

**UNIVERSITY OF ZULULAND**



**An analysis of the sustainability of small-scale farming in Dukuduku, Kwa-Zulu  
Natal, South Africa.**

**By**

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## ORIGINALITY DECLARATION

|                                     |                                                                                                   |
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In particular, I confirm that I had obtained an ethical clearance certificate for my research (Certificate Number UZREC 171110-030 PGM2018/556) and that I have complied with the conditions set out in that certificate.

I further certify that this research thesis is original, and that the material has not been published elsewhere, or submitted, either in whole or in part, for a degree at this or any other university.

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## **DEDICATION**

To my late father, Mkhambathi Mashiyane, this work is for you Sondaba, Skhabe Sontshibe. Uthole Uk'phumula okuhle Mashiyane. Ngsaqhubeka lapha owangshiya khona nemfundo.

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## **LIST OF ABBREVIATIONS**

|         |                                                               |
|---------|---------------------------------------------------------------|
| DLA     | Department of Land Affairs                                    |
| KZNDARD | KwaZulu Natal Department of Agriculture and Rural Development |
| RPE     | Radical Political Economy                                     |
| DRDLR   | Department of Rural Development and Land Reform               |
| CRDP    | Comprehensive Rural Development Programme                     |
| GDP     | Gross Development Product                                     |
| DPME    | Department of Planning, Monitoring and Evaluation             |
| SSF     | Small-scale farming                                           |
| KZN     | KwaZulu Natal                                                 |
| GPS     | Global Positioning System                                     |
| STATSA  | Statistics of South Africa                                    |
| IDP     | Integrated Development Plan                                   |
| RBM     | Richards Bay Minerals                                         |
| RSA     | Republic of South Africa                                      |
| NEMA    | National Environmental Management Act                         |
| DWS     | Department of Water and Sanitation                            |
| DAFF    | Department of Agriculture, Forestry and Fisheries             |
| DEFF    | Department of Environmental, Forestry and Fisheries           |
| GIS     | Geographical Information System                               |
| EPWP    | Expanded Public Works Programme                               |
| FET     | Further Education Training                                    |
| LGE     | Local Government Elections                                    |
| NGO     | Non-Governmental Organisation                                 |
| IASP    | Invasive Alien Species Programme                              |
| IFP     | Inkatha Freedom Party                                         |
| SEDA    | Small Enterprise Development                                  |

|        |                                                                 |
|--------|-----------------------------------------------------------------|
| EDTEA  | Economic Development, Tourism and Environmental Affairs         |
| UNESCO | United Nation Educational, Scientific and Cultural Organisation |

## **ABSTRACT**

Redressing the injustices of the past apartheid government has been the core-focus of the South African government since the birth of democracy in 1994. The variety of rural based policies, like land restitution have been introduced in order to restore the dignity of people and by these means economically empower them (to productively utilise the land and by these means attain rural and agrarian transformation) in the former homelands who were forcefully removed from their land due to racially discriminatory laws of the apartheid government. However, this has been met with several challenges such as poor monitoring and evaluation by the state in certain areas, which has resulted in the maladministration of resources, poor market access as well as poor access to credit. Therefore, the aim of this study was to investigate the sustainability of small-scale farming (with emphasis on the credit access, market access, improved infrastructure as well as state intervention) in Dukuduku, an area in which the community benefited from land restitution. The aim was achieved through four objectives. First, to map the spatial extent of small-scale farming in the study area from 2001-2019. Second, to examine the nature of economic opportunities arising from small-scale farming in the study area. Third, to explore perceptions of small-scale farmers in Dukuduku towards land restitution programme. Fourth, to assess the sustainability of small-scale farming in relationship to agrarian transformation in the study area. The study employed the convergent parallel mixed method design to collect and analyse the data. The findings suggest that, while small scale farming has increased significantly in the study area, the farmers continue to face challenges relating to inadequate agricultural support and extension services. This has undermined the sustainability of small scale farming activities and by extension agrarian transformation. The study recommends that, this calls for proactive and effective agricultural support and extension services by the government so that the utilisation of restituted land for agricultural purpose (small-scale farming in this study), is productive, sustainable and transformational.

**Keywords:** Small-scale farming, land restitution, agrarian transformation, radical political economy

## **CHAPTER 1: INTRODUCTION AND ORIENTATION TO THE STUDY**

### **1.1 INTRODUCTION**

This chapter introduces the whole study. It does so by discussing the background of the study statement problem, aim, objectives and research questions of the study. The chapter also explains the significance of this research as well as outlining the structure of the whole dissertation.

### **1.2 BACKGROUND TO THE STUDY**

The apartheid government left a huge gap in terms of land ownership amongst the racial groups in South Africa. Makhado (2012) states that, whites who constitute about 10 percent of the total South African population own about 87 percent of the potential agricultural land, whilst blacks who constitute about 90 percent of the population own 15 percent of the land. The Native Land Act of 1913 is the main hindrance which implemented the idea that native South Africans should be restricted to and be given only 15 percent of the total country's land during the apartheid era (Feinberg, 1993; Louw, 2013 cited in Netshipale, 2017). When the democratic government came into power in 1994, the land reform programme was introduced in order to address and amend land rights act, and cater for the equal land right to all South African citizens (Netshipale, 2017).

Notably, there are three main pillars of the land reform programme, and they include restitution, redistribution and tenure, in which each has social, economic and political implications. Land restitution is mainly interested in giving land back to people whose land was forcefully taken away from them through racial discriminatory laws and practices, or claimants opting for compensation in form of cash (Netshipale, 2017, Kostiv, 2008). It is targeted at improving the socio-economic and political status of the communities at the centre of land restitution cases. Similarly, while "land redistribution focuses on overcoming land ownership and access to agricultural land by transferring land from white minority to previously disadvantaged groups for production purposes" (Netshipale, 2017:57), land tenure involves securing rights of those who are already occupying land without insecure security rights (DLA, 1997). An effective land restitution is the only hope towards an effective agricultural production in communal areas (Andrew et al, 2003). Recent studies indicate that the contribution of the agricultural based land restitution programme towards sustainable household

livelihood is quite significant than in the previous years (Andrew et al., 2003). This suggests that, an effective land restitution programme is the key towards sustainability of small-scale farming in former homelands. This is because one of the main goals of land restitution is to boost agricultural production through an effective land ownership.

In Dukuduku resettlement area, small-scale farming is the second largest primary economy driver after the tourism industry (Karumbidza, 2005). The Dukuduku communities are the beneficiaries of land restitution programme. In the case of Dukuduku, the intention of land restitution was to help in redressing the land ownership issue. The aim was therefore to contribute towards effective small-scale farming practices in the area in terms of creating land based income opportunities for the local people through farming. Against this backdrop, this study investigates whether or not small-scale farming is generating economic opportunities in Dukuduku. This brings to force the issue of the sustainability of small-scale farming in the study area, which is the central focus of this research.

### **1.3 PROBLEM STATEMENT**

From few agrarian studies by Kutya (2012), and Tshuma (2014), it was found that in South Africa, small-scale farming is predominantly found in rural areas. It is also assumed that, small-scale farming can play a significant role towards the sustainability of rural livelihoods through jobs and business opportunities. Dukuduku is a resettlement area where people were given their land as a result of the land reform programme through restitution with an intention of promoting the sustainability of the local livelihoods through land-based economic activities in the area. Given the supposed role that small-scale farming plays in the sustainability of livelihoods, this study investigates if this is the case in Dukuduku. Bearing in mind that that the agrarian transformation is concerned with the progress of agricultural-based production mainly associated with successful land restitution in rural areas (KZNDARD, 2015), the study examines if Dukuduku communities have realised their livelihoods, and if not, it explores the issues which militate against the goals towards the achievement of sustainable small-scale farming.

### **1.4 RESEARCH AIM AND OBJECTIVES**

**Aim:** To analyse the sustainability of small-scale farming in Dukuduku area.

## **Objectives**

Based on this aim, the objectives of the study are to:

- a) Map the spatial extent of small-scale farming in the study area from 2001-2019.
- b) Examine the nature of economic opportunities arising from small-scale farming in the study area.
- c) Explore perceptions of small-scale farmers in Dukuduku towards land restitution programme.
- d) Assess the sustainability of small-scale farming in relationship to agrarian transformation in the study area.

### **1.5 RESEARCH QUESTIONS**

The following are the research questions of the study.

- a) How local small-scale farming spatially changed from 2001-2019?
- b) What is the nature of economic opportunities arising from small-scale farming in the study area of long or short term?
- c) What are the perceptions of small-scale farmers towards land restitution in Dukuduku?
- d) What is the relationship between the agrarian transformation approach and the sustainability of small-scale farming in Dukuduku?

### **1.6 INTENDED CONTRIBUTION TO THE BODY OF KNOWLEDGE**

The study contributes to the literature on the sustainability of small-scale agriculture in rural areas resulting from land restitution programme. It has availed empirical data on the connection between these two, which could be used by municipalities and other tiers of government for planning purposes.

### **1.7 OUTLINE OF THE STUDY**

This research study is divided into seven chapters which are detailed as follows:

Chapter One: This chapter serves as an introduction to the study. Specifically, it gives the background of study, statement of the study, objectives of the study, research objectives and questions, and the significance of the study.

Chapter Two: This chapter delves deep into the theories which inform the study and these are radical political economy and agrarian transformation.

Chapter Three: This chapter provides an overview of all literature surveyed, relating on the nature and existence of small-scale farming in South Africa. The sustainability measures of agricultural industry as well as perceptions of active small-scale farmers towards the land restitution in the study area are reviewed.

Chapter Four: The chapter describes the physical setting of the study area in terms of among others, the physical, economic, social, spatial characteristics and the history of the land restitution in the study area.

Chapter Five: This chapter discusses methodology that was employed in the study.

Chapter Six: In this chapter, the collected data is analysed and discussed in the light of the objectives of the study and the research questions are answered.

Chapter Seven: The chapter provides the summary, conclusions, and recommendations of the study based on the findings presented in chapter six.

## **1.8 CONCLUSION**

The chapter introduced the study by discussing the background of the study, statement problem that acts as the foundation of this study as well as the research objectives, and research questions which also form the foundation of the study. The following chapter discusses the theory that forms the foundation of the study.



## **CHAPTER TWO: CONCEPTUAL AND THEORETICAL FRAMEWORKS**

### **2.1 INTRODUCTION**

The question of the transformation of small-scale farming in rural areas has generated many theories, which attempt to explain this phenomenon. One of these theories is radical political economy, which provides a theoretical framework for this study, in terms of assisting the examination of the sustainability of small-scale farming in previously disadvantaged rural areas. Such an analysis falls within agrarian transformation as the logic of rural development in South Africa. In this regard, this chapter discusses the conceptual and theoretical framework of the study. The first part focuses on the concepts that underpin the study and the second section is centred on the theory that provides the lenses for this study.

### **2.2 CONCEPTUAL FRAMEWORK**

The main concepts on which this study is based are; agriculture, small-scale farming, sustainability and rural areas.

#### **2.2.1 Agriculture**

Agriculture refers to the systematic raising of useful plants and livestock under the management of a person or persons for sustenance, economic gain or both (Rimando, 2004:1; Rubenstein, 2003:496). "South African agriculture is dualistic, consisting of a commercial sector and small-holder subsistence sector", with white farmers dominating the commercial farming sector and black farmers more visible in the small-scale subsistence sector (Sihlobo and Nel, 2016:69). The focus of this study is mainly on the small-scale farming sphere of agriculture, in terms of whether it is sustainable after the land restitution programme in the study area. One of the study objectives is to explore perceptions of small-scale farmers in Dukuduku towards land restitution programme.

#### **2.2.2 Small-scale farming**

There have been debates over the definition of small-scale farming. Some definitions are focused on the land size, while other definitions are mainly concerned with the kind of product being produced in the farm and its location. In a South African context one can describe the small-scale farming sector as being, non-commercial,

subsistence agriculture that is mainly found in the former homelands with black farmers as the main dominant participants (Kirsten and van-Zyl, 1998). This study is mainly concerned with fruit and vegetables as well as sugarcane farming in small plots of land in Dukuduku. This farming is occurring on a resettled land as a result of the land reform programme (Karumbidza, 2005). The land reform programme in South Africa is made up of three main pillars, which are land redistribution, land tenure, and land restitution. Land restitution is focused on resettling or financial compensating those who were forcefully removed in their land before 1913. Land tenure aims to address insecure tenure in the former homelands and land redistribution is focused on redistributing land to the landless poor and emerging farmers for residential, productive use or both (Ranchod, 2004). The aim of this study is to analyse sustainability of small-scale farming in Dukuduku area regarding access to markets, access to credit, infrastructure improvement and farming inputs in the study area.

### **2.2.3 Rural areas**

Hart et al (2005) describe rural areas as places of higher unemployment, underemployment rates, lower population density with high rate of poor, uninsured and underinsured residents as well as high rate of elderly people and children. Small-scale farming is the main economic activity in rural areas. In case where services are delivered, they are delivered on fewer centres e.g. health care facilities, causing longer travelling distance between people and centres of aid (Hart et al, 2005). Bell (2007) identifies two rural kinds, a first and second rural. He describes the first rural as the modern rural with lower population density with no more than 2500 people, and the second rural as the rural with a post-modern style, where human rights are practiced. Based on the above definition and characteristics of rural areas, Dukuduku communities can be regarded as the post-modern kind of rural area where the communities can express their concerns through democratic process. The reason is that, the communities are based on resettled land, on which agrarian transformation should occur as outlined in the objectives of land reform programme. This is directly linked to the objective four of the study which is to assess the sustainability of small-scale farming in relationship to agrarian transformation in the study area.

### **2.2.4 Sustainability**

The term sustainability refers to the meeting of today needs without compromising the ability of the future generation to meet their own (Giovannoni and Fabietti, 2014). The

term does not singularly refer to the environment, but it also refers to the actions one can perform to ensure that a certain activity last longer in a way that it benefits next offspring. Therefore, sustainability can be environmental, social and economic (Giovannoni and Fabietti, 2014; Ben-Eli, 2015). In rural areas, agricultural activities are the dominant economic sector which provides rural dwellers with both economic and social benefits. This then makes rural dwellers to depend on this economic sector for their livelihood to continue, for which reason, the sustainability or otherwise, of this type of agriculture therefore becomes an important issue. The communities of Dukuduku mostly rely on tree and sugar plantation, vegetables, and growing cannabis for their personal gains (Karumbidza, 2007). Therefore, sustainability in this study is measured in terms of access to markets by the farmers, availability of finance, condition of infrastructure such as roads, etc. all of which should make small-scale farming effective and thus successful in terms of transforming the rural areas and thus meeting the goals of land reform in general and restitution in particular. In this way, objectives two and four of the study are addressed, which are about investigating sustainability of economic opportunities brought by small-scale farming in the study area.

## **2.3 THEORETICAL FRAMEWORKS**

This research utilises two theories, which are radical political economy and agrarian transformation.

### **2.3.1 Radical Political Economy (RPE)**

From its developmental background, radical political economy can be defined as the philosophy whose focus is on reviving the complexity of unresolved social problems such as inequality, pollution and imperialism through an introduction of robust economic policies (Worland, 1972, 270; McMichael, 2006; Rosset et al, 2006 cited in Dlamini, 2016). In the South African context, the aim is to ensure that racial classes that were previously denied access to economic freedom as a result of the apartheid laws obtain control of both economic and political freedom through relevant political process. This is because, political and economic freedom are interrelated. In their study in Zimbabwe, Ncube and Gomez (2015) found that, rural people depend mainly on remittances and social grants for their survival and to upgrade the existing agricultural activities, whereas non-receivers were securing their lives by forming pools

of labour for those with farms. As a result, implementing radical political economic principles would provide social, economic and political freedom to economically struggling groups through land-based economic activities of which small-scale farming is one of them, because land guarantees food and economic sovereignty of the African continent.

Rebitzer (1993) outlined three fundamental ideas which define RPE, namely, the role of politics in economics, the desirability of institutional change, and the historical contingency of economic structures. The first proposition is about political power and state intervention in the economic sector and engaging with relevant stakeholders vice versa. The second proposition is about remedial actions needed for failing social relations that does not evolve spontaneously through the market and the last proposition is on “introducing a notion of path dependency into the analysis of economic structures” (Rebitzer, 1993: 1395).

With different strands mentioned above, the main focus of the study is on the first and second strands, which is on the political power and state intervention on matters relating to development and transformation as well as taking corrective measures so as to address social developmental and relations issues respectively. Regarding these issues, the government of the Republic of South Africa instituted and implemented land reform so as to correct the injustices and exploitation of the past. This brings to the fore, the issue of land restitution, which is the focus of the study. Through the lenses of RPE, this research attempts to examine if indeed the state intervention and remedial measures in the form of giving land back to original owners as well as providing supporting infrastructure and services has actually transformed and supported these economic activities or the condition of the people have worsened, just like was the case during apartheid.

Since, it is generally accepted that, rural poverty originates from an unequal agrarian structure where there is an observed exploitation and oppression of workers and peasants by the land-owning classes which are powerful and with only agribusiness interest (McMichael, 2008; Rosset et al, 2006), the situation, in which land issues are assumed to have been resolved, deserve analysis to see if these enterprises are sustainable. This is because, there are no land owning classes who control the land

which belong to rural dwellers in a place like Dukuduku. In this sense, and seen through the lenses of RPE, land restitution constitutes one of the political processes, which aims to promote inclusive local, regional and national economic development. Again, land restitution promotes ecological sustainable farming methods, which helps in ensuring non-degraded land for future farming, and successful land reform ensures the ability of small-scale farming to secure rural dwellers' livelihood (Manenzhe et al, 2016). Therefore, political power controls most economic factors in the modern world. With no doubt, state intervention in resettling people in former homelands (land restitution in this case) following proper political process and ensuring post settlement support would ensure the food and economic secured citizens of Dukuduku communities. With all this being said, RPE assist the study to accomplish the set objectives but more specifically objective two and four of the study which is to examine the nature of economic opportunities arising from small-scale farming in the study area, and to assess the sustainability of small-scale farming in relationship to agrarian transformation in the study area, respectively, because land-based economic policies are more focused on improving farming and improving livelihoods in former homelands.

#### **2.3.4 Agrarian transformation**

The Department of Rural Development and Land Reform (2017:2) defines agrarian transformation as a “rapid and fundamental change in the relations (systems and patterns of ownership and control) of land, livestock, cropping and community”. Cousin and Scoones (2009:12) view agrarian transformation as “as a range of policies which complement land redistribution with an aim to support peasants and enhancing agricultural productivity, rural livelihoods and food sovereignty”. Other scholars view agrarian reform as “the strategy that is aimed at bringing about transformation of the role of numerous agrarian classes in struggles for development and democratisation towards equitable land ownership and social relations of production, and developing the agricultural production forces to enhance food security, livelihood and the accumulation of capital” (Byres, 1991, 1996 and Bernstein, 2010 cited in Moyo, 2011: 494). The objective of the above said, is to create an enabling environment for an increase in agricultural production while simultaneously generating employment opportunities (Patnaik, 2003 cited in Moyo, 2011). This is further supported by Evans

(2009) in Moyo (2011:494) who ascertain that an “agrarian based economy requires state facilitated land reform, building the productive and social capabilities of small producers and support for agro-industrial growth and diversification”.

As detailed in the Comprehensive Rural Development Programme (CRDP), agrarian transformation in South Africa was designed to focus on four items on the governmental priority list, namely land (land restitution, land based resources, land reform), livestock (processing plants, small industries, animal facilities), cropping (agricultural parks, economic infrastructure and fresh produce markets) and community (social infrastructure, amenities, facilities) (Department of Rural Development and Land Reform, 2017). The study focuses on the cropping aspect. This is based on the notion that Dukuduku communities are the active small-scale farmers (Karumbidza, 2006), and their livelihood is expected to change through agrarian transformation. Agrarian reform is one of the goals of land restitution programme that was enacted with an aim to drastically transform the small-scale farming sector in former homelands. Beneficiaries are provided with relevant agricultural expertise such as farming skills, provision of credits, agricultural extension and training, provision of transport, ploughing services, development of rural infrastructure and support to farmers organisations and co-operatives (Hall et al, 2003).

This is based on that, agrarian transformation was introduced to fight challenges of food insecurity, unemployment, poor agricultural infrastructure and lack of basic services by providing aforementioned state interventions with an aim of improving the quality of life in rural communities (DRDLR, 2017). This is the context within which this study, examines the nature of economic opportunities arising from small-scale farming in the study area. Further, agrarian transformation is one of the tools that can aid Dukuduku communities in sustaining the productivity of small-scale farms in the area. Whether or not this is happening, it is investigated in this study as expressed in the fourth objective of this study. This is because, it is vital for land reform projects to display economic sustainability for government to invest time and funds in ensuring food security, the secured future of citizens and strong Gross Domestic Product (GDP), (Ntlou, 2016). There is an observed inadequate performance of the South African government to make accessible agricultural support or post settlement after

care, which is the reason for poor performance of land reform projects leading to failure of resettled farms and low agricultural productivity. This is caused by inappropriate designs of farmer support programmes, operational challenges, beneficiary challenges and lack of monitoring and evaluation (DPME, 2013 cited in Ntlou, 2016). This also means that the views of the people who are expected to benefit from agrarian transformation of rural communities such as Dukuduku is important and are explored in this research as illustrated by the third objective.

## **2.5 CONCLUSION**

This chapter has outlined and linked the concepts that act as the foundation of the study. The theories that support the study have been discussed and linked with the research problem and objectives. The radical political economy theory assists in assessing the economic opportunities that come along with political actions by the state to address the economic challenges faced by the marginalised groups. On the other side agrarian transformation helps in exploring the perceptions and assessing the agricultural development and support that has happened since the introductory of land based policies. The following chapter will focus on the literature review around the issues under investigation.

## **CHAPTER THREE: LITERATURE REVIEW**

### **3.1 INTRODUCTION**

This chapter reviews literature related to small-scale farming. It starts by discussing the definitions of small-scale farming at both global and local levels. This is then followed by the deep analysis of the small-scale farmers and their livelihoods. There is then an analysis of main aspects around sustaining small-scale farming, perceptions of small-scale farmers towards land restitution in South Africa, as well as economic opportunities brought by small-scale farming to communities. The final part is the conclusion.

### **3.2 AN OVERVIEW OF SMALL SCALE FARMING**

Defining small-scale farming differs between countries and between agro-ecological zones. Lipton (2005 cited in Pienaar, 2013), Elise (1999), (Kutya, 2012), and (Lininger, 2011) ascertain that small-scale farming involves family members who produce for subsistence and market sale in communal lands and periphery of urban areas, whereas Dixon et al. (2005) suggest that, small-scale farming refers to farming activities with limited resource endowment in relation to other farmers. Chamberlin (2007:3) states that small-scale farming is the “connotation of limited land availability” resourced poor farms with limited capital including less than 10 head of livestock, fragmented holdings and limited access to inputs. In a study conducted in Ghana, on the relationship of smallholders and market access, it was concluded that smallholders consist of a land size quantity of 5 hectares and below, with crop mix, input use, as well as economic welfare (Chamberlin, 2007). Crop mixture in small-scale farming involves farming various kinds of crops in one small piece of stand e.g. cassava, maize meal, timber plantation and vegetables (Chamberlin, 2007). Small-scale farmers therefore generate fewer crops compared to producers with larger holdings (Chamberlin, 2007); this further makes small-scale farmers to be susceptible to crop and market failure. Similarly, there is a practice of using inputs such as indigenous fertilisers in this farming sector rather than synthetic fertilisers. Wiggins (2009) further ascertain that small-holder agriculture involves farmers with little knowledge of farming as they mainly cultivate small pieces of land.

Another study conducted in Austria on the economic situation of small-scale farm forestry in the mountain regions by Toscani and Sekot (2017), found that farm forestry



should not exceed 200 hectares in order to be regarded as small-scale farms. Again, another study by Tshuma (2014) conducted in South Africa on small-scale agriculture as a precondition for promoting rural development; it was found that the size of the small-scale farm is calculated as 1 hectare or less. From the above various definitions of small-scale farming based on size, one can easily point out that the definition of small-scale farming still needs a serious scrutiny. Again this further implies that, defining small-scale farming varies with the geographical location where these farms are located.

Despite the aforementioned aspects of small-scale farming, Kirsten and van Zyl (1998) argue that size of the land is not the good measure of small-scale farms as one hectare of agricultural potential land in urban areas with proper irrigation scheme could drastically produce high agricultural output than the five hundred hectare of low quality land found in the Karoo. As result, the focus should be on the net farm income rather than the farm size. In Ghana, accessibility to the agricultural land is strongly influenced by the household income, where people living under the poverty line stand great chances of not securing enough land for agriculture, and in cases where land is available; it is used for residential purposes (Chamberlin, 2007). Kirsten and Van Zyl (1998) further opine that the concept of small-scale farming is value-laden, because it is associated with non-productive, non-commercial, non-organised farming methods, found in former homelands, mainly practiced for household benefits. The main focus is on the product in the farm, the location as well as the dominant race involved of which, it is the black majority. This is due to a disadvantaged economic background, which keeps preventing them from dominating large-scale farming and producing well in small-scale farms (Kirsten and Van Zyl, 1998).

As a result, it is evident that, there is a no single definition for small-scale farming as various scholars have viewed the concept from varied perspectives. On this basis, this study views small-scale farming through the lenses of Wiggins (2009), Tshuma (2014) and Kirsten and Van Zyl (1998) who characterise small-scale farming as an economic activity designed to boost the local economy of people in former homelands through well designed agrarian structures. In Dukuduku, small-scale farming is the second main economic activity following the tourism industry, with local people actively engaging in sugar plantation, forestry as well as vegetables (Karumbidza, 2005). The

local people are also beneficiaries of the land reform programme, specifically land restitution.

As a planned outcome of the land restitution programme, small-scale farming is expected to improve people's living conditions with regards to their socio-economic status in Dukuduku. This was to be achieved through effective agricultural practices that promote both business and employment opportunities. In light of the above, mapping the spatial extent of small-scale farming in the study area from 2001 to 2019 is of paramount importance so to gain an insight regarding the progress of small-scale farming in the study area from the date the land was claimed back. This could help in identifying evolutionary changes in terms of small-scale farming in the study area from the year 2001, when the community of Dukuduku were given back their land. Achieving this, addresses objective one of the study. Again, examining the nature of economic opportunities arising from small-scale farming would help in gaining more insight on the nature of the economy that small-scale farming brings in the study area, and this directly addresses objective two of the study.

### **3.3 SMALL-SCALE FARMING AND LIVELIHOODS**

Livelihood refers to a way of earning a living for an alternative pathway out of poverty for household as well as a mechanism for managing risks in an uncertain environment (Sharma, 2018). Pienaar (2013) further states that, this involves diversification in terms of individuals or households generating a living from various sources voluntarily or non-voluntarily as a response from a crisis for production, wages, trading and transfers (grants and remittances) towards a resilient and sustainable living. People in former homelands derive their livelihood from agriculture either directly or indirectly (Pauw, 2007; Alemu, 2012). This is further witnessed by Sharma (2018)'s study on the rural livelihood diversity and its impacts on livelihood outcomes in Jammu and Kashmir states, India, where he found that more than 70 percent of rural people in the area highly depend on agriculture for their living. In addition, about two-thirds of the population depends either on farm related (crop production and livestock) or off-farm economic activities (wage employment on other farms). Further, the rest of the population in former homelands make non-agricultural related income such as wage employment in other firms (Alemu, 2012) (tourism industry, mining and construction), government grants and remittances (Perret et al, 2005).

In the South African former homelands, such as those which have benefitted from land restitution, small-scale farming continues to keep the livelihoods functioning and this is done through production, labour and trading. Most people in the former homelands who are the active small-scale farmers are “poor and black people who support themselves with income earned from agricultural activities” (Pienaar, 2013:14). This therefore suggests that small-scale farming remains the dominant and viable economic activity to sustain the livelihoods of rural people. Analysing the impacts that small-scale farming has on the rural areas such as Dukuduku directly addresses objective two of the study which is to examine the nature of economic opportunities arising from small-scale farming in the study area.

Furthermore, the availability of land remains the main challenge in the income generation of small-scale farmers based in the former homelands. In their study conducted in the West India, Apine et al. (2019) found that income generated from small-scale farming fisheries remains low which is caused by unavailability of adequate land for catching enough mud crabs. Small-scale fisheries in the west of India remains the major source of income for people living in rural areas, as it comprises the most vulnerable and poorest groups worldwide (Bene, 2009 cited in Apine et al., 2019). Weather conditions like droughts and floods, financial assistance, biophysical changes, development plans, tourism, population growth and pollution also adds up in the list that continues to threaten small-scale crab farming in the west of India (Campbell et al., 2006 cited in Apine et al., 2019). Similarly, the work by Ramakashkumar and Rajaran (2019) on seaweed small-scale farming in the Palk Bay coast of Tami Nadu, India, shows that, both direct and indirect employment opportunities are created as a result of small scale farming. This has resulted in an increase number of small-scale fishermen by more than 2000 during the on-peak season which is August-January (Ramakashkumar and Rajaran, 2019). In the case of women, seaweed small-scale farming empowers them to achieve a better lifestyle, hence enabling them to live a healthy well-being (Ramakashkumar and Rajaran, 2019).

A study conducted by Toscani and Sekot (2017) in Austria on the economic situation of small-scale farming forestry in mountain regions found that “small-scale farming forestry still predominates with family labour accounting 82 percent of the workforce employed in agriculture and forestry” (BMLFUW, 2016 cited in Toscani and Sekot,

2017: 272). Bravo-Ureta and Pinhein (1992) also ascertain that, small-scale farms are multifunctional, more productive, and more efficient and contribute more to both employment and business opportunities. Further, Outara and Graham, (1996); Baydas and Graham (1996), cited in Tshuma (2014) in their study of the Northern Provinces of in KwaZulu-Natal found that small-scale farming contributes to income generation, but the impact is quite limited given that small-scale farmers cultivate quite small pieces of land and produce crops which result to minor economic benefits as compared to large-scale farms. This is further supported by Monde (2003) in a study conducted in the Eastern Cape Province where very little economic opportunities of small-scale farming were observed. This does not necessarily mean that small-scale farms are negatively performing, but the challenges of sustaining these farms such as difficult access to credit, few available market, and non-availability of large agricultural land, are the main hindrances towards the creation of sound economic opportunities.

In South Africa, small-scale farmers on restituted land are given much attention regarding skills promotion, financial assistance, marketing sources as well as day to day mentoring. This is through the approach of agrarian transformation where recipients of land are provided with necessities they need in order to profit from the resettled agricultural land, but the problem of managing the said assistance still prevails. The questions that are always asked are how this assistance would help in transforming the economic status of rural areas in the country (Tshuma, 2014:2414). In this respect, small-scale farming is expected to provide both employment and business opportunities which could improve social welfare of rural communities. To achieve the above, however, requires sound and effective measures which could strengthen such opportunities that come along with small-sale farming. Examining the nature of economic opportunities arising from small-scale farming in Dukuduku area is the second objective of the study and this section of the literature review provides a context for addressing this objective.

### **3.4 SMALL-SCALE FARMERS' PERCEPTIONS TOWARDS LAND RESTITUTION**

Unemployment and food insecurity continues to be the national challenge in South Africa, and unrest fights demanding agricultural land are on-going, and thereby

pushing the government to speed up the pace of land reform programme in order to overcome this plight (Netshipale, 2017). The above serves as the context in which this study focuses on small-scale farmers on restituted land in Dukuduku. It should be also emphasised that there are other economic activities on which restitution focuses on besides agriculture. These include land for tourism, land for conservation purposes, and mining (Lahiff, 2007). Netshipale (2017) further breaks down these into land use classes such as game farming and quarrying. Game farming refers to keeping wild animals in a protected environment as a means of generating a revenue which promotes eco-tourism (Netshipale, 2017) and this can be practiced at both small and large-scale farming i.e. game parks vs. game reserves.

Access to such lands could drastically transform the recipients' livelihood through both economic opportunities as well as improved social wellbeing. Quarrying comes along with extracting useful minerals from the earth surface with an aim of generating revenue, for both business and employment opportunities (Elizabeth, 2006). All these land use classes can only be executed successfully only if the beneficiaries are given relevant aid on how best to ensure their sustainability, so that, they understand how to handle the aforesaid land use classes after the successful land restitution programme. Some communities might feel the need to be share-holders of these land use classes, whereas some might feel the need for compensation in form of cash instead of claiming exact land with these land use classes.

In the case of small-scale farmers, land reform should come along with agricultural land, agricultural support as well as advanced agricultural skilling programmes. In this regard, land restitution, on which this study is based concerns how land beneficiaries are trained for agricultural production, and how best they perceive the importance of these trainings as well as their response in as far as land reform and restitution in particular is concerned regarding small scale farming in the study area. Small-scale farming could rapidly and positively change both social and economic status of people in the rural areas given that agricultural trainings and relevant expertise is provided adequately. Investigating on this matter directly links with objective three of the study which is to explore perceptions of small-scale farmers in Dukuduku towards land restitution programme.

### **3.5 SUSTAINABILITY OF SMALL-SCALE FARMING**

Capital access, exposure to risk and input technologies, market orientation, farm accessibility, farm size, land availability as well as social factors are the familiar tools being utilised to measure the sustainability of small-scale farming (Chamberlin, 2007). These farm sustainability measures typically involve indicators of social, economic and environment change or development (Mutyasira, 2018; Ahnstrom et al, 2008). This is further supported by Mutyasira (2018) in his study of the economic models in small-scale farming conducted in the highlands of Ethiopia who outlines that farmers felt farm size, market access, off-farm income, agricultural loans and access to agricultural extension and demonstration plots were key drivers of agricultural sustainability at the farm level. Importantly, farm size determines access to credit, as large farms are easily granted credit compared to small-scale farms (Mutyasira, 2018; Atuahene, 2011; Doss, 2006). But, it is also true that, small-scale farms are manageable, which may enhance their sustainability (Mohammadi et al, 2013; Zhang et al, 2015 cited in Lee and Choe, 2019; Mutyasira, 2018, Atuahene, 2011).

In the same vein, access to capital is one of imperative measures of farm sustainability as financial resources determine the resiliency of farms through the improved technology and stability against environmental disasters such as floods and drought (Mutyasira, 2018). It has also been reported that off-farm income could positively influence farm sustainability as households engage in alternative sources of income which could lead them in adopting new technologies and more capacity to finance new investments in their farms (Pender and Gebremedhin, 2006). Furthermore, Mutyasira (2018) found that lack of access to the market is the dominant cause of failure of farm sustainability due to long distances travelled to urban areas and uneasy access route by potential customers in urban areas. This then directly implies that geographical location plays a huge role in the farm sustainability, as this promotes convenience between rural and urban communities. Access to credit and market in Dukuduku is quite limited, though the area has benefited from the land restitution (Karumbidza, 2005). This then questions if the government delivers the benefits that come along with land reform in former homelands.

Meanwhile, social factors like farmers' age, gender, family size and access to information plays a huge role in the determination of farm sustainability through technology and effective decision making (Teckleworld et al., 2013). Gender plays a

huge role in the farm sustainability as farms dominated by women stand high risk of not going forward as most rural women are still deprived financial opportunities, being isolated and vulnerable to numerous of social ills and as a result hinders farm development. Specifically, access to credit still remains as one of main farm sustainability measures. This is further supported by the Forum Umwelt und Entwicklung (2015) who emphasise that, in the local production, gender equality as well as fair prizes must be considered for sustainability of small-scale farming. Bigger families are expected to provide more labour which hence strengthens the workforce of the farm, and generally increases productivity, and farming efficiency (Pender and Gebremedhin, 2006 cited in Mutyasira, 2018). Access to information through farmers' participation on input and output markets is another form of social factor that determines sustainability of farming at local level (Kassie et al., 2013).

Dukuduku has small pieces of farm land which again makes it difficult for the government to provide agrarian support to the beneficiaries; this is because most part of land is covered with alien vegetation, such as paper plantations (Karumbidza, 2005). Atuahene (2011) found that the government of South Africa fails to provide newly resettled communities with the basic irrigation tools and electricity. Nonetheless, people must benefit from the agrarian support in as detailed in the land restitution programme. This research analyses the sustainability of small-scale farming in Dukuduku in terms of access to markets, credit, technological support and agricultural extension support which addresses objective four and two of the study which is to assess the sustainability of small-scale farming in relationship to agrarian transformation in Dukuduku as well as examining the nature of economic opportunities arising from small-scale farming in the study area respectively. Similarly, focusing on the farmer's age, gender, family size and access to information in Dukuduku area is of paramount importance as it addresses both objective four and the aim of the study which is to assess the sustainability of small-scale farming in relationship to agrarian transformation in the study area.

### **3.6 CONCLUSION**

This chapter reviewed some literature that is relevant to this study. This involved explication of relevant themes or concepts and views from different scholars in relation to small-scale farming and the livelihoods of participants, perceptions of small-scale

farmers towards land restitution, as well as the sustainability of small-scale farming. The following chapter addresses the physical setting of the study.



## **CHAPTER 4: PHYSICAL SETTING OF THE STUDY AREA**

### **4.1 INTRODUCTION**

The observation and description of the physical setting of a study area is important in clarifying some aspects of the conceptual framework of any research study (Ximba, 2007). As a result, this chapter describes the physical setting of the study area. This includes an outline of amongst other things, the geographic setting of the study area, demographic characteristics and farm distribution as well as a variety of land uses found within the municipality where the study is based. The chapter also describes geomorphology of the study area and then there is the conclusion.

### **4.2 THE PHYSICAL LOCATION OF THE STUDY AREA**

Dukuduku is located in Mtubatuba Local Municipality with Global Positioning System (GPS) co-ordinates: 28°10'12"S, 32°35'63"E (StatSA, 2011). The Dukuduku area lies adjacent to the world famous iSimangaliso Wetland Park (Dukuduku Trust, 2016). The Mtubatuba local Municipality enjoys relatively good access and connectivity at a regional level. The N2 runs through the area linking Durban with major urban centres further north. The R618 road acts as the main economic corridor in the Khula village in Dukuduku region offering transportation to both incoming and outgoing tourists as well as trading opportunities. The municipality forms an integral part of both KwaZulu-Natal and uMkhanyakude District Municipality (Mtubatuba Municipality IDP, 2017). The Mtubatuba Local municipality is one of five category B local municipalities within uMkhanyakude District municipality, with other listed as follows: KZN271: UMhlabuyalingana Local municipality, KZN272: Jozini Local municipality, KZN273: Big Five false Bay Local municipality, KZN274: Hlabisa Local municipality.

The Mtubatuba Local Municipality Integrated Development Plan (2017) further reveals that the municipality is bounded to the South by Mfolozi River, which acts as a boarder to uMfolozi Local municipality. UMfolozi Local municipality makes the family of other local municipalities under King Cetshwayo District. On the eastern side of the Mtubatuba municipality is Indian Ocean which has the warm ocean current hence responsible for subtropical weather across the coastal regions of the municipality. Further North the municipality is bounded by the Big Five False Bay Local Municipality, while on the further western side it is bounded by Hluhluwe Local municipality (Mtubatuba Municipality IDP, 2017). Mtubatuba Local municipality is divided into 19

municipal wards which are represented by 19 wards councillors, and the total of 17 wards fall within Mpukunyoni Traditional council, which confirms that the municipality is predominantly rural with most of its land administered by the Ingonyama trust. These wards coincide with settlements of Indlovu Village, KwaMsane Township, Mpukunyoni traditional council (which is the only existing traditional council in the municipality) and Dukuduku Resettlement area (where the study is mainly based). Most of the wards cover commercial farmlands and are sparsely populated (Mtubatuba Municipality IDP, 2017).

Before 1999, Dukuduku had too much indigenous forestry, with so much of wildlife in the area. After the resettlement took place (after 1999), some people were removed in their homes and deforestation started to be observed. After the resettlement of people in Dukuduku, the fight over the available resources between the iSimangaliso wetland park, the government and the people of Dukuduku developed. The available resources in the area include amongst other things the following; land for agriculture, land for conservation purposes, as well as mining. The main reason behind conflict is that the community in the area of Dukuduku is utilising land which is close to iSimangaliso Wetland Park for agriculture, but the government is opting to relocate people but at the same time granting Richards Bay Minerals (RBM) a mining licence along the eastern coast of St Lucia. The fact that government has opted to relocate people to the nearby Ezwenelisha (meaning New home) in order to make room for the proposed mining projects has angered the community members in Dukuduku.

The relocation of Dukuduku community has seen the booming of nearby villages, namely; Ezwenelisha, Indlovu village as well as Khula village which are located on North Eastern side of Dukuduku. Ward three, four, five and nine in these villages have parts of land that is owned by the state, the private sector as well as the Dukuduku trust. The reason for this is that, these wards have ecologically sensitive areas i.e. wetlands. Due to the aforesaid reasons, these areas were declared as protected by government, as section 24 (a) of the South African constitution and National Environmental Management Act NEMA 107 of 1998 regulate that any area that has been identified as ecological sensitive must be protected (RSA, 1999). ISimangaliso authority was appointed to manage the wetland and other ecologically sensitive areas in these wards. According to the Induna Baba Maphanga, he claims that iSimangaliso wetland park authority was created with an aim to bring about confusion amongst the

communities of Khula village, Dukuduku and Ezwenelisha. The reason behind such claims is that the iSimangaliso wetland park authority has claimed almost half of the land which is utilised by local residents for small-scale farming as areas of high environmental sensitive, and therefore the residents are directed to evacuate such areas, therefore such claims has of today resulted to the unrest and confusion amongst community members from there aforesaid villages. Dukuduku community is sustaining themselves through agriculture and tourism, with small-scale farming as the leading economic engine in the area. The following map shows the locality of the study area.

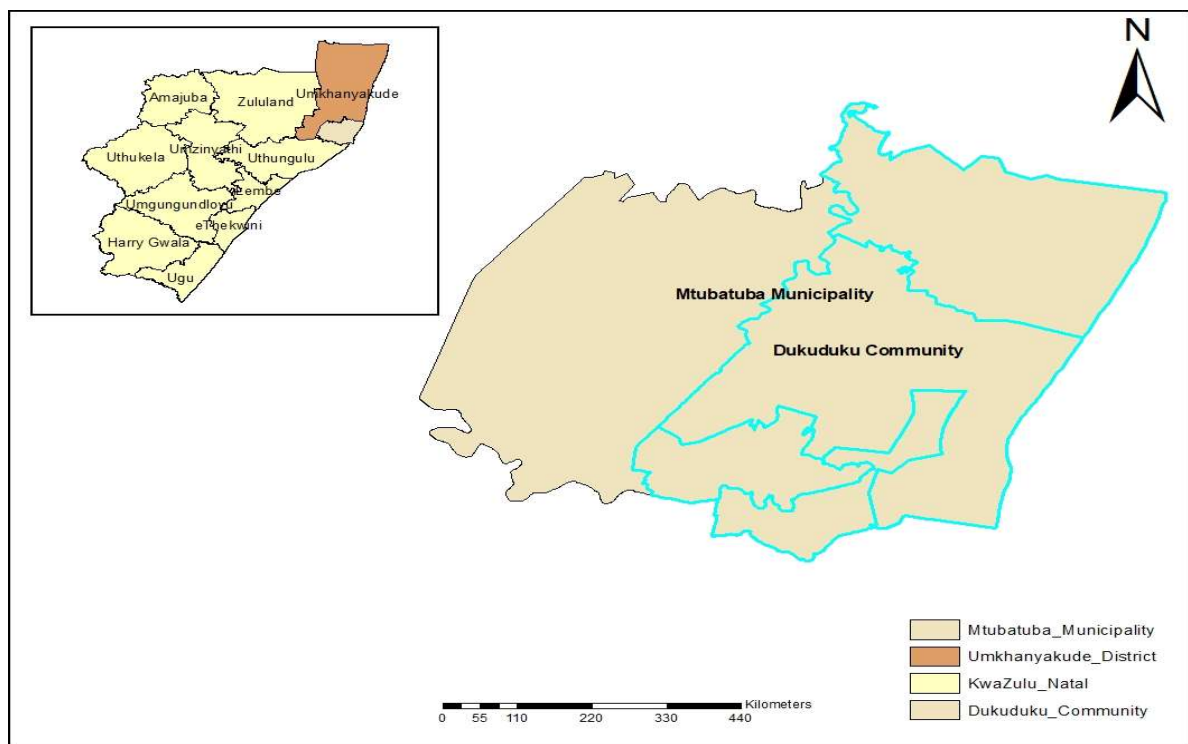


Figure 4.1: The locality of the study area

#### 4.2.2 Wards distribution and land ownership in Mtubatuba Local Municipality.

The distribution of wards within Mtubatuba is shown on the map below, where the total of 19 wards are sparsely distributed and the nearby natural environment to each ward is well displayed. Ward three, four, five and nine are located adjacent to the great St Lucia, as well as iSimangaliso Wetland Park, UMfolozi swamp state, causing some part of land within these wards to be associated with fatalism and dissidences. Whereas the rest of the 15 wards are located to the far East of environmentally sensitive areas (Mtubatuba IDP, 2017). The following map indicates the location of

municipal wards, the sensitivity of the environment and land ownership in each of the ward.

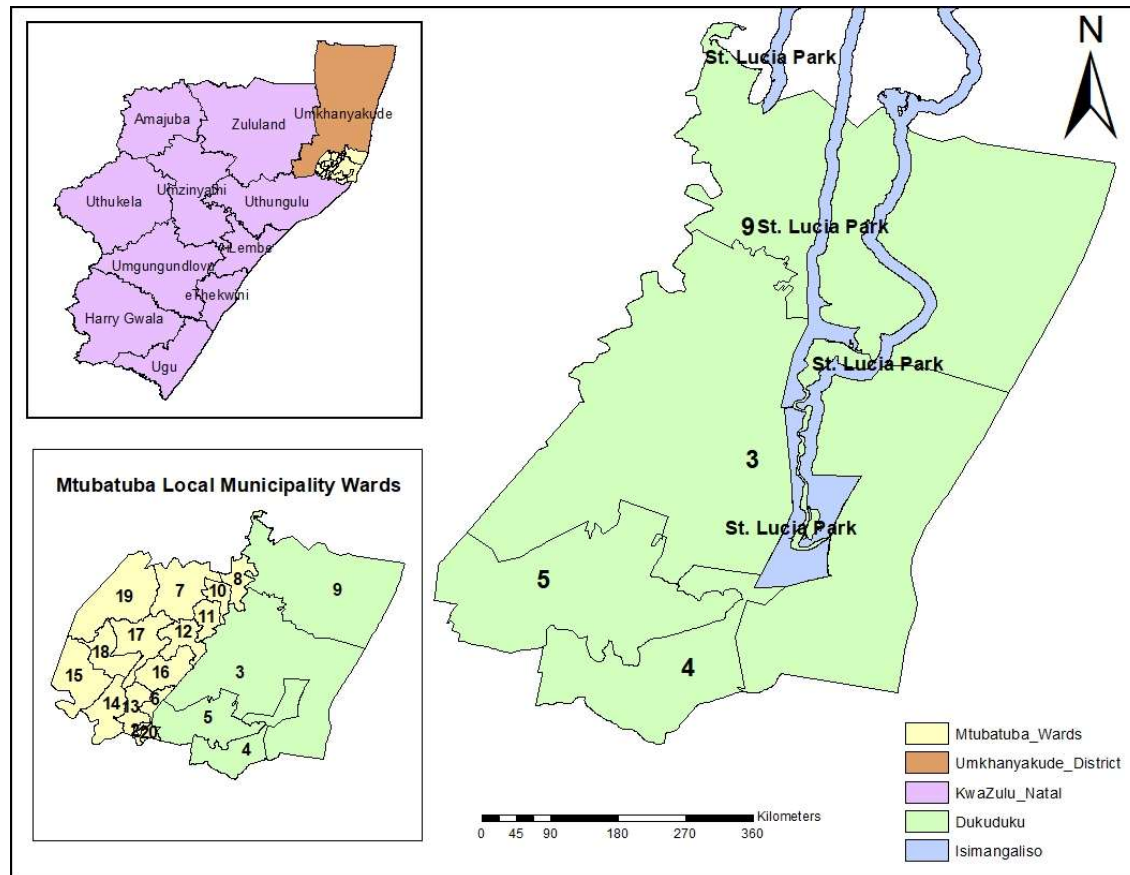


Figure 4.2: Mtubatuba local municipality wards.

#### 4.2.3 Demographic, land distribution and geology of the study area

The Community survey (2016, cited in the Mtubatuba IDP, 2017) records the sum of 202176 as the total population size of Mtubatuba local municipality, whereas on the other side StatsSA (2011) reflects 5329 as the total population size of Dukuduku. The municipality has a total of 70 percent of land administered by Ingonyama Trust and 30 percent belongs to the state, private and Dukuduku trust. Uneven membership of the community and traditional land allocation practices are the major factors that shape settlement pattern of the area with Hluhluwe Game reserve acting as the main boundary in the structuring of the spatial pattern of the municipality (Mtubatuba IDP, 2017). This is supported by the limited development in places that are in strong proximity to the game reserve and the social politics of distribution regarding the spatial distribution of human settlement. The area is characterised by shallow lithosols on weathered bedrock and shallow soils on bedrock. The area has lobombo rock

formations, mudstone and shales with most of the municipality having sandy rocks across the coastal regions (Mtubatuba IDP, 2017). The Dukuduku area is the home to numerous ecosystems, wetlands as well as major rivers, namely, UMfolozi River, Msunduzi River as well as the St Lucia River. The following map indicates geomorphological features within the study area.

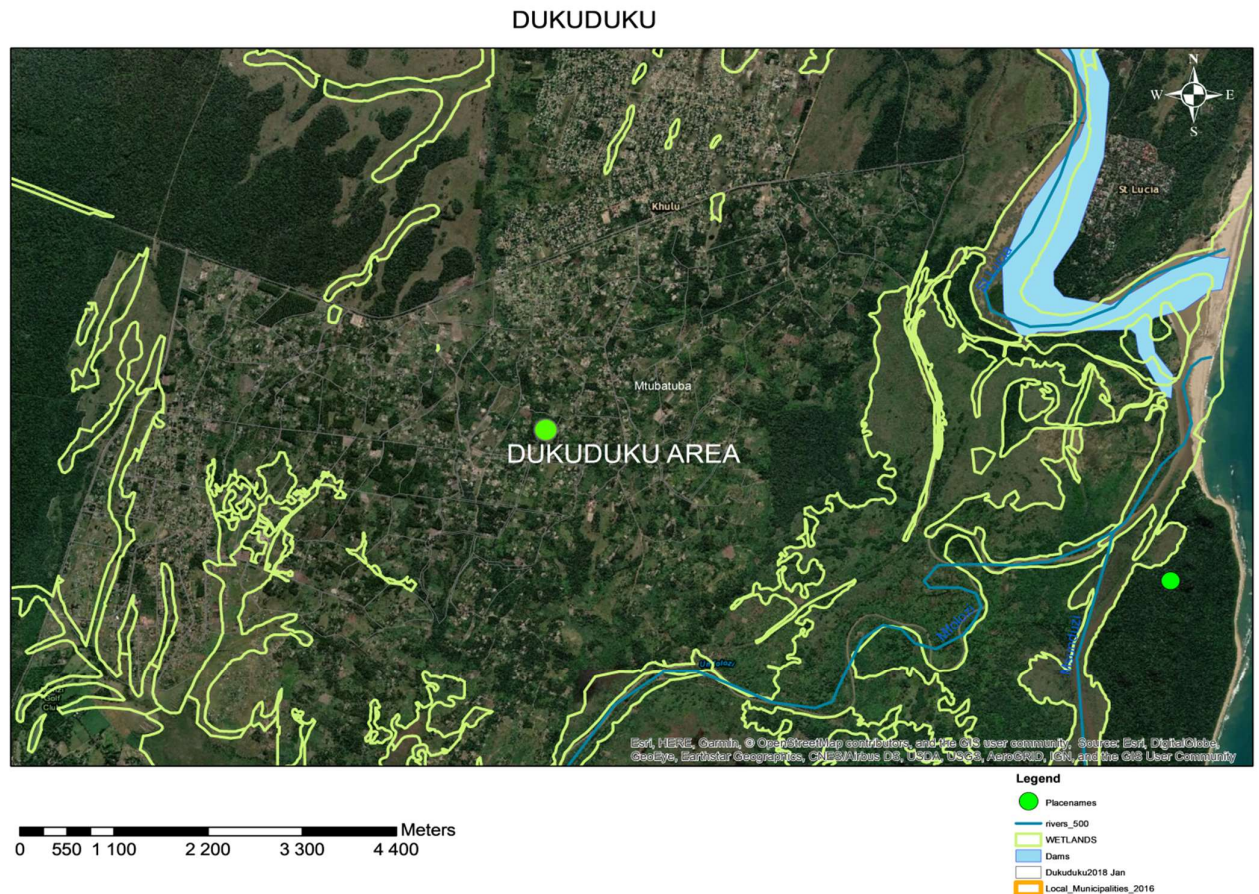


Figure 4.3: Geomorphological features in Dukuduku area

### 4.3 DISTRIBUTION OF LAND USES FOUND WITHIN MTUBATUBA LOCAL MUNICIPALITY

#### 4.3.1 Residential use

The settlement pattern found in the municipality is mainly in the form of expansive rural settlements which are characterised by the scattered unevenly in space with the development in most of the areas typically traditional or in homesteads *Imizi* i.e. Indlovu Village, Khula Village, Mpukunyoni Traditional council as well as Dukuduku resettlement area. The municipality also has Formal Township or urban areas which



include places like Riverview, Nordale, St Lucia and KwaMsane Township (Mtubatuba IDP, 2017). The total of 70 percent of the land belongs to Mpukunyoni Traditional council and the rest of 30 percent is occupied by township, and suburbs. Rural homesteads are allocated following the traditional land allocations system driven by the Induna and neighbours as witnesses (Mtubatuba IDP, 2017). In this case this can be regarded as the allocation process that involves no issuing of title deeds, where homesteads are measured in a way that it accommodates dwelling units, a kraal and some space for crop production. Such allocation varies with the position of each beneficiary in the community, making people who are related to top community leaders getting more land than normal people. Recently it can be confirmed that Ingonyama Trust Board has now embarked on issuing written documents with the stamp from the office of the Chief *Inkosi* where the head of household's name appears as the sole and full owner of the stand.

In Dukuduku, the area is characterised by the dispersed rural settlement pattern with rondavels and traditional huts *Amaqhugwane* and limited settlement space. Most part of the land is the state owned resulting to the unrests that has been going for years between the government and the community.

#### **4.3.2 Grazing land**

Large tracks of vacant land are observed in between settlements as the area is characterised by dispersed type of settlement. In spite of that being said above, none of the available land has been properly declared as the grazing land (Mtubatuba IDP, 2017). The carrying capacity has not been determined, as this has not been assigned as the grazing land as it is again not easier to be managed nor controlled in accordance with the norms and standards for grazing land (Mtubatuba IDP, 2017). This again proves that the number of livestock or cattle for each household allowed to keep is not controlled. This then could lead to the degradation of the available land in the area as improper management is seen as evident. Dukuduku has very small pieces of land, which they utilise for grazing purposes as most of the area is dominated by small-scale farms, and mostly state and privately owned land. The future status of the present small-scale farms is seen deteriorating due to the ongoing political land unrests in the area.

### **4.3.3 Conservation and Tourism**

#### **a) Hluhluwe- Imfolozi Park**

The park was first created in 1895 as a conservation area, and subsequently as Hluhluwe Game Reserve in 1897 (Mtubatuba IDP, 2017). The site was first proclaimed by the name of Imfolozi junction reserve in 1895 and then later changed to Umfolozi Game reserve in 1897. The park is divided by three main water courses, the white uMfolozi, the Black UMfolozi River and Hluhluwe River with its tributaries, Mansiya, Manzibomvu and Nzimane (Mtubatuba IDP, 2017). The aim of the park is to conserve areas and species that are listed as threatened and in need of protection.

#### **b) iSimangaliso Wetland Park.**

The declaration of iSimangaliso wetland park authority as a World Heritage site, came about as a result of the incorporation of the World Heritage Convention into South African parliament, which resulted to the passage of World Heritage Convention act 49 of 1999 (Mtubatuba IDP, 2017). The site was declared by United Nation Educational, Scientific and Cultural Organisation (UNESCO) in 1999, resulting from facts that the site is one of the biggest global sites that support high level of biodiversity which constitutes variety of threatened and protected species (iSimangaliso Wetland Park, 2016).

Again, the agreement to manage the iSimangaliso Wetland park authority was passed between the involved active stakeholders, The park authority, KZN conservation board, KZN tourism, Ezemvelo KZN Wildlife, Trade and Investment KZN, South African tourism, uMkhanyakude District municipality, Land Claimants, Department of Environmental affairs (ocean and coast), Department of Rural Development and Land Reform (DRDLR), Department of Water Affairs (DWS), Department of Agriculture, Forestry and Fisheries (DAFF), Ingonyama Trust as well as KZN Environmental affairs (iSimangaliso Wetland park, 2016). iSimangaliso wetland park is an estuary that boasts among other attractions the largest forested sand dunes , which reach up to 180m (600 feet) (Mtubatuba IDP, 2017). The park consists of five individual ecosystems and they fully integrate with each other, therefore as a result the municipality has developed Integrated Management Plan as a tool to manage and protect the park against any activity that could pose threat and deteriorate the status of the park.

#### **4.3.4 Agricultural activity and mining**

Agricultural activity is the principle economic activity in most of the rural areas within Mtubatuba local municipality and hence acting as the source of livelihood for majority of rural households (Mtubatuba IDP, 2017). Rural communities mainly depend on fruit and vegetables farming, sugarcane farming, forestry and livestock, as a result activities such as settlement planning and mining, tend to limit agricultural land which is then seen as a barrier towards achieving sustainable food production for rural households in Mtubatuba municipality (Mtubatuba IDP, 2017). The granting of rights to the existing Somkhele coal mining situated approximately 20km west of Mtubatuba along R618 has brought along negative impacts on the existing agricultural potential land where relocation of nearby households within Mpukunyoni were observed and more than 23 027ha of land has been cleared of which most part of it consisted of agricultural and grazing land. Again, the proposed sand dune mining by RBM in the coastal region of St Lucia has again caused unrests between communities, environmental groups and the government due to the fact that the proposed mining is going to cause ecological degradation of coastal region. Environmental Management Plan was therefore developed in order to address settlement planning and proper land use management to ensure that good agricultural land is not diminished further. In Dukuduku, the agricultural land is limited, with people utilising mainly their homesteads in order to sustain their agricultural production (Mtubatuba IDP, 2017).

#### **4.4 CONCLUSION**

The Mtubatuba municipality is home to a number of ecosystems that is widely found in the area. The on-going dissidences between the community of Dukuduku, the state and the iSimangaliso wetland park authorities is seen as the major barrier towards the sustainable agriculture in the area, with government opting for the removal of people in the area in preparation of cabinet projects such as hotels, whereas on the other side RBM is opting to mine sand dunes along the coastal region of St Lucia. The following chapter addresses the methodology that is used in this study.



## **CHAPTER 5: RESEARCH DESIGN AND METHODOLOGY**

### **5.1 INTRODUCTION**

This chapter discusses the methodology and research design that was followed in attaining information from the field in order to achieve the set objectives and answering the research questions of this study. The validity, ethical consideration as well as constraints encountered in the field are also discussed.

### **5.2 RESEARCH DESIGN**

The study followed the mixed method approach. Mixed methods research involves the use of more than one approach or method of design, data collection, or data analysis, within a single programme of study, with integration of the different approaches or methods occurring during the programme of study (Bazeley, 2006 cited in Johnson et al, 2007). In other words, mixed method design is a systematic integration of both qualitative data and quantitative methods in a single study for the purpose of obtaining a fuller picture and deeper understanding about the problem under study. The mixed method approach has three paradigms which are listed and explained below:

- a) Explanatory sequential mixed method design
- b) Exploratory sequential mixed method design
- c) Convergent parallel mixed method design

#### **5.2.1 Explanatory sequential mixed method design**

This method involves a two-phase project in which the researcher first collects the quantitative part of the data, analyses the results, and thereafter utilises the outcome of quantitative results to build on the qualitative phase. In this method of the research, the outcome of quantitative results informs the researcher about the characteristics of the participants to form part of the sample size of qualitative phase and the type of questions to ask them (Creswell, 2014). The simplest term for this is collecting data using questionnaires in an open ended question format, the results are analysed from the questionnaires, and thereafter the site visit follows in order to conduct one-on-one unstructured interviews, focus groups informed by the quantitative results in order to ascertain if the two data sets complement each other.

### 5.2.2 Exploratory sequential mixed method design

This is the reverse of the explanatory sequential mixed method design, in other words, in this case the researcher first collects qualitative data, analyse the results and then uses the outcome of the qualitative results to purposefully select potential participants to form part of quantitative phase (Creswell, 2014). The basic intent for this is to “develop measurements with specific samples of populations and to check if data from a few individual group (qualitative) can be generalised to a larger group (quantitative)” (Creswell, 2014:275). The basic example here is when the researcher conduct focus groups, observations and one-on-one structured interviews, analyses them and then develops the questionnaire based on the results from qualitative results to check if the very same results are going to be obtained when the instruments has been changed to the quantitative instrument.

### 5.2.3 Convergent parallel mixed method design

This method refers to the case where the researcher collects both qualitative and quantitative datasets simultaneously. After the collection, the researcher analyses the two datasets separately and then later on merge them to check if the findings confirm of disconfirm each other (Creswell, 2014). This method has three to four steps involved which are displayed in a Figure 5.1 below and explained thereafter.

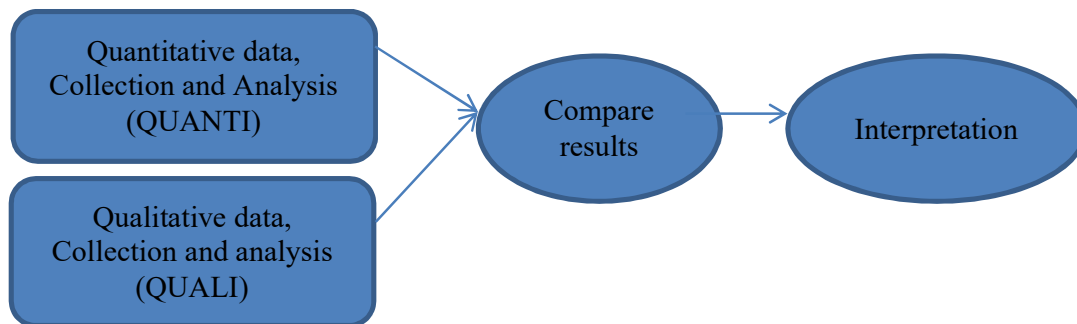


Figure 5.1: The convergent parallel mixed method design: Source: Creswell (2014:269)

**Step 1: Collection and analysis of both Qualitative and Quantitative data**

This step of convergent paradigm involves collecting both qualitative and quantitative datasets simultaneously. In this study, the qualitative path of data collection was made through semi-structured interviews, whereas questionnaires were utilised for quantitative method dataset collection in June-July 2019. This is further explained in the following sections on data collection and analysis.

### **Step two: Comparing results**

Merging and converging the results in the convergent parallel mixed methods design is always associated with challenges. As a result three approaches to merge the two datasets have been designed, and they are (a) data transformation, (b) joint display of data and (c) side-by-side comparison (Creswell, 2014). Data transformation refers to the case where the researcher changes the qualitative codes or themes into quantitative variables and then merges the two quantitative databases. The joint display of data is when the two datasets are merged in a table or a graph (Creswell, 2014). In this study, the side-by-side approach was utilised where the researcher began with the reporting of quantitative statistical results and then discussed the qualitative findings that either confirm or disconfirm the statistical results. The steps on the side-by-side approach are explained later on the section of the analysis of data.

### **Step three: Interpretation**

This step of convergent parallel paradigm is where the results from quantitative and qualitative datasets are tested for divergence or convergence. This is explained later on the analysis and interpretation of results.

In line with the convergent mixed methods paradigm, the following sections explain in full the qualitative and quantitative approaches in terms of sampling, instrumentation and data collection and analysis.

## **5.3 QUALITATIVE METHOD**

This method of collecting data is mainly known as an inquiry that seeks to understand lived experiences within their socio-historical context (Haverkamp and Young, 2007 cited in Mukwembi, 2012). This method relies on texts and image; it also has unique steps in data analysis (Creswell, 2014).

### 5.3.1 Sampling method and size

The study employed non-probability sampling techniques (purposive sampling), of individuals within the network of land and agrarian transformation. This includes the total of nine key informants within the study area as well as the local municipality. As a result, the following participants were purposively sampled. The municipal mayor, municipal official, the ward councillors of wards three, four and five, two team leaders of small-scale growers as well as the Induna to represent the Mpukunyoni traditional council (Table 5.1 below). The reason for the selection of the aforementioned participants is that they have in-depth understanding about the study area and small-scale farming that is on-going in the study area.

Table 5.1: Qualitative sample

| <b>Designation</b>                        | <b>No of Persons sampled</b> |
|-------------------------------------------|------------------------------|
| Municipal Mayor (Mtubatuba municipality)  | 1                            |
| Municipal officials                       | 1                            |
| Ward Councillors                          | 3                            |
| Team leaders (Small-scale farmers co-ops) | 2                            |
| Induna                                    | 1                            |
| <b>TOTAL</b>                              | <b>8</b>                     |

### 5.3.2 Instrumentation and collection of data

The instrument (data collection tool) that was utilised was the in-depth structured interviews. Respondents in the field were selected based on the fair number of both sexes, as this helps in ensuring that socio characteristics of each group of respondents were taken into account. The researcher had to make appointment to meet with the mayor of Mtubatuba Municipality, Mr Gumede, fortunately enough the appointed was passed and the date was set. The councillor of ward four was telephonically interviewed due to the inability to meet with the researcher; the conversation was recorded during the interview. Ward three and five councillors were met and interviewed in their respective homes. The municipal official from the cooperate

services was selected for interview which happened in the municipal offices following the date of the mayor interview. The Induna of the community who is also championing small-scale farmers in Dukuduku area was interviewed. Two team leaders of the small-scale farming co-ops were interviewed on the same day of quantitative data collection.

### **5.3.3 Analysis of data**

#### **5.3.3.1 Content analysis**

Neuman (2011) outlined 6 (six) major steps that one needs to follow in order to meet objectives of content analysis. These steps are, reading the transcripts, identification of common patterns, establishing common themes, explaining and connecting the themes to the research aim. In this study the researcher analysed written transcripts of respondents where a certain punctuation symbols were used to indicate the tone of the voice of respondents. After reading through notes and transcripts, the researcher then noted down recurring statements that were labelled, described and summarised to portray the respondent's feelings towards the problem being investigated. The researcher then established themes which are the words with explicit point of meaning in each of the respondent's answers. Themes that were created were then connected to the research aim, which is to analyse the sustainability of small-scale farming in Dukuduku area,

## **5.4 QUANTITATIVE METHOD**

### **5.4.1 Population of the study area**

The StatSA (2011) reveals that the total population of Dukuduku is 5329, with almost 92.31 percent being the IsiZulu native speakers. The literacy rate in the area is relatively low and the most observed age group during the time of data collection were the elders. The exact number of the small-scale growers in the area is still uncertain since the agricultural co-operatives in the area have no formal records on the number of their members, but during the time of data collection, the researcher was informed that means are in place in order to address the issue. The challenge to that is that, members have been coming and leaving the co-operatives opting for other economic activities in the area claiming that the agricultural industry in the area is lacking basic support from the government.

### 5.4.2 Sample size

Castillo (2009:3) described target population as “the entire group of individuals or objects the researchers are interested in, usually with varying characteristics”. The target population of the study were the people that are in direct linkage with the small-scale farming, this includes the beneficiaries of land restitution, more especially those who are the active small-scale farmers. Below are the sample size calculations as recommended by Cochran (1965).

| Calculating the constant ( $n_0$ )                                                       | Calculating the Sample size ( $n$ )                                                           |
|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| $n_0 = \frac{Z^2 pq}{e^2}$ $n_0 = \frac{(1.65)^2 (0.5 \times 0.5)}{(0.10)^2}$ $n_0 = 68$ | $n = \frac{n_0}{1 + \frac{(n_0 - 1)}{N}}$ $n = \frac{68}{1 + \frac{(68 - 1)}{5329}}$ $n = 67$ |

From the 67 (sixty seven) of the total sample size, 58 (fifty eight) respondents were selected randomly to form the total of quantitative sample. Participants from the four (4) co-ops were selected randomly and questionnaires were self-administered to them.

### 5.4.3 Sampling technique

The respondents were selected for interviews by following the simple random sampling technique, where every individual in the sample size stood the chance of being chosen. Every community member who is an active small-scale farmer was targeted to participate in the study. As a result, their champion was helpful by assisting the researcher in terms of introducing him to every small-scale farmer in the area.

### 5.4.4 Instrumentation and collection of data

Surveys were employed to obtain information from the participants in the field, through the utilisation of questionnaires. The questionnaire consisted of both close and open ended questions, where open ended questions were offered as a choice to each respondent. Each questionnaire had six sections grouped in a way to address each research objective. Section A consisted of quantitative demographic characteristics of

the community, section B aimed at addressing objective one of the study, section C aimed addressing objective two, the fourth section was designed to meet the objective three, section five designed to meet objective four of the study and lastly the sixth section consisting of the personal views of each of respondents. In the day to day data collection, the researcher liaised with Mr Maphanga so that the small-scale farmers were informed. Mr Maphanga is the founder of Sisemnothweni secondary co-ops which parents three co-ops namely Sombhekwas Co-op, Bright widows Co-op, and Simunye Co-op. During the time of data collection, the most observed challenge was that very few were able to read and respond without any verbal interpretation even though questions were translated to isiZulu in a written format. In response to that, the researcher was aided by two of his peers in order to ensure that the accurate information is obtained from the field as ethics of the research study emphasises accuracy in the collection of data.

#### **5.4.5 Analysis of data**

The collected data through questionnaires was coded. The coding process involves, representing the data in a numerate order of appearance from the questionnaire, where each question is represented by a certain number. This was done for the whole of the questionnaire, when each number that represents the certain question has been coded into the spread-sheet. The coded information was then exported into the Statistical Package for Social Sciences (SPSS) for the generation of frequency tables as well graphs.

### **5.5 GEOGRAPHICAL INFORMATION SYSTEM (GIS)**

The Geographical Information System (GIS) was utilised to analyse and to meet objective one of the study, which was to map the spatial extent of small-scale farming in the study area from 2001-2019. In all this, maps from 2001 to 2019 were generated and compared so to check the development of small-scale farms between the specified periods. GIS also helped to analyse the spatial distribution of farms and their proximity to environmental sensitive areas i.e. the Great iSimangaliso wetland park, since they are marked as “do away areas”. In addition to that, again it was very crucial to map the so called “protected areas” and agricultural active land and to display their proximity to each other in the maps. GIS was again utilised to demarcate municipal wards that are triggered by this study as not all wards are involved, which are the

wards three, four, five, eight and nine. Figure 5.2 below summarises the whole methodology of the study.



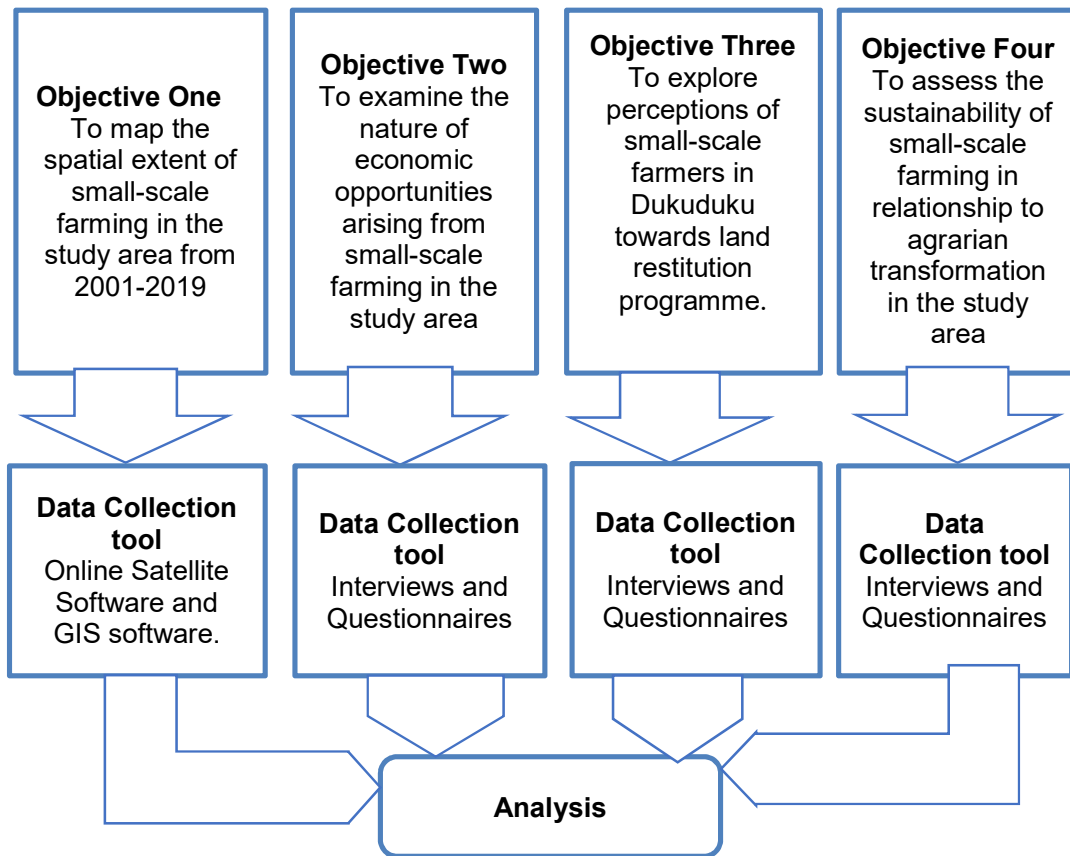


Figure 5.2. Summary of methodology

## 5.6 LIMITATIONS OF THE STUDY

During the period of data collection, illiteracy was a challenge, which compelled the researcher to extend the time allocated for data collection, because of the need to explain each and every question from both the structured interviews and questionnaires. The political instability in the area also contributed to the delays of data collection of this study because some wards were not visited due to that people did not trust anyone. The researcher was able to distance himself from political dynamics in order to obtain candid responses from participants. Ward eight and nine councillors were not interviewed due to the scarcely available small-scale farming in their wards, and the political unrests regarding the “protected areas” is widely evident in their wards. Another challenge that was faced was that the Mtubatuba municipality does not have the department precisely designed to deal with legal matters, as the issue of land restitution requires a lot of legal interference. Some community members were not comfortable to provide the researcher with information fearing for their lives, as they believe that they might be seen as people who are leaking the information from within their community.

## **5.7 CONCLUSION**

This chapter explained the methodology and research design which was followed in this study. This was achieved in terms of discussing a variety of methods that are associated with the study of this kind, data collection and analysis as well as the GIS. The following chapter focuses on the analysis of the data which was collected following procedures explained in this chapter.

## CHAPTER 6: ANALYSIS AND INTERPRETATION OF DATA

### 6.1 INTRODUCTION

In this chapter, the findings of this study are analysed, interpreted, and the research questions are answered. The chapter begins with the presentation of the demographic characteristics of each respondent. The second section responds to the first objective of the study which is to map the spatial distribution of small-scale farming between 2001 and 2019. This is followed by section three which addresses objective two. The fourth section analyses perceptions towards land restitution. The fifth section engages with the fifth objective of the study and the final part concludes the chapter.

### 6.2 DEMOGRAPHIC CHARACTERISTICS

In total forty-three (43) respondents participated in the study. Of this total of respondents, eight were purposively sampled and thirty-five were sampled randomly. In other words, the proposed sample size of sixty-seven was not reached due to the limitations of the study that are discussed in the previous chapter. Table 6.1 below illustrates the gender characteristics of the research participants.

Table 6.1: Gender characteristics of the research participants

| <b>Gender</b> |           |              |
|---------------|-----------|--------------|
|               | Frequency | Percent      |
| Male          | 17        | 48.6         |
| Female        | 18        | 51.4         |
| <b>Total</b>  | <b>35</b> | <b>100.0</b> |

Table 6.1 shows that, there were more women than men in small-scale farming in the study area. This is because most men in Dukuduku have migrated to nearby cities for better economic opportunities, leaving behind women as heads of households. This then leaves women with nothing but to work out the land in order to supplement the income and improve food security for their families. The average household member size in the study area is five to ten children per home. In addition to this, Table 6.2 below depicts the ages of the respondents.

Table 6.2: Age characteristics of the research participants

| <b>Age</b>   |           |            |
|--------------|-----------|------------|
|              | Frequency | Percent    |
| 15-25        | 6         | 17.1       |
| 26-36        | 5         | 14.3       |
| 36-46        | 3         | 8.6        |
| 46-56        | 7         | 20.0       |
| 56-66        | 8         | 22.9       |
| 66 and above | 6         | 47.1       |
| <b>Total</b> | <b>35</b> | <b>100</b> |

From table 6.2 it is clear that the elderly population remains the dominant participants in small-scale farming in Dukuduku. This account for forty seven percent of the total quantitative sample size whereas the youth accounts for thirty one percent. This is because the young people in Dukuduku do not want to involve themselves in agriculture because they believe that it is old fashioned. Those youth that participate in agriculture in the area do so for the purpose of raising funds in order to get registration fees in tertiary institution (Interview with the Induna, August 2019). Figure 6.1 shows the employment characteristics of small-scale farmers in the study area.

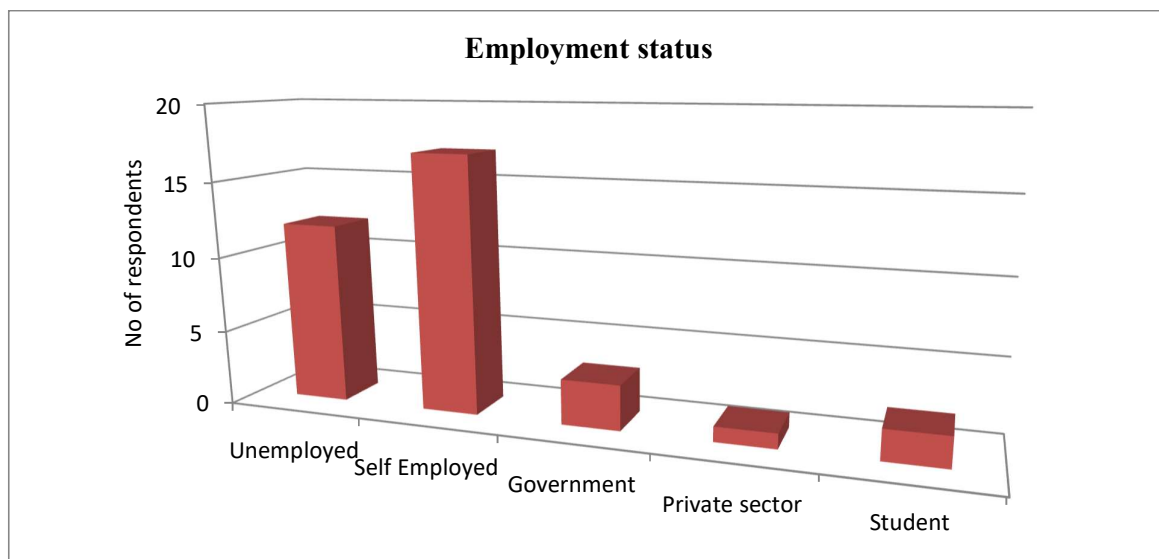


Figure 6.1: Employment status of respondents

Most of the community members in Dukuduku were self-employed, with approximately forty eight percent of small-scale farmers surviving on selling of fruits and vegetable in the markets, and selling other handicraft objects to tourists who visited iSimangaliso Wetland Park. Those that are unemployed were surviving through remittances, government grants as well as periodic job opportunities that were brought by government Expanded Public Works Programme (EPWP). These jobs do not last them long, with possible rotational of workers after a specific time. Out of all the respondents, only one worked for the private company, of which is Somkhele Coal Mining located in Mtubatuba on a part-time basis. Six percent of the respondents are the students in nearby colleges, in KwaNongoma Mthashana FET College, as well as the UMfolozi College in Esikhaleni campus. Table 6.3 represents the education status of the community.

Table 6.3: Level of education of respondents

| <b>Level of Education</b> |                  |                |
|---------------------------|------------------|----------------|
|                           | <b>Frequency</b> | <b>Percent</b> |
| Primary                   | 18               | 51.4           |
| Secondary                 | 8                | 22.9           |
| College                   | 5                | 14.3           |
| Tertiary                  | 4                | 11.4           |
| <b>Total</b>              | <b>35</b>        | <b>100</b>     |

The results show that fifty one percent of the respondents had attained primary education level, twenty three percent had secondary level, fourteen percent had college education and eleven percent had tertiary education. This suggests a low level of education in the study area and corroborates StatsSA (2011) findings.

### **6.3 SPATIAL DISTRIBUTION OF SMALL-SCALE FARMING IN DUKUDUKU**

In this section of the study, objective one is addressed. This objective sought to map the spatial distribution of small-scale farming in the study area using the Geographical Information Science (GIS). This is the most useful tool in attaining the information about an object without the physical contact. To respond to this objective, the researcher analysed the spatial distribution in question over the five year interval, from 2001 to 2019 so as to compare the changes over time. Figure 6.2 below indicates the spatial distribution of small-scale farming in the study area in 2001.

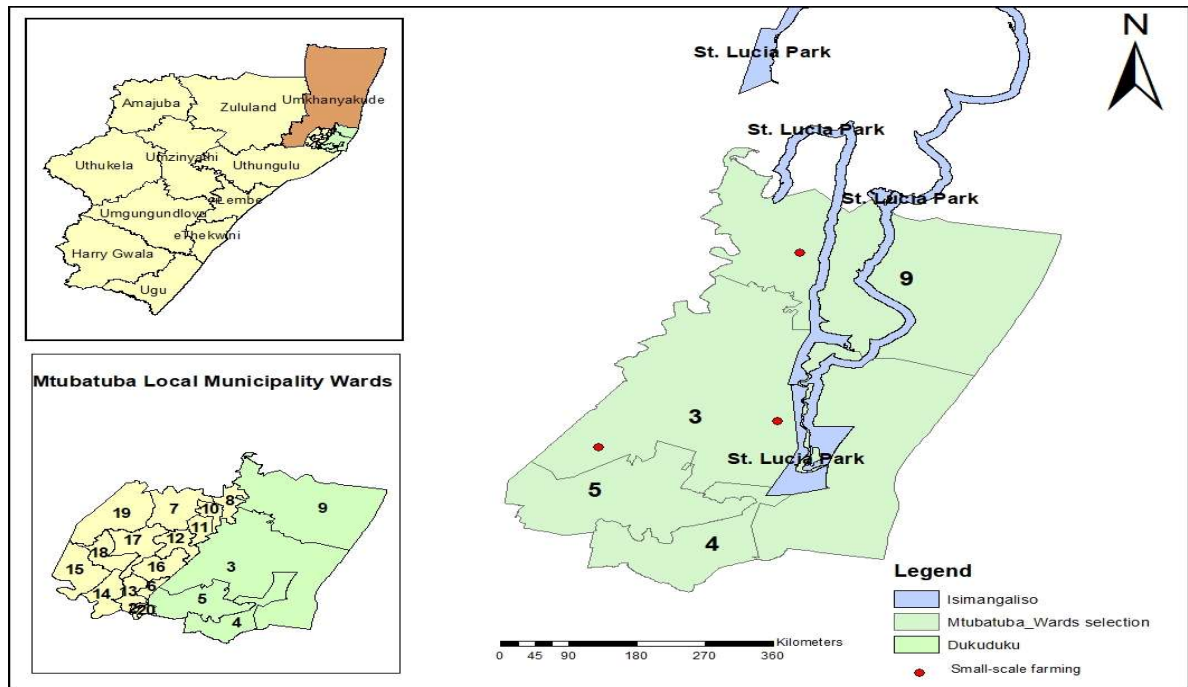


Figure: 6.2: Distribution of small-scale farming in 2001

From the figure 6.2 above, it is evident that only ward nine and ward three had small-scale farming during this period. This marks the period of land restitution. In other words, the residents were newly resettled and so as a result, most people had not yet migrated to the area. The area was densely covered by forest and the clearing had not occurred yet occurred. Figure 6.3 represents the small scale farming for 2006.

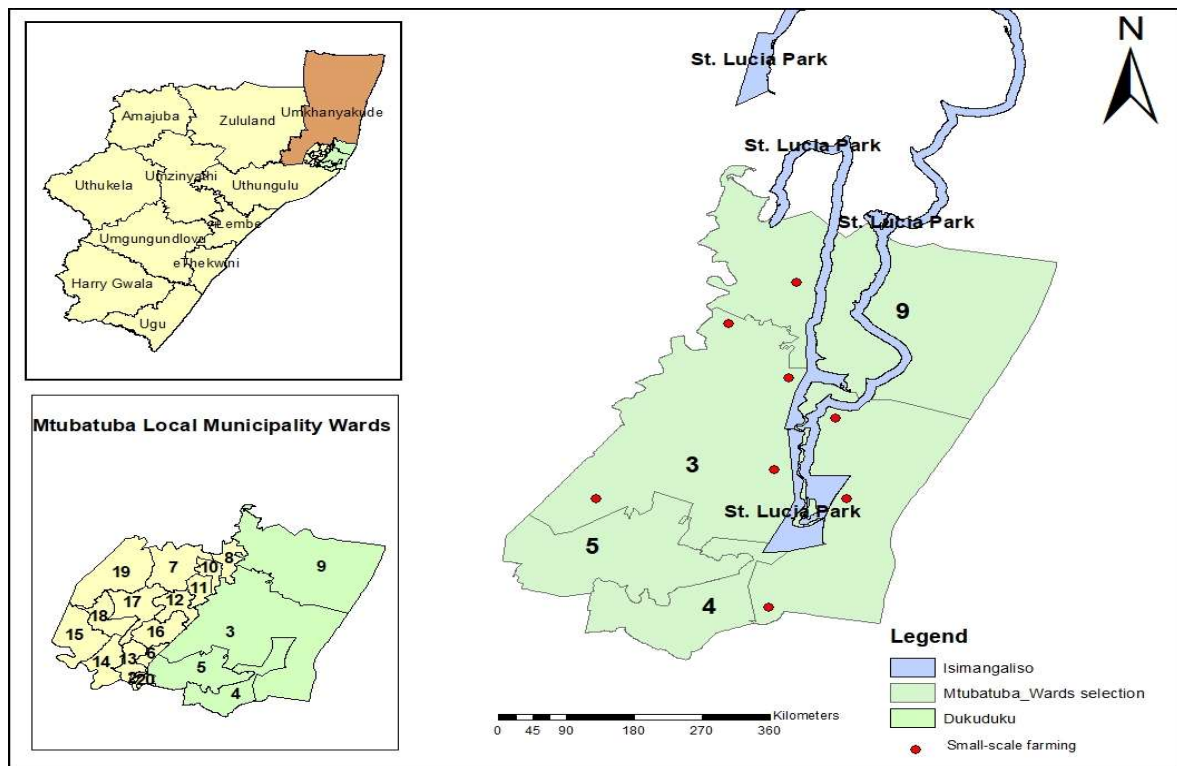


Figure 6.3: Distribution of small-scale farming in 2006

In 2006, one can notice that small-scale farming had started to boom more especially in ward three along the UMfolozi River, with both wards four and five not showing any sign of small-scale farming and most of these farms were forestry and sugarcane. The factor that drove the development of small-scale farming along the UMfolozi River could be the close access to water for irrigation. During this period, the fight to remove small-scale farming along the banks of UMfolozi River was generated by private environmental groups and the state, claiming that they were impacting negatively to the water table of the area (Interview with the co-op leader, August 2019). The following figure (Figure 6.4 represents the small-scale farming in 2011.

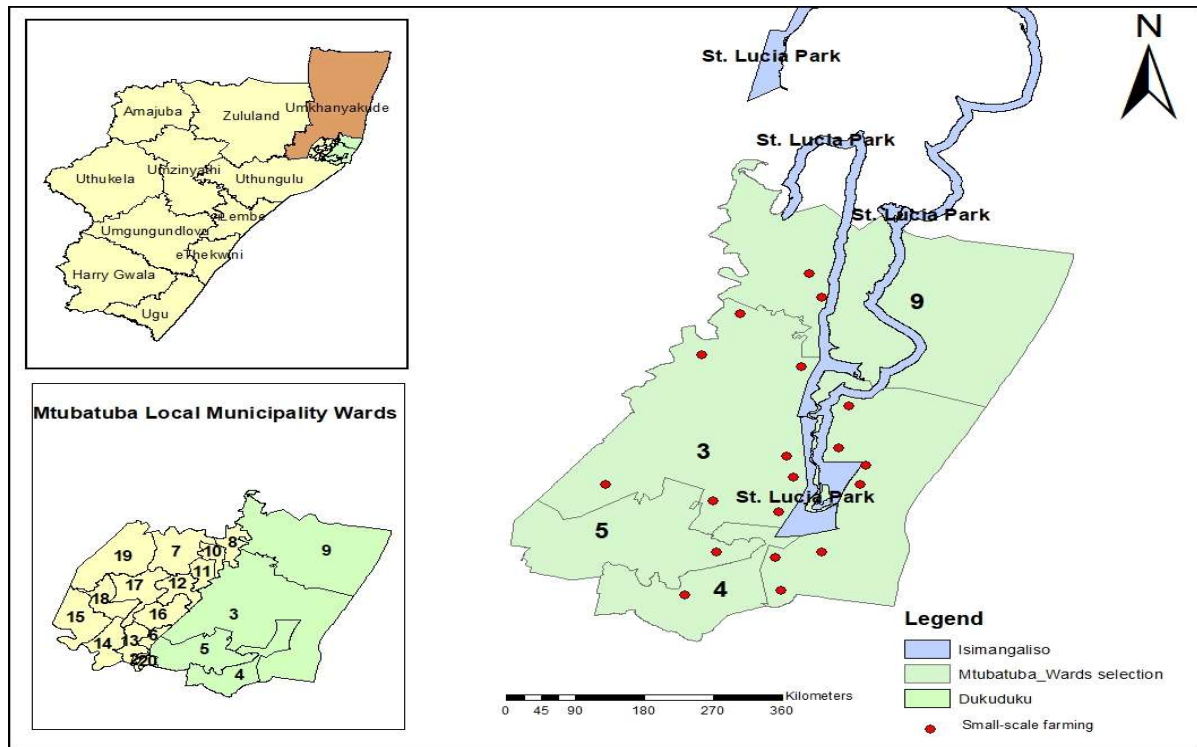


Figure 6.4: Spatial distribution of small-scale farming in 2011

Small-scale farms had increased in Ward three, more especially on the northern side of UMfolozi River. The reason for this, which was discussed in the preceding part, is the need to be close to the river for irrigation purpose. Four small-scale co-operatives were registered during this period to work together and start up the fruits and veg production market (Interview with the Induna, August 2019). At this time, small-scale forestry and sugarcane farming was dominant in the area. There was also an observed increased in small-scale farms in both Wards four and five. Figure 6.5 indicates the distribution of small-scale farming in 2016.



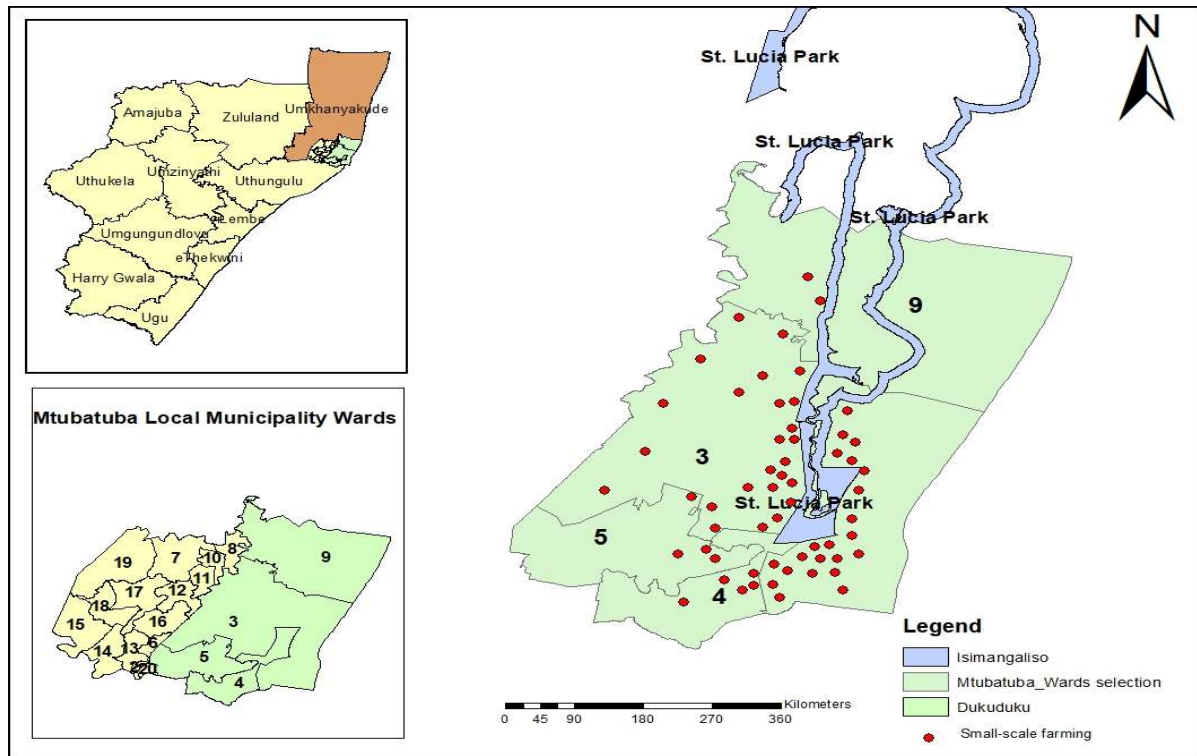


Figure 6.5: Spatial distribution of small-scale farming in 2016

The establishment of co-operations in the period between 2011 and 2016 has witnessed an increased in the small-scale farming in Dukuduku. The most observed trend in the distribution of small-scale farming in the area is the linear growth along the UMfolozi River. This growth has led to various debates and unrests in the area, because the fights by the private environmental authorities and the state to remove small-scale farms that are located in proximity to the Greater iSimangaliso wetland park are getting stronger (Interview with Induna of the community, August 2019). It is in this period where the closure of UMfolozi mouth occurred, which resulted to the flooding of the crops for those that are along the UMfolozi River (Interview with Induna of the community, August 2019). Figure 6.6 below indicates the distribution of small-scale farming from 2017 to today.

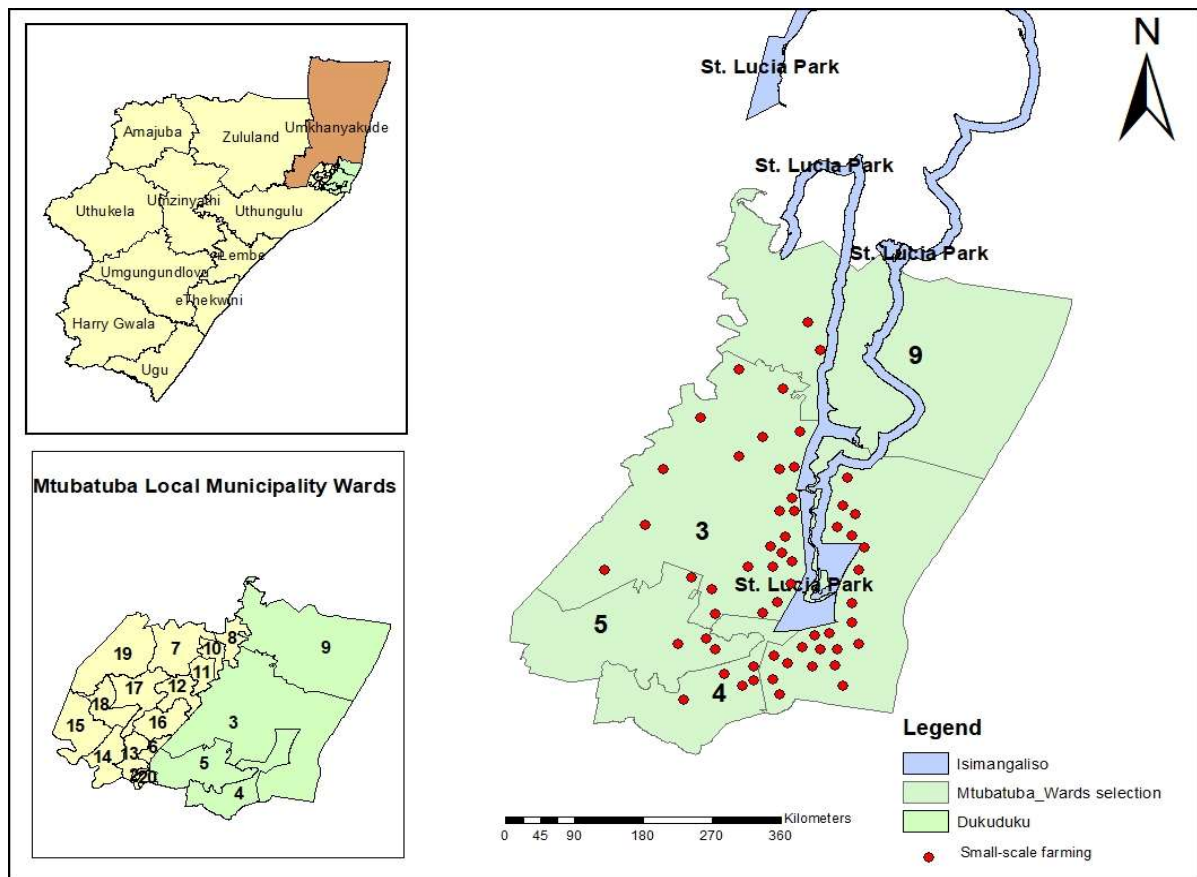


Figure 6.6: Spatial distribution of small-scale farming today

This is the current state of the small-scale farming sector in Dukuduku. It shows an addition of more small-scale farms in Ward three. This is because the Dukuduku community is mostly dominant in Ward three, and the soil in the area favours the plantation of crops like fruit and vegetables. The future distribution of small-scale farming in the area could be doubled, although the community is complaining about the lack of agricultural support from the government (Interview with co-op leader, August 2019). In answering research question one of the study, one can therefore conclude that the small-scale farming sector has increased over the period of nineteen years. This is supported by the remote sensing analysis (GIS data presented above) of small-scale farming in the area which indicates the positive growth in the distribution of small-scale farming in the area.

## 6.4 SMALL-SCALE FARMING AND ECONOMIC OPPORTUNITIES IN DUKUDUKU

The second objective of the study was to examine the economic opportunities arising from small-scale farming in Dukuduku community. In this regard, this section discusses the issues relating to economic opportunities brought by small-scale farming of which is the generation of employment and business opportunities.

### 6.4.1 Job opportunities brought by small-scale farming

From the results that were obtained in the field it can be deduced that, there were different types of small-scale farming in Dukuduku (Figure 6.7). These small-scale farms were then grouped based on the period it takes to harvest from the date of ploughing. Respondents were provided with options, and the results are provided on figure 6.7 below.

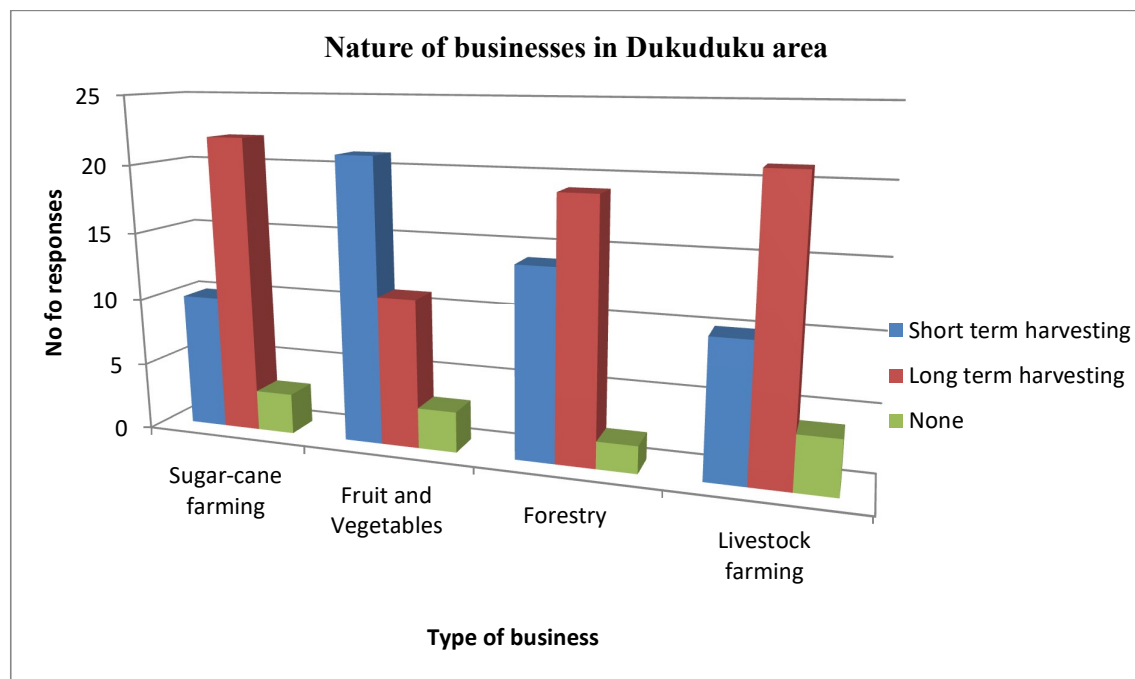


Figure 6.7: Small-scale businesses in Dukuduku

The most active small-scale farming in Dukuduku is sugarcane farming, followed by fruit and vegetables, forestry and livestock farming. But due to the short term harvesting of fruit and vegetables, it therefore remains the core farming activity in the area and thus plays a significant role in supporting the livelihood of the local community. From the figure 6.8 below, it is evident that small-scale farming does provide job opportunities to local people, more especially the elderly group of the

community. Eighty three percent of small-scale farmers agreed that small-scale farming does provide jobs; these jobs involves employing local people for clearing of land (Figure 6.9) in preparation of agricultural activities, weed eradication, and participating in small-scale farming as labours.

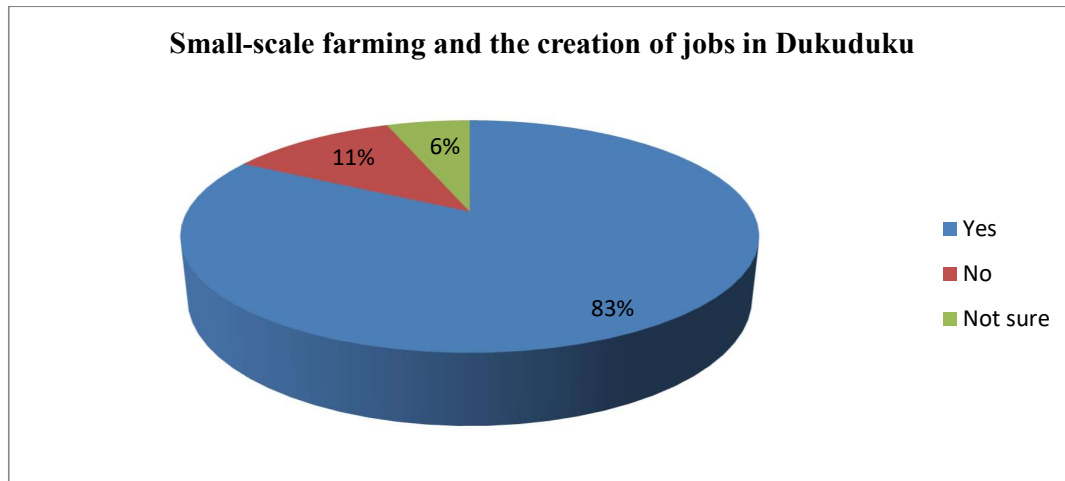


Figure 6.8: Job opportunities and small-scale farming

These results were further confirmed by the municipal mayor, the councillors and the municipal official, who stated that small-scale farming plays a huge role in the provision of jobs to local people of Dukuduku and Ezwenelisha, since these two neighbouring communities have relatively low rate of employment. In this respect, it was stated that “most people are employed during the weeding and harvesting because these farming activities are labour intensive and there is the need to produce so as so to meet the demand of the market, more especially local retails stores and school feeding schemes” (Interview with Mayor, June 2019). However the Induna, who is also the champion of small-scale farmers in the area, is not happy with the way small-scale farming is creating jobs for local people. He stated that the farming is creating seasonal jobs of which is something that, must be improved so that people are getting lifetime employment (Interview with Induna, August, 2019).



Figure 6.9: The cleared land in Dukuduku, Researcher camera: 29/08/2019

An example of employment creation is on this five hectare piece of land (Figure 6.9) which has been estimated to generate more than fifteen permanent jobs and thirty five temporary posts. The table 6.4 below details the kind of temporary jobs that are brought by small-scale farming to local people.

Table 6.4: Temporary jobs created by small-scale farming

| <b>Temporary Jobs</b> |                  |                |
|-----------------------|------------------|----------------|
| <b>Job Type</b>       | <b>Frequency</b> | <b>Percent</b> |
| Land preparation      | 15               | 42.9           |
| Weed eradication      | 6                | 17.1           |
| Tending the crops     | 8                | 22.9           |
| Other                 | 6                | 17.1           |
| <b>Total</b>          | <b>35</b>        | <b>100.0</b>   |

From this table, it can be said that small-scale farming provides variety of jobs to local people in Dukuduku, like land preparation. Land preparation involves those local people that get hired in order to clear the land in the preparation of agricultural activity. This includes renting machineries to clear the land, paying people to spray weed especially alien invasive plants in the area, as well as hiring local people to work in small-scale farming. Jobs are also offered in terms of the delivering fruit and vegetables to local retail stores, and school feeding schemes. One of the leaders of small-scale farmers believes that small-scale farming would have been highly profitable, but instead was making a loss, due to the corruption by the uMkhosinga

close co-operation, which is the government entity, but interferes with the small-scale farming activities in the study area (Interview with co-op leader, August 2019).

**6.4.2 Small-scale farming and business opportunities in Dukuduku**

The question of whether small-scale farming introduced business opportunities in the study area were also investigated. Figure 6.10 below represents the responses from small-scale farmers.

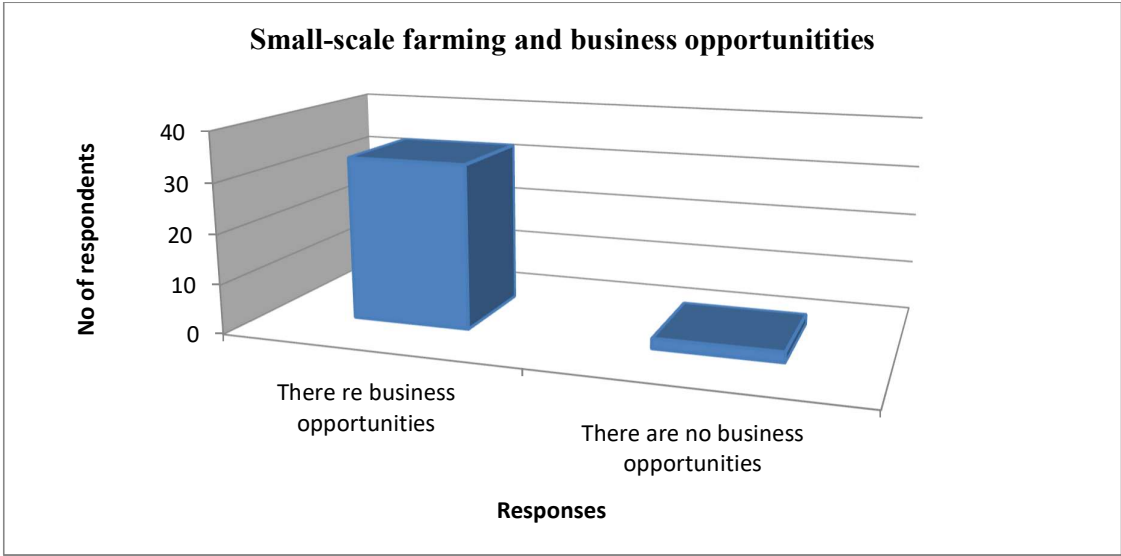


Figure 6.10: Business opportunities and small-scale farming in Dukuduku.

From the above results, it is clear that small-scale farming has a positive impact on the creation of business opportunities in Dukuduku. These business opportunities are in the form agricultural co-operations that are registered with the Small Enterprise Development Agency, (SEDA). Currently, there are four co-operatives. These co-ops are growing their fruit and vegetables (Figure 6.11) locally and distribute to local retail stores in Mtubatuba such as Spar.





Figure 6.11: Small-scale fruit and vegetables farming in Dukuduku, Researcher camera: 29/08/2019

The co-operatives produce different types of fruit and vegetables and operate closer to the wetland area. There was an agreement amongst the small-scale farming co-ops that exist in the study area to provide nearby schools with fruit and vegetable through school food feeding scheme, but due to the suspected corruption in the appointing contractor, UMkhosinga, their agreement was then terminated. However, the leader of small-scale growers was not satisfied with the way the government handled the matter, which failed to support the small-scale farmers (Interview with co-op leader, August 2019). This was corroborated by the municipal official who stated that small-scale co-ops in Dukuduku are generating business opportunities for the local community but the problem of support from the government still remain the main hindrance towards achieving maximum productive capacity (Interview with the municipal official, June 2019). In addition, the mayor and the councillors mentioned political unrests that are mainly driven by the demarcation of municipal boundaries and service delivery as the contributory factors to the political instability in the study area. This has negatively impacted on the progress of small-scale farming in the area (The interview with the mayor and a councillor, June 2019).

In answering research question two of the study, one can state that small-scale farming in Dukuduku provides numerous economic opportunities such as employment and business opportunities. These economic opportunities come along in a form of temporal and self-employment, business opportunities in the area are both short and long term. Based on the insights from Radical Political Economy (see e.g. Worland, 1972; McMichael, 2006; Rosset et al, 2006 cited in Dlamini, 2016, section two, chapter 2) and Agrarian Transformation (see e.g. Cousin and Scoones, 2009, Section three

Chapter 2) theories, which provided a guide to this study, it appears as if providing land to people has the potential of improving and positively transforming their livelihoods. This is particularly the case with the people in rural areas who could productively utilise the land to and in the process transform their existential circumstances. This is in keeping with these theories, which emphasise the provision of land as the core driver in ensuring political, economic and social freedom of the previous disadvantaged groups. This does not mean that there are no challenges - issues which are discussed in the next part. It emphasises that, an “agrarian based economy requires state facilitated land reform, building the productive and social capabilities of small-scale producers and support for agro-industrial growth and diversification” (Evans 2009 cited in Moyo 2011:494). This amplifies the point that, access to resources like land by means of remedial programmes like land restitution is necessary for radical social, economic and political progress, particularly of those section of society who have suffered injustice in past (Rebitzer, 1993: 1395). Therefore, transformation and agrarian reform in rural areas, like the one under study cannot be understood outside of politics around land and other natural resources. The utilisation of Radical Political Economy and Agrarian Transformation has assisted this study to bring this to the fore.

## **6.5 PERCEPTIONS OF SMALL-SCALE FARMERS TOWARDS LAND**

### **RESTITUTION IN DUKUDUKU**

In this section of the study, the core focus is objective three, which explores the perceptions of small-scale farmers towards land restitution in the study area. As such, this section discusses the ways in which respondents perceive and appreciate land restitution in the area.

#### **6.5.1 Understanding land restitution**

On the question of how the community members understood land restitution, Figure below 6.12, shows that more than fifty percent of small-scale farmers understand land restitution at a general and/or superficial level.



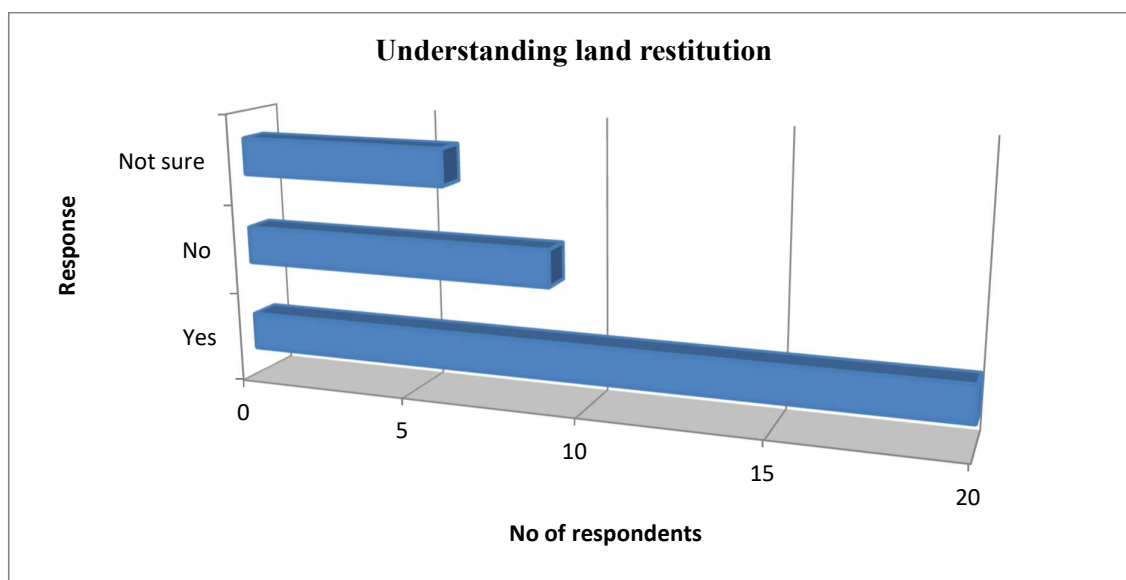


Figure 6.12: Understanding land restitution

However, beyond the general understanding of land restitution, most respondents have limited information regarding a deeper grasp and the full meaning and implications of land restitution. In this regard, Table 6.5 below indicates their responses regarding their definition and understanding of land restitution.

Table 6.5: Understanding land restitution

| Understanding land restitution                  |           |              |
|-------------------------------------------------|-----------|--------------|
|                                                 | Frequency | Percent      |
| No proper explanation from the government       | 2         | 5.7          |
| It is all about farming                         | 2         | 5.7          |
| Giving back the land to its rightful owners     | 13        | 37.1         |
| Government has not said anything to us about it | 2         | 5.7          |
| It is all about uplifting rural economies       | 1         | 2.9          |
| No response                                     | 15        | 42.9         |
| <b>Total</b>                                    | <b>35</b> | <b>100.0</b> |

The information that was obtained from the leaders of the co-operatives and the Induna was the same as the one in Table 6.5. The Induna who is championing small-scale farmers replied that “land restitution is all about giving the land back to its rightful

owners that were dispossessed such rights during the apartheid era” (Interview with the Induna, August 2019). Whereas one co-operative leader replied that “the minute I hear about land restitution, I just think of the land and farming that’s all” (Interview with the co-operative leader, August 2019). The following figure 6.13 represents the way in which the respondents appreciate land restitution.

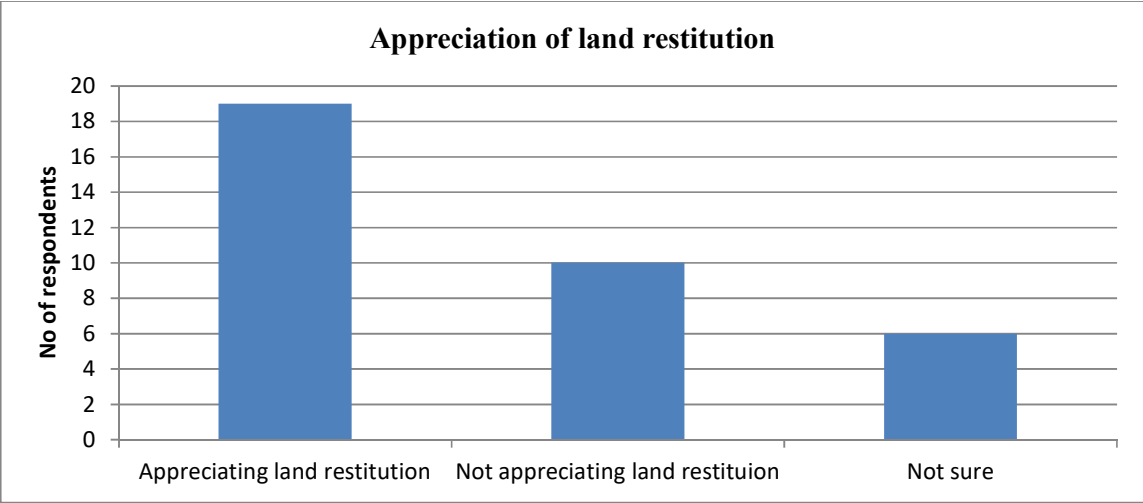


Figure 6.13: Appreciation of land restitution

About fifty-four percent of the small scale farmers stated that they were not happy with land restitution that has taken place in their community. The people complained that they believed the government has not demonstrated adequate support regarding the land restitution in the study area. One of the major complaints is that the land in Dukuduku was given back to people, but it still remains the state land and the community is fighting the government to provide them with title deeds so that they remain the rightful owners of the land. This has resulted to numerous political related fights, including the fight for natural resources which is the agricultural land, the minerals that were discovered by the Richards Bay Minerals (RBM) along the eastern coast of Dukuduku, as well as the eco-tourism land that has been declared to be under iSimangaliso Wetland Park. All these fights have led to the forceful removal of small-scale farmers who are in proximity to the iSimangaliso wetland park, because it is believed that they are contributing towards the decrease of water table in the area, and the area has been declared protected by the state (Interview with Induna, August 2019).

The closure of uMfolozi river mouth was also identified as the main threat to the growing and struggling small-scale farming sector in the area, causing the nearby cultivated land to be flooded. “The government wants to remove us and place foreign mines to extract minerals in our ancestral land, and they are working tirelessly to remove us in this land, now they have joined forces with iSimangaliso Wetland Park in order to win the case of removing us. All we want is land, access to credit, tractors, harvesting materials, and food storing containers in order to sustain the farming industry in the area” (Interview with leader of co-ops, August 2019). Again “we are forcefully going to make the government accountable, if that fails, we are sure to make it by all our means in order for government to provide tittle deeds to us, this is our ancestral land we will die for it” (Interview with the Induna, August 2019).

Again, the political challenges in the area of Dukuduku limit the local municipality’s intervention in the delivering of basics services such as support for small-scale farming and other basic infrastructure, more especially on Ward three. This Ward has been without a Councillor since the 2016 Local Government Election (LGE) where the Inkatha Freedom Party (IFP) won the Ward (Interview with a ward councillor and Mayor, June 2019). But certain issues were raised regarding the boundaries of the Ward which resulted to the ward opting for bi-election in 2019 around June (Interview with the Mayor, June 2019). The development of these unrests has seen most of the Dukuduku dwellers migrating to the nearby villages namely Khula village and Ezwenelisha for peace, but some are left behind refusing to leave the place (The interview with the Induna, 2019).

In answering research question three of the study; it is imperative to outline that small-scale farmers in Dukuduku perceive land restitution as something that is lacking proper implementation, and has resulted into dramatic unrest in the area, due to the alleged lack of government support for the small-scale farmers and the community in the study area. Based on this, one can therefore conclude that the government is failing to implement effective democratic procedures in the provision of land to the Dukuduku community which undermines agrarian transformation. This is because agrarian transformation is a tool to enhance agricultural productivity, rural livelihood and food sovereignty (see e.g. Cousin and Scoones, 2009 section three, Chapter 2) and if this is not occurring as much as it should, like in the case under examination, points to some deficiencies in the programme. It is observed that the South African government

is not doing very well in providing agricultural support or post settlement support after care in the study area which is the cause to the failing land restitution. This is confirmed in literature (see e.g. Byres, 1991, 1996 and Bernstein, 2010 cited in Moyo, 2011 and Section two, Chapter 2). This causes the Dukuduku community to perceive land restitution as a programme which needs intense improvement in order to benefit their social, economic and political needs.

**6.6 ASSESSING THE SUSTAINABILITY OF SMALL-SCALE FARMING IN RELATIONSHIP TO AGRARIAN TRANSFORMATION.**

In assessing the sustainability of small-scale farming in relationship to agrarian transformation in Dukuduku, both quantitative and qualitative results of the study was taken into consideration. Figure 6.14 below indicates the number of people who have been able to realise their livelihood through small-scale farming.

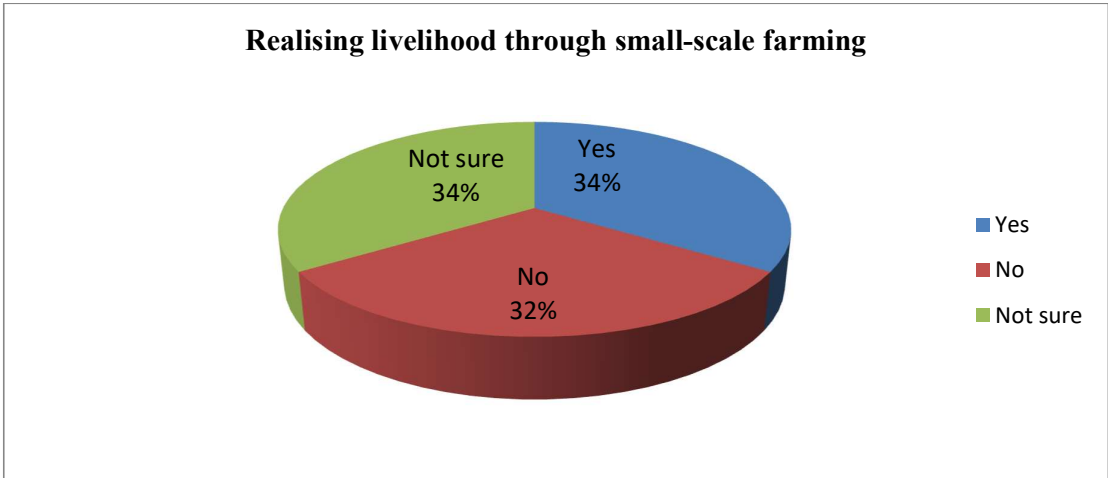


Figure 6.14: Realising livelihood through small-scale farming

From the figure above, it is clear that small-scale farming is not doing enough to support the livelihood of people in Dukuduku. This is followed by several complains that have arisen regarding the development of small-scale farming in the area. Amongst other complains is the lack of funding from the government and the forceful removal of small-scale farmers in areas that are in proximity to iSimangaliso Wetland Park. The Induna of the community provided the researcher with concrete evidence (which is explained below) that indicates that the community is working tirelessly to sustain the small-scale farming in the area. Amongst other things, the Non-Governmental Organisations (NGOs) are supporting small-scale farming projects that are on-going in the area, which are the construction of the three tunnels, borehole

drillings and the clearing of more land for agriculture. Figures 6.15 shows the proposed tunnels and boreholes for small-scale farming that were taken by the researcher during the data collection.



Figure 6.15: Proposed tunnels for small-scale farming, Researcher camera: 29/08/2019

As indicated above, these tunnels have been built by the local community through the donations from the community and NGOs in the area. They are mainly designed to be utilised by small-scale farmers to grow mushroom, tomatoes and cabbage (Interview with the Induna, August 2019). The demand for these products has been proven to be strong to nearby retail stores and food feeding schemes (Interview with co-ops leader, August 2019). Figure 6.16 below shows the bore-hole in the new proposed site for small-scale farming in Dukuduku.



Figure 6.16: Borehole sites that were observed; Researcher camera, 23/08/2019

The above picture is of the borehole that was spotted on site, which is mainly designed for the irrigation scheme of the proposed small-scale farming scheme. During the interview with the mayor, he mentioned that there is a partnership that has been established between the Secondary Farming Association and the Tendele coal mine with the intention to boost small-scale growers in the area. This partnership has witnessed the donation of three farming tractors, by the Tendele mine (Interview with the mayor, June 2019). The Mayor further outlined that the Mtubatuba Municipality has a budget for small-scale farming but “the main challenge regarding delivering all these agricultural support in Dukuduku is that it is a state land, and it is very hard to intervene in anything that happens within the community” (Interview with the mayor, June 2019). He further outlined the issue of the proposed hotels in Dukuduku by the state as the one of the main hindrances towards the sustainability of small-scale farming in the area. “Anything that happens in Dukuduku does not involve us, as the local government we have been disempowered to comment nor participate in anything that occurs within Dukuduku” (Interview with the Mayor, June 2019).

In addition, “there is a need for food in the area, the land is very fertile, and the community is supplementing their income by selling their agricultural and handicrafts products to tourists travelling to St Lucia. The existing mushroom project in the area is dying, all because of the national government which does not want to see people of the area benefiting from small-scale farming” (Interview with one of the ward

councillors, June 2019). Table 6.6 indicates the views of the small scale farmers in relationship to agrarian transformation.

Table 6.6: Relationship between small-scale farming and agrarian transformation.

| <b>Relationship between small-scale farming and agrarian transformation</b> |                  |                |
|-----------------------------------------------------------------------------|------------------|----------------|
| <b>Response</b>                                                             | <b>Frequency</b> | <b>Percent</b> |
| Strongly agree                                                              | 3                | 8.6            |
| Agree                                                                       | 2                | 5.7            |
| Undecided                                                                   | 20               | 57.1           |
| Disagree                                                                    | 7                | 20.0           |
| Strongly disagree                                                           | 3                | 8.6            |
| <b>Total</b>                                                                | <b>35</b>        | <b>100.0</b>   |

On the table above, respondents were given options to select their choice. Due to the unhappiness of small-scale farmers towards the restitution of land in the area, more than half of the selected respondents chose not to provide their choices which were followed by more than twenty eight percent disagreeing to the matter, leaving only fourteen percent agreeing. Further, the mayor insisted that politics remain the core hindrance towards achieving the goals of agrarian transformation in the area (Interview with the Mayor, June 2019).

From the information that was obtained in the field, it was noted with great concern that small-scale farming is facing numerous challenges which is causing great strain towards its sustainability. Amongst other challenges that were outlined by the respondents were, the limited access to the market, alien vegetation, improper infrastructure, political factors such as the rezoning of the land, and the fight for ward boundaries as well as little involvement of the youth in small-scale farming. Small-scale farmers do not have proper funding methods from the state, even though the local municipality has the budget reserved for any small-scale farmer that reside within its boundaries, but it is of great concern that it cannot be easily provided for Dukuduku community because the land belongs to the state, and the local municipality was disempowered to deliver services without consultation with the state (Interview with the Mayor, June 2019). In cases where the municipality wants to donate to the

Dukuduku community, the national government must be served with a correspondence, which takes a long period of time for the approval of the proposed donation (Interview with the Mayor, 2019).

The issue of improper infrastructure in the area has resulted to the great concerns amongst the small-scale growers, because the access roads to small-scale farming sites can only be accessed with 4x4 vehicles during rainy season, due to the underlying mudstone. This leaves small-scale farmers devastated and helpless as they cannot afford to purchase 4x4 vehicles (Interview with the Induna, August 2019). On the other side, the national department of Environmental, Forestry and Fisheries (DEFF) working with the Invasive Alien Species Programme (IASP), introduced the EPWP programme with an intention to provide jobs. The programme witnessed the decline in the growing of invasive alien species such as *Chromolaena odorata* (traffid weed), (Interview with the Induna, August 2019). The challenge of this programme is the lack of government to provide enough employees, claiming the lack of funds as the cause (Interview with the Mayor, 2019).

The challenge of youth participation was also raised during the data collection, in which it was stated that the youth still perceive agriculture as something that is mainly for the older age group people. Most youth in the community migrate to nearby towns, in searching for employment opportunities and some they choose to study various courses in nearby FET colleges and Universities (Interview with the co-op leader, August, 2019). This then hinders the growth of small-scale farming because the young age group is physically active and so their absence in small-scale farming can mean that no enough production could be generated. Again, the issue of ward boundaries and demarcation of protected areas were outlined during the interview with the mayor, the co-op leader and Induna, where it was outlined that the proposed removal of small-scale farming next to the iSimangaliso wetland park has resulted in the decline to the production (Interview with Mayor, June 2019; Interview with Induna, and co-op leader, August 2019).

In responding to the fourth research question of the study, one can conclude that the utilisation of the notions of Agrarian transformation and Radical Political Economy were productive in this study. This is precisely because Radical Political Economy (see Section two Chapter 2), shows that in this study politics in the form of returning land



to the people is important in terms of empowering them to transform their socio-economic circumstances. However, the realisation of the full potential of land restitution can be further affected by politics. For instance, politics in the form removal of small-scale farmers in areas that are close to the iSimangaliso Wetland Park has negatively impacted on the sustainability of small-scale farming because the government is failing to address the issue. In addition, the government failed to address issues related to infrastructure, market access and access to credit. Likewise, the lens of Agrarian Transformation (see Section three Chapter 2) assists this study to show that, not much has been done by the government to transform the restituted land into a fully productive resource. This is because small-scale farmers in the study area do not have agricultural support and full ownership of the land. Therefore, small-scale farming in Dukuduku is facing numerous challenges towards the attainment of agrarian transformation as per the conditions of land restitution. This takes us back to the problem statement of the study which outlines the significance of land restitution in redressing the economic challenges for the previously disadvantaged groups. Therefore, the notion of radical political economy emphasises the need for transparent political processes in the provision of land to the economically struggling groups, whereas the agrarian transformation indicates that the government should provide agricultural support to the communities after the resettlement has occurred. The limited and ineffective state intervention in land reform and the accompanying agricultural support and extension services raises the question of what has happened to following the principles of agrarian transformation in full.

## **6.7 CONCLUSION**

The small-scale farming in Dukuduku has faced challenges since the time of resettlement of the community. This is due to the national government disempowering the local government intervention to the development that happens within the boundaries of Dukuduku and rezoning most of the land in Dukuduku. This has led to conflicts because small-scale farmers feel that they are not protected by the government. In addition, the community members are working tirelessly to gain back their land as contained in the objective of land restitution in order to restore their human rights and dignity through democratic processes. In addition, small-scale farmers face further challenges related to funding mechanisms and participation and this highlights

that the sustainability of small-scale farming in the study area and agrarian transformation essential to it has not occurred. The following chapter provides the conclusion and recommendations of the study.

## **CHAPTER 7: SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **7.1 INTRODUCTION**

The study consisted of seven chapters. Chapter one provided the background to the study. Chapter two explored the contextual and theoretical perspectives to the study. Chapter three critically reviewed literatures relevant to the present research. Chapter four presented the physical setting of the study (the study was based in Dukuduku). The chapter briefly explained the history of land restitution in Dukuduku, geomorphological features, as well as the variety of land uses that exist in the study area. Chapter five described the research design and methodology which was followed in the collection of data. Chapter six provided a critical and extensive analysis and interpretation of the data in response to the objectives of the study. This chapter provides the summary of the findings for the whole study, as well as the recommendations by the researcher based on the observed challenges from the data collection. The first section summarises the findings on each of the objectives, this is followed by the second section, in which recommendations are proposed. The final part of the chapter is the conclusion.

### **7.2 SUMMARY OF FINDINGS**

The aim of this study was to analyse the sustainability of small-scale farming in Dukuduku and this was achieved through setting four main objectives of the study. The first objective was to map the spatial distribution of small-scale farming from 2001 to 2019, the second objective was to examine the nature of economic opportunities arising from small-scale farming in the study area, the third was to explore perceptions of small-scale farmers in Dukuduku towards land restitution programme, and the last one was to assess the sustainability of small-scale farming in relationship to agrarian transformation in the study area.

In response to the first objective, the findings of the study show that, the spatial growth of small-scale farming in Dukuduku has been significant. For example, in 2001, small-scale farming was not extensive in the study area because the community was not widely spread and very few people had migrated in the area. This changed as from 2006 up to 2019, such that currently, small-scale farming which involves the production of fruit and vegetables, sugarcane farming and forestry has grown.

The second objective was to examine the nature of economic opportunities arising from small-scale farming in Dukuduku. In addressing this objective, both business and employment opportunities that arise from small-scale farming were taken into consideration. It was found that the land remain the core-economic engine for the rural people. Most economic activities in rural areas still rely on land and this was evident in Dukuduku where almost most businesses are land based. Beyond this, the nature of economic activities linked to small-scale farming in the study area included sugarcane farming, fruit and vegetables and forestry businesses involved in the transportation of agricultural products to the market. Others were the employment of the local people working in small-scale farming during weeding seasons, and as labours during the entire process from the generation of seeds and harvesting period.

The third objective explored the perceptions of small-scale farmers in Dukuduku towards the land restitution programme. Members of the community were interviewed and small-scale famers were sampled randomly. In this section of the study, it was found that rural dwellers do not necessarily enjoy the benefits of land restitution contrary to what is being portrayed by the government. This is because the state is failing to meet the needs of the people in rural areas in terms of agricultural support and extension services. In some cases this has led to conflict due to the removal of small-scale farming in their restituted land and government refusing to give out tittle deeds to people. This then limits the local government intervention in any development that happens within Dukuduku as the land still remains the state land. The people in Dukuduku think that the state has betrayed them in terms of failing to fulfill the goals of land restitution in fulfillment of agrarian transformation.

The fourth objective assessed the sustainability of small-scale farming in relationship to agrarian transformation in the study area. The analysis under this objective revealed that the restitution of land has improved the dignity of previously discriminated people. This was evident because the people can now plough and generate a living for their families from the land, which is something that was never a choice during the apartheid government due to racially discriminatory laws. Government intervention is not satisfactory at this stage as most businesses related to small-scale farming were struggling to access credit, market, and other political factors such as the removal of small-scale farms in areas that are in proximity to iSimangaliso Wetland Park. It is imperative to state that, the sovereignty of Africans more especially those who live in

the former homelands can only be met through the unbiased intervention between the state and the beneficiaries of land restitution, which goes hand in hand with the principles of both Radical Political Economy as well as the agrarian transformation. Indeed, the poor intervention of the South African government in the provision of agricultural support and proper infrastructure still hinders the sustainability of small-scale farming in former homelands, which ends up seeing the beneficiaries losing focus and strength towards the programme. This is proven by the migration of the youth from the former homelands to urban areas, losing interest in farming and opting for other economic opportunities. This means that agrarian transformation has to be fully implemented in most restituted land for positive results.

### **7.3 RECOMMENDATIONS**

In chapter one it was stated that after the successful analysis and interpretation of results, this chapter will provide recommendations which are based on the findings of the study. As such the following recommendations have been suggested.

a) Issue of land ownership- the land ownership in the study area remains the core-challenges towards the sustainability of small-scale farming. This is because the land is still zoned as the “state land” which makes it difficult for local municipality to intervene in any development that should happen within Dukuduku. The government especially the Department of Rural Development and Land Reform (DRDLR), or any relevant authority must intervene in solving the issue pertaining the land ownership in the study area. Transparent process must be provided for local people to access the deeds register office in order to register for their title deeds as contained in the objectives of land restitution.

b) Poor intervention of the state- since the area is zoned as the “state land”, this means that only the national government is responsible for anything that happens within Dukuduku. In the case that, there are proposed projects within the area, the national government is the one which authorizes these. Therefore, it was found that the national government is not doing enough to address the challenges that are faced by the small-scale farming in the study area. It was found that the community has no proper access routes to their farms more especially during rainy seasons. The community does not have access to credit and the market. The national government should deliver infrastructure to local people such as roads, and maintenance in the

form appointing the contractor responsible for the maintenance of dusty, sandy and muddy roads only during rainy seasons. The national government especially the Department of Planning Monitoring and Evaluation (DPME) must deal decisively with the fraud and corruption that happens within the appointed contractors. Small-scale farmers must have access to the information regarding the funding of Small-Medium and Micro Enterprises (SMMEs). They should be given access in the registering of their newly co-operatives and the preparation of business plans by Small Enterprise Development Agency SEDA and Department of Economic Development, Tourism and Environmental Affairs EDTEA department in partnership with the national government. The government should provide with or teach the small-scale farmers about marketing strategies where they will attend classes and learn about variety of advertising the business. The challenges of improper provision of agricultural support such as machineries must also be the responsibility of the government. Tractors, and other agricultural equipment must be provided and beneficiaries must be trained on how they should operate them. The national government should also promote co-operate governance where the four spheres of the government are working hand in hand, and this will allow the local municipality to engage openly with the local people since they are the closest sphere to people.

c) Political challenges- The issue of political challenge in the study has been brought to the fore by the unrests in the area regarding the demarcation of wards which causes frustrations and confusion amongst the beneficiaries and the fight for the removal of people in proximity to the UMfolozi River. ISimangaliso wetland park, Ezemvelo KZN Wildlife (EKZNW), the Department of Environmental Forestry and Fisheries (DEFF) as well as the local people must work collaboratively in order to address the challenge of the fight amongst the resources. This would allow the local people to voice out their concerns, and be taught about the sensitive ecological areas.

d) Recommendation for future studies- This study has revealed that land restitution programmes need intense collaboration between the beneficiaries and government for a successful implementation, Studies of this nature are recommended in future in order to equip government and decision makers with the correct resources needed in as far as land reform and agrarian transformation is concerned in South Africa. This include, post settlement after care support programmes such as delivery of basic needs to the beneficiaries, as well as continuation of monitoring and evaluation of the

resettled land in order to ascertain if indeed the aim and objectives of land reform are served thus avoiding maladministration of funds.

#### **7.4 CONCLUSION**

Intervention of the state is essential in every step of land restitution, from the initiation stage and after the resettlement. This must be through the delivery of basic support (through post settlement support) to the resettled communities in the form that complements the land use type that is predominantly available in the resettled land. The beneficiaries must be the part and parcel of development in order to avoid confusions and conflicts amongst them, the state must play the crucial role in linking the beneficiaries of land restitution and the other potential donors. The limited involvement of the state in the Dukuduku is causing chaos and maladministration of the available resources hence contributing to the failure of the small-scale farming in the study area to sustain the livelihood of the community and this undermines the goals of agrarian transformation.

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APPENDICES  
APPENICE A: ORIGINALITY DECLARATION

|                                     |                                                                                                   |
|-------------------------------------|---------------------------------------------------------------------------------------------------|
| <b>Full Names and Surname</b>       | ZAMOKUHLE NOTHANI MASHIYANE                                                                       |
| <b>Student Number</b>               | 201100019                                                                                         |
| <b>Title of dissertation/thesis</b> | AN ANALYSIS OF THE SUSTAINABILITY OF SMALL-SCALE FARMING IN DUKUDUKU, KWAZULU NATAL, SOUTH AFRICA |

I acknowledge that I have read and understood the University's policies and rules applicable to postgraduate research, and I certify that I have, to the best of my knowledge and belief, complied with their requirements.

In particular, I confirm that I had obtained an ethical clearance certificate for my research (Certificate Number UZREC 171110-030 PGM2018/556) and that I have complied with the conditions set out in that certificate.

I further certify that this research thesis is original, and that the material has not been published elsewhere, or submitted, either in whole or in part, for a degree at this or any other university.

I declare that this research thesis is, save for the supervisory guidance received, the product of my own work and effort. I have, to the best of my knowledge and belief, complied with the University's Plagiarism Policy and acknowledged all sources of information in line with normal academic conventions.

I have subjected the document to the University's text-matching and/or similarity-checking procedures.

|                              |         |
|------------------------------|---------|
| <b>Candidate's signature</b> | ZNMASHI |
| <b>Date</b>                  |         |

## APPENDICE B: QUESTIONNAIRE

**TOPIC: An analysis of the sustainability of small-scale farming in Dukuduku, KwaZulu-Natal, South Africa.**

**ISIHLOKO: Ukuhlaziywa kokusimama kokulima okuncane eDukuduku, KwaZulu-Natali, South Africa.**

The purpose of this research project is to analyse sustainable measures of small-scale farming in Dukuduku area. I kindly request for your honest assistance through the completion of these questions. I bind myself that the information you provide will only be used for this academic research and will be highly confidential.

***Mark with a cross in the provided spaces and where necessary complete the required information using a pen. Please feel free to provide the required information.***

Inhloso yalomsebenzi wokucwaninga ukuhlaziya izinyathelo eziqhubekayo zokulima okuncane endaweni yaseDukuduku. Ngiyacela ngobuqotho usizo lwakho oluqotho ngokuqedelwa kwale mibuzo. Ngizibophezela ukuthi ulwazi olunikezayo luzosetshenziselwa kuphela lolu cwaningo lwezemfundo futhi luzoba yimfihlo kakhulu.

***Phawula ngesiphambano ngezikhala ezinikeziwe futhi lapho kudingeka khona ugcwalise ulwazi oludingekayo usebenzisa ipeni. Sicela ukhululeke ukunikeza ulwazi oludingekayo.***

### 1. [SECTION A] DEMOGRAPHIC CHARACTERISTICS

#### 1.1. Age/ Ubudala

|       |  |    |       |  |    |              |  |    |
|-------|--|----|-------|--|----|--------------|--|----|
| 15-25 |  | 01 | 26-36 |  | 02 | 36-46        |  | 03 |
| 46-56 |  | 04 | 56-66 |  | 05 | 66 and above |  | 06 |

#### 1.2. Employment/ uMsebenzi owenzayo

|                                          |  |    |                                |  |    |                                        |  |    |
|------------------------------------------|--|----|--------------------------------|--|----|----------------------------------------|--|----|
| Unemployed/<br>Awusebenzi                |  | 01 | Self Employed/<br>Uyazisebenza |  | 02 | Government/<br>Usebenza ku<br>Hulumeni |  | 03 |
| Private Sector/<br>Usebenza ezikaphanini |  | 04 | Student/<br>Ungumfundi         |  | 05 | Other/Okunye                           |  | 04 |

#### 1.3 If other please specify/ Sicela wenabe

.....

1.4. Gender/ Ubulili

|                 |  |    |                     |  |    |
|-----------------|--|----|---------------------|--|----|
| Male/ Owesilisa |  | 01 | Female/ Owesifazane |  | 02 |
|-----------------|--|----|---------------------|--|----|

1.5 Level of Education/ Izinga Lemfundo

|                               |  |    |                               |  |    |                      |  |    |
|-------------------------------|--|----|-------------------------------|--|----|----------------------|--|----|
| Primary/ Amabanga<br>aphansi  |  | 01 | Secondary/ Amanga<br>aphezulu |  | 02 | College/<br>Ikolishi |  | 03 |
| Tertiary/ Imfundo<br>ephakeme |  | 04 | None/ Akukho                  |  | 05 |                      |  |    |

**2. [SECTION B] NATURE OF ECONOMIC OPPORTUNITIES ARISING FROM SMALL SCALE FARMING IN DUKUDUKU AREA.**

2.1 Is there any role played by small scale farming in the provision of jobs within the Dukuduku area?

-Ingabe ikhona indima edlalwa ukulima okuncane ekukhandekeni kwamathuba omsebenzi endaweni yase Dukuduku?

|           |  |    |        |  |    |                           |  |    |
|-----------|--|----|--------|--|----|---------------------------|--|----|
| Yes/ Yebo |  | 01 | No/Cha |  | 02 | Not sure/Anginisiqiniseko |  | 03 |
|-----------|--|----|--------|--|----|---------------------------|--|----|

2.2 Please specify your Response/ Sicela wenabe

.....

.....

2.3 What type of employment does small-scale farming offers to the local community?

-Yilona luphi uhlobo lomsebenzi oludalwa wukulima okuncane emphakathini?

|                               |  |    |                         |  |    |                          |  |    |
|-------------------------------|--|----|-------------------------|--|----|--------------------------|--|----|
| Temporary/Okwesikhashana      |  | 01 | Permanent/<br>Unomphela |  | 02 | Contract/<br>Inkontileka |  | 03 |
| Self-Employment/ ukuzisebenza |  | 04 |                         |  |    |                          |  |    |

2.4 Does small-scale farming offers any business opportunity to local people?

-Ingabe ukulima okuncane kuyawakhanda yyini amathuba okuhweba?

|           |  |    |         |  |    |                           |  |    |
|-----------|--|----|---------|--|----|---------------------------|--|----|
| Yes/ Yebo |  | 01 | No/ Cha |  | 02 | Not-sure/ Angnasiqiniseko |  | 03 |
|-----------|--|----|---------|--|----|---------------------------|--|----|

2.5 Please specify the nature of the following small scale farming businesses in the area.

-Sicela wenabe kabanzi ngemvelo yalama bhizinisi okulima okuncane akhona endaweni.

| <b>Business/ Ibhizinisi</b>                                           | <b>Nature of economic (<u>Short term/ Long term economic opportunity</u>)/ Uhlobo</b> |       |
|-----------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------|
| <b>Sugar cane farming/ Ukulima umoba.</b>                             | LONG                                                                                  | SHORT |
| <b>Fruits and Vegetables farming/ izithelo zama fruthi nama veji.</b> | LONG                                                                                  | SHORT |
| <b>Forestry/ Amahlathi</b>                                            | LONG                                                                                  | SHORT |
| <b>Livestock farming (Specify)/ Imfuyo (Chaza)</b>                    | LONG                                                                                  | SHORT |

### 3. [SECTION B] PERCEPTIONS OF SMALL-SCALE FARMERS IN DUKUDUKU TOWARDS LAND RESTITUTION PROGRAMME.

3.1. In your own point of view, do you understand the land restitution programme?

-Ngokombono wakho, Ingabe uyaliqonda uhlelo lokubuyiselwa kohlaba kubantu?

|           |  |    |         |  |    |                           |  |    |
|-----------|--|----|---------|--|----|---------------------------|--|----|
| Yes/ Yebo |  | 01 | No/ Cha |  | 02 | Not sure/ Angnasiqiniseko |  | 03 |
|-----------|--|----|---------|--|----|---------------------------|--|----|

3.2 Please specify your response.

-Sicela wenabe kabanzi

3.3 Please select the most correct objective of land restitution programme.

-Sicela ukhethe injongo okuyiyona ngampela yohlelo lokubuyiselwa komhlaba kubantu.

|                                                                                                                                                                                                                                                                                                                                                            |  |    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----|
| <p><b>Land restitution</b> is about offering a solution to people who had lost their <b>land</b> as a result of racially discriminatory practices such as forced removals.</p> <p><b>Ukubuyiselwa komhlaba</b> kuwukunikeza isixazululo kubantu abalahlekelwe umhlaba wabo ngenxa yemikhuba ebandlulula ngokobuhlanga njengokukhishwa okuphoqelelwe.</p>   |  | 01 |
| <p><b>Land restitution</b> main objective is to boost agricultural production through an effective land ownership.</p> <p>Inhloso eyinhloko <b>yokubuyisela umhlaba</b> ukuthuthukisa ukukhiqizwa kwezolimo ngokusebenzisa ubunikazi bomhlaba obusebenzayo.</p>                                                                                            |  | 02 |
| <p><b>Land restitution</b> is about giving land to all South African citizens with an aim of boosting their socio-economic status through land based activities.</p> <p><b>Ukubuyiswa komhlaba</b> kuwukunikeza umhlaba izakhamuzi zaseNingizimu Afrika ngenhloso yokukhulisa isimo sabo sezenhlalakahle nezomnotho ngemisebenzi esekelwe emhlabathini</p> |  | 03 |
| <p><b>Land restitution</b> is mainly concerned with agricultural production.</p> <p><b>Ukubuyiswa komhlaba</b> kubhekene nokukhiqizwa kwezolimo.</p>                                                                                                                                                                                                       |  | 04 |

3.4 As a small-scale farmer, do you appreciate the land restitution programme or you feel that it is lacking implementation?

-Njengomlimi omncane, uyalithokozela yini uhlelo lokubuyisela komumhlaba noma uzizwa ukuthi ukuqaliswa kwalo akukho esimeni esanele?

|           |  |    |         |  |    |                            |  |    |
|-----------|--|----|---------|--|----|----------------------------|--|----|
| Yes/ Yebo |  | 01 | No/ Cha |  | 02 | Not-sure/ Anginasiqiniseko |  | 03 |
|-----------|--|----|---------|--|----|----------------------------|--|----|

3.5 Please specify your response.

- Sicela uchaze kabanzi impendulo yakho.

.....  
.....  
.....  
.....

3.6 As a beneficiary of land restitution and a small-scale farmer, have you realised you livelihood as contained in the objectives of land restitution programme?

-Njengomzuzi wokubuyiselwa komhlaba kanye nomlimi omncane, ngabe usuqaphela impilo yakho njengoba kuqukethwe kwimigomo yokubuyiselwa komhlaba?

|           |  |    |         |  |    |                            |  |    |
|-----------|--|----|---------|--|----|----------------------------|--|----|
| Yes/ Yebo |  | 01 | No/ Cha |  | 02 | Not sure/ Anginasiqiniseko |  | 03 |
|-----------|--|----|---------|--|----|----------------------------|--|----|

3.7 Please specify your response

- Sicela uchaze kabanzi impendulo yakho

.....  
.....  
.....

#### **4. [SECTION C] SUSTAINABILITY OF SMALL SCALE FARMING IN RELATIONSHIP TO AGRARIAN TRANSFORMATION IN DUKUDUKU AREA.**

4.1 The agrarian transformation is concerned with the progress of agricultural based production mainly associated with successful land restitution in rural areas, as a small-scale farmer; do you observe any the change in the farming industry?

-Ukuguqulwa kwemvelo kugxile ekuthuthukiseni ukukhiqizwa kwezolimo ngokuyinhloko okuhlotschaniswa nokubuyiswa komhlaba okuphumelelayo ezindaweni zasemaphandleni, njengomlimi omncane; Uyabona yini ushintsho embonini yokulima?

|           |  |    |         |  |    |                            |  |    |
|-----------|--|----|---------|--|----|----------------------------|--|----|
| Yes/ Yebo |  | 01 | No/ Cha |  | 02 | Not sure/ Anginasiqiniseko |  | 03 |
|-----------|--|----|---------|--|----|----------------------------|--|----|

4.2 Please specify your response

- Sicela uchaze kabanzi impendulo yakho

.....  
...

4.3 Are the small-scale farming projects in the area in line with the objectives of agrarian transformation?

-Ingabe amaprojekthi amancane okulima endaweni ayahambisana yini nezinhloso zokuguqulwa kwemvelo?

|          |  |    |         |  |    |                           |  |    |
|----------|--|----|---------|--|----|---------------------------|--|----|
| Yes/Yebo |  | 01 | No/ Cha |  | 02 | Not sure/ Angnasiqiniseko |  | 03 |
|----------|--|----|---------|--|----|---------------------------|--|----|

4.4 Please specify your response

-Sicela uchaze kabanzi impendulo yakho

.....  
.....

4.5. To what extent do local people participate in small-scale farming in the study area?

-Abantu basendaweni bahlanganyela kanjani ekulimeni okuncane okulinganiselwe?

.....  
.....  
.....

4.6 Please outline on the challenges that are faced by small-scale farmers that hinders the sustainable farming in the area.

- Sicela ucacise ngezinsalelo ezibhekene nabalimi abancane ezivimbela ukulima okusimeme endaweni?

.....

.....

## 5. [SECTION F] PERSONAL OPINION QUESTIONS

The following table serves as a key to help you to be able to answer easily on the following statements. You will use a cross **[X]** to indicate your answer on the table provided below.

### **Keys of the following table**

|                                      |           |
|--------------------------------------|-----------|
| Strongly Agree/ Nguvumelana kakhulu  | <b>SA</b> |
| Agree/ Ngyavumelana                  | <b>A</b>  |
| Undecided/ Anginasiqiniseko          | <b>U</b>  |
| Disagree/ Ngyaphika                  | <b>D</b>  |
| Strongly Disagree/ Ngyaphika kakhulu | <b>SD</b> |

| <b>STATEMENT</b>                                                                                                                                                 | <b>SA</b> | <b>A</b> | <b>U</b> | <b>D</b> | <b>SD</b> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------|----------|----------|-----------|
| 5.1 Sustainable small-scale farming and land restitution are mutually related.<br><br>-Ukulima okuncane okuqhubekayo nokubuyiswa komhlaba kuhlobene ngokufanayo. |           |          |          |          |           |
| 5.2 Small-scale farming can only be achieved through land restitution programme.<br><br>-Ukulima okuncane kungatholakala kuphela ngohlelo lokubuyisela umhlaba.  |           |          |          |          |           |
| 5.3 The community does not participate in small-scale farming.<br><br>-Umphakathi awuhlanganyeli ekulimeni okuncane.                                             |           |          |          |          |           |



## APPENDICE C: INTERVIEWS GUIDE

The purpose of this research project is to analyse sustainable measures of small scale farming in Dukuduku area. I kindly request for your honest assistance through the completion of these questions. I bind myself that the information you provide will only be used for this academic research and will be highly confidential.

Inhloso yalomsebenzi wokucwaninga ukuhlaziya izinyathelo eziqhubekayo zokulima okuncane endaweni yaseDukuduku. Ngiyacela ngobuqotho usizo lwakho oluqotho

ngokuqedelwa kwale mibuzo. Ngizibophezela ukuthi ulwazi olunikezayo luzosetshenziselwa kuphela lolu cwaningo lwezemfundo futhi luzoba yimfihlo kakhulu.

### **SEMI STRUCTURED INTERVIEW/ IMIBUZO EHLELIWE**

#### **MAYOR / USODOLOBHA**

1.1 What are the strategies that are in place aimed in the achievement of sustainable small scale farming in order to ensure economic development in the area?

-Yiziphi izinyathelo ezikhona ekufezeni ukulima okusimeme kancane kokulima ukuze kuqinisekiswa ukuthuthukiswa komnotho endaweni?

1.2 As a mayor of the city, what are the observed challenges that are being faced by the small scale farming sector in order to successfully achieve the goals of agrarian transformation?

-NjengoMeya wedolobha, yiziphi izinselelo eziobonelayo ezibhekene nemboni encane yokulima ukuze kufinyelelwe ngempumelelo imigomo yokuguqulwa kwemvelo?

1.3 What are the socio-economic impacts of small-scale farming in the study area?

-Yimiphi imithelela ezolimo ezincane enazo emphakathini nasemnothweni endaweni yokufunda?

1.4 The area benefited from land restitution programme, are the objectives of land reform been met if not, what are hindering factors?

-Indawo izuzile ohlelweni lokubuyisela umhlaba, ingabe izinhloso zokuguqulwa komhlaba zenziwe uma kungenjalo, yiziphi izivimbela?

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#### **WARD COUNCILLOR / IKHANSELA LESIGCEME**

1.1 As a ward councillor, what have you done to promote the sustainability of small-scale farming in the area?

-Njengekhansela lesigceme, yini oyenzile ukugqogqezela ukusimama kokulima okuncane kule ndawo?

1.2 Do you think investing in small-scale farming would be of wise idea or bad idea? and specify your response?

-Ucabanga ukuthi ukutshalwa kwezimali ekulimeni okuncane kungaba nomqondo ohlakaniphile noma umqondo omubi? futhi ucacise impendulo yakho?

1.3 As a local government messenger and a representative of your ward, what are the local municipality's projects that are in place to develop the small black agricultural sector in the area?

-Njengomthunywa wendawo wendawo njengommeleli wewadi yakho, yimaphi amaphrojekthi omasipala wendawo osemandleni okuthuthukisa umkhakha omncane wezolimo endaweni?

1.4 Since the area benefited from the land restitution programme, is there any change you have observed regarding small-scale practices?

-Njengoba indawo yazuza ohlelweni lokubuyisela umhlaba, ingabe kukhona ushintsho oye walubheka mayelana nemikhuba encane?

**ONE ADMIN CLERK AND ONE LEGAL DEPARTMENT/  
UMBHALISI WOMQONDIS OYEDWA KANYE NOYEDWA WOMYANGO  
WEZOMTHETHO**

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1.1 As an admin clerk and legal department, is the list for land restitution beneficiaries in possession? And if yes, please provide.

-Njengomabhalane wezokuphatha kanye nomnyango wezomthetho, ingabe uhlu lwabahlomuli bomhlaba ababuyiselwayo lukhona? Futhi uma kunjalo, sicela usihlizeke ngalo.

1.2 What challenges are being faced regarding the distribution of land amongst the people?

-Yiziphi izinselele ezikhona mayelana nokusabalalisa umhlaba phakathi kwabantu?

**2 TEAM LEADERS AND INDUNA (TRADITIONAL LEADER)  
ABAHOLI BAMAQEMBU ABABILI NE-INDUNA (UMHOLI WENDABUKO).**

1.1 What are the factors hindering the sustainability of small-scale farming?

- Yiziphi izinto ezivimbela ukusimama kokulima okuncane

1.2 What economic opportunities arise from small-scale farming?

- Yimaphi amathuba ezomnotho avela emapulazini amancane?

1.3 Is the small-scale farming sustainable in the area? Please specify more.

- Ingabe ukulima okuncane kuyakwazi kuyaqhubeka kule ndawo? Sicela ucacise okuningi.

1.4 Are the title deeds available? Please provide proof.

- Ingabe amatayitela akhona? Sicela unikeze ubufakazi.

1.5 What are the strategies that are in place in order to successfully meet the objectives of land restitution through small-scale farming the area?

-Yiziphi izinyathelo ezikhona ukuze zihlangabezane ngokuphumelelayo nezinhloso zokubuyiselwa komhlaba ngokulima okuncane endaweni?

1.6 What are the small-scale farming practices that are main dominant in the area? Please list and outline on each.

-Yiziphi izindlela zokulima ezincane ezibonakala kakhulu kule ndawo? Sicela ubeke ohlwini bese ucacisa ngamunye.

#### APPENDICE D: ETHICAL CLEARANCE CERTIFICATE

