising as well as the level of performance. Therefore, as indicated earlier this definition is not holding for this study and all the farmers interviewed had land holdings ranging from

0,2 ha up to 21 ha with majority not utilising all of it. Thus, they still fit under smallholders and were included in the study. Table 4.1 summarises the land holdings of the 54 farmers interviewed in this study. The mean land holding is 3 ha. The minimum land holding recorded from the interviewed farmers is 0,2 ha and the maximum is 21 ha. This variation could be attributed to the different landholdings the people have from communal, subsistence and small-scale. There is no correlation observed between farm income and the size of land holdings. This could be contributed due to the observation that most of the farmers do not use their farms to full capacity.

Table 4.1: Distribution of the respondent’s land holding

Size of the Farm	Frequency	Percent	Cumulative Percent
less than 2 hectares	19	35.2	35.2
2,1 - 3 ha	4	7.4	42.6
3,1 - 5 ha	8	14.8	57.4
5,1 - 10 ha	11	20.4	77.8
10,1 - 15 ha	5	9.3	87
15,1 - 20 ha	4	7.4	94.4
21 ha	3	5.6	100
Total	54	100	

4.4.1 Succession planning

The interviewed farmers are all involved in family businesses. Sustainability of these businesses is of paramount importance and comes handy in cases where the elderly become incapacitated to manage the operations. The findings from this study showed that, 70 % (n=38) of the respondents indicated that they did not have any succession plans in place whether verbal or formal (Figure 4.2). Whereas 30 % (n=16) indicated that they had succession plans in place however they did not have any form of documentation in place. Succession plans were mainly through verbal discussions with their families.

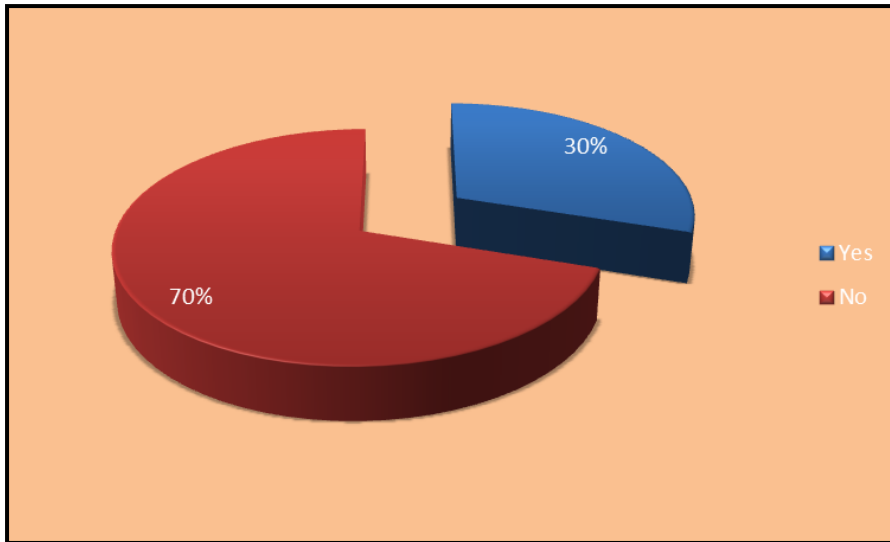


Figure 4.7: Shows succession plan availability among the respondents

4.4.2 Production dynamics

From the study, specific questions were asked to the different respondents in relation to their farming operations. These questions were meant to give a better understanding regarding the level of knowledge the farmers had and whether the good agricultural practices they followed linked to their sustainability. The major drawback that has been observed for both crop and animal farmers is that they do not manage their records of production and finances well. Some admitted to not keeping any records at all whilst others partially recorded their farming activities. Regardless of being capacitated in this area, the farmers seemed not to recognize the importance of keeping complete and up-to-date farming records. Due to poor record keeping, they were not aware of the quantities they produced per hectare and they were also not able to benchmark themselves with other farmers. The summary of following variables from data analysis indicates that the farmers were not practicing complete Good Agricultural Practices (GAP).

4.4.2.1 Output per hectare

The farmers were asked of the crops they grew and the respective output per hectare. This information comes from the harvest produced and when sending off produce to the market. Therefore, for a normal season the farmers are supposed to

consolidate the figures and understand how much they would have made in a season compared to the previous and get their performance. This information aids in planning for the coming season as well drafting budgets and production plans. However, in the absence of such information, it is difficult to improve farm production and performance as well as attract investment and financial support to their businesses.

4.4.2.2 Record keeping

From Figure 4.8, 91 % (n=49) of the respondents indicated that they were not currently practicing record keeping. Those observing record keeping practices constituted 9 % (n=5). Records to be kept by farmers apart from financial records from the previous season include dates planted, weeded, sprayed, harvested and the quantities of labour used as well as the output. It helps the farmer to assess the planting dates if they need to be changed or maintained for a season to improve production. Additionally, supporting questions on production plans and breeding programmes were asked which revealed that after combining responses, 83 % (n=45) of the farmers did not have any in place. Some indicated that they had the records memorised and could provide them when needed. However, this poses some challenges if they are missing since no one will be able to implement the plans. Therefore, it is imperative that all planning and recording should be documented and filed within the organization's information system for easy accessibility.

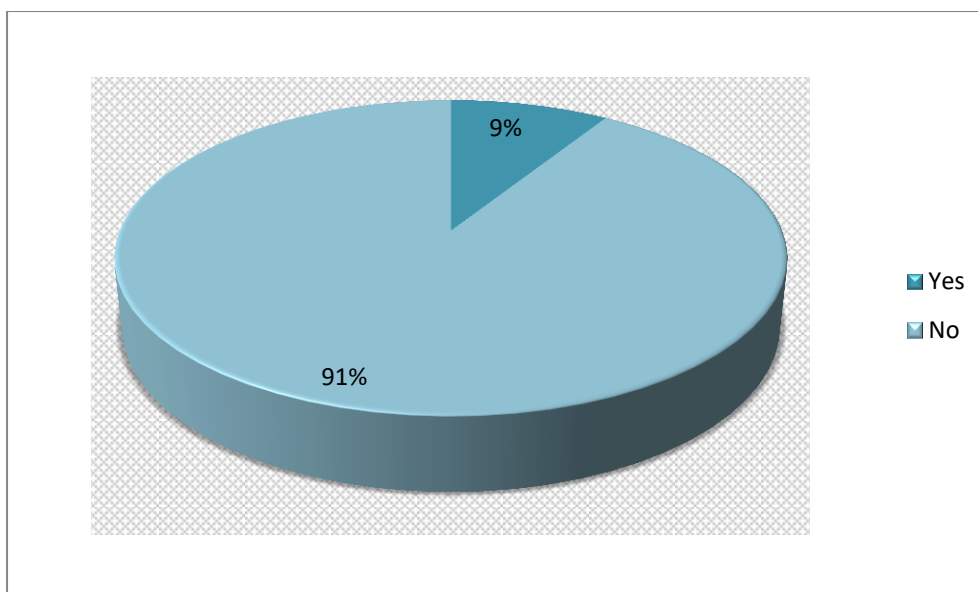


Figure 4.8: Farmer's responses on record keeping

4.4.2.3 Feed composition known

From the results, it can be noted that the farmers did not have a clear understanding of the feed composition they gave to their livestock. Those who indicated that they knew the composition make 6 % (n=3) whilst 46 % (n=25) is without knowledge, the remaining 48 % (n=26) are crop producers who do not practice animal production. Most indicated that they would require training on animal nutrition. This question was meant to assess how much the farmers understood about the nutrition of their livestock and the effects perhaps if they are to give them poor quality feed. The knowledge on feed composition aids in understanding what to look for when buying feeds from the suppliers and for the farmers to venture into value addition opportunities that promote increase in income and sustainability.

4.4.2.4 Water conservation strategies

From the 54 respondents 6 % (n= 3) indicated that they practice some elements of water conservation strategies such as mulching, water harvesting and minimum tillage. The rest (94 %, n=51) did not practise any water conservation strategies at all. Climate variability presented several difficulties to the farmers among which water shortages are included. Therefore, water conservation strategies are required to build resilience of the farmers from drought and promote sustainability of their operations. This information gives direction and input to future CDIs to capacitate the

farmers on climate adaptation measures considering the environmental challenges faced globally.

4.4.2.5 Water sources

Most crop producers 42 % (n=23) reported that they got their irrigation water from the Letaba River which is the main water source for horticultural farmers around Selwane village in the Ba-Phalaborwa municipality. These farmers however did not understand about water rights and were not registered with the Department of Water and Sanitation which is the country's custodian of water protection and management. However, during the data collection phase the Department of Water and Sanitation had a workshop for the farmers on water rights, registration and uses, this was organized by LDARD. Other water sources for production for the farmers include canal water (2 %, n=1), boreholes (15 %, n=8), rainfall (24 %, n=13) and the municipality (4 %, n=2) for interviewed broiler chicken producers. Given the various water sources, the issue of water rights make the farmers understand that it is not an abundant resource but rather a scarce one and requires to be managed well. Rainfall has become erratic over the years and this has affected irrigation water which includes either surface or underground water. Some boreholes ceased giving out water and rivers dried up or the water levels became very low, constraining the farmers. Therefore, training on water conservation which includes understanding water economics and legislation needs to be done frequently. This will enhance economical management of the scarce resource and possibly reduce the negative impacts of climate change.

4.5 Financial status of the farmers

Financial records are vital for any business as they reveal the financial standing of the business with regards to the sales, expenditure and income received. This information assists in rating the performance of an organisation and paves way to assess possible ways to cut on costs or strategize on optimising a specific income stream. This could mean growing one specific crop and abandoning or cutting down on others. From Table 4.2 it can be noted that 39 farmers (72 %) indicated that they did not have financial records and 28 % (n=15) had their financial records intact.

Financial history of any organisation is important when expanding the business or when the business seeks to apply for loans or assistance from financial organizations. However, most farmers tend to be discreet with their financial information and this in turn negatively impacts their enterprises.

Table 4.2: Financial Record keeping of farmers interviewed

Response	Frequency	Percent
Yes	15	27.8
No	39	72.2
Total	54	100.0

4.5.1 Annual income from farming

Due to the absence of complete records from some farmers, estimates of income in Figure 4.9 were made based on other information provided such as quantity produced and sold during the previous production year. The findings from this study showed that many farmers (30 %; n=16) had an annual income above R60 000. Whilst 7 % (n=4) of the farmers reported an annual income of less than R1000. Interestingly 26 % (n=14) of the farmers representing the second most common income group reporting an annual income ranging from R6001 to R9000. The annual income ranges reported in this study suggest that most of these farmers (70 %) earn less than R5000 per month. These low-income earnings by the farmers can be attributed to poor farming practices leading to poor production. The low income could also be because of unreliable markets the farmers are operating in. Due to poor record keeping there is a possibility that these figures could be higher. However, many of these farmers are experiencing financial difficulties.

On the other hand, since the figures could not be verified, some farmers might not have been honest with the fear that they may not receive government hand-outs if they reported to have viable businesses. However, with the few smallholder farmers,

visited during data collection, the challenges observed such as lack of adequate irrigation water, prevalent pest and diseases and poor grazing lands, production levels are bound to decrease in such adverse conditions. This in turn makes it difficult to have sufficient farm income.

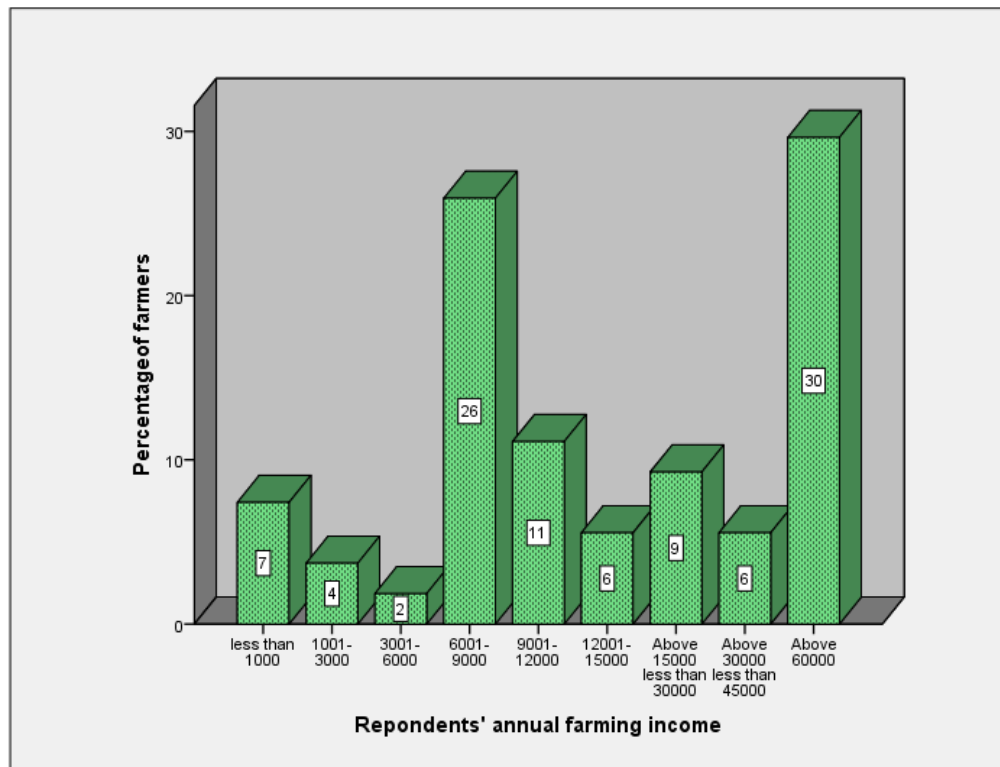


Figure 4.9: Respondents' annual estimated farm income

4.5.2 Income use

The farm income received is used for both farm and non-farm expenditure. From the analysis, 30 % (n=16) of the respondents indicated they had off-farm income. Of these respondents with off-farm income, 87.5 % (n=14) indicated they use their off-farm income for farming activities and 12.5 % (n=2) did not. This indicates that income sources complement each other and this is where record keeping is crucial for accountability purposes. Generally, the income received is used on expenditures such as household food, school fees for the children, production inputs, wages, operational costs, marketing material such as boxes and developing their farms buying equipment such as irrigation pipes.

4.5.3 Off-farm income source

The greater percentage of the respondents, 72 % (n=39) in Figure 4.10 indicated that they depended solely on farming activities as an income source. Whilst the remaining, 28 % (n=15) indicated of having other income sources. However, not all had off-farm employment, since this 28 % includes pensioners earning less than R2 000 per month. Those who have indicated that they received off-farm income, 90 % (n= 49) use it for their farming activities. This is supported by other researchers who have found that farmers with off-farm income increased their farm production and they invested it in their farming operations. This contribution promotes the fight against poverty, malnutrition and food insecurity (Babatunde and Qaim, 2010). Farming is an economic activity that immensely contributes to the livelihoods of smallholders.

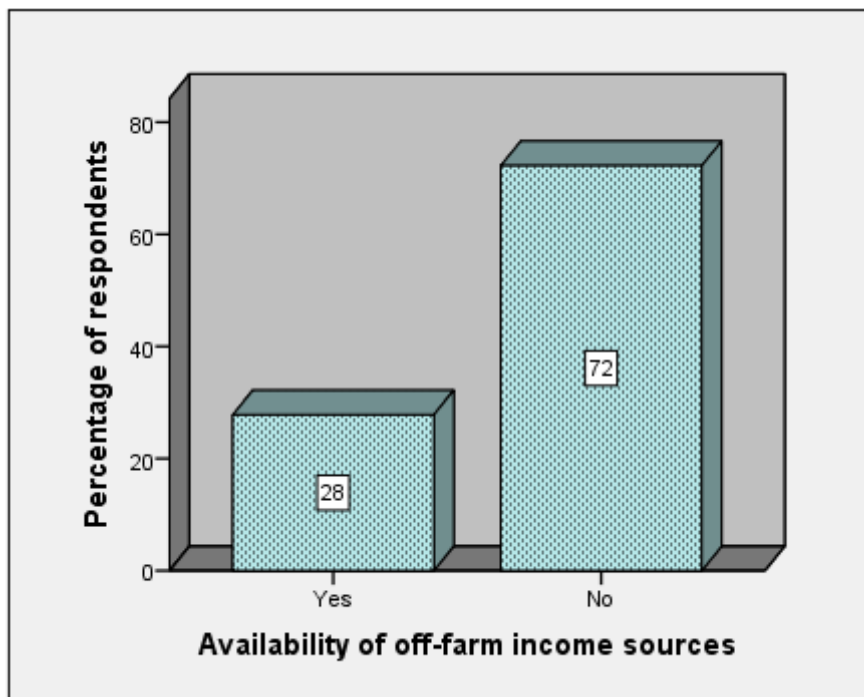


Figure 4.10: Farmer's distribution indicating availability of off-farm income sources

4.6 Capacity Development Interventions

4.6.1 Agricultural training before commencing with farming

During the infancy of small business start-ups, the level of vulnerability is very high and support for their survival is crucial. Hence the importance of receiving related

training prior to establishing a farm could promote their sustainability. Watson, Hogarth-Scott and Wilson (1998) found in their study that the pre-training and support before commencing of the business plays a pivotal role in its success and thriving within the industry. Certain challenges which are later faced by these farmers could be avoided if they receive training prior to production. This could contribute positively in their sustainability as they understand their environment internally and externally (Watson, Hogarth-Scott and Wilson, 1998). For the farmers interviewed 9 % (n=5) indicated that they managed to have some agricultural training before they could begin their operations. These came through exposure to farming within the family as well as agricultural studies at primary and secondary school. Most of the farmers, 91 % (n=49) did not have farming training before their own commencement and reported to have received training over the years from LDARD as well as other private institutions and the agricultural colleges such as Madzivhandela Agricultural College.

Not only do the farmers need to be capacitated in their roles and responsibilities within their businesses, their workers too need to be trained. The worker's competency has an impact on the performance of the businesses with regards to operation, input and time management. One farmer indicated that a worker once used the same knapsack sprayer for herbicides and pesticides without washing it in between thus destroyed the crops in the process. It is crucial that the workers involved in the day to day production and management on the farm be trained on how to operate and perform better. From the interviewed farmers 87 % (n=47) indicated that their workers had not been trained whilst 13 % (n=7) reported training of their workers. This low number of trained workers could be attributed to high employee turnover for some farmers as well lack of training opportunities. This could be contributed by poor agricultural working conditions and budget constraints.

4.6.2 Trained farmers

Of the interviewed farmers, 67 % (n=36) were trained whilst 33 % (n=18) reported not to have received training (Figure 4.11). Most of the interviewed farmers however, did receive some form of training. It is their view that training should be formalised and offered more than one day. This is clearly demonstrated by those who attended the workshop on water rights by the Department of Water and Sanitation at Ga-

Selwane which the researcher also attended; they responded that they had never received any training. Exceptions could be those who are new in the farming industry. This perception of not valuing information shared in workshops could be attributed to the way workshops or extension contact sessions are presented. It is crucial that objectives are set before the training can begin and parties, the trainer and the trainees should understand them. In the end, they evaluate what they would have gained from the training highlighting to what extent they would have met the objectives. Be it a workshop or formalised accredited training information shared has value.

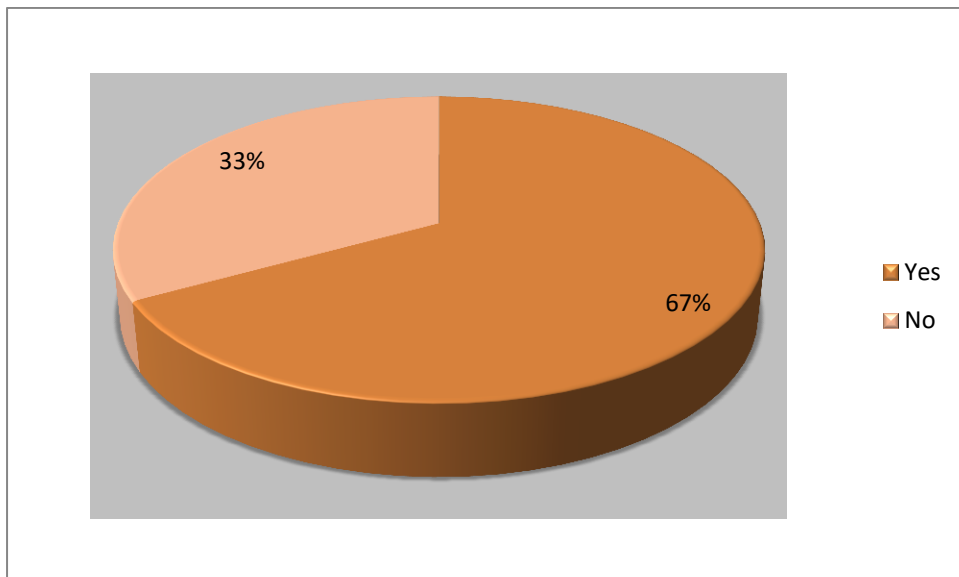


Figure 4.11: Summary of trained farmers

As noted previously in Chapter 4 (section 4.4.4) it was observed that 91 % (n=49) of the farmers commenced farming or working within the agricultural sector without prior experience or training. Only 9 % (n=5) acquired knowledge and skills through exposure and training before venturing into agricultural production. Therefore, those who ventured into production without training, require capacitation to become competitive and contribute to the economic mainstream.

4.6.3 Training procedures

4.6.4 Types of training

The farmers received different training which was facilitated by different stakeholders that include LDARD extension officers and technicians, private companies that were subcontracted by LDARD, SEDA, LEDA, LIBSA and Agri-Academy. This training was categorised according to the responses given by the farmers (Figure 4.12). The combination of the training represents the kind of training the farmers received over the years; whether its technical, technical and financial or technical, financial and business training. The most common category of training farmers received and reported is technical training which constitutes approximately 35 % (n=19) (Figure 4.12). The lowest number of farmers were trained in the category of both technical and financial management, 2 % (n=1). Farmers require the basic technical know-how of farming for good crop and animal production. After they have mastered this, financial management and other management functions become crucial. For future training requests, farmers indicated that they still require business and financial management skills.

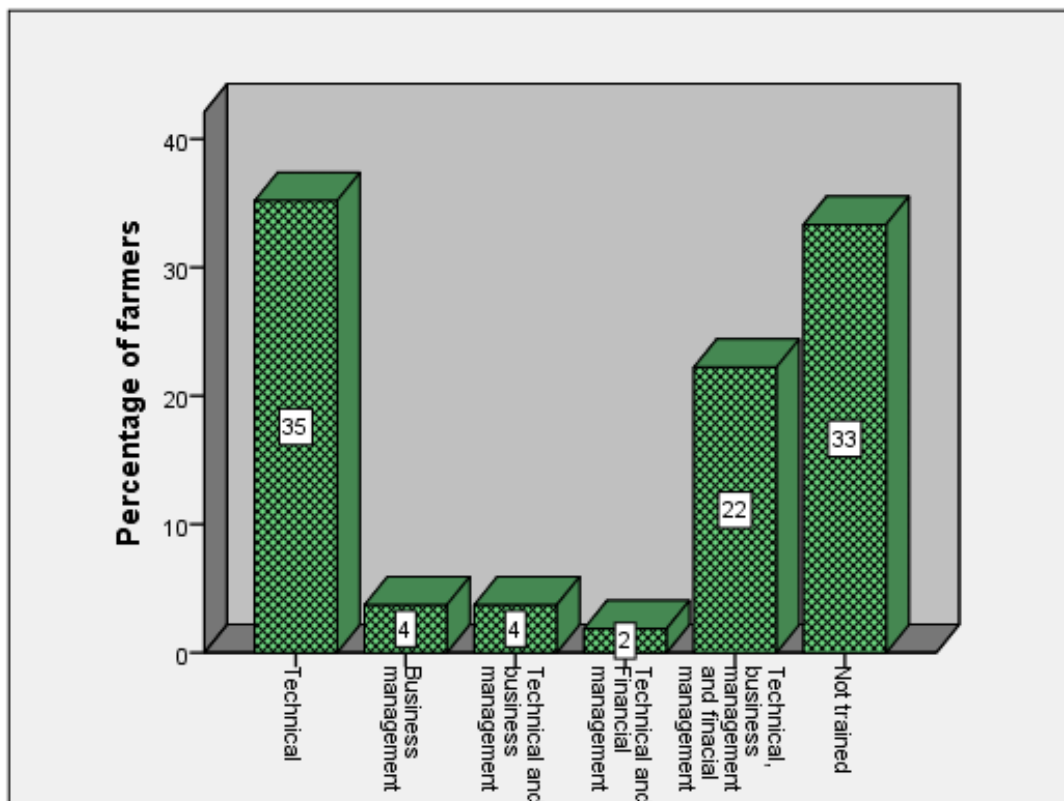


Figure 4.12: Type of training the farmers received

4.6.5 Training impact

All the trained farmers who were interviewed indicated that training had helped them positively in their businesses and work. Some farmers only got to know about possible markets they could sell to after receiving training. Others are now connected with their marketing agents who constantly give them market prices and they indicated that this helped them in knowing what to grow and when. Although they lamented about the unreliability of the open market, they see it as an achievement that they have made through training. The training sessions helped them to network with other farmers in their area with whom they now share agricultural information. This confirms that CDIs are important to the farmers and should be continuously implemented. Among the farmers who were trained 67 % (n=36) reported a positive impact on their businesses following training. Regardless of the training approaches used, (workshops or accredited trainings), a positive impact was reported by the recipients. This could be attributed to the value of the information shared which the farmer will not be having much knowledge of.

4.6.6 Future training

Those farmers who were trained indicated that they still wanted further training. They reported that previous training helped them but still felt that there were gaps needing to be closed to enable them reach their full potential. However, there were other farmers who indicated that they no longer need training, these constituted 18 % (n=10) of the respondents. Some of them gave reasons such as incapacitation as they were getting old but indicated that their children could be trained. This could only be sustainable if the children to be trained are part of the succession plan which will enable them to be equipped with knowledge and skills related to their future positions in the farms. Furthermore, farmers who had not been trained indicated that they also required training

4.7 Mentorship or coaching

All the farmers interviewed reported that they had no prior exposure to a mentor. This has not been a popular intervention strategy as indicated by the findings. However, mentorship seems to yield advanced results as compared to training since

it is carried out over a longer period as compared to training. There is more individual capacity development focus in mentorship compared to training where the trainer will be dealing with many trainees.

4.8 Other interventions apart from CDI

Apart from Capacity Development Intervention, the farmers need other support interventions which could enhance their production and sustainability. Due to climate changes, which have affected the grazing lands for livestock, LDARD gave farmers some feeds in the past seasons. Although inadequate, the farmers appreciated the gesture. However, by the time of data collection in November 2019, the farmers had not yet received feeds and the animals were struggling. This made them appreciate more what they used to receive previously.

4.9 Challenges faced by the farmers

Smallholder farming is vital to the African economy. However, the farmers were faced by a myriad of impediments which prevented optimal realisation from the sub-sector. The interviewed farmers indicated some of these obstacles which have been summarised in the figure 4.13. It can be noted that a lack of capital was one of the major challenges impeding farming operations, 37 %, (n=20) of the farmers experienced capital challenges. Some factors contributing to this were poor financial record keeping systems, poor asset endowment and unavailability of credit track records which hinder the farmers from getting loans from financial providers. The lack of capital hinders infrastructural development, business expansion and asset procurement, consequently this impedes the growth of the farmer.

The second challenge was unfavourable weather. This can be classified under climate changes which have resulted in extremely high temperatures during the summer season. The increase in temperatures has affected the Southern African region and this has exacerbated the suffering of the farmers as they are forced to produce under harsh conditions. The poultry producers in Ba-Phalaborwa directly suffered from heat waves which resulted in chickens dying due to heat stress. Use of air conditioning facilities was limited due to financial challenges and load shedding excessively affected the agricultural industry within the country. Another challenge the farmers were facing was theft which was reported by 7 % (n=4) of the

respondents. All these are external factors affected production within the farms of the respondents.

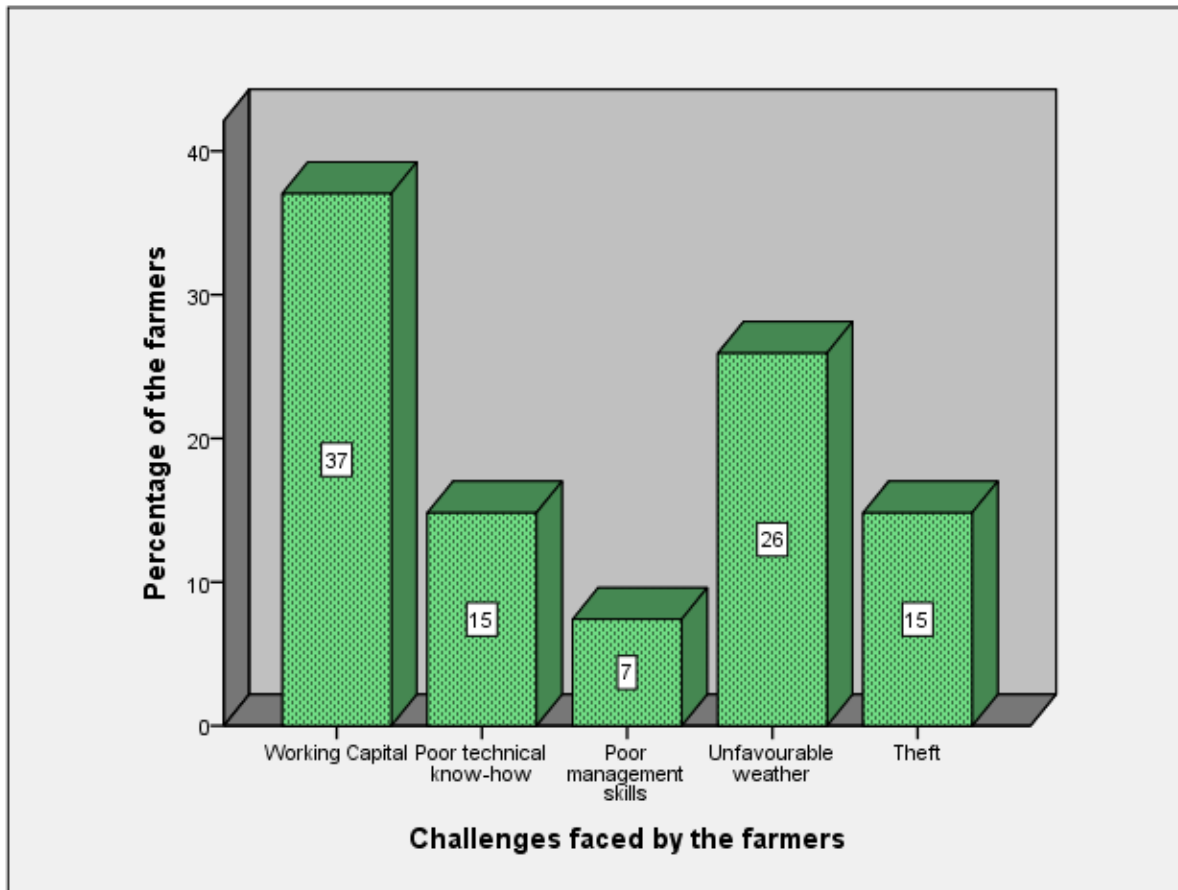


Figure 4.13: Summary of the challenges faced by the farmers in their production.

4.10 Summary

The results of this study showed that there are more elderly farmers within the municipality of Ba-Phalaborwa most of whom are pensioners. The oldest respondent was 86 years and the youngest was 23 years. Youth participation (23 %, n=13) was low compared to the 51+ years age group constituting 50 %, n=27. This has a negative impact on sustainability and implementation of CDIs since some of the elderly are not able to read or write and other are slightly incapacitated because of age and are not able to attend trainings when required to. Therefore, it affects the attainment of the sustainability objectives of CDIs when they are implemented.

From the findings, trained farmers indicated that CDIs had contributed positively to their production as they were producing more and managing diseases better. Those

who managed to adopt recording practices indicated that they could plan for their production and track their production from season to season. Majority of the farmers (72 %) indicated that they were not practicing financial record keeping and this complicates the business performance evaluation as there were no records to track the business performance.

The interviewed stakeholders indicated that they performed a needs analysis or skills audit before they can commence with any CDI. This enables the farmers to highlight the areas that they would require to be capacitated in. This was verified by the trainees that they have had skills audit prior to training in the past. What has been noted to lack was a strong monitoring and evaluation strategy of the interventions as there were no reports available to measure the level of objectives attainment. With regards to CDI implementation both the training service providers and the trainees indicated that there were no challenges faced and they were satisfied with the process.

Evidently from the data collected, farmers indicated several challenges they were facing which were limiting their optimal production. These include lack of capital, unfavourable weather, theft, poor technical know-how and lack of infrastructure. However further analysis has shown that some of the challenges are self-induced since several farmers were not practicing record keeping regardless of being capacitated in that area. Therefore, no investor will be willing to lend money to a business without track record.

The following chapter has concluding remarks and recommendations on some of the suggested actions that could help the farmers and the relevant stakeholders in promoting sustainable rural development through CDIs.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

This chapter concludes the research findings and recommends relevant actions that could be implemented, for the benefit of smallholder farmers and rural communities. Agriculture remains at the core of rural development and its success will assist in resolving several challenges African communities are facing today. The chapter will begin by giving the conclusions drawn from the study, recommendations and future research areas.

This study was aimed at evaluating the impact of the CDIs implemented for farmers in Ba-Phalaborwa municipality. These CDIs entail various training interventions offered by the relevant stakeholders within the agricultural sector which include workshops, exposure visits, accredited and non-accredited training. The implementers are government extension officials, NGOs, commodity associations, and private companies.

Data was collected through interviews from and observations of 54 farmers within the Ba-Phalaborwa municipality in the areas of Ga-Selwane, Manjenje, Matiko Xikaya, Lulekani and Ben Farm agricultural centers. A mix of crop and livestock producers was sampled using non-probability sampling method which involved purposive and convenience sampling techniques. Quasi-experimental mixed method research design was incorporated. Additional data was collected from Limpopo Department of Agriculture and Rural Development (LDARD) officials and service providers as well as through document analysis from the provincial LDRAD office.

The ages of the respondents ranged from 23 to 86 years. Most of the respondents were in the 51⁺ age group constituting 50% of the total respondents. Youth participation was low (22 %).. Succession planning is an element that was overlooked by the farmers as shown by the statistics as 70 % of the respondents who did not have a plan at all. On the other hand, 30 % had succession plans in place but were not formalized through documentation. The data showed that most of the participants were males constituting 76 % of the total respondents whilst females constituted 24 % of the total respondents. The most common farming practice in Ba-Phalaborwa was horticulture complemented by both large stock and small stock operations.

It was observed that 13 % of the respondents had no formal education at all whilst 87% had some form of education from primary level up to diploma level which was the highest level of education reported in the study. The study also revealed a general positive relationship between level of education and the level of income received. This finding supports the importance of CDIs in that if they are implemented well and monitored, the income of the farmers and their standards of living could increase.

From the study, it was observed that farmers were not eager to perform administrative work related to their operations such as production planning, marketing arrangements, sales records, financial records, business planning and general administration of the business. Some farmers reported receiving training in record keeping and appreciated the training but were not applying the knowledge gained; 91 % did not keep records and only 9 % reported to keep some form of documentation. The findings from this study also indicated that 70 % of the farmers relied solely on farm production. However, a few had off-farm income which they used to supplement farm income.

Market access remains a challenge among the participating smallholder farmers in particular, but it is a common problem for peers. From the results 52 % were selling their farm produce to local and national open markets and the 48 % participated locally within their communities. None of the respondents were selling their produce to local supermarkets neither did they have any other contractual arrangements. All farmers who received training indicated that they benefited from the CDIs offered to them. Accordingly, they reported a positive impact in technical production, disease management, understanding business environment, business management, record keeping, financial management and open market participation. Although the open market is not lucrative, other farmers appreciated the prices they get in certain seasons when other provinces were not able to produce especially in winter. This study also showed that there were no notable challenges faced by both the stakeholders and farmers during the implementation of CDIs. This was probably because of the participatory approach used in the designing and planning of the capacity development intervention empowers the farmers as they are given a voice in their development.

5.1 Recommendations

The outcomes of this study suggest that farmers need to understand the initiative behind CDIs and this could be done over a series of workshops. This can possibly help farmers to appreciate the efforts by the government and other stakeholders in developing their competency in farming so that they become better farmers. In addition, this could be a step closer in improving the impact of the CDIs as they optimize on the knowledge gained and utilization of the imparted skills. It is highly recommended that relevant policies be drafted by the sub-Saharan African governments to assist in reaping the benefits of youth participation in the agricultural sector to reduce the gap shown by the findings of this study. The youth need support through CDIs related to entrepreneurship and innovation paving way to a sustainable future. Therefore, it is crucial that the youth are involved in the agricultural industry at all levels. CDIs should be aligned to the current trends that are being experienced in the market so that they cater for the youth and their involvement in the sector can be fulfilling.

Intense monitoring and evaluation should be implemented to ensure that the set objectives are met as the implementation ends. Implementers should be held accountable by the CDI recipients; they should deliver what they would have promised when the programme commenced. This will reduce wastage of scarce resources- time and money. It is also recommended that a sustainable approach be developed and implemented to alleviate the market access challenges the farmers are facing. This is whereby farmers are required to understand the marketing game and leave them attached to a market at the end of the intervention. The government has different arms that can help the farmers. CDIs should not be implemented alone but along other programmes that assist farmers such as input programmes or financial assistance. This brings about enhanced outcomes compared to when the programmes are implemented separately.

Mentorship and incubation should be recommended for the CDIs of these smallholder farmers in line with training. It has been observed that training tends to have limited time with the farmers and usually concentrates on one aspect or few gaps previously identified. There is no aftercare period and the relationship is minimal as opposed to a mentor who may become attached to the project and

constantly visits them for a longer period. Normally incubation and mentorship focus on the whole enterprise or per the agreed programme with more defined outcomes as opposed to training.

5.2 Areas for further study

Further studies need to be carried out to effectively monitor specific CDIs from the pre-inception phases, implementation up to completion phase so that root causes hindering the success of such programmes obtaining optimum results could be identified. Investigation in the attitudes and perceptions of the farmers to adopt innovations will require attention as well. These further studies will include all the relevant stakeholders and will have their buy in support including the recipients of the program.

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APPENDIX A: QUESTIONNAIRES FOR PARTICIPANTS

Questionnaire 1: Farm owner/ Employee trained

Title of study: Investigating impact of Capacity Development Interventions for Smallholder Farmers in Ba-Phalaborwa Municipality in Mopani District, Limpopo, South Africa.

Date: _____ Questionnaire ID: _____

SECTION A: Organisational Details and Demographics

- i) Farm Location
District _____ Municipality _____
GPS coordinates _____
- ii) What is your age? Please tick the relevant box to indicate your age group
- 18-25
 26-30
 31-35
 36-40
 41-45
 46-50
 51+
- iii) Please tick your gender.
- Female Male
- iv) What is the highest degree or level of school you have completed? Please tick relevant box below.
- None
 Primary level up to grade 7
 Grade 8-11
 Matric
 Diploma
 Bachelor's Degree
 Honours Degree
 Master's Degree
- v) What is the size of the farm? _____
- vi) What farming do you practice?
- Horticulture
 Grain production
 Small stock production
 Large stock production
 Fodder production
 Other Specify _____

vii) Through which programme did you acquire the farm and when was that?

viii) How long have you been operating/ working on the farm? _____

ix) Did you have any formal agricultural training before starting to farm? Yes/No

x) How many workers are employed on the farm including yourself? Give demographics below.

Men _____

Women _____

Youth _____

Disabled _____

xi) Have they been trained on their work? Yes/ No _____

xii) If Yes who offered the training and on what?

xiii) What challenges are you facing on your farm?

xiv) Is there a succession plan in place? Yes/No

xv) Does the organisation have any agricultural/ market certifications e.g Organic certificate, Global GAP or HACCP? Yes/No

xvi) List them below

xvii) What is/are the certifying bodies?

xviii) Are you affiliated to any commodity organisation? Yes/No

xix) If Yes, indicate below which organisation that is.

SECTION B: Production

Crops

i) What crops do you produce on your farm?

ii) How much do you produce per hectare/ per annum (including waste and indicate percentage of waste)?

iii) Do you have a production plan? Yes/No

iv) Do you have irrigation Yes/No

v) Which type of irrigation? _____

vi) What is/are your water source?

vii) Are there any water conservation strategies in place? Yes/No

viii) List these strategies/practices.

ix) Are you using electricity or solar to pump the water? Yes/No

x) On average how much do you pay for your monthly electricity bill?

LIVESTOCK

i) Which animals are you keeping on the farm?

ii) How many animals do you have? _____

iii) What infrastructure is in place to support your production?

iv) How many animals have you sold in the previous year?

v) Do you have a disease management programme? Yes/No

vi) If Yes, who assisted you to draw it up?

vii) Where do you get the parent stock?

viii) Do you feed your livestock? Yes/No

ix) If Yes, what is the composition of the feed?

x) Do you have a breeding programme? Yes/No

SECTION C: FINANCIAL SECTION

i) Where do you sell your produce?

ii) What percentage of your total production is sold?

iii) What do you use the remainder for?

iv) How much income on average do you get from your farming activities per annum?

- less than R1000
- R1001- R3000
- R3001-R6000
- R6001-R9000
- R9001-R12000

- R12001-R15000
- Above R15000 less than R30000
- Above R30000 less than R45000
- Above R45000 less than R60000
- Above R60000 Specify _____

v) What do you use the income you receive indicated above for?

vi) Do you have any financial records (bank accounts, tax returns, etc) to show the income and expenditure of the farm? Yes/ No

vii) Are you at liberty to share the information? Yes/No
If Yes, please do show us a summary of the previous year's financials.

viii) Do you have other income sources? Yes/No'

ix) Please indicate which ones are these. _____

x) Tick the relevant box to indicate and how much you get from other sources annually?

- less than R1000
- R1001- R3000
- R3001-R6000
- R6001-R9000
- R9001-R12000
- R12001-R15000
- Above R15000 less than R30000
- Above R30000 less than R45000
- Above R45000 less than R60000
- Above R60000 Specify _____

xi) Do you use the money for farming operations? Yes/No

xii) What percentage of your off-farm income do you use for farming operations? _____

SECTION D: CAPACITY DEVELOPMENT INTERVENTIONS

i) Have you received any kind of training in the past? Yes/ No

ii) If No, Would you want to be trained? In what areas?

iii) If Yes, what kind of training did you receive? List them below

iv) Who offered the training?

v) Where was the training offered?

vi) How long was the training?

vii) Did you receive certificates for these trainings? Yes/No

viii) Are these certificates of competency or attendance? _____

ix) What were the procedures followed before being trained?

x) Would you confidently say the training helped you in your business or job? Yes/No

xi) Give a reason for your answer above.

xii) What were the challenges you faced during and after the training?

xiii) Do you need more training? Yes/No

xiv) If Yes in what areas do you feel you need more training?

xv) Have you ever had a mentor in the past? Yes/No

xvi) If Yes, how long was the mentorship programme? _____

xvii) Would you say the mentorship programme was successful? Yes/ No

xviii) Please elaborate given your answer above.

(More specific questions will be asked in relation to the training received to help understand if the objectives of training were met and to what extent. Below are the few examples)

xix) Were you keeping complete records before training/mentorship? Yes/No

xx) If Yes, which ones are those in answer to above. _____

xxi) Did you know the role players in the agricultural industry before training? _____

- xxii) What other intervention(s) have you received in the past and from which organisation(s)? (Financial, equipment or infrastructure)

NB: With relevant observations during the field visit notes will be made like state of infrastructure and production equipment available.

THE END

Questionnaire 3 for Service Provider- Commodity organisation/ NGO/ Private company

- i) What is the type of entity of your organisation? _____
- ii) What Capacity Development Interventions (CDIs), do you offer to the farmers?

- iii) How long have you been offering these CDIs to the farmers?

- iv) What are the procedures followed by your organisation when offering CDIs to the farmers?

- v) Who facilitates the CDIs?

- vi) Are you affiliated to any accreditation body? Yes/No
- vii) Indicate the accreditation body mentioned above.

- viii) How long have you been accredited?

- ix) Does your organisation measure the impact of the trainings offered?
Yes/No
- x) Please elaborate on your answer above.

xi) What measures have you put in place to ensure the success of the farmers?

xii) What are the challenges faced by your organisation during the CDI implementation process?

xiii) Do you link the farmers with any market for their produce?

xiv) Are there any after care programs for the farmers after CDI implementation? Yes/No

xv) Please explain these after care programs.

THE END

Questionnaire 2: Limpopo Department of Agriculture and Rural Development official

Date: _____

Venue: _____

i) What is your age? Please tick the relevant box to indicate your age group

- 18-25
- 26-30
- 31-35
- 36-40
- 41-45
- 46-50
- 51+

ii) Please tick your gender.

- Female Male

iii) What is the highest degree or level of school you have completed? Please tick relevant box below.

- None
- Primary level up to grade 7
- Grade 8-11
- Matric
- Diploma
- Bachelor's Degree
- Honours Degree
- Masters Degree

iv) What is your designation? _____

v) How long have you been working with the farmers in this area? _____

vi) Does the department have a Capacity Development strategy for farmers in place? Yes/No

vii) If Yes, summarise in few words what it entails in the lines below.

viii) What kind of trainings are given by the Department to the farmers?

ix) Who decides on the training to be offered?

x) How often are the trainings offered?

xi) Are there measures in place to evaluate the impact of the trainings?
Yes/No

xii) Please elaborate on your answer above

xiii) What are the procedures when offering training to the farmers?

xiv) For the trainings that they have received, do you see any progress?
Yes/No

xv) Please elaborate on your answer above.

xvi) What other supporting structures are in place to assist the farmers?

xvii) What challenges are being faced when implementing Capacity Development Interventions (CDIs)?

xviii) How do you think these challenges can be mitigated?

THE END

APPENDIX B: ETHICS APPROVAL LETTER



GENERAL/HUMAN RESEARCH ETHICS COMMITTEE (GHREC)

22-Oct-2019

Dear Mrs Adam, Julia Jn

Application Approved

Research Project Title:

Assessing the Capacity Building Interventions on smallholder farmers: Ba-Phalaborwa Municipality, South Africa

Ethical Clearance number:

UFS-HSD2019/0980

We are pleased to inform you that your application for ethical clearance has been approved. Your ethical clearance is valid for twelve (12) months from the date of issue. We request that any changes that may take place during the course of your study/research project be submitted to the ethics office to ensure ethical transparency. Furthermore, you are requested to submit the final report of your study/research project to the ethics office. Should you require more time to complete this research, please apply for an extension. Thank you for submitting your proposal for ethical clearance; we wish you the best of luck and success with your research.

Yours sincerely

Prof Derek Litthauer

Chairperson: General/Human Research Ethics Committee

Digitally signed by
Derek Litthauer
Date: 2019.10.22
21:49:20 +02'00'

205 Nelson Mandela
Drive
Park West
Bloemfontein 9301
South Africa

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Bloemfontein 9300
Tel: 051 401 9398 /
7619 / 3682
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**APPENDIX C: LIMPOPO DEPARTMENT OF AGRICULTURE APPROVAL LETTER
TO CONDUCT RESEARCH**



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

**DEPARTMENT OF
AGRICULTURE AND RURAL DEVELOPMENT**

Ref: 12R
Enquiries: Dr T. Raphulu

28 August 2019

Mrs Julia Adam
University of Free State
Bloemfontein

**RE: APPLICATION TO CARRY OUT RESEARCH UNDER THE DEPARTMENT OF
AGRICULTURE & RURAL DEVELOPMENT IN BAPHALABORWA
MUNICIPALITY**

1. Your letter dated 03/07/2019 of request for permission to do research has reference.
2. Kindly take note that your request to conduct Research in Baphalaborwa Municipality has been granted with the following condition, you will be required to present your proposal to the Departmental Research Forum/Committee.
3. You are required to visit the office of the Deputy Director Baphalaborwa Municipality to brief them on the study, to request smallholder farmers database and the assistance from the Baphalaborwa officials.
4. The Department is prepared to embark on any activity which could assist our smallholder farmers to improve their farming systems and production at large.
5. Kindly take note that you will be expected to hand over a copy of your final report to the Department for record purposes as well as for reporting. You may also be invited to share your findings in the Departmental Research Forum.
6. Hoping that you will find this in order.

Kind regards

Dr. T. Raphulu
Scientist Manager - Research Services

28/08/19

Date

67/69 Biccard Street, POLOKWANE, 0700, Private Bag X9487, Polokwane, 0700

Tel: (015) 294 3135 Fax: (015) 294 4512 Website: <http://www.lida.gov.za>

The heartland of Southern Africa - development is about people!

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

I received your contacts from the Limpopo Department of Agriculture and Rural Development. I have chosen you among the farmers who are farming in Phalaborwa municipality as you are relevant to the study and your contribution will be of great value to the findings of the study.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

You will be required to respond to a set of questions which are compiled in a different document (questionnaire). These questions will be gathering more information on the Capacity Development Interventions you have received in the past and your perception towards its effectiveness as well as challenges faced during the implementation. The questionnaire implementation is expected to take 30-45 minutes and this should be within your convenience to minimise disturbance to your work. Additionally, time management will be implemented to adhere to the time and even reduce it if possible suppose the respondent is fast in tackling the questions.

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Participation in this study is voluntary and you are under no obligation to conduct the survey. If you have any concerns with the way the research is being conducted, please feel free to contact and discuss it with my team leader, whose contact details are given above. However, please note that after submitting the questionnaire you are in no position to withdraw from the study as you would have participated already.

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

There are no direct benefits for participating in this study, however the information that you provide might contribute towards improvement of the Capacity Development interventions implementation so that their positive impact could be enhanced and promote alleviation of poverty and other sustainable development goals

WHAT IS THE ANTICIPATED INCONVENIENCE OF TAKING PART IN THIS STUDY?

As you take part in this study, there may be questions you feel uncomfortable responding to, please indicate and you are free not to respond. There are no significant risks other than the ones you face in your day to life without participating in the research. The participating will require your time to respond to the questions asked and this will take 30-45 minutes. If you require breaks during the survey/interview session, please inform the researcher and you will be granted.

WILL WHAT I SAY BE KEPT CONFIDENTIAL?

The information that I will obtain from you will be stored safely and it will be shared with my supervisor and those involved in this study. Excerpts from the interview may be included in the final dissertation and may also be published in journals. The interview will be conducted privately and your name will not be written down or recorded anywhere. Furthermore, the study does not require you to disclose or name any specific individuals and you do not have to discuss any personal information that you do not

feel comfortable talking about. Your answers will be given a fictitious code number or a pseudonym and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Your answers may be reviewed by people responsible for making sure that research is done properly, including the transcriber, external coder, and members of the Research Ethics Committee. Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

Hard copies of your answers will be stored by the researcher for a period of five years in a locked cupboard/filing cabinet within the researcher's premises for future research or academic purposes; electronic information will be stored on a password protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After five years have elapsed the hard copies will be shredded and the electronic copies will be deleted. If someone gains access to the hard copies without permission, your name will not be written anywhere and you will remain anonymous. It's not likely to happen but still in case it happens it will not cause harm to you in any way.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

There are no incentives or payments related to participating in this study. However, the information you will provide will be of value in future Capacity Development Interventions that may aid sustainable development within the agricultural sector. There are no major risks that you will be exposed to except the normal you have in your daily life. You will not incur any costs in relation to this participation as you will not be required to travel for the survey, rather the researcher will come to a place of your convenience.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS / RESULTS OF THE STUDY?

If you would like to be informed of the final research findings, please contact Julia Adam, +27788293897, Email: jadam2408@gmail.com The findings are accessible from February 2020. Should you have concerns about the way in which the research has been conducted, you may contact Supervisor: Dr. Kobus Laubscher, +27515227802, Email: kobus@kamac.co.za. Should there be delays in response, please use all forms of contact to reach us.

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

CONSENT TO PARTICIPATE IN THIS STUDY

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: _____

RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM

DATE

20 October 2019

TLHOKOMELISO YA PUSO YA PATLISISO

HO FIHLELA TLHOKOMELISO EA TLHOKOMELISO LITLHAKISO TSA BOPHELO TSE KHOLO HO BAHOLO BA BANYALANI BA TSOANG TSA BOPHELO BA BA-PHALABORWA MUNICIPALITY IN MOPANI DISTRICT, LIMPOPO, AFRIKA Boroa.

PRINCIPLE INVESTIGATOR / BATHOBOTSE (S) LEBITSO (S) LE PUO YA THOBALANO (S):

Julia Adam

2016333359

+27788293897

FACULTY AND DEPARTMENT:

*Economic Management Sciences
Centre for Development Studies*

STUDYLEADER(S) NAME AND CONTACT NUMBER:

*Deidre van Rooyen
051 4017059*

SEBETSI / TLHALOSO YA THUTO KE ENG?

Bo ithuto bjaka bo nyakisisa tekanyo ya kago ya tsenelopele yeo e kilego ya rutiwa mo baleming ba mo nageng ya mo bjalo thulano le mathata re humanego ka nako ya go nyaka go berekisa thuto tse ke tse dilatelago:

KE MANG EO E BANG PUO?

Ke nna moithuti wa go ke rutela tsa boithuti bja Masters ka bogare bja tswetsopele ka mo lefapeng la tsa leruo le bolaodi bja thuto mahlale mo Unibesiti ya Free State. Ke le hlohloetsa gore le tseye karolo mo bonyakisiso bjaka bja thulagano mo tekanyong ya go aga tsenelo pele ya balemi ba banyane mo Masepaleng wa Ba-Phalaborwa.

A SE ITHUTOANG A FUMETSE BOPHELO BA ETHICAL?

Boithuto bona bo amohetse tumello ho tsoa ho Komiti ea Litekanyetso tsa Boithuto ea UFS. Kopi ea lengolo la tumello e ka fumanoa ho mofuputsi.

Approval number: *To be inserted once provided*

KE HOBANE'NG HA U KENYETSOA HO nka karolo Karolong ee ea Phuputso?

Ke fumane mabitso a hau ho tsoa Lefapheng la Temo la Temo le Nts'etsopele ea Limpopo. Ke u khethile har'a balemi ba ntseng ba lema masepaleng oa Phalaborwa kaha u na le malebela ho thuto 'me monahela oa hau o tla ba oa bohlokoa haholo ho seo liphetho li se fumaneng.

TLHOKOMELISO EA HO NKA KAROLO HO ITHUTOANG ENA KE ENG?

O tla koptjoe ho araba lethathamong la lipotso tse bokantsoeng tokomaneng e fapaneng (ea lipotso). Lipotso tsena li tla bokella tlhaiso-leseling e batsi ka likhakanyo tsa nts'etsopele ea bokhoni tseo u li fumaneng nakong e fetileng le pono ea hau mabapi le katleho ea lona hammoho le liqholotso tse tobaneng le tsona nakong ea ts'ebetsong. Ts'ebetso ea lipotso e lebelletsoe ho nka metsotso e 30-45 mme sena se lokela ho ba ka har'a monyetla oa hau oa ho fokotsa phokotso mosebetsing oa hau. Ho feta moo, tsamaiso ea nako e tla kenngoa ho latela nako le ho e fokotsa ha ho khoneha nahana hore motho ea arabang o potlakile ho araba lipotso.

NA KAROLO E KA TS'EHETSA HO RUTA?

Ho nka karolo liphuputso tse na ke boithatelo 'me ha ho tlamo ho etsa tlhahlobo. Haeba u na le mathata ka tsela eo lipatlisiso li ntseng li etsoa ka eona, ka kopo ikutloe u lokolohile ho ikopanya le ho e buisana le moetapele oa sehlopha sa ka, eo lintlha tsa hae tsa puisano li fanoeng kaholimo. Leha ho le joalo, ka kopo elleloa hore kamora ho fana ka lipotso, ha u boemong ba ho itokolla thutong joalo ka ha u ne u se u nkile karolo.

KE LINTHO TSE LING TSE LING TSA HO BUA KAROLO HO ITHUTOANG HONA?

Le ge ele gore ga gona tshepiso ya ka hlego ye e feletsego mot hutong ye, segolo thata ke gore thuto ye re lefang yona e tlo le aga gore le ke thuse go hlalola tswelapele ya kago le go tswetsa pele gore re bele dipoleo tse di botse tsa go thusa le go fokotsa bohloki le mathata a mangwe mo lefaseng.

KE HOBANE'NG HA HO BONAHTSOA HO BONT OFA KAROLO HO ITHUTE SEE?

Ha u nka karolo thutong ena, ho ka ba le lipotso tseo u ikutloang u sa lokele ho li araba, ka kopo bontša 'me u lokolohile ho se arabe. Ha ho na likotsi tse kholo ntle le tseo u tobanang le tsona matsatsing a hau a bophelo ntle le ho nka karolo lipatlisisong. Ho nka karolo ho tla hloka nako ea hau ea ho araba lipotso tse batsitsoeng mme sena se tla nka metsotso e 30-45. Haeba u hloka likhefu nakong ea thuto / tlhahlobo ea lipotso, ka kopo tsebisa mofuputsi mme u tla fuoa.

NA SE KE SE BUANG KE SEBELISANG KOTSI?

Tlhahisoleseling eo ke tla e fumana ho uena e tla bolokoa ka polokeho mme e tla arolelana le mookameli oa ka le ba amehang thutong ena. Lintlha tse tsoang puisanong li ka kenyelletsoa ho dissertation ea ho qetela mme li ka phatlalatsoa le lingorong. Puisano e tla etsoa ka lekunutu 'me

lebitso la hau le ke ke la ngoloa fatše kapa la ngolloa kae kapa kae. Ntle le moo, thuto ha e hloke hore o senole kapa u rehe batho ba itseng mme ha ua lokela ho bua ka tlhahisoleseling efe kapa efe eo u sa phutholoheng ho bua ka eona. Likarabo tsa hau li tla fanoa ka nomoro ea khakanyo ea mohopolo kapa pseudonym 'me u tla bitsoa ka tsela ena ho data, sengoloa leha e le sefe kapa mekhoha e meng ea ho etsa lipatlisiso e joalo ka linyeoe tsa kopano. Likarabo tsa hau li ka hlahlojoa ke batho ba ikarabellang bakeng sa ho etsa bonnete ba hore lipatlisiso li etsoa hantle, ho kenyetsetsa le sengoli, coder ea kantle, le litho tsa Komiti ea Litekanyetso tsa Boithuto. Ntle le moo, lirekoto tse u khethollang li tla fumaneha feela ho batho ba sebetsang thutong, ntle le haeba u fa batho ba bang tumello ea ho bona lirekoto.

TLHOKOMELISO E TLA FINYELETSA LE HO FINYELETSA JOALE?

Likopi tse thata tsa likarabo tsa hau li tla bolokoa ke mofuputsi nako e telele ea lilemo tse hlano ka har'a khabinete e notletsoeng / ho hlatsua ka har'a meaho ea mofuputsi bakeng sa lipatlisiso tsa nako e tlang kapa sepheo sa thuto; Tlhahisoleseling ea elektronike e tla bolokoa komporong e sirelelitsoeng ka password le ho marang-rang. Ts'ebeliso ea nako e tlang ea data e bolokiloeng e tla ts'oaroa ho hlahloba litekanyetso tsa boitsoaro tsa lipatlisiso le tumello haeba e sebetsa. Kamora ho qeta lilemo tse hlano likopi tse thata li tla aroloa ebe likopi tsa elektroniki li tla hlakoloa. Haeba motho a fumana likopi tse thata ntle le tumello, lebitso la hau le ke ke la ngoloa kae kapa kae 'me u tla lula u sa tsejoe. Ha ho na monyetla oa hore e etsahale empa haeba u ka etsahala e ke ke ea u ntša kotsi ka tsela efe kapa efe.

KE TLA FUMANELA TLHOKOMETSO KAPA HO NA LE LINTHO TSE LING TSE LING TSA HO TS'A KAROLO HO ITHUTA ENA?

Ha ho na lits'usumetso kapa litefo tse amanang le ho nka karolo thutong ena. Le ha ho le joalo, leseli leo u tla fana ka lona le tla ba le bohlokoa ho liphelelo tsa nts'etsopeleng ea bokhoni ba nako e tlang tse ka thusang nts'etsopeleng ea nako e telele lekaleng la temo. Ha ho na likotsi tse khohle tseo u tla pepesetsoa tsona ntle le tse tloaelehileng tseo ke nang le tsona bophelong ba hau ba letsatsi le letsatsi. U ke ke ua tlisa litšenyehelo tse amanang le ho nka karolo ha ho sa tla hloka hore u tsamae bakeng sa tlhahlobo, ho fapana le moo mofuputsi o tla tla sebakeng sa hau sa boiketlo.

MOTHO OA BOTSOANG A KA BONAHALA JOANG LITLHAKISO / LITLHAKISO TSA HO ITHUTA?

Haeba u ka rata ho tsebisoa ka liphetho tsa ho qetela tsa patlisiso, ka kopo ikopanye le Julia Adam, +27788293897, Email: jadam2408@gmail.com Liphetho li fumaneha ho tloha ka Pherekhong 2020. Haeba u na le matšoenyeho mabapi le tsela eo lipatlisiso li entsoeng ka eona, o ka ikopanya le Supervisor: Dr. Kobus Laubcher, +27515227802, Email: kobus@kamac.co.za. Ha ho ka ba le ho lieha ho arabela, ka kopo sebelisa mekhoha eohle ea ho ikopanya le rona ho re fihlela.

Kea leboha ha u nkile nako ea ho bala leqephe lena la tlhaiso-leseling le ho nka karolo phuputsong ena.

TLHOKOMELANG HO NKA SEBELE BUKA ENA

'Na, _____ (lebitso le nkang karolo), netefatsa hore motho ea botsang tumello ea ka ea ho nka karolo lipatlisisong tsena o mpoleletse ka mofuta, ts'ebetso, melemo e ka bang teng le tšitiso e lebelletsoeng ea ho nka karolo.

Ke balile (kapa ke ile ka ntlhalosetsa) mme ka utloisisa thuto joalo ka ha e hlalositsoe leqephe la tlhahisoleseling. Ke bile le monyetla o lekaneng oa ho botsa lipotso mme ke ikemiselitse ho nka karolo ho ithuteng. Kea utloisisa hore karolo ea ka ke ea boithatelo le hore ke lokolohile ho tlohela nako efe kapa efe ntle le kotlo (haeba ho hlokahala). Kea tseba hore liphetho tsa thuto ena li tla sebetsoa e sa tsejoe e le tlaleho ea lipatlisiso, lingoliloeng tsa koranta le / kapa linyeoe tsa kopano.

Ke lumellana le ho rekisoa ha mokhoa o khethehileng oa ho bokella data.

Ke fumane khopi e saenneng ea tumellano ea tumello e tsebisitsoeng.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

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

Signature of Researcher: _____ Date: _____

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

I received your contacts from the Limpopo Department of Agriculture and Rural Development as one of the service providers that provide Capacity Building Interventions to the farmers within Limpopo. I have chosen you among the service providers as you are relevant to the study and your contribution will be of great value to the findings of the study.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

You will be required to respond to a set of questions which are compiled in a different document (questionnaire). These questions will be gathering more information on the Capacity Development Interventions you have offered to the farmers in the past and your perception towards its effectiveness as well as challenges faced during the implementation. The questionnaire implementation is expected to take 30-45 minutes and this should be within your convenience to minimise disturbance to your work.

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

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 team leader, whose contact details are given above. However, please note that after submitting the questionnaire you are in no position to withdraw from the study as you would have participated already.

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

There are no direct benefits for participating in this study, however the information that you provide might contribute towards improvement of the Capacity Development interventions implementation so that their positive impact could be enhanced and promote alleviation of poverty and other sustainable development goals

WHAT IS THE ANTICIPATED INCONVENIENCE OF TAKING PART IN THIS STUDY?

As you take part in this study, there may be questions you feel uncomfortable responding to, please indicate and you are free not to respond. There are no significant risks other than the ones you face in your day to life without participating in the research. The participating will require your time to respond to the questions asked and this will take 30-45 minutes. If you require breaks during the survey/interview session, please inform the researcher and you will be granted.

WILL WHAT I SAY BE KEPT CONFIDENTIAL?

The information that I will obtain from you will be stored safely and it will be shared with my supervisor and those involved in this study. Excerpts from the interview may be included in the final dissertation and may also be published in journals. The interview will be conducted privately and your name will not be written down or recorded anywhere. Furthermore, the study does not require you to disclose or name any specific individuals and you do not have to discuss any personal information that you do not

feel comfortable talking about. Your answers will be given a fictitious code number or a pseudonym and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Your answers may be reviewed by people responsible for making sure that research is done properly, including the transcriber, external coder, and members of the Research Ethics Committee. Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

Hard copies of your answers will be stored by the researcher for a period of five years in a locked cupboard/filing cabinet within the researcher's premises for future research or academic purposes; electronic information will be stored on a password protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After five years have elapsed the hard copies will be shredded and the electronic copies will be deleted. If someone gains access to the hard copies without permission, your name will not be written anywhere and you will remain anonymous. It's not likely to happen but still in case it happens it will not cause harm to you in any way.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

There are no incentives or payments related to participating in this study. However, the information you will provide will be of value in future Capacity Development Interventions that may aid sustainable development within the agricultural sector. There are no major risks that you will be exposed to except the normal you have in your daily life. You will not incur any costs in relation to this participation as you will not be required to travel for the survey, rather the researcher will come to a place of your convenience.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS / RESULTS OF THE STUDY?

If you would like to be informed of the final research findings, please contact Julia Adam, +27788293897, Email: jadam2408@gmail.com The findings are accessible from February 2020. Should you have concerns about the way in which the research has been conducted, you may contact Supervisor: Dr. Kobus Laubscher, +27515227802, Email: kobus@kamac.co.za. Should there be delays in response, please use all forms of contact to reach us.

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

CONSENT TO PARTICIPATE IN THIS STUDY

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: _____



RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM

DATE

20 October 2019

TITLE OF THE RESEARCH PROJECT

INVESTIGATING THE IMPACT OF CAPACITY DEVELOPMENT INTERVENTIONS FOR SMALLHOLDER FARMERS IN BA-PHALABORWA MUNICIPALITY IN MOPANI DISTRICT, LIMPOPO, SOUTH AFRICA

PRINCIPLE INVESTIGATOR / RESEARCHER(S) NAME(S) AND CONTACT NUMBER(S):

Julia Adam 2016333359 +27788293897

FACULTY AND DEPARTMENT:

Economic Management Sciences
Centre for Development Studies

STUDYLEADER(S) NAME AND CONTACT NUMBER:

Deidre van Rooyen
051 4017059

WHAT IS THE AIM / PURPOSE OF THE STUDY?

The study is aimed at investigating the impact of the Capacity Development Interventions offered and their contribution to smallholder farmers in Ba-Phalaborwa municipality.

WHO IS DOING THE RESEARCH?

I am an independent researcher and consultant who has passion for the development of farmers and am doing this research to fulfil my studies for Masters in Development Studies.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has received approval from the Research Ethics Committee of UFS. A copy of the approval letter can be obtained from the researcher.

Approval number: To be inserted once provided

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

I received your contacts from the Limpopo Department of Agriculture and Rural Development as one of the officials responsible with the Capacity Building Interventions of the farmers within the Phalaborwa municipality. Your contribution will be of great value to the findings of the study.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

You will be required to respond to a set of questions which are compiled in a different document (questionnaire). These questions will be gathering more information on the Capacity Development Interventions that have been offered to the farmers in the past and your perception towards their effectiveness as well as challenges faced during the implementation. The questionnaire implementation is expected to take 30-45 minutes and this should be within your convenience to minimise disturbance to your work.

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

There are no direct benefits for participating in this study, however the information that you provide might contribute towards improvement of the Capacity Development interventions implementation so that their positive impact could be enhanced and promote alleviation of poverty and other sustainable development goals

WHAT IS THE ANTICIPATED INCONVENIENCE OF TAKING PART IN THIS STUDY?

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WILL WHAT I SAY BE KEPT CONFIDENTIAL?

The information that I will obtain from you will be stored safely and it will be shared with my supervisor and those involved in this study. Excerpts from the interview may be included in the final dissertation and may also be published in journals. The interview will be conducted privately and your name will not be written down or recorded anywhere. Furthermore, the study does not require you to disclose or name any specific individuals and you do not have to discuss any personal information that you do not feel comfortable talking about. Your answers will be given a fictitious code number or a pseudonym

and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Your answers may be reviewed by people responsible for making sure that research is done properly, including the transcriber, external coder, and members of the Research Ethics Committee. Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records.

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HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS / RESULTS OF THE STUDY?

Findings report will be submitted to the research office within the Limpopo Department of Agriculture and Rural Development once the report is complete. This will be by February 2020. However, if you have any inquiries in relation to the research findings, please contact Julia Adam, +27788293897, Email: jadam2408@gmail.com The findings are accessible from February 2020. Should you have concerns about the way in which the research has been conducted, you may contact Supervisor: Dr. Kobus Laubscher, +27515227802, Email: kobus@kamac.co.za. Should there be delays in response, please use all forms of contact to reach us.

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



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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: _____

