

**THE EFFECTS OF INFRASTRUCTURAL AND INSTITUTIONAL
SERVICES ON FOOD SECURITY IN NTAMBANANA RURAL AREA**

BY

MASUKU MANDLA MFUNDO

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Supervisor : Dr B.M. Selepe
Co-Supervisor : MRS P.T. Sabela

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ABSTRACT

The aim of this study was to explore how food security at household level is affected by lack of infrastructural and institutional services. This study particularly looks at how these constraints affect access to food and assess the availability institutional services such as the availability of extension services in Ntambanana. The study recommends that improved rural infrastructure and support services sustains food security as well as contributes to the improvement in the living conditions of rural households. The availability of infrastructure and institutional support in rural areas regarded as means of rural development which eliminate problems of access to food and other services.

The study concluded that lack of infrastructural services such as poor storage facilities, roads, irrigation system and transport facilities that creates food insecurity in Ntambanana. The general findings of the study reveal that assessment and evaluation of policies that are based on rural development and food security is very important. These include improving communication amongst various stakeholders, creating an enabling environment for local businesses, ensuring the availability of facilities such as storage, communication and transport facilities.

This study concludes that the cost effective ways to improve access to food is to assist local small scale businesses to earn cash through creating market for them and invest in infrastructure that lead to improving food security. The results reflect that socio – economic conditions play an important role in accessing food by looking the level of purchasing power in the community.

Key words: food security, institutional support, infrastructural support, smallholder farmers, access to food, Ntambanana.

DECLARATION

I, Mandla Mfundo Masuku declare that:

- i) The research reported in this dissertation, except where otherwise indicated, and is my original research;
- ii) This dissertation has not been submitted for any degree or examination at any other university;
- iii) This dissertation does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from those persons;
- iv) This dissertation does not contain other authors' writing, unless specifically acknowledged as being sourced from other authors. Where other written sources have been quoted, then:
 - a) Their words have been rewritten but the general information attributed to them has been referenced;
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Signed: Date

As supervisor, I agree to submission of this dissertation for examination.

Signed:Date.....

Dr B.M. Selepe

As co-supervisor, I agree to submission of this dissertation for examination.

Signed:Date.....

Mrs P.T. Sabela

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LIST OF ABBREVIATIONS

CISANET	Civil Society Agriculture Network
DSM	Development Support Monitor
FAO	Food and Agriculture Organisation
GDP	Global Donor Platform
HSRC	Human Sciences Research Council Report
IFAD	International Fund for Agricultural Development
IFSS	Integrated Food Security Strategy
MDGs	Millennium Development Goals
NGOs	Non-Governmental Organisations
OM	Operation Maintenance
SFSA	Support for Food Security Activities
SMMEs	Small, Medium and Micro –Sized Enterprises

CHAPTER 1

1.0 BACKGROUND OF THE STUDY

1.1 INTRODUCTION

Food security is achieved when all people at all times have physical and economic access to sufficient, safe and nutritious food for a healthy and active life (Department of Agriculture, 2002). Rural people are affected by factors such as poverty, lack of infrastructure, poor access to markets and lack of institutional support and these factors has exposed them to food insecurity. The Department of Agriculture (2006) stated that in South Africa, the rural population is vulnerable to food insecurity and the quality of life of the rural people has as a result deteriorated very much. It is further stated that the cause of food insecurity or hunger in South Africa is not due to shortage of food but rather an inadequate access to food by certain categories of individuals and households in the population.

According to the Food and Agriculture Organisation (FAO, 2011) more than 14 million people, which is about 35% of the population in South Africa, are estimated to be vulnerable to food insecurity. It is further stated that currently, in developing countries, 925 million inhabitants are affected by shortage of food and the figures of hungry people is increasing at a rate of four million a year. Moreover, this trend is not decreasing enough to achieve one of the Millennium Development Goals (MDGs) which is to eliminate poverty and hunger, including “reducing by half the proportion of people who suffer from hunger” between 1990 and 2015.

Support for Food Security Activities (SFSA, 2004) predicts that the high rate of population increase in most parts of sub-Saharan Africa, this increase will lead to food insecurity and starvation which will result to most countries failing to reach their Millennium Development Goals, poor infrastructure and lack of institutional support

especially in rural areas. Fedderke *et al.* (2006) maintain that the role of infrastructure is to raise the marginal productivity of capital and encouraging private investment, this is specifically for roads, which generally bring down the transaction cost of trading. It is evident that investment in rural infrastructure leads to economic growth and in turn results in food security.

1.2 MOTIVATION OF THE STUDY

Food security exists when all people have physical, social and economic access to sufficient, safe and nutritious food (Department of Agriculture, 2002). Chapter 2, Section 27.1b of the South African Constitution Act 108 of 1996 asserts that every citizen has the right to have access to sufficient food and water and that the government has to take reasonable legislative measures to ensure that everyone has adequate access to food. Bonti-Ankomah (2001) states that the challenges of food security develop from a variety of factors, namely infrastructural and institutional deficiencies lead to food insecurity. Food insecurity is highest amongst African population and rural households. It is further stated that while South Africa produces sufficient food at national level, it never guarantees food security at personal or domestic level at home. Guaranteeing access to food household level relies not only on stable food supplies but also on stable demand or having money to purchase food.

In the outskirts areas of South Africa food security is a distress because there is poor public investment in infrastructure including the safeguarding of existing infrastructure which is necessary to create a sustainable rural development. Barrios (2008) maintain that poverty alleviation in urban areas is working more rapidly than its rural counterparts. The proper provision of physical infrastructure, the condition of financial services in rural areas, and non-farming activities are more closely linked to food security and improvements in the living conditions of rural households which are regarded as means of poverty alleviation.

Barrios (2008) argues that physical and economic infrastructure has been regarded as important factors, but it seems that the policies and other implementation guidelines may have not evolved completely to support rural development or improve conditions of rural households. Furthermore, the study investigates that in most food security programmes demand for finance, infrastructure like roads, potable water systems and irrigation systems are required in order to achieve and sustain food security.

1.3 STATEMENT OF THE PROBLEM

Rural people have been actively involved in activities which ensure food security such as farming but the consequences of their hard work are not evident because of lack of infrastructural and institutional services. Food insecurity in rural areas is high and it affects all levels of social and economic life. The primary problem or cause of food insecurity is that poor households are unable to purchase food despite its availability. Bonti- Ankomah (2001) maintains that with the current increased rate of unemployment levels in South Africa and the decrease of the average households incomes in comparison to food expenditures, what becomes exposed is that many rural people depend on wage incomes.

The study intends to investigate lack of infrastructure and weak institutional support as constraints to gaining access to food. The main concern of the study was to investigate ways of improving rural development through the growth of small and medium scale enterprises, improving agricultural activities to address chronic problems of food insecurity and strengthen access to rural credit facilities. The study examined rural infrastructure and institutional support as a means of facilitating access to food at household level and food security related issues such as employment creation and income generation through Small, Medium and Micro-sized Enterprises (SMMEs).

1.4 STUDY QUESTIONS

The study provided answers to the following questions:

- To what extent has rural infrastructure and institutional support enhanced food security in rural areas?
- What coping mechanisms and survival strategies are used by food insecure households to mitigate the impact of food shortages?
- What infrastructural support services are available in the area of study?
- What are the provisions of the policy on food security with reference to infrastructure and institutional support?

1.5 AIM OF THE STUDY

The main aim of the study was to explore how food security at household level is affected by lack of infrastructural and institutional support services, particularly looking at how these constrain access to food in rural areas, using Ntambanana Municipality as the case study.

1.6 OBJECTIVES OF THE STUDY

The study objectives were as follows:

- To identify infrastructural services available at Ntambanana area (storage, roads, and irrigation system and transport facilities).
- To assess availability of institutional support services provided in the area.
- To establish information on the purchasing power of households and intra-familial distribution.

1.7 ASSUMPTIONS OF THE STUDY

It was assumed that:

- Adequate institutional support will improve access to food by individual households.
- Lack of adequate water supply in the study area constrains food security.
- People are food insecure because of lack of infrastructure mostly in rural areas.
- An improvement of infrastructure creates an easy access to market.

1.8 PRELIMINARY LITERATURE REVIEW

This study was to explore and evaluate current literature (books, journals and other reviewed articles) on the effects of infrastructural and institutional support services on food security. There are various definitions on food security but all focus on issues such as access to nutritious food, at all times. South Africa is characterised by food insecurity at household level particularly in rural areas, yet at national level the country is food secure. It is stated in the Human Research Council Report (2004) that 14 million or 35% is vulnerable to food insecurity and approximately 1-5 million of children under the age of six are suffering from malnutrition.

Scholarly writings for instance Devereux (2001), Fedderke, Perkins and Luiz (2006) and Barrios (2008) argues that investment in rural infrastructure can lead to economic growth and in turn ensure that households become food secure. The constitution of South Africa chapter 2, section 27.1b includes a clause which affirms the right to food security and the right to adequate nutritious food for all, hence Department of Agriculture in the Integrated Food Security Strategy (2002) maintains eradication of poverty and aims at addressing micro – nutrient deficiencies. Baseline information on food security or food insecurity provides answers to essential questions raised by (Jacobs, 2009), such as which

households are unable to access adequate food. What are the determinants of their food insecurity and what are the determinants of their food insecurity.

1.9 RESEARCH METHODOLOGY AND PROCEDURE

The research design was a descriptive approach that encompasses a combination of quantitative and qualitative research methods that was undertaken because they complement each other (Scrimshaw, 1990). Furthermore, Creswell (1994) stated that the descriptive method of research is to gather information about the present existing condition. The researcher used descriptive approach because it is describing rather than judging or interpreting the situation. The researcher used this method to get primary data from the respondents so as to make rational and sound conclusions and recommendations for the study. The descriptive approach is suitable as it is agreed to the identification of the similarities and differences of the respondent's answers.

1.10 THE METHOD OF SAMPLING

In this study sampling was describe as a process which involves a selection from population or interest groups which will lead to form generalisation about the results where the sample was taken (Creswell, 1994). The researcher used non probability sampling methods to ensure that adequate and relevant information is collected. Convenience sampling procedure was used which is classified as a non-probability sampling procedure involving the identification of the population that are involved in issues of food security such as non Governmental organisations(NGOs), Community based organisations, community leaders(Amakhosi and izinduna) and Faith based organisation in the area of study.

While purposive sampling used for government officials (municipality officials) selected for theoretical reasons to provide the researcher with the information on how they ensure food security. The researcher acknowledges the use of probability sampling method as to

measure variables and generalise findings obtained from a representative sample from the total population. The study population clearly defined according to age, sex, residence and other variables. One of the best-known kinds of probability sampling is random sampling which was acknowledged for socio- economic and demographic information to ensure that every member of the population have equal right or chance of being involved in the study.

Forty three respondents were from households or community members of Obizo, Obuka, Somopho and Mambuka Traditional Authorities. Eighteen respondents in the commercial sector and smallholder farmers were selected into the sample for the study because they enabled the researcher to find out on how they contribute to food security in the area of the study. Focus groups were constituted using community organisation which ensures food security in Ntambanana area. These community organisations were grouped in terms of their Traditional jurisdiction of Ntambanana.

1.11 THE STUDY AREA

The study was conducted at Ntambanana municipality which was established in the year 2000 under the administration of uThungulu District. Ntambanana Municipality is located in North Eastern part of Kwazulu Natal North Coast. Ntambanana Municipality or Area is rated as the poorest municipality. There are four Traditional Authorities that fall within the jurisdiction of Ntambanana Municipality, and these include Obizo, Obuka, Somopho and Mambuka Traditional Authorities. Ntambanana municipality Integrated Development Plan (IDP,2011/2012) stated that the rest of the municipality is made up of small scale and subsistence farming activities such as the number of poultry, vegetable and cotton projects and these projects are funded mainly by the Department of Agriculture as well as some coming from the municipality for fencing. These projects are meant for poverty alleviation and enhancing food security.

1.12 DATA COLLECTION INSTRUMENTS

A combination of methods was used in the study, namely:

- Literature study involving the review of related literature on food in / security in rural areas was used which included government annual reports, official statistical abstracts, the data published in different books in relation with food issues and infrastructural as well institutional support. The study was accomplished and completed with inputs from policy papers documentation relating to development in agriculture, research journals and policy documents on food security.
- Qualitative data was used in collecting information from key informants using interviews with Ntambanana municipality officials, NGOs and community leaders. The interviews with government officials and NGOs officials were conducted to enable the researcher to understand their role in terms of assisting the community to ensure food security.
- A questionnaire was written in English and interpreted in isiZulu language. Questionnaire was used as the tool to confirm responses and test the reliability of information obtained using other data collection tools. The researcher used two main categories, namely open (unstructured) and closed (structured) questions. The researcher used self administered questionnaire, delivered by hand and group- administered questionnaire. The following questions which are in form of questionnaire reflect the aims and objectives of the study are as follows:
- Demographic questions such as gender, race, educational status, occupation and socio – economic status were formulated and used in the study.
- Food security (non-agricultural), food security (agricultural activities), physical infrastructure, socio- economic status and markets, and institutional support services.
- Focus group discussions with community members were conducted, using a semi – structured interview guide. Focus groups discussions are preferable because

they enabled the researcher to explore and prompt the interviewees for in –depth answers.

The researcher sought the permission of conducting a research in an area through Traditional Authorities providing letters to all respondents to feel secured in terms of providing a researcher with relevant information to the study.

1.13 ETHICAL CONSIDERATIONS

The study was approved by Faculty Board of Arts and Higher Degrees Committee. The proposal and questionnaires were submitted to Ethical Committee to seek ethical clearance. The respondents were informed of the confidentiality clause. This was fully explained to them and also that participation is voluntary suggesting that they can pull out of the research if they wish to, at any time. The researcher explained to the Traditional Authorities the purpose and the importance of the research, and why their area was selected as the study area.

1.14 METHOD OF DATA ANALYSIS

Data was analysed by using the Excel Microsoft and Qualitative data was analysed manually. The questionnaires were sorted and cleaned to keep those usable and were analysed using Excel Microsoft.

1.15 RELIABILITY AND VALIDITY

Various data collection tools were used namely focused group discussions, interviews and questionnaires with an aim of collecting reliable data from relevant respondents. The researcher tested the questionnaire and conducted interviews to check for reliability. Validity was tested by letting five respondents to complete the questionnaires three times. Giving the same answer indicated that the questionnaires were valid.

1.16 OPERATIONAL DEFINITIONS

The researcher defined the concepts in order to avoid ambiguity to the reader of this document. Different organisations and institutions define food security different by depending on their perceptions. However, their definitions use same basic concepts. Since 1970s when it developed, it has since become a considerable topic and has attracted phenomenal attention (Gebrehiwot, 2008).

1.16.1 Food Security – For purposes of this study the definition adopted by Food Agriculture Organization (FAO, 1996:56), where it is defined as Food security exists when all people at all times, have physical and economic access to adequate, secure and healthful food to meet the nutritional needs and food preferences for an active, healthy life while they also define food security not in terms of resources and means of production and purchasing power when food is produced.

1.16.2 The Household – In this study the household is the vital institution in which rural people live. Pennartz and Niehof (1999) define the household as a social unit comprised of individuals of varying age from both sexes who, over a long period of time, are enabled to pool income from various sources in order to guarantee their individual and collective reproduction and well being.

1.16.3 Institution – For purposes of this study institutions, defined in the framework of new institutional economics, are rules of the game, which have been formulated to govern relationships between individuals or groups of people involved in transactional activities (North, 1990).

1.16.4 Infrastructure – The study defined infrastructure as basically the support in which economic growth is built upon and which consists of a broad series of systems and facilities that house and transport people and goods and provide services. It includes

transportation networks, including roads, storage facilities, irrigation system and telecommunications services (Machethe, 2004).

1.17 THE RESEARCH DELIMITATIONS

This study focuses on infrastructural and institutional services and deficiencies on food security in Ntambanana Municipality area. This means that the whole geographical area of Ntambanana was the target area. Food security issues from other geographical areas were incorporated where the researcher is of the opinion that it may benefit this research, but the main focus was on this geographical area (Ntambanana Area).

1.18 ORGANISATION OF THE STUDY

This constitutes the description of chapters.

Chapter 1 of the research is based on orientation which provides an analysis of the research problem, motivation for the study, assumptions about the study, objectives and aim of study, research question and a brief overview of methods of research, procedures for the administration of the research instrument and control of confounding variables, operational definitions and selection of the study area. **Chapter 2** on the other hand is based on relevant and available literature and is reviewed with the aim to establish a sound theoretical foundation on which questionnaires and interviews can be based. **Chapter 3** explains the research design and methodology employed in this study is elaborated on including the sampling procedure and data collection techniques. **Chapter 4** based on demographic profile of respondents in relation with infrastructure and institutional services as well as food issues. **Chapters 5 and 6** provide data presentation, analysis and discussion on the availability and challenges of infrastructure, and institutional support on food security and the **chapter 7** finally is based on the conclusion and recommendations of the study.

CHAPTER 2

2.0 LITERATURE REVIEW

2.1 INTRODUCTION

This chapter reviews literature about infrastructural and institutional hindrances on food security. In general, rural population experience inadequate physical infrastructure and lack of institutional support. Altman *et al.*(2009) stated that food security need to be understood in conjunction with of the factors such as social protection, sources of income, rural and urban development, changing household structures, health, and access to land, water and inputs, retail markets, education and nutritional knowledge and other developmental factors.

The concept of food security became popular after the food crisis that affected the world in the mid 1970s. This crisis was due to the rise in food prices and because many food-deficit countries failed to import enough food, owing to their limited foreign exchange reserves (World Bank, 2007). The number of undernourished people in the world is estimated to have declined in 2010 as the global economy recovers. The number of undernourished people remains unacceptably higher than it was two years before the recent crises, higher than it was 10 years ago. The state of food insecurity has been characterised in the 21 century by the global food crisis and the number of food insecure people has reached 1 billion (FAO, 2009a.). Furthermore, FAO (2010b.) stated that the total number of food insecure people in the world is estimated to have reached 1023 million in 2009 and is expected to decline by 9.6 percent to 925 million in 2010. The improvement in food security in 2010 reflects improved access to food through the expected resumption of economic growth especially in developing countries.

FAO (2008) maintains that Africa is the continent with high percentage of food insecure people; more especially in Sub-Saharan Africa where hunger has reached a critical point with one in three is chronically hungry. This region's population growth by 200 million between the early 1990s and 2003-2005 was 700 million. Furthermore, FAO (2008) noted that the number of food insecure people in the region increased by 43 million from 169 million to 212 million. Democratic Republic of the Congo in Sub-Saharan Africa is the country with the number of its chronically hungry people increasing from 11 million to 43 and the undernourished increased from 29 –76 percent.

Human Sciences Research Council Report (HSRC, 2004), maintains that South Africa is not likely to appear in the 'high risk' category in any international rating of food security. South Africa's Integrated Food Security Strategy (IFSS) declares its "primary objective to overcome rural food insecurity by increasing the participation of food insecure households in productive agriculture sector activities". However, farming is the source of income approximately 1.2 million households in the traditional black rural areas. Other rural household's income is mostly welfare payments earning from self employment and from informal employment. Furthermore, Statistics South Africa (2009) has estimated that 20 percent of South African households have inadequate or severely inadequate access to food. Food access problem is most serious in Kwazulu- Natal (23, 1 percent).

2.2 THE EFFECTS OF INFRASTRUCTURAL SUPPORT ON FOOD SECURITY

Major contributing factor food insecurity in rural areas is inadequate infrastructure both social and physical. Devereux (2001) argues that urban food security was usually ignored with the assumption that cities and towns were better off than rural areas. There has been a swing in focus from rural food insecurity to urban food insecurity due to the fact that researchers observed a trend of rural-urban influx.

2.2.1 Urban infrastructure support and services available

Frayne *et al.* (2009) argues poverty in the urban areas is associated with increased level of food security at a household level. A survey of 70% of poor urban households in South Africa pointed out the conditions of important and severe food insecurity to be pervasive in urban centres in Southern Africa. Rogerson (2003) and Thornton (2009a.) argue that lack of information regarding marketing, pests control, high costs of labour and other inputs, lack of policy on urban agriculture, crop thefts and lack of credit and investment support services have all negatively affected urban agriculture and resulted to food insecurity in the cities. Furthermore, Chuenyane (2010) maintains that infrastructure contributes to economic development both through supply and demand channels by reducing the costs of production, and raising the quality of life by creating amenities, consumption goods and contributing to macro – economic stability.

Urban areas rely heavily on water, energy and food to sustain growth. However, cities in developing countries face challenges of water shortages, food insecurity which heavily impacts on the urban poor (Stockholm international water institute, 2012). Crush *et al.* (2010) further maintains that problems affecting urban agriculture are low intensity use and even the growing abandonment of urban and peri-urban agricultural lands. In many cities, water delivery has been privatised, making one of the key inputs for urban agriculture considerably more expensive. Next to land, access to water (especially water of good quality) and nutrients (especially manure and compost of good quality) is crucial to urban farmers, and both are difficult to obtain although more widely available than in many rural areas.

The continued failure of the economic growth to uplift the majority of urban people to gain access to enough food results in chronic food insecurity (Frayne *et al.*, 2009). Furthermore, it is pointed out that the process of urbanisation is leading to significant urban sprawl, increasing the cost of living in the city and destroying valuable agricultural land and increasing the demands for energy, water and food. Food security housing is

interrelated because houses are usually used for businesses purposes. With the proper organisation and planning, they are incorporated into the food system from production and marketing services. Informal business sector has the lowest level of food security in South Africa's cities. While improving infrastructure is a problem in these areas, it is also an opportunity to upgrade these areas with food security as a guiding structure and developmental principle.

Nugent (2001) specifically noted that the urban farmer with knowledge, space and equipment to store and or process her output is likely to increase her income potential. A strong presence of street foods in a city is creating a link between producers and vendors, sometimes within the same family. The risk of income loss from spoilage, theft or damage to crops and livestock can be reduced with proper storage and preserving facilities. Frayne *et al.* (2009) pointed out that sustainable agricultural practice is well suitable to local small scale urban and semi-urban farming. Restorative ecological practices into the city is seen as part of urban infrastructure and is the main tools available to help lower the negative influences of industrial agriculture through localised self-reliance and to foster urban scale sustainability. Furthermore, it is suggested that urban development as part of a smart growth vision can make use of planning principles and systems that promote pedestrian-oriented urban systems, maximising multiple land uses and better public transportation systems.

Nugent (2001) maintains that farmers need safe and adequate transportation for goods and people, including a well-planned road system between the farming land and residential areas and road system between rural and urban areas. Policy –makers must realistically assess the needs urban farmers have for these resources and consider feasible alternatives to expensive infrastructure. Armar- Klemesu (2001) believes that urban growth influences all aspects of food production and consumption. Food security to urban population involves the necessity of buying all the food products that household needs. In short urban people depend on the market system and commercial manufacturing system for their food needs. Most of the city dwellers are disadvantaged by their limited

purchasing power because of their low paying employment in the informal sector. Furthermore, the increasing lack of employment opportunities, rural-urban migration, urban expansion, rising land prices and the resultant lack of available land for local production and most importantly the price of urban food.

These supermarkets are placed in the more central locations, out of the periphery. This has not only had serious consequences in terms of infrastructure, transport and storage requirements, it has also resulted in many poor urban neighbourhoods becoming food-retailing deserts, where access to good food shops and markets is rare (Garnett, 2000). Armar-Klimesu (2001) stated that urban agriculture has increasingly gained recognition as a viable intervention strategy for urban poor to earn extra income. It allows the poor to reduce their reliance on cash income for food by growing their own food on plots inside or outside the city.

2.2.2 Rural infrastructure support and services available

Rural infrastructure is one of the numerous subsets of activities that comprise the essential elements of African rural transformation (Fishbein, 2001). A major challenge for rural areas is access to appropriate infrastructure and services. Rural infrastructure is important in facilitating production, consumption, distribution, and trade and is important in obtaining food security in the rural economy. The availability of and access to rural infrastructure by persons within the rural economy is both essential and crucial in the attainment of food security. Outskirt populations are vulnerable because they are extremely dependent on a single track livelihood source or income, lack of opportunities, high transport costs and lack information. It clearly noted that poor infrastructural services are the major constraint to food security and rural development. Gebrehiwot (2008) argues that marketing, rural transportation, and communication are forms of infrastructure which are important in obtaining household food security in order to reduce poverty. He further argues that traditional farming system, poor infrastructural services, shortage of farm land is also contributing factors for the household food insecurity.

Delgado *et al.* (1998), Hazell and Haggblade (1993) and Mellor in Hendricks and Lyne (2003) also argues that agricultural growth linkages can generate employment opportunities and broaden rural incomes through expanded and diversified production of both farm and non-farm goods and services. Furthermore, widespread increases in spreading on the types of non-tradable that rural people consume like dairy, fruits, vegetables, some starches, services, building materials can mobilise rural resources such as land, labour and capital for growth.

Haddad (1997) mentioned that there are two different types of infrastructure, the first is soft infrastructure consists of a system of a provision of countryside services such as banking, credit, extension, seed and fertilizer distribution, transportation, communications and rural marketing services. The type of infrastructure is hard infrastructure consists of roads, enhances the use of inputs such as fertilizer, increases aggregate farm output, and has a similar constructive influence on marketed surplus from rural areas. The provision of rural roads should be bundled appropriately with support services and capacity – building activities. Furthermore, rural growth linkages results as increased rural incomes are spent on other regional non-food goods and services, thus inspiring economic growth in the rural sector. Service infrastructure becomes concerted in towns and urban areas defined as the heart and its availability declines rapidly in the villages and rural areas. The major infrastructural issues in this respect are discussed in the following sections:

2.2.2.1 Road infrastructure

Barrios (2008) describe rural road as an access from the main road network to the rural communities and production areas. It is intended to provide an access path for the individuals residing in rural communities, and to act as a passage for light public vehicles carrying people and produce. Dirt pavements topped with gravel are mostly constructed in rural farm roads. He further stated that during reap season, the local administration or community associations may improve so that hauliers can reach as close as possible to

the production areas. Jari (2009) argues that poor conditions for roads, which are often blocked during rainy season, have an adverse effect on the transportation of the produce. If roads are in bad condition, travelling time is long, implying that it will be difficult to sell fresh produce within the required time limit.

Improved access roads among the rural households bring increased accessibility and easy movement because of lower transportation costs, which increase economic activities. Rural roads are regarded as a catalyst for greater public investment into infrastructure and capacity building. An improved access road will facilitate the construction of a health centre, a warehouse for agricultural commodities and conducting of training and other capacity building activities. For the non-agricultural household, the direct impact of roads will be in terms of facilitating the emergence of new investments and new enterprises. Food security happens when there is increased production among farming households and when the non-farming households are engaged in microenterprise development (Barrios, 2008).

2.2.2.2 Transport constraints

Transport limitation has been explained as one of the causes of food insecurity, rural areas have transport difficulties in moving food to a market or elsewhere. Poor transport conditions are regarded as one of the main constraints on food security especially in rural areas. Roberts and Rastogi (2006) stated that according to the Rural Accessibility Index, only 34 percent of the African rural population lives within two kilometers of rural roads compared to East Asia and the Pacific countries, where 90 percent of their rural populations have access to rural roads. Sieber (1998) noted with concern that the rural population of many developed countries move mainly by walking on paths and trails away from the rural road network and undertake very few motorised trips. Furthermore, time constraints may have severe negative impacts on productivity, especially during peak working periods, such as in the harvesting season. In most rural areas more time is

spent on transport activities than on labour in the field and the lack of labour is the main reason for low agricultural production resulting to food insecurity.

In most rural parts of South Africa, farmers are not able to get their produce to the market timeously because of poor access to private and public transport. This results in product spoilage and losses (Bachmann and Earles, 2000). The shortage of reliable transport may increase transport costs, which increases transaction costs amongst smallholder farmers. These high costs will then reduce the incentive to move away from the farm gate sales (Zaibet and Dunn 1998, in Jari 2009).

2.2.2.3 Storage facilities

Good food storage facilities are essential to ensure food security for a long time. Great losses can be experienced if the conditions of storage are not good enough to protect the food product from spoilage. If conditions are not good the quality and quantity of food is negatively affected (Mtshali, 2002). Storage infrastructure is necessary for carrying over the agricultural produce from harvesting period's to the rest of the year. Insufficient storage facilities cause losses in terms of wastage in quantity and quality of produce. He further noted with concern that farming community and other local businesses need to be assisted with facilities for scientific storage so that wastage and produce deterioration are avoided (White, 1999). Most smallholder producers and other small local businesses are eager to sell produce almost immediately after harvest in order to ease congestion, leading them to sell their produce at lower prices (Wilson, Boyette and Estes, 1995) in Jari (2009).

Furthermore, the problem of inadequate storage facilities is still critical. Inadequate storage facilities in rural areas, in most cases lead to products being sold directly from the field. At some stage of harvest seasons this practice tends to depress producer prices, leading to loss of rural farmers' income. An inadequate post-harvest storage facility

causes deterioration in the quality of agricultural products. Adequate storage facilities are needed to increase and stabilise farmers' incomes, and to preserve the quality of products.

2.2.2.4 Market constraints

Makhura and Mokoena (2003) argue that rural markets have problems with lack of facilities, while the investment in urban wholesale and retail markets is usually greater and the problems more complex than for rural areas. In rural areas smallholders get only a fraction of the value of their produce because of the lack of marketing infrastructure. Department of Rural Development and Land Reform (2011) maintains that many small scale farmers, who are in the majority find it hard to deal with food price increases with increased production due to lack of markets, inputs and finances. White (1999) pointed out that in rural markets; trade is characterised by direct sales of small quantities of produce by producers to village traders, by sales and retailers to rural consumers. Rural markets are normally situated alongside main highways, or near ferries and other local transport modes.

Inadequacy in rural infrastructure services leads to poor functioning of domestic market with little spatial and temporal integration, low price transmission and weak international competitiveness (Pinstrup-Anderson and Shimokawa, 2006). Furthermore, Makhura and Mokoena (2003) pointed out that poor road conditions, high transport costs and isolated markets have been identified as factors that slow down the improvement market access for emerging farmers and creates food security for rural population.

A lack of access to markets is due to poor infrastructure and insufficient information that prevents access to both labour and capital. In many rural communities there are few job opportunities outside of agriculture and often resulting in income and food insecurity due to deficiencies on food security. Employees in rural areas work for extremely low wages in agricultural sector; this sector is seasonal fluctuations and little income security. Lapar *et al.* (2006) argue that the availability of market information is very limited in

developing countries especially in rural areas. Inadequate market information is common due to the great number of smallholder producers, ineffective communication systems and high levels of illiteracy.

2.2.2.5 Irrigation system

Adequate water supply in the Ntambanana Municipal area is a major problem. The majority of residents (64%) within the ethnic group areas have not adequately been provided with water supply, which need to be addressed urgently. Water supply in the ethnic group areas is basically provided from boreholes (Ntambanana Municipality IDP, 2010/2011). Development Support Monitor (DSM, 2012) maintains that irrigation has the potential to contribute immensely towards rural communities' ability to generate income, create food security and reduce poverty. Its direct influence includes higher earnings through high yields, cropping intensity and changing towards high value crops, higher rural employment and reduced food prices. Hussain and Hanjra (2004) also believe that irrigation benefits the poor through higher production, higher yields, and lower risk of crops failure. An irrigation system empowers smallholders to adopt more diversified cropping patterns and to change from low-value subsistence production to high – value market- oriented production. Increased production makes food accessible and reasonably priced for the poor people to able to buy. Furthermore, it helps to alleviate poverty in its worst forms, namely chronic poverty. Irrigation is productivity enhancing, growth promoting and food insecurity reducing. Irrigation is an important socio-economic good with a positive role in reducing food insecurity and the poor population with limited resources remains unable to adopt irrigation as the means of preventive or defensive measures for food security.

Tafesse (2003) and FAO (2007) in DSM (2012) stated that the problems facing irrigation development and management in the recent past have mostly related as follows:

- *Environmental factors:* water scarcity and poor water quality especially with regard to sediment concentration; land degradation as a result of poor operation

and maintenance (O&M) activities due to inefficient water management practices. These result in water wastage and water logging including land-use regulation.

- *Capacities of farmers:* where there is lack of knowledge and access to the opportunities of irrigation technology; the weak economic foundation of most farmers and the relatively high development costs involved in developing irrigation schemes.
- *Government policy; institutional and legal support:* in general there has been limited or no priority given to irrigation development in national and local planning and budgeting; there are poor management structures in place to support farmers and promote irrigation development; and the current land tenure system does not encourage farmers to invest in permanent improvements on their plots and make improvements to obtain credits for further development; and unclear water rights and their enforcement.

Access to reliable irrigation water can enable farmers to adopt new technologies and intensify cultivation, leading to increased productivity, overall higher production and greater returns from farming. This, in turn, opens up new employment opportunities, both on – farm and off- farm, and can improve incomes, livelihoods, and the quality of life in rural areas. Access to good irrigation allows poor people to not only increase their production and incomes, but also enhance their opportunities to diversify their income base, and reduce their vulnerability to the seasonality of agricultural production and external shocks. It should be noted that the poor also use water for other farm and non-farm production activities, particularly small-scale rural enterprises such as livestock rearing. Accesses to irrigation facilities help improve participation and decision making by the poor. Farmers’ involvement in irrigation management and decision making delivers direct benefits at farm household level and indirect benefits to the irrigation system (Hussain and Hanjra, 2004).

2.3 THE EFFECTS OF INSTITUTIONAL SUPPORT

One of the challenges of rural areas is the weakness of rural local administration and insufficient social mobilisation to take onward development as many of the dynamic people migrate and the rural economy stagnates. Furthermore, poor governance systems also make rural areas poor investments. Related to this are weak structures of community participation and contribution and development plans that never address ward needs leading to communities being not involved in their own development and being deprived of local opportunities (Department of Rural Development and Land Reform, 2011). The institutional infrastructure available to serve households' needs for credit for agricultural production in the traditional black rural areas' varies according to whether that production is mainly for the market or for self consumption. Formal agricultural credit inherently a private sector function in most instances it is only the public sector that plays this role in the old black rural areas. Parastatal banks have made substantial efforts to satisfy the demand for credit in the old black rural areas (HSRC, 2004).

Barrios (2008) stated that there is still a strong belief among rural households and community at large that credit should be provided by the government and many rural credit facilities in rural communities failed because of a very low repayment. In rural areas food-insecure households are normally cash strapped buy inputs in the market. Access to adequate credit is required, but it is always a fact that they do not qualify to get credit. The research indicated that no more than a quarter of smallholders credit needs are satisfied through institutional lending while the rest is siphoned off by large and medium farmers producing cash crops primarily for the market (Alamgir and Arorai 1991).

Access to financial support is often more important for smallholder farmers, as the majority of them do not have formal employment, and therefore, may not have sufficient income to finance their projects (Mthembu, 2005). Since the majority of smallholder farmers do not have formal employment and live in communal areas, farmers do not have collateral that could be used when borrowing money from financial institutions such as

banks (Coffey, 1998). In some areas, an emphasis on rural finance, rather than exclusively agricultural finance, is justified. In rural Ethiopia credit schemes were operated by advancing loans to groups of women farmers to undertake various commercial activities (Peacock and Jowett, 2006).

The largest volume of lending for agricultural purposes, since the late 1990s has come from the Land Bank, though others such as Ithala Bank in KwaZulu-Natal, Uvimba Bank and its predecessors in Eastern Cape formally known as Transkei-Ciskei and Agribank Northwest have had a significant local presence (HSRC, 2004). Giving credit to small businesses is the most successful way to promote food production and food security. As pointed out earlier smallholder or household in rural areas can not access credit due to illiteracy and lack of information and lending processes. The rural poor have been forced to resort to exploitative, informal sources of credit. Financial institutions extending credit to rural households have not necessary support from governments and central banks such as seed capital and periodic enlargement of their capital base. Lack of capital is a feature of poverty and the poor generally lack both savings and borrowing opportunities (Peacock and Jowett, 2006).

It is crucial that rural credit institutions be encouraged to mobilise savings for lending purposes (Alamgir and Arorai, 1991). While micro-finance institutions have taken financial services to many people who previously did not have access to financial services, micro-finance institutions have failed to reach poorer rural areas and smallholder agricultural producers whose livelihoods are characterised by seasonal investments, risks and returns (Morduch, 1999).

Exposing the poor with access to credit is a technique that can raise farm incomes, not through higher prices for agricultural goods, which transfer to consumers and have a negative impact on food security by reducing production costs (Muhumaza, 2002). Commercial banks are likely to be reluctant to go on board on rural credit programmes because of the particular difficulties encountered in rural financial markets. Other

problems include poorly developed legal systems and information infrastructure, high transaction costs, lack of credit and financial records of potential borrowers and collateral that is not secure (Adams and Vogel 1986). Barham *et al.* (1996) stated that in Bangladesh, commercial banks are forced to open a certain number of rural branches before they can open additional, more profitable, urban branches. International Fund for Agricultural Development (IFAD,1985a: Ch.6) in Alamgir and Arorai (1991) stated that institutional framework is adopted to deliver credit to the smallholders food producers, a number of strategic elements should be kept in view of the following:

- Clear criteria should be laid down to ensure that smallholders and the rural poor receive the necessary credit in time. Women's needs, in particular, should be addressed, as their role in family food security is crucial. Income, landholding, ceiling on loans, type of eligible loan can restrict the benefit of credit to food-insecure households.
- Access to credit for smallholders and the rural poor should be improved by relaxing eligibility criteria; more especially restructure security requirements of property or land. The shift of attitudes of credit institutions and staff training should be done, towards greater sensitivity to the needs of smallholders and rural people in general is extremely important.
- Credit must be accompanied by appropriate research and extension support. Otherwise, credit use will be less than effective and delinquency will amount. The stock of knowledge and technology has to be expanded in favour of smallholders, and institutions responsible for spreading the new know-how also have to be strengthened.

2.3.1 The lack of purchasing power

The majority of households in South Africa lack access to purchase food due inadequacy of cash. The main causes of this situation are as follows unemployment, inflation of food prices and low wages. Black households have the lowest standards of living and are much

more vulnerable to food insecurity (Department of Agriculture in IFSS, 2002). In addition incomes earned from both on farm and off-farm activities allows household to access food through exchange either through the money economy or other governmental grants (HSRC, 2004).

In South Africa, rural communities' source of economy is greatly dependent on agriculture and the poor performance of farmers is caused by climatic changes and poor market prices and the income derived from this source is very little and it fails to sustain the family in terms of food purchase. Most farming families are likely to be exposed to food insecurity due to above mentioned reasons (Civil Society Agriculture Network, 2005).

2.3.2 Technical and Institutional challenges in Agricultural Development

Kirsten *et al.* (2009) stated that a widely accepted objective for agricultural development in Africa is to achieve sustainable intensification with the adoption of new technologies that use purchased inputs to increase land and labour productivity. Furthermore, they stated general challenges facing poor rural areas as follows:

- The absence, in many cases, of markets because of low purchasing power in the domestic market and poor access to global markets caused by distortions,
- production and sales cycles that are long by the standards of other small businesses exacerbating climate, pest, price and transaction risks, leading to significant seasonality in labour use, cash flow, food availability, prices and risks, and affecting whole communities and their economies,
- insufficient allocation of labour to their own land during labour peaks for some farmers because of poverty, forgoing valuable increases in their harvest, as shortages of food drive them to work for others,

- small – scale individual input purchases that therefore have high transaction costs in situations where markets are poorly developed and risky, even though technical progress and population pressure on land increase farmers’ needs for inputs,
- need for seasonal financing of farmers’ input purchases, raising issues of how such purchases can be financed and how the risks of such finance to poor farmers can be mitigated,
- use of significant shares of output for subsistence, generating welfare but not cash, so that sales of outputs often fail to fully cover purchased input and labour costs,
- land tenure arrangements that affect farmers’ ability to borrow, expand or exit with a lump sum, by land – market transactions, and that also influence incentives for land improvement,
- relative scarcity of water, both for human basic needs and for direct production in irrigation agriculture the latter exacerbated by the low level of investment in irrigation infrastructure.

Just as problems in input supply and financial service delivery to small –scale subsistence farmers in poor rural areas are mutually reinforcing, they can also have negative effects on output market development without greater use of purchased inputs. Seasonal finance and farmers’ marketed surplus will be relatively small and leading to higher transaction costs which impact on risks for output buyers (Kirsten *et al.*, 2009).

2.4 COPING MECHANISM AND SURVIVAL STRATEGIES USED TO REDUCE THE IMPACT OF FOOD SHORTAGES

The ways in which households engage in various activities to meet their food requirements are called coping strategies. Poor households face a dilemma that involves a trade-off between immediate subsistence and long-term sustainability. Households may choose to make changes in their attitudes to food, income, consumption, production or asset, resources base in order to cope with food insecurity. Many rural households faced

with food insecurity turn to agriculture for solutions to food shortages and as insurance against hunger (Hendricks, 2002). Rural communities have no passive sufferers of food shortage problems. Basing on their ability or available funding and opportunities they try to use different methods to handle the stress situation (Gebrehiwot, 2008).

The rural communities sell their belongings, trade off other items and diverse agriculturally to cope with stress. Other assets they sell include livestock in a non sustainable fashion this exposing themselves to food insecurity. Some of the most important survival strategies that are experienced by rural communities are out migration social networks and support from relatives or friends, on a daily basis labour, food aid and reducing daily meal (Gebrehiwot, 2008).

Maxwell (1995) pointed out that borrowing either food or money from relatives or friends was a commonly- mentioned practice. Local merchants may extend short-term credit as well and borrowing money for food can lead to permanent indebtedness, and is an example of how a short-term coping strategy can put a household in a more vulnerable position with regard to longer – term livelihood options.

2.5 PROVISION OF POLICIES ON INFRASTRUCTURE AND INSTITUTIONAL SUPPORT

The Reconstruction and Development Programme (RDP) in 1994 identified food security as a priority policy objective. The government reprioritised public spending to focus on improving the food security conditions of historically disadvantaged people. That policy resulted into increased spending in social programmes of all spheres of government such as school feeding schemes, working for water, Provincial community food garden initiatives like Kgora and Xoshindlala, production related loans scheme for small farmers, infrastructural grant for smallholder farmers and the Presidential tractor mechanisation scheme (Department of Agriculture in IFSS, 2002). Fishbein (2001) specifically noted that these policies should aim to guide and oversee the development of

service delivery systems by, among others: assuring the existence of local government capacity to support communities, facilitate necessary fiscal transfers, assure appropriate planning and connect to external support networks, setting and monitoring technical and management norms. If these policy guidelines are implemented correctly food security will be easily achieved.

Poor governmental policies and institutional failures are possible factors for repeated food shortage or poverty and failure for development in general. The government is responsible for causing food insecurity or failing to prevent it. Furthermore during the apartheid system policies and strategies to promote agricultural production and food security were limited or non-existent and black people were excluded (Gebrehiwot, 2008).

The main principle of Integrated Food Security Strategy for South Africa of 2002 is that food security should be addressed by ensuring that the target population gains access to productive resources and is empowered to have nutritious and safe food. Where a segment of the population is unable to gain access to productive resources, food security interventions will ensure access to income and job opportunities to enhance purchasing power (South African Human Rights Commission SAHRC, 2004).

Furthermore, the Special Programme for Food Security was launched in February 2000 and aimed to support 3000 households with infrastructure and agricultural input support to the value of approximately R2000 to R3000 per household. This programme was established to increase food production and livelihoods among smallholders by encouraging adoption of new technology and reducing constraints to farm output (SAHRC, 2004).

2.6 SUMMARY

The chapter has reviewed literature on the effects of infrastructural and institutional deficiencies on food security. The focus was based on several of hindrances on food security especially in rural areas such as poor road, lack of transport, lack of storage facilities, lack of irrigation system and poor market. These factors contributing in creating food insecurity and it has been noticed that in urban areas these factors are not regarded as major problems.

The main challenge that has been regarded as major cause of food insecurity in rural areas is weak institutional support where rural people do not have adequate access to credit and lack of information which could assist them in terms of formulating food security project as one of the way for poverty alleviation. This has chapter reviewed that South Africa and other developing countries have weak policies that can address the issue of food insecurity in rural areas. The study highlighted that the problem of these policies is on how to implement them to the community

CHAPTER 3

3.0 RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

This chapter is on research methodology includes the research approach that was followed in executing the research on the effects of infrastructural and institutional deficiencies and services on food security. This study used both qualitative and quantitative research methods in order to obtain a holistic perspective around the topic being researched.

3.2 THE STUDY AREA OR LOCATION OF THE STUDY

Ntambanana area is located in the northern coast part of KwaZulu Natal and is one of the six local municipalities under uThungulu District (Figure 3.1). Ntambanana covers an area of 1083 km² and has a population of 94772 people and 98% of the total people as per 2007 community survey. Eighty five percent of the land in Ntambanana area belongs to Ingonyama Trust and 15% of the land is privately owned by commercial farmers. Ntambanana municipality is rated as the poorest municipality in DC 28 it solely depends on equitable share. The implementation of property rates has set a base in revenue collection since the municipality was able to collect 2% rates from farmers in 2007/8 and 6% in 2008/9 (Ntambanana Municipality IDP, 2010/2011). The overlap below map depicts Ntambanana Traditional Authorities.

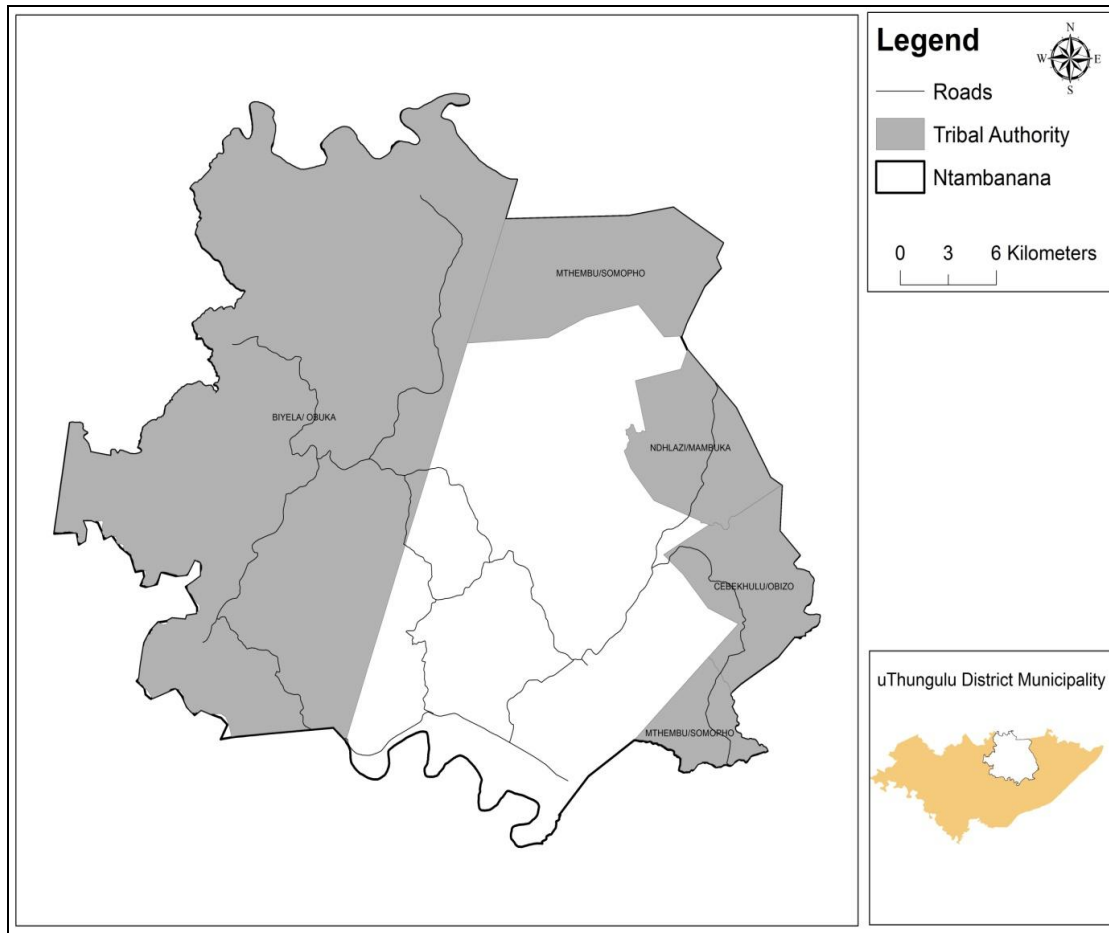


Figure 3.1: Ntambanana Traditional Authorities Map

Ntambanana is predominantly rural with no big or formally established towns. The settlement pattern is largely what is defined as rural scattered, which is an extremely sparsely populated settlement pattern and makes infrastructure provision difficult. The Ntambanana State Farms are owned by the Department of Land Affairs and controlled by the Department of Agriculture, but are in the process of being transferred to the community through a land redistribution programme. The largest proportion of the total population in the Ntambanana municipal area is based in the Traditional Authority Areas. The highest population densities are found in the Somopho South Traditional Authorities which varies from 600 – 1200 people/kilometer squared (Ntambanana Municipality IDP, 2010/2011).

Ntambanana municipality has 36.70 pensioner headed household. It is perceived that most households in the area depend on the government pension grant for survival, since there is still a high percentage of unemployment in the area. Ntambanana has been characterised as one of the municipalities with high percentage of illiteracy. The statistics indicate that very few people have finished their matric in this area. Poverty associated with unemployment is one of the contributing factors, since many people drop out of school to seek work in bigger cities like Durban and Johannesburg. Economic activity in the traditional areas such as production of food for own use, arts and crafts and informal sales are generally disregarded and create the impression that traditional communities are without a source of income and survive from day to day on subsistence production. Sixty four percent of the population in the ethnic group areas receives no formal income and between 68% and 84.6% in the Obizo, Mambuka, Somopho North, Somopho South and larger proportions in the Southern area of Obuka receive no formal income (Ntambanana Municipality IDP, 2010/2011).

3.3 RESEARCH DESIGN

The researcher used a descriptive design combined with quantitative and qualitative methods in order to observe several angles and to acquire multiple measures of the same phenomena by applying different research measures (De Vos, 2002). Qualitative method was used to gather data pertaining local perception and opinions on the lack of infrastructural and institutional services and policy outcomes using semi-structured questionnaire. Furthermore, the qualitative method enabled the researcher to find out what can be learned about some phenomenon of interest, particularly social phenomenon where people are participants. The study used qualitative method because the researcher was interested in investigating and responding to descriptive questions.

Quantitative data on household's income status, food security status, demographic characteristics and other basic information was collected from sample households using structured questionnaire. The quantitative method enabled the researcher to quantify data

in terms of statistics, tables and percentages. The aim of descriptive approach was to obtain an accurate profile of the people, events or situations. Hakim (1987: 26) in Sithole (2008) stated a descriptive study seeks to elicit a comprehensive and improved understanding of a situation as it offers a richly descriptive report of the individual's perceptions, attitudes, beliefs, views, feelings, meanings and interpretation. The participants were requested to describe their own understanding of infrastructural and institutional services on food security in their area in order to verify their understanding of development and programme implementation processes of food security. Descriptive study assisted the researcher to gain better understanding of deficiencies in food security and existing programmes that are to alleviate food insecurity. Secondary sources or analysis were used as data collection methods in this to collect preliminary data from the books, journals and other available documents from internet and library. This assisted the researcher to gain a vivid background on the issues of food security in rural areas and helped the researcher to formulate relevant interview questions and questionnaire.

The primary analysis of this study was interviews which include semi-structured one –to one, observation and questionnaires. The focus group discussions were conducted by use of participatory research tool, this tool enabled researcher to identify some gaps in the tool. This step was followed by the selection of the sample from the population.

3.4 RESEARCH METHODOLOGY

Huysamen (1994) in Khoza (2003) states that research methodology comes into play at various overlapping and integrated namely the creation and development of techniques and strategies to collect data. One of the objectives of research methodology is to facilitate the researcher's task in conceptualisation, sampling, analysis, systematisation of empirical findings report- writing.

3.4.1 Sampling method

A sample was drawn from the population of Ntambanana area at Obizo, Obuka, Somopho and Mambuka Traditional Authorities and respondents were selected as key elements in qualitative data gathering. This population was targeted precisely because it was the most reliable population to provide appropriate data that will assist the researcher in achieving the objectives of the study. The researcher used convenience sampling procedure which is classified as a non-probability sampling procedure involving the sample being drawn from that part of the population readily available.

The researcher used convenience sample as he selected stakeholders that are involved in issues of food security such as non governmental organisations, community leaders (Amakhosi and Izinduna) and Community Based Organisations in the area of the study, the researcher believed that convenience sampling provides the study with useful information through interviewing interested group. Creswell (2003) argue that in qualitative data collection, purposeful sampling is used so that individuals are selected because they have experienced the central phenomenon. In this study government officials were purposefully selected particularly those exposed in the issues of food security. It should be noted that probability sampling method though never used in the study, determine variables and take a broad view about findings obtained from a representative sample of the total population. The researcher however, acknowledges that quantitative data often involve random sampling so that each individual has an equal probability of being selected and the sample can be generalised to larger population.

The sample comprised of sixty one community members distributed as follows:

- Forty three households were included in the sample to obtain information on food security at household level.
- Two governmental officials were interviewed to solicit information on their perceptions and local government activities and policies related to food security at municipality level.

- Eighteen small scale farmers were also interviewed to ascertain or determine production levels for both commercial and household consumption in order to gain an in - depth understanding on livelihood generation and the extent to which the product can contribute to food security for the immediate physical setting.
- Focus group: Discussions were held with existing groups made up of males and females. The four focus groups used in the study were made up of members ranging between five and ten and interviews were conducted in their gardens. The groups were targeted because of their involvement in gardening projects. The researcher was mainly interested in obtaining information on the extent to which the garden projects contributed to food security.

3.5 DATA COLLECTION INSTRUMENTS

3.5.1 Questionnaire

The new dictionary of Social Work (1995) describes a questionnaire as a set of questions on a form which is completed by the respondent in respect of a research project. In this study a questionnaire was designed as a instrument for primary data collection and the questions included in the questionnaire relate to the research questions reflected in chapter one. The researcher used questionnaire because more food security studies used this data collection tool. The questions were clear and easy to understand because with self completed questionnaire there is no one to explain the meaning of questions to respondents. The questionnaire was designed in order to collect both qualitative and quantitative data. Due to the geographical area of Ntambanana as the study population the researcher used questionnaire because respondents were scattered and there was no proper transportation. The basic objective of questionnaire is to obtain facts and opinions about a phenomenon from people who are informed on the particular issue (Strydom *et al.*, 2005).

The researcher used two types of questions, namely open– ended questions (unstructured) and closed–ended questions (structured). In a self–completed questionnaire a line or space is left for the respondents to write his or her own answer and there is no prior list of answers. The researcher assisted those who were unable to read and write by filling the questionnaire for them. The advantage of open – ended questions in this study was that the respondent’s answer was not influenced unduly by the interviewer or questionnaire and replies from respondents were recognised as valid data. Closed – ended questions in this study offered the respondent a range of answers to choose from, in the case of self – completed questionnaire a range of answers is set out in the questionnaire and the respondents were asked to tick the appropriate box or next to correct answer.

The researcher used different types of questionnaire such as administered and self administered, and group- administered questionnaire delivered by hand. This tool was used to confirm responses and test the reliability of it; the intention of researcher was to compare responses from discussions with questionnaires responses. The questionnaire was designed to capture data on factors that influence food security. The data that was collected included:

- Demographic data such as gender, age, marital status, high educational level and income level (Appendix B).
- Food security in terms of production food security –non agricultural activities, agricultural activities and market availability (Appendix C).
- Factors of physical infrastructure such as roads, communication links, storage facilities and transport availability (Appendix D).
- Institutional support (financial institutions, governmental institutions, legal institution and Non–governmental institutions (Appendix E).

The researcher saw it as important that respondents are interviewed and answer questions in a language they feel comfortable and clear to them. The questionnaire were written in English and translated in isiZulu and experts of these languages were employed for translation. The back-translated version was checked against the original version. The

researcher used questionnaire because of its advantages such as: it is not expensive because you save time, human and financial resources. It also offers greater secrecy as there was no face-to face interaction between respondents and interviewer. In this study some sensitive questions were asked such as demographic, income class and employment status questions. Other advantage of interview as data collection was easy to use to the study population because of it being illiterate.

This kind of data collection method has some disadvantages which might affect the objectives of the study. In most studies self-administered questionnaires have low response rate which means not everyone returned their questionnaire and sample size of the study will in effect be reduced. The response rate is not a problem when the questionnaire is administered in a collective situation. There is a self –selecting bias that means not everyone who receives questionnaires returns it. Those who return their questionnaire may have attitudes, attributes or motivations that are different from those who do not and if the rate of response is low the findings may not be representative of the total population. This data collection method lack opportunity to clarify issues when respondents do not understand some questions and if different respondents interpret questions differently this will affect the quality of the information provided (Kumar, 2005).

3.5.2 Interviews

The researcher used a qualitative interview schedule because it is an interaction between the researcher and respondents. The aim of qualitative interviews is to see the world through the eyes of the participant, and they can be a valuable source of information. The researcher used this data collection method to obtain rich descriptive data which helped the researcher to understand the participant's construction of knowledge and social reality. The researcher used open- ended interview because the form of a conversation with the intention that the researcher explores with the participants her or his views, ideas, beliefs and attitudes about the effects of infrastructural and institutional

deficiencies on food security. Open- ended interviews are normally spread over a period of time and consist of a series of interviews.

The use of interviews has allowed the researcher to be in touch with people who possess the information being sought. They allowed the researcher to capture their thoughts more openly and accurately about the topic than it would be possible using structured interviews. The researcher started with a summary of what the interview is about and it was short and brief. The researcher used a tape – recorder during the interview process and the researcher got the consent first of respondents or interviewee. During the recording of interview the researcher scribbled down questions while the interviewee was speaking. The researcher used interview as useful tool for collecting in–depth information because it was possible for the researcher to obtain in –depth information by probing. The researcher explained questions where it was necessary to avoid confusion to the respondents.

3.5.3 Focus group discussions

Focus group interviews were used as control for the interview that was conducted early. The discussions between the researcher and participants are sometimes used to generate hypotheses about how they perceive topic and discussions often enable the participants to discuss issues they consider to be important. The focus group is held in an environment that is free from noise and comfortable (Struwing and Stead, 2011). The purpose of group interviews is based on the collection of qualitative data and stated that the participants should be tasked with setting the ground rules at the beginning of the session so that no one would be hindered or feel offended by the discussions Frey (1994) in Welman *et al.* (2005).The researcher used focus group discussions which involved gathering of collective perceptions on deficiencies on food security issues. Focus group discussions were conducted as the way of making people recall important facts about food security issues within the area. Discussions were held and series of unstructured questions were

asked to the members who freely share their opinions, ideas and reactions about food security issues and its challenges.

All groups or community organisations that were selected were present and the researcher had one session with the participants. The sample was sufficiently homogeneous, because of the age group and cultural background including their socio – economic background. In focus groups, all participants were encouraged continuously by the researcher to feel that their contributions were worthwhile and they were allowed to disagree with each other if it was necessary. The researcher decided to take detailed notes and tape recorder. The researcher tried to establish a tolerant environment in the focus group that would give confidence to participants to share perceptions, points of view, experiences, wishes and concerns without forcing the participants to reach agreement.

Like any other data collection tools, focus groups also have its advantages and disadvantages. Advantages being that a secure setting can be provided for a discussion without fear of criticism, an in- depth of a topic can be obtained. According to De Vos *et al.* and Welman *et al.* (2005: 203-4) in Kadozo (2009):

- Focus group discussions produce concentrated amounts of data on the topic of interest,
- the method is a friendly and respectful one and conveys a willingness to listen without being defensive,
- in this method participants do not require any literacy, just the ability to listen and analyse,
- multiple viewpoints or responses were obtained in a shorter period of time than in individual interviews.

The limitations of utilising focus group discussions are that generalising to a population is not possible given the small sample size; the participants may be unwilling to disclose

all their thoughts on the topic, the facilitator may be biased in directing the discussion (Struwing and Stead, 2007).

3.6 DATA ANALYSIS

The Microsoft excel was used to analyse the quantitative data and this programme enabled the researcher to capture data. Content analysis was used to analyse the qualitative data for this study where the researcher generated themes from the questionnaires and focus group discussions. Qualitative data may take the form of interview transcripts collected from research participants or other identified texts that reflect experientially on the topic of study (Maree, 2007). In this study content analysis is suitable because focus group interviews was used, in that interview respondents were given an opportunity to express their experience as well as their feeling over the operation of small scale farming in their area. Manual analysis was used for qualitative analysis of large bodies of textual, graphical and audio and video data and assisted the researcher uncover and systematically analyse complex phenomena hidden in text.

3.7 ETHICAL CONSIDERATIONS

The researcher obtained permission from traditional leaders of the study area. The researcher briefly provided the reasons for research being conducted and emphasised the fact that participants may withdraw at any time. It was explained that the identity of individuals from who information was obtained during the research process will be kept strictly confidential and that no information revealing the names of participants will be included in the final report or any form of communicating the results of the study. In order to secure the consent of the selected participants the researcher relayed all important details study, including its aim and purpose. Creswell (1994: 56) in Sithole (2008) cites it is the researcher's obligation to respect the rights, needs, values and desires of the research participants.

3.8 RELIABILITY AND VALIDITY OF THE STUDY

Reliability and validity was tested using five respondents and the results came out positive. But the results do not form part of the project. Data collection tools were tested with an aim of collecting reliable and valid information for the study to be undertaken. The data that was gathered answered the research questions and in lined with the objectives of the study.

3.9 SUMMARY

Research design and methodology, research sample, data collection, data analysis and ethical consideration as well as reliability and validity of the study were discussed with a vivid explanation as to how the information was processed in the study. The data collection tools were used as way to respond to research questions.

CHAPTER 4

4.0 DEMOGRAPHIC PROFILE OF RESPONDENTS IN RELATION TO FOOD SECURITY

In this section the demographic profile which includes aspects such as age, gender, marital status, education level and socio-economic status, are discussed. These aspects are related to the issues of food security and they influence the respondent's economic status. An infrastructural and institutional hindrance mostly affects community members or households.

4.1.1 Gender distribution by Respondents

The study revealed that 63% of participants were female with 37 percent males who are solely responsible for food provision on daily basis as depicted in the graph (Figure 4.1.) below.

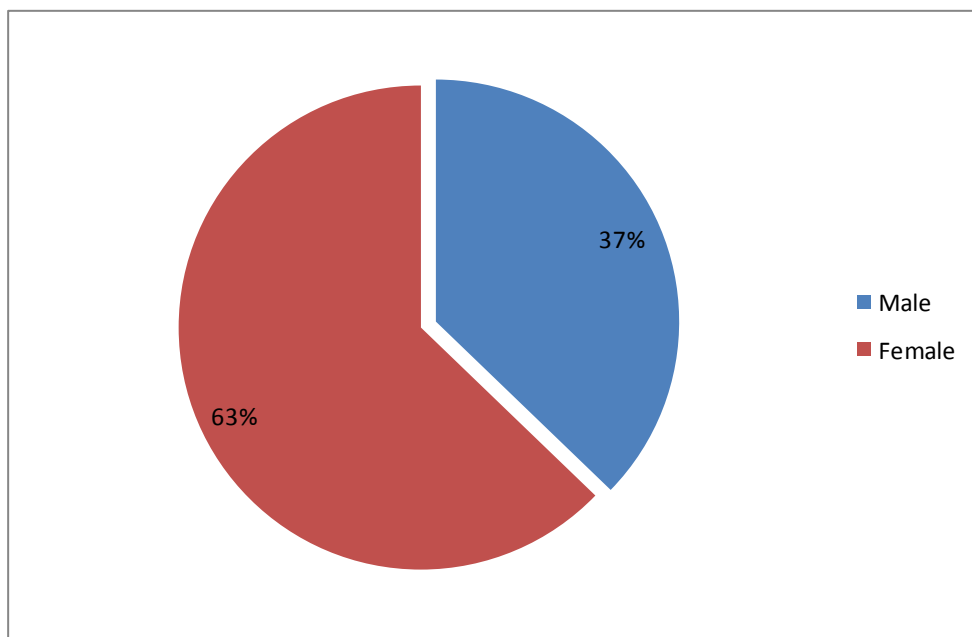


Figure 4.1: Gender distribution of respondents

The results suggest that females are key role players in ensuring household food security as compared to males. This was also reiterated from the focus group discussions that farm activities are pre-dominantly performed by females in the area. What seems to be an obstacle, as was reported by the majority of women, is their limited access to assets key resources and such as land, technical knowledge and information sources. Correspondingly Porter (1995) clearly stated that women's relative poverty, their lack of access to capital and credit certainly restricts their market opportunities. In the growing roadside markets many women, like men appear to have expanded opportunities for trade and again Porter (1995) argues that women sold specific categories of low value goods such as small scale grains, cooked foods, vegetables and fruits while men sold the high valued goods such as livestock. Women retail less costly local produce. Added to this, a larger proportion of respondents felt that their role has been under estimated even their contribution remains unrecognised. In contrast to this, some previous related studies such as Butt *et al.* (2010) have established that the majority of food security projects have women as major participants but still women remain on the insignificant of the agricultural sector in terms of decision-making process. Interestingly, Delius and Schirmer (2001) argue that women operate under greater constraints such as poor infrastructural and lack of institutional support in agricultural and non-agricultural activities that ensures food security.

4.1.2 Age distribution of respondents in relation to food security

The study discovered that the majority of active participants in food issues were the elderly people and adults African women. Ntambanana Municipality IDP (2011/ 2012) stated that a high percentage of the population fall within the economically active group which is 15-34 age categories, but the difference is that most pensioners are the breadwinners through the government pension grant for survival. The Graph overlap depicts the age distribution of respondents.

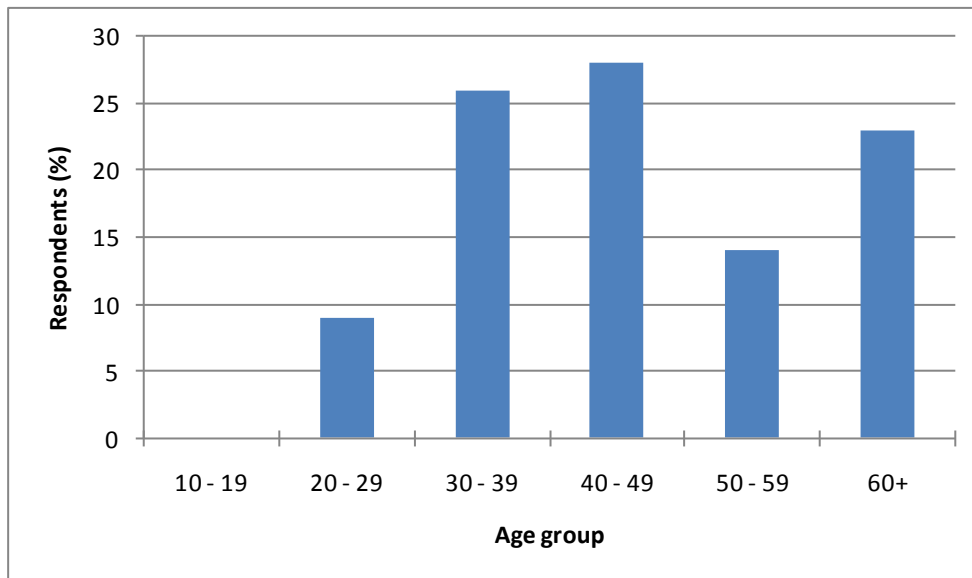


Figure 4.2: Age distribution of respondents

The graph shown in Figure 4.2 presents that the majority is 28 percent who are involved in making the means of bringing food on the table and fall in the age range of between 40-49 followed by 26 percent that range between the ages of 30-39. Twenty three percent of the pensioners (60 + yrs) also play a vital role in establishing food security in their households. As shown on the graph, young people between ages of 20- 29 (9 percent) sample households are involved in agricultural and non agricultural activities to create chances of food security.

Focus groups indicated that the majority of the people of Ntambanana are farm workers because agriculture is the major source of the income. Elderly people and young African women who are less educated are in majority in farming and agricultural activities. It is noted in Wolfe *et al.* (1996) that there has been little studies done on food insecurity among elderly, yet the limited evidence available suggests that the low incomes, limited mobility, and poor health of many elderly are likely to put them at greater risk for the problem than the general population. Low income elderly experience food insecurity.

Factors that contributed to the experience of food insecurity in the elderly included limited incomes, poor health and physical disabilities, high medical bills and medicine costs, and unexpected expenses such as house repairs. Some elderly were unable to shop because they could not drive or could not stand or walk for very long distances. Food parcels were used by only one- third of the rural white and just over half of the urban black elderly, although many of the others appeared to be eligible, including some who were food insecure. The findings of this study concur with Ntambanana municipal's IDP (2011/2012) which suggests establishing various youth programs to capacitate the large group of youth that is unemployed.

Table 4.1: Participation in food security issues by age and gender groups

		Age groups					Total
		20 - 29	30 - 39	40 – 49	50 - 59	60 +	
Gender	Male	2	4	5	2	3	16
	Female	3	7	7	4	6	27
Total		4	11	12	6	9	43

The results that are presented in Table 4 indicate by comparison of age and gender who participates more to food security activities. In the table above it is clearly shown that between the ages of 40-49 more people are actively involve in activities of food security. It is assumed that between the ages of 20-29 young people migrate from rural areas to find jobs in urban areas and this is clearly stated in the Ntambanana municipal's IDP (2011/2012). The results further indicate that the highest proportion of elderly are the dwellers in rural areas and they are the beneficiary and victims of food insecurity.

In additional, Wolfe *et al* (1996) indicated that when food problems became more severe, respondents make use of less acceptable food management strategies such as borrowing money from children or other relatives. Most of the elderly relied on family members to take them shopping or do their shopping and bring them food periodically. Neighbours

often checked in on elderly, provided transportation or picked up food items for them and brought them to church. For the elderly, the availability of transportation services in a community was very important for reducing food insecurity. The availability and exorbitant prices of grocery stores in the community also affected food insecurity. Many of those without transportation preferred to walk to a grocery store rather than depend on others, but had to rely on others to get to the larger, cheaper but more distant supermarkets. During the interview most elderly people were actively involved in agriculture as the means of food security.

4.1.3 Educational level of respondents

The study indicated that the large proportion (30 percent) of the respondents has a primary and secondary education level, 26 percent of the respondents have not attended school and 14 percent have tertiary education, as depicted in Figure 4.3 below.

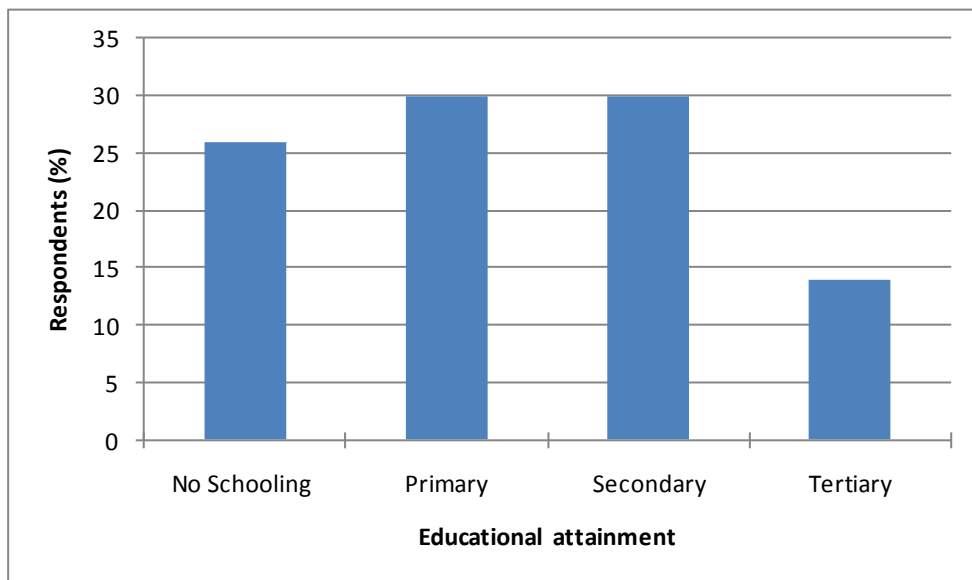


Figure 4.3: Educational attainment of respondents

Education is one of the most indispensable components to be considered in order to determine the ability for respondents to achieve food security and poverty alleviation. Poor households attain less enrolment and completion of schools because direct and

indirect educational expenditures are considerable burdens. Low level of education causes a lack of employment opportunity for poor households and these poor households cannot earn sufficiently for their basic needs (Kanagawa and Nakata, 2008). Illiteracy constrains access to skilled and semi-skilled off-farm employment. The map below indicates how many schools are available in Ntambanana area.

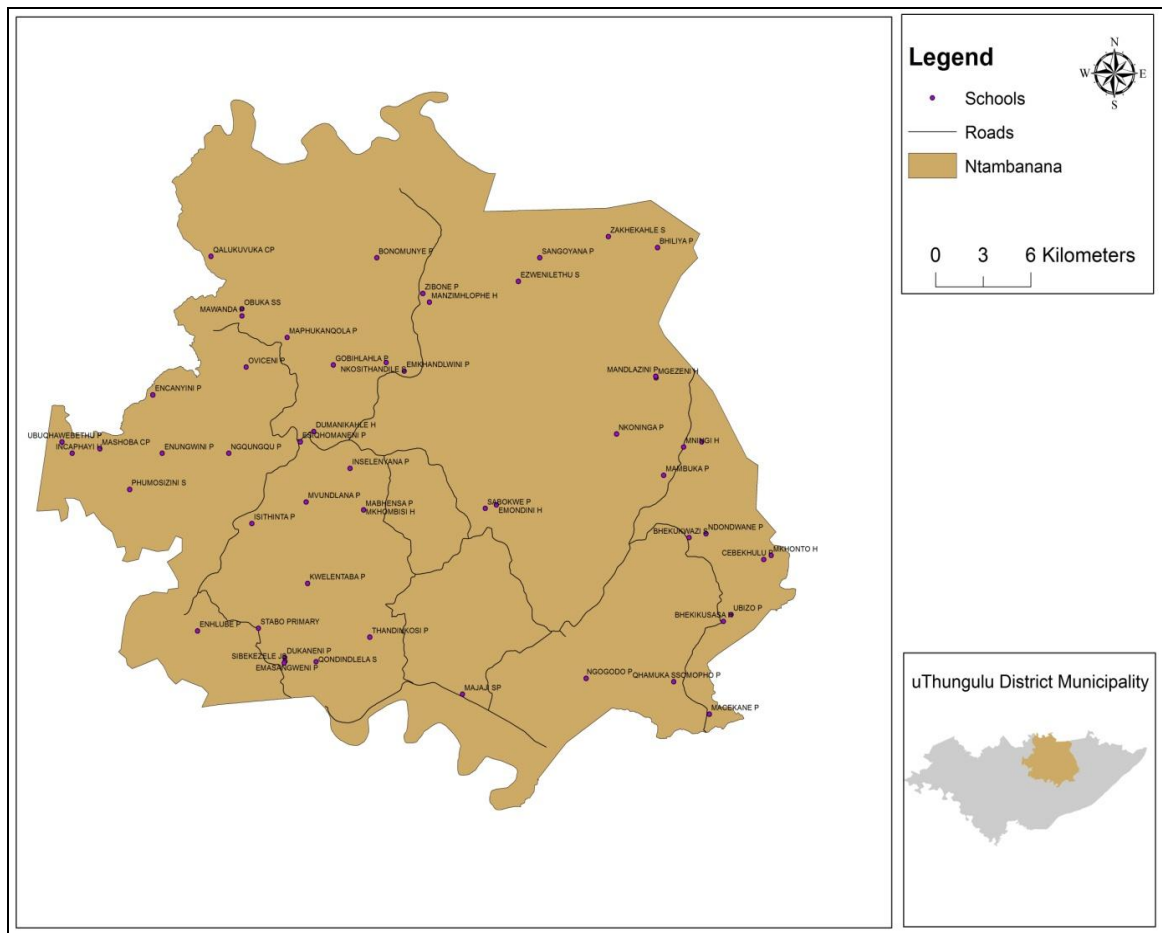


Figure 4.4: Map of Ntambanana indicating location of schools

Ntambanana area has been described as one of the municipalities with high percentage in illiteracy. One of the characteristics of Ntambanana is poverty and unemployment as pointed out during the interview that the majority of people drop out of school to seek employment in other areas. These findings are concurring with the findings of Delius and Schirmer (2001) which stated that the majority of population in rural areas was likely to

have little or no education, while in Figure 4.4 it is indicated clearly that Ntambanana have 55 schools which are public schools and no fee schools . It is evidenced from the results that low or no education impacted negatively in market participation and accessing market information. Kanagawa and Nakata (2008) suggested that access to modern energy enables people to not only have economic opportunities for income generation, but also save their time from time-consuming drudgery and allocate to more enjoyable or educational activities. Electricity considered as a representative of modern energy which enables to study at night through lighting appliances, freeing up from hard work and creating time for study and also helps through information communication technologies. The availability of electricity has indirect contributions for women to have opportunity to attend schools or educational activities as well as take into a part in the labour market or establish small enterprises rather than allowing girls from consuming housework

4. 1.4 Marital status of respondents in relation to food security issues

Wolfe *et al.* (1996) stated that lack of economic jointness and married women are hampered by cultural and other restrictions on their movements. Figure 4.5 shows marital status of the respondents. From this figure, it is clearly evident that the majority of respondents (58%) were married, some 30% were single and about 12% were widowed. As indicated in Figure 4.1 that the majority of respondents were females than it is contrary to view that in a rural African community marriage is a major source of social status for women and married women have a dignity than an unmarried one. The overlap graph below depicts the marital status of respondents.

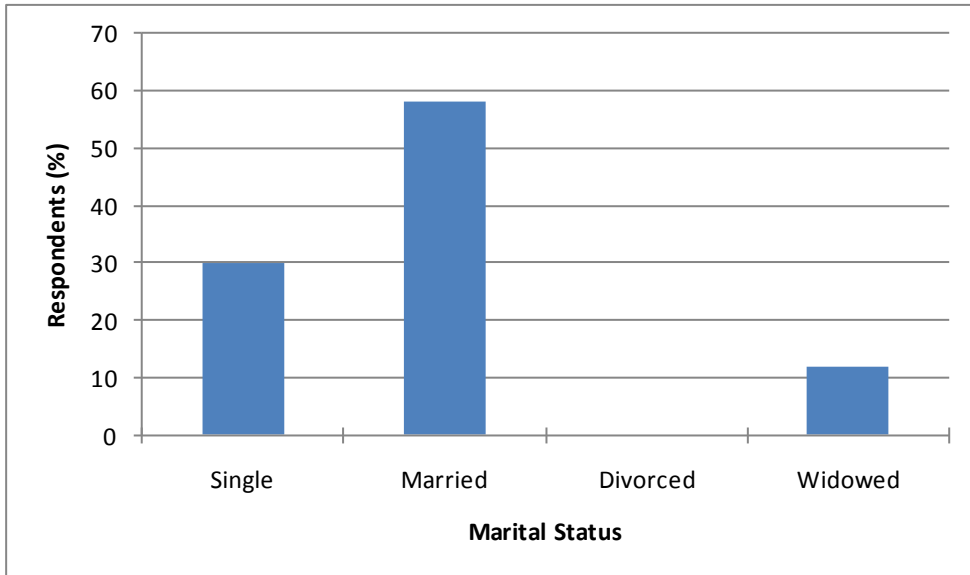


Figure 4.5: Marital status of respondents

During the interview process the majority of married respondents ones stated that being a farmer that ensures food security is time consuming especially when there are limited farming resources and this affects their relationships because they spend more time in the fields and come home tired. It was indicated that most of the farms are away from home and they walk long distance that makes them to spend the whole day in farming activities.

Employment status of the households is an important factor because it determines the access and availability of food. In addition, employment status indicates the standard of purchasing power of the community members. The employment status was classified as follows full time farmer, part time farmer, employed, pensioner, unemployed and self-employed. The overlap graph below depicts the employment status of respondents.

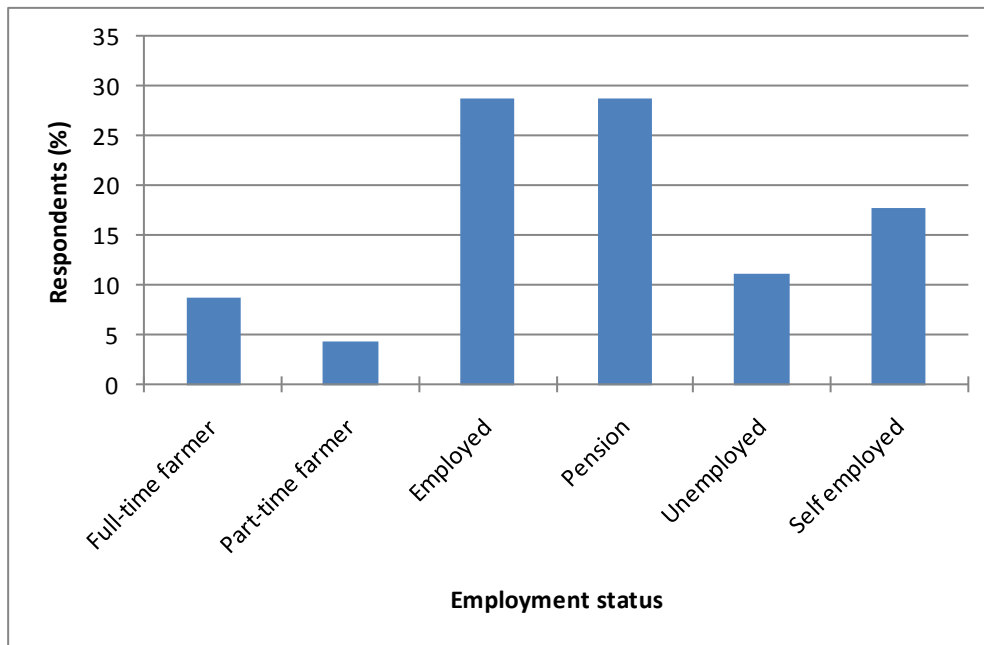


Figure 4.6: Employment status of respondents

Figure 4.6 shows that about 29 percent of respondents are pensioners, 29 percent are employed, 18 percent are self employed, 9 percent are full time farmers and 4 percent are part time farmers. The majority of respondents indicated that their employment were on contract bases six months to a year and some work seasonal that means the majority are farm workers. The findings of this study indicates that unemployment is much higher in rural areas and majority of rural African dwellers earned less than R1500 per month that is concurrent with the findings because pensioners are in majority.

HSRC (2004) pointed out that about 1, 2 million households in the black rural areas derive some of their income from farming and their income consists of welfare payments and migrants remittances with earnings from local wage employment and self employment in non-farm microenterprises. The findings of Ntambanana Municipality IDP (2011/ 2012) reveals that the area is characterised having the highest level of unemployment because more people are migrant labourers and when they retrenched in big cities some returned home and counted unemployed.

The majority is illiterate and they are not easily employable since large proportion of people did not complete high school education. Most rural dwellers are subsistence farmers who have been forced to diversify into off-farm incomes to bridge their annual consumption gap, while some are effectively landless and depend entirely on non-agricultural sources of food and income, including food aid. The typical rural livelihood strategy combines crop and livestock agriculture, off-farm income-generating activities and dependence on food aid (Devereux, 2000).

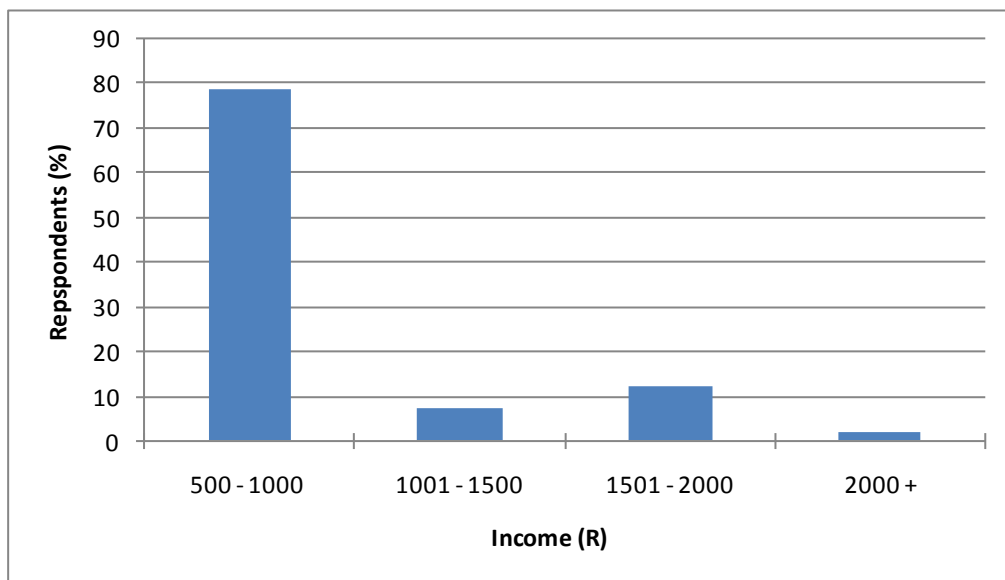


Figure 4.7: Income levels of respondents

According to the graph above (figure 4.7.) 79 percent of the total respondents are earning between R500-R1000 per month as mentioned in graph 4.5 the majority are pensioners and farm workers. Seven percent earning between R1001-R1500 and 12 percent 1501-2000 as well two percent earning between R2000 and the above. The findings indicated that people of Ntambanana have low purchasing power that led to food insecurity.

4.2 SUMMARY

This chapter has presented the findings which mostly based on the demographic factors which portray the reasons for food security and insecurity. Moreover, the findings of the study revealed that rural households who are food secure are those with financial stability and easy access to market because of stable and good conditions of infrastructure.

CHAPTER 5

5.0 THE EFFECTS OF INFRASTRUCTURE CHALLENGES ON FOOD SECURITY

This chapter provides a detailed explanation and discussion on the infrastructural support, availability and challenges experienced by all stakeholders and respondents who participated in this research. Sequentially, this chapter it gives an account on infrastructure and some dynamics in the area. It goes on to discuss the nature of markets and later highlights the challenges on the themes presented in this chapter.

5.1 Availability of physical infrastructure and challenges

The availability of infrastructure for rural development is regarded as the fundamental of social and economic infrastructure and integrated economic activities that have been acknowledged as being inter-related and mutually supportive. These include areas such as physical infrastructures or physical systems (Hemson *et al.*, 2004). In this section the study presented and analysed the availability and challenges of physical infrastructural facilities of the respondents who were households and emerging or smallholder farmers in the Ntambanana area. The main aspects that are discussed include storage facilities, road system, transport facilities and systems, communication facilities, irrigation facilities and system and physical markets.

5.2.1 Availability of Storage and Packing Facilities

The lack of storage facilities in rural areas is a major problem and storage facilities play an integral part in ensuring domestic food supply. Focus group discussions revealed that the storage and packaging facilities are the major problem especially to those who are practicing farming. The community indicated that they do not have storage and

packaging facilities and those who have the facilities indicated inadequacy and that the facilities were not meeting the required standard. White (1999) alludes to the inadequacy in storage facilities and that it causes great losses in terms of wastage in quantity and quality of produce in rural areas and further leads to products being sold directly from the field.



Figure 5.1: Photo showing lack of proper storage facilities, Ntambanana, 2012.

Figure 5.1 indicates that small holders really encountered lack of storage facilities and this has negative impact in produce prices. Adequate storage plays an important role in stabilising food supply at household level by smoothing seasonal food. South African communities still rely on traditional storage methods for food, fodder and seed and inadequate post-harvest storage contributes significantly to food insecurity. Storage facilities assist to improve farm incomes and food security for small scale farmers by storing crops and selling at premium prices (Thamaga *et al.*, 2004).

5.2.2 Access to Road and challenges

In general, rural roads are always in poor condition and they create limited access to achieve food security. Jayne *et al.* (2003) confirm that there is lack of basic infrastructure such as good road network and in addition the road and transportation means also add up to the problems that are encountered by Ntambanana population. In such environment farmers, local business and households will have no proper transport to deliver the goods or products to their markets while roads are also in dilapidated mode which inconveniences vehicles. The shortage of roads is in the northern area of Obuka, south – western area of Obuka and eastern area of Obizo where residents have to walk more than 5 km to reach a local road and roads are indicated in the map below.

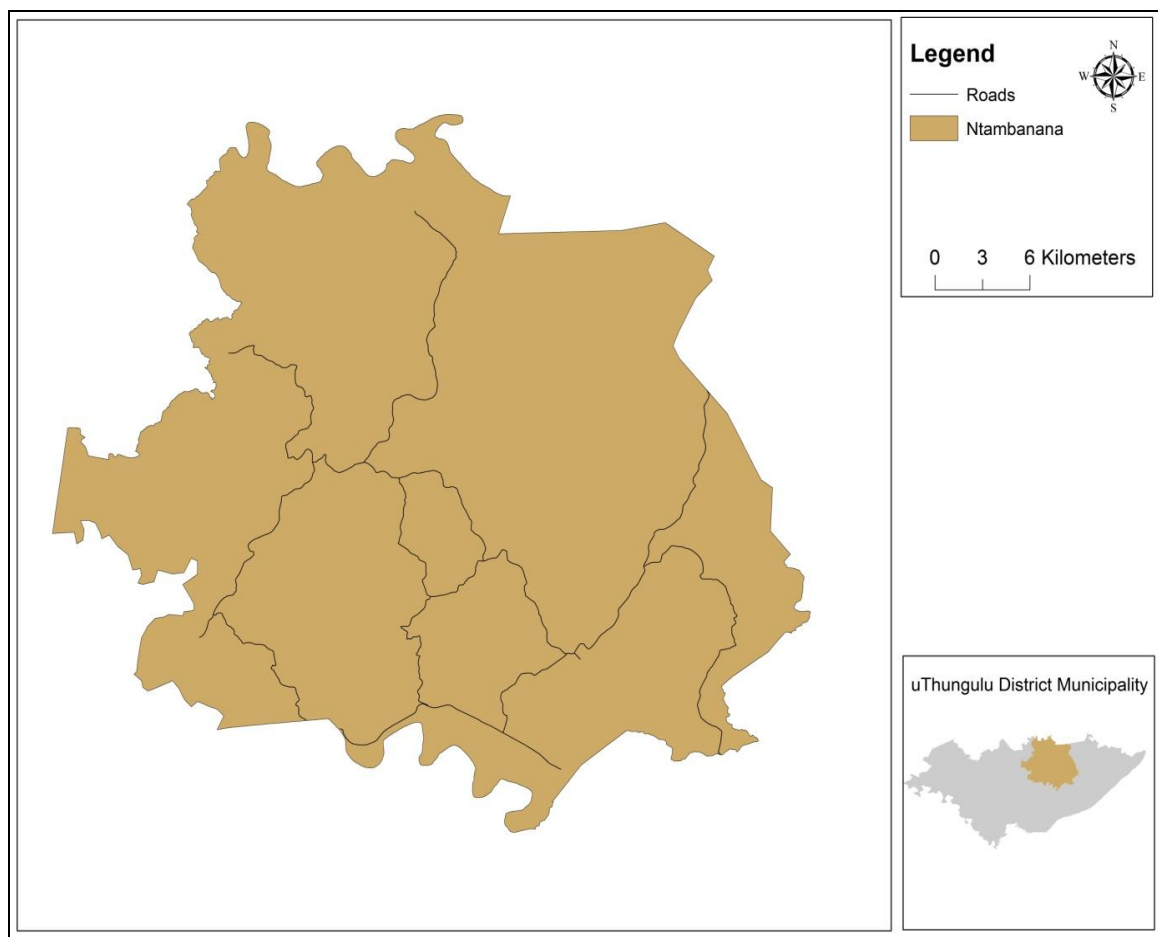


Figure 5.2: Road Map of Ntambanana

The focus groups indicated that their main problems were poor and high cost of basic infrastructure which includes roads. The respondents pointed out that lack of road infrastructure creates weak market and food insecurity on their side. The majority (72 %) of respondents indicated that they are not satisfied with regard to the number of roads that links to market because there are too far from the town and markets. They stated that gravel road is used to reach town and that it is time consuming and expensive transport costs. Twenty eight percent of respondents stated that they were satisfied with the road network because they have one main gravel road that links them to market in town. Interestingly the findings of the study are similar to Friedrich (2002) who indicates that most rural areas have poor networks of roads and it has direct impact on product availability and demand. The graph below depicts the level of satisfaction about road conditions.

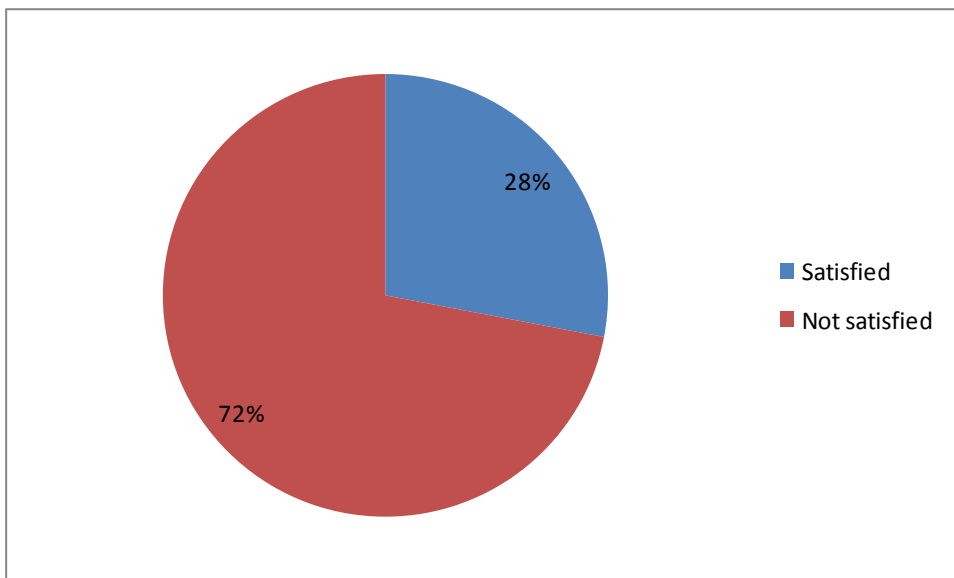


Figure 5.3: Satisfaction of respondents on road conditions

The findings of the study concur with the findings of Ntambanana Municipality IDP (2011/2012) which stated that the municipality aims to develop a road network that will service all its communities and people to ensure that they need not walk more than 5 km to reach a primary road or District road and this road will link Richards Bay with Ulundi and further north. Furthermore, Nugent (2001) suggested that rural areas need safe and

well planned road system between the farming land and residential areas and road system between rural and urban areas. Barrios (2008) pointed out that improved access roads increased production among local farming households and microenterprise development.

5.2.3 Transport facilities and system

In general, South African rural areas have a common major challenge of lack of proper transport system which impacted negative to food security and rural development. Transport is crucial to Ntambanana people because many people work and shop outside the area and six percent of their employment is from this sector. The graph below depicts the general problems on transport.

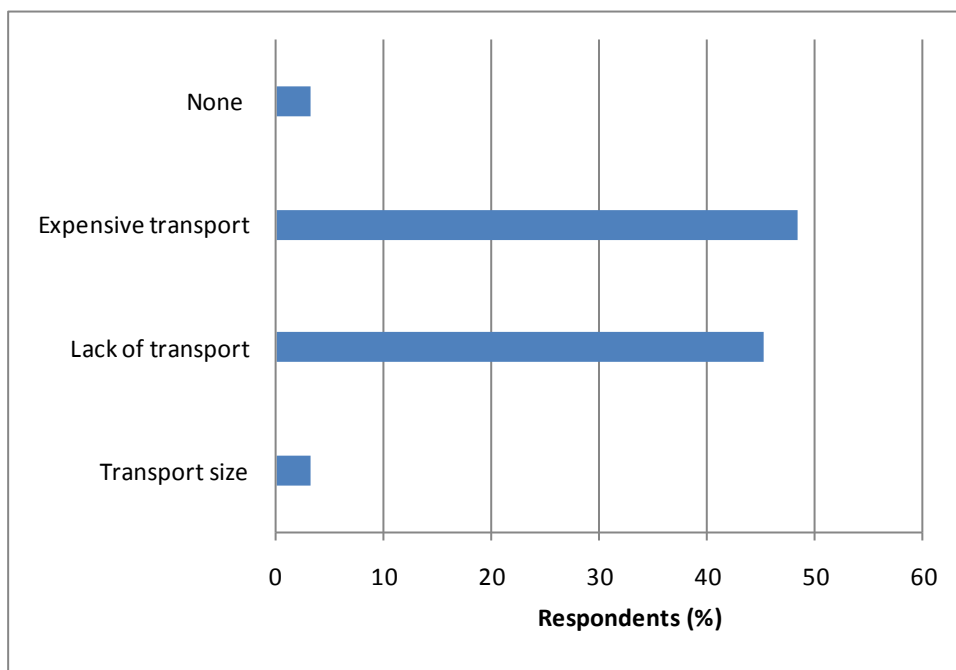


Figure 5.4: The general problems on transport

The graph shown in Figure 5.4 presents that forty eight percent of respondents indicated that their major problem was an expensive of transport while 45 percent stated that they encountered lack of transport and three percent complained with the size of transport that transport them and their good which is small to meets their needs. The majority of

respondents indicated clearly that lack of and expensive transport creates and leads to produce spoilage. They indicated that this does not have reliable market and the market is far away from them. Only three percent indicated that they were not affected by the transport.

It is clearly noted in the IDP of Ntambanana Municipality (2011/2012) that the means of transport involves the use of bakkies although illegal in terms of South African legislation and is used to transport people and goods in the far outskirts areas where other land transport is not feasible. Notably Zaibet and Dunn (1998) suggested that the lack of reliable and inadequate transport may increase transport costs and which have negative effects on local producers such as smallholder farmers. Furthermore, the study discovered that public transport is very limited in the study area which has negative impact to local businesses who are producers.

5.2.4 Irrigation facilities and system

This study discovered that there is inadequate water supply and that constrains farming activities. Agriculture is a major source of local economic development; more people depend on farming activities for their food security. The findings of Ntambanana municipality IDP (2011/2012) indicated that people of Ntambanana area suffers from drought and this affects the community as livestock and crops are destroyed, suggesting that the means of survival for the traditional community and their lives are adversely affected, due to droughts, while the findings of Hussain and Hanjra (2004) on the other hand, stated that poor people in rural areas also use water also for non farm production activities such as blocks projects and housing projects for the community.

The key informants indicated that the irrigation system is a major problem and causes food insecurity in the area. It was reported that the submissions was made to the Provincial government to assist with construction of dams and the local department of agriculture is in the process of reviving dams in the community. It was reported that lack

of irrigation systems have negative impact to the Ntambanana farmers because their main source of income is subsistence farming and they use traditional methods to watering vegetables. Focus group discussion indicated that there is no reliable source of water in the area and they are not allowed to use community tap as the source of water for farming activities.

Interestingly, Ntambanana Municipality IDP (2011/2012) indicated that the majority of residents (64%) within the ethnic group areas have not adequately been provided with water supply and water supply in the ethnic group areas is mainly provided from boreholes. Furthermore, water from boreholes in most municipal wards is not appropriate for human consumption due to unacceptable waste disposal system of Ntambanana municipal areas. The majority of respondents indicated that their major problem is the scarcity of water to use for agricultural and non – agricultural purposes. The graph below depicts the sources of water by respondents.

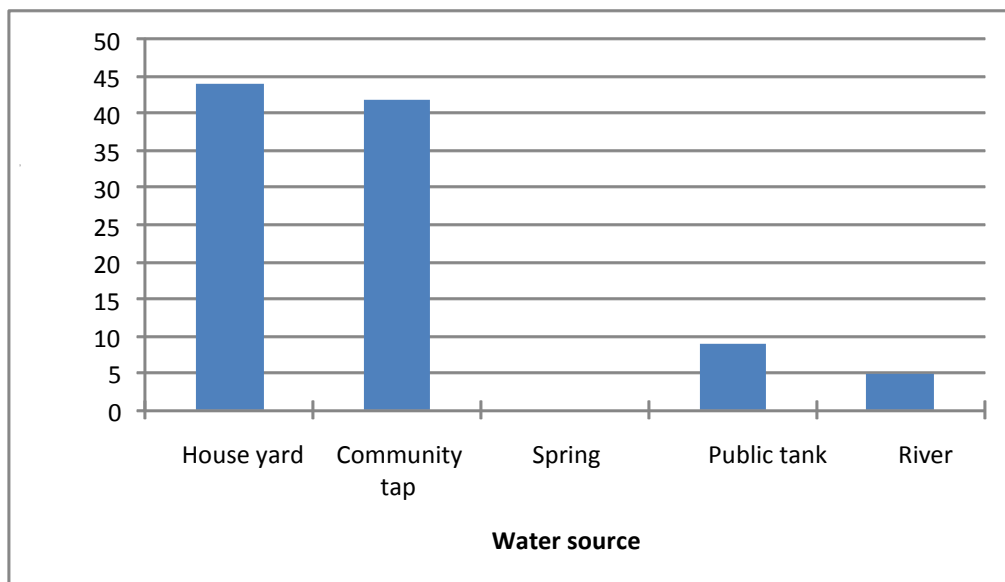


Figure 5.5: The sources of water by respondents

As indicated in Figure 5.5, forty four percent of respondents stated that water pipe have been installed into their yard and forty two percent used public or community tap water for consumption only because they are prohibited to use it for farming purposes. Nine

percent of respondents indicated that they depend on community or public tanks as a source of water and five percent of respondents stated that their source of water is river. The findings of the study coincide with Ntambanana municipality IDP (2011/2012) which stated that only 1.28% of the households have water connected to their houses.

The findings of the study also indicated vividly that it is difficult in the study area to have proper irrigation system as the catalyst for smooth farming because it lack harvest water management. In general, Ntambanana lack water harvesting that causes for the household food insecurity while water harvesting is considered as the means to increase agricultural produce and alleviate water shortage in the drought areas of the study area. The respondents indicated that there are no small dam based irrigation program that is in place to address the shortage of water and increase to agricultural productivity. The findings of Hussain and Hanjra (2004) are like recommendation to the findings of the study where it was stated that irrigation is crucial socio-economic factor with a positive role in reducing food insecurity and irrigation is enabling to economic growth resulting to food security.

5.2.5 Markets and it constraints

The findings of the study indicated that the availability or access to the market is a major problem for the community and contributes to food insecurity. The availability of market is more important in development and sustainment of local economy especially in rural areas. This study discovered that informal markets are more dominant because it where people generate their livelihood.

Focus group discussion indicated that their major problem is an access to market and physical market, and it was reported that there is no formal physical market to sell the produce; the majority sell from homes, gardens and farm gate. In addition, Eyethu Bay Watch (2013) article indicated in the state of the province address in Pietermaritzburg stated that all district councils including uThungulu had been directed to set up a vegetable hub within the next six months and people were encouraged to grow their own

vegetables. It was noted by the province that many communities who produce vegetables lack markets to sell them.

It was indicated that were not allowed to sell their produce in town because they were not permitted to sell without market license from the municipality. In focus group discussions the majority stated that private traders dictate the prices of the produce and this left them with no profit. Interestingly Civil Society Agriculture Network (CISANET, 2005) pointed out that private traders dictate very low prices when they purchase from the communities and rural farmers or rural entrepreneurs have no say since traders have total control of the markets. Rural populations who have businesses feel cheated because the prices dictated by private traders do not reflect production costs as the results, rural farmers who are smallholders are exploited when they try to sell their produce.

Ratner (2000) points out that the informal market is often thought of as a kind of “safety net” for people who do not find a place themselves in the formal market. Furthermore, informal markets are a part of everyday life and household survival strategies in rural and urban areas. The informal markets are suggested as helping smallholders to generate incomes and offer the best solutions to decrease rural poverty and food insecurity. The findings of the study indicated that very few people who have access to formal markets in agriculture is described as those governed by high quality and food safety standard and where the activities of the companies are monitored. Interestingly, Schneider (2002) clearly indicated informal markets typically sell on a lower scale and tend to display their goods on shop front or carry them from one place to another. The product mix is typically made up of food, beverages, clothing and footwear and this suggest that most economic activity is informal especially in rural areas as the overlap below graph depicts.

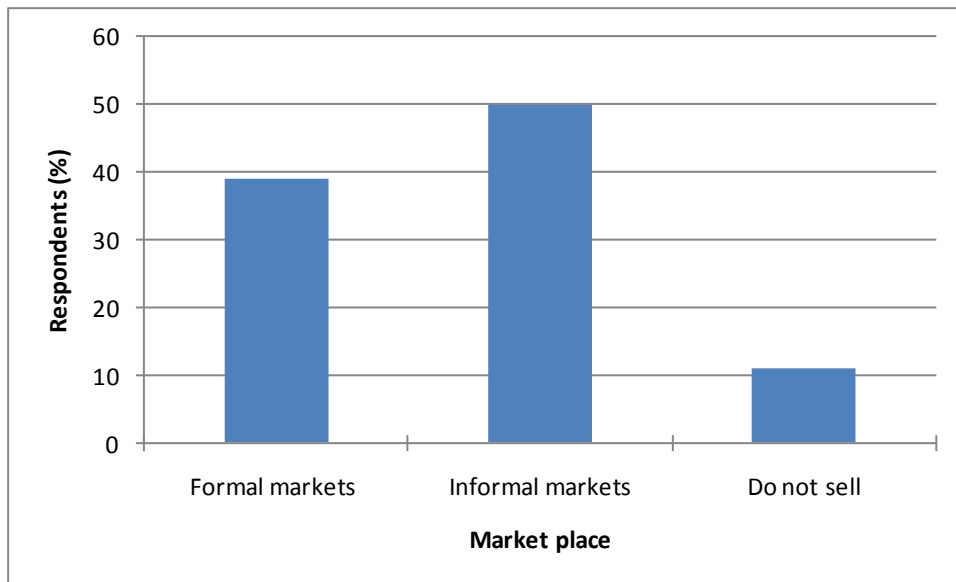


Figure 5.6: The informal and formal markets

The majority of respondents (50 percent) indicated that they participate in informal markets because they lack access to formal markets attributed to inadequate information and poor infrastructure such physical markets in the area. The findings concur with White (1999) by saying markets in rural areas are usually found next to main roads or near to ferries, bus stations and taxi ranks.

The respondents indicated that lack of storage facilities and transports this denies them to sell fresh produce and attract formal markets such as supermarkets in nearby urban suburb and governmental institutions (schools and hospitals). It is correctly noted in Makhura and Mokoena (2003) that rural markets have major problems with poor facilities and lack of marketing infrastructure. Furthermore, poor road conditions that lead to high transport costs and isolated markets have been regarded as factors that slow down the development of market access for local people to create food security.

It was clearly indicated by some of the respondents that the issue of inadequate market information is caused by poor communication systems amongst them and governmental institutions such as local municipality and local department of agriculture. The

respondents stated that their main problem is that they do not understand procedures and processes to participate in formal markets due to illiteracy. Scholarly writers such as Lapar *et al.* (2006) pointed out that market information was limited in rural areas because they do not have access to effective communication systems. However, thirty nine percent of respondents indicated that they have limited access to formal markets because of being registered as cooperatives which make them to be recognised as formal organisations in terms of legal processes. The respondents stated that they have access to sell their produce to supermarkets and supply schools with vegetables for the school feeding scheme programmes but they stated that they do not have contractual market as the below graph depicts.

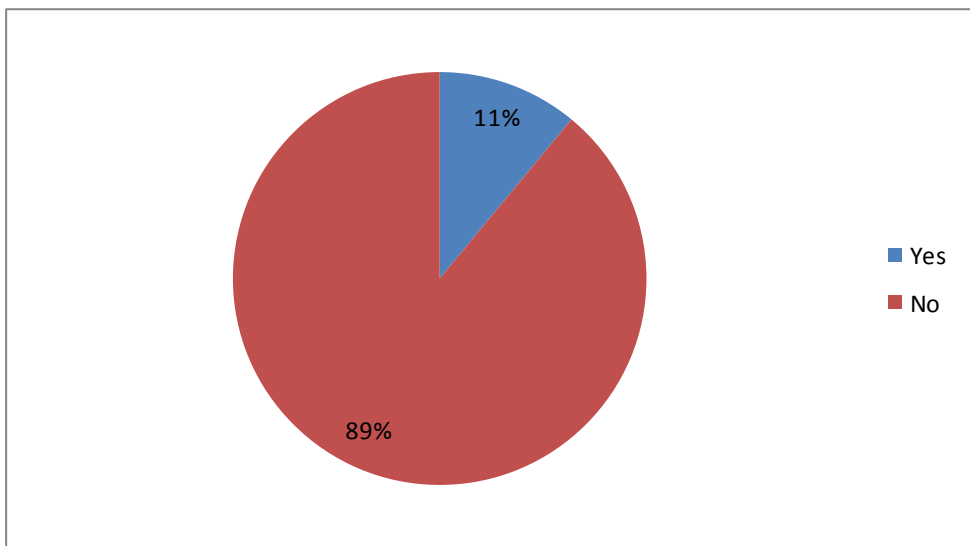


Figure 5.7: Contractual agreements with any shop and corporate

The group which produces sugarcane indicated that they do not have the problem of access to market because they have contractual agreement with one of the big companies in the sugarcane industry, but the problem is poor infrastructure due to bad roads conditions and the transport is very expensive. Eyethu Bay Watch (2013) article indicates that during the state of the province address of 2013 by Kwazulu-Natal Premier in Pietermaritzburg it was stated that rural vegetable hubs will enter into an agreement with the Minister of provincial education and health who will guarantee to purchase all the

available produce for the school feeding scheme and various hospitals under the provincial government.

The focus groups who produce vegetables stated that it is difficult to find markets that led to spoilage of vegetables and reported that the local department of agriculture local organise market week at Mthonjaneni where they get an opportunity to sell their products. Focus groups indicated that unavailability of markets lead to food insecurity and do not promote or creates opportunities for entrepreneurship.

5.3 SUMMARY

This chapter has presented the findings which mostly based on the availability of infrastructure and its challenges on food security. In this chapter it was indicated that poor infrastructure has the negative impacts on food security. Based on the findings of this study, it can be easy on to come up with amicable solutions in terms of improving rural infrastructure.

CHAPTER 6

6.0 THE EFFECTS OF INSTITUTIONAL SUPPORT ON FOOD SECURITY

This chapter provides a detailed explanation and discussion on the data collected, which relate to institutional challenges and opportunities on food security. The first section of the chapter presents information on the extension services, communication facilities and systems, financial support and purchasing power. The last part looks at the challenges on the basis of the above mentioned factors.

6.1 EXTENSION SERVICES

In general the majority of Ntambanana people and farmers are illiterate and agricultural extension would play an important role in assisting them by identifying problems and improving the situation. The study revealed that service provision needs to be prioritised because the findings of the study indicated that more services are needed such as water, physical market, communication facilities such as postal services, telephones and other infrastructural facilities. The findings are based on the role of an agricultural extension services due to the dominance of agricultural activities known as the major source of income. Anaeto *et al.* (2012) describe the role of extension officers, especially farmers' education, as being crucial for the social and economic development of a nation and assisting farmers to become aware of the problems and helps farmers to improve their own opinion-farming and decision making skills.

Key informants stated that high level of poverty in Ntambanana is seen in those households who depend on government grants, some unemployed and involved in small scale farming and subsistence farming. It further indicated that there is lack of water supplies and many households depend on communal taps which are also limited. It was

indicated that if there is no water from communal taps the municipality supply communities with safe and clean water through transport tanks.

The key informants reported that the municipality has the unit which is responsible for local development and assisting people to register as cooperatives. It was also pointed out that the most important service provision was to provide local people with skills based on how to establish business and other means of income generation. The key informants indicated their main functions are to organise training , workshops and summit for SMME's because it assist people to acquire skills on how to make local resources as the source of income.

It was reported that most projects were sponsored by the office of the premier of Kwazulu-Natal as part of rendering service delivery and 300 people benefited from this funding. The key informants indicated that these projects are mitigating the problem of food insecurity and they were promoting the slogan "ONE HOME, ONE GARDEN". It was also reported that the District municipality introduced the concept "fresh market produce" that means people will be assisted by improving physical infrastructure such as roads and physical market. This concept is in-line with the findings of Anaeto *et al.* (2012) that agricultural extension services encompass all aspects of agriculture which includes the provision of timely information, the linking of farmers with sources of farming inputs and credit facilities and most importantly the provision of education services to farmers.

The study revealed that 83 percent of respondents indicated that extension officers from the local Department of Agriculture are always available if they need them for agricultural purposes while 17 percent stated that extension officers are not available for them. During the focus group discussions the majority of participants reported that they are contented with the visibility of extension officers and 78 percent of participants stated clearly that the information that is provided by extension officers is helpful enough to

utilise it for food security. Twenty two percent indicated that the services from extension officers are unavailable for them and not helpful.

The focus group discussions also revealed that the causes of unavailability of services provided by extension officers were caused by poor communication between stakeholders. Interestingly the findings of University of Greenwich (2011) assert that extension services provide rural people with the access to knowledge and information they need to increase productivity and improve their quality of life and livelihoods. Furthermore, it has helped rural communities move towards meeting food security and aiming promoting and implementing poverty alleviation programmes.

The study revealed that 34 percent of participants were provided with marketing advice by extension officers such on how to market their produce and to find relevant market as well to assist them to have physical market. It was reported that 33 percent of respondents indicated that they were assisted by extension officers on how to do record keeping for the farm and also 33 percent indicated that they were educated about suitable farming methods that can sustain their farming activities and increasing their production. The study findings are in-line of University of Greenwich (2011) that extension officers provide advice to farmers on problems or opportunities in agricultural production, marketing and addressing public interest issues in rural areas food security monitoring and youth development.

6.2 COMMUNICATION STRATEGIES

It was clearly stated one of the hindrances to have households to be food secured in rural areas is the weakness of rural local government and lack of participation of community members in development matters. The weak communication of various institutions lead to not address wards needs due to no clear communication (Department of Rural Development and Land Reform, 2011). Ntambanana Municipality formulated communication principles to address ineffectiveness of projects and programmes which lead to food insecurity. These principles aim at maximising public information and

minimising confusion and communication with community both written and oral with their language isiZulu.

According to key informants it has been noticed that there was lack of communication between communities and organisations such as municipality and other government institutions that led to the formulation of communication strategy which was approved by the municipal council. It was stated that most of projects failed because of poor and lack of communications among the stakeholders that led to an increase of food insecurity and unemployment. It was reported that the tools were developed to improve communication amongst stakeholders to implement programmes effectively and these are the following tools:

- Public meetings: it was reported that public meetings are called by ward counsellor in their wards and explain about new projects and Amakhosi are informed about any meetings and are also playing a leading role.
- IDP Road shows and Sukuma Sakhe: it was indicated that campaigns were conducted to hear from the community about their problems and key informants stated that this tool was the element of bottom -up approach.
- Website and media: key informants and focus group discussion pointed out that not all of them have the access to technology such as internet due to illiteracy. It further stated that the lack of access to market was created by lack of access to technology that would ease the process of marketing their produce and other products.

Schneider (2002) indicated that most rural areas have a poor and limited access to electricity and no access to telecommunications lines which have negative impact in improving communication among stakeholders. Furthermore, rural areas have major challenge which is the weakness of rural local government and inadequate social mobilisation to take forward development; these challenges are caused by poor and inadequate communication.

6.3 AVAILABILITY OF FINANCIAL SUPPORT

Barrios (2008) clearly stated that rural households have a belief that financial support should be provided by the state and many rural communities can not access funds easily due to their low income and failure to repayment. But the availability of agricultural financial support to the small scale farmers who have no capital and little to invest in farming is a crucial component in rural farm to overcome low production that resulted to food insecurity. According to focus groups the majority of respondents indicated that they were never assisted by any organisation through financial.

Others were assisted by extension officers by referring them to relevant financial institutions and clearly reported that most of the people do not meet the requirements to be granted a loan due to that the majority are unemployed, pensioners and earning very low salaries. The province noted that many communities lack access to financial support and in the state of province address of 2013 it was stated that financial support will also be provided by the provincial government to augment municipal resources while Ithala Bank has agreed to partner and offer credit facilities to small growers. Furthermore, Small Business Development Agency will work closely to support the co-operatives and small business involved in the initiative. The graph overlap depicts the sources of money to invest in farming.

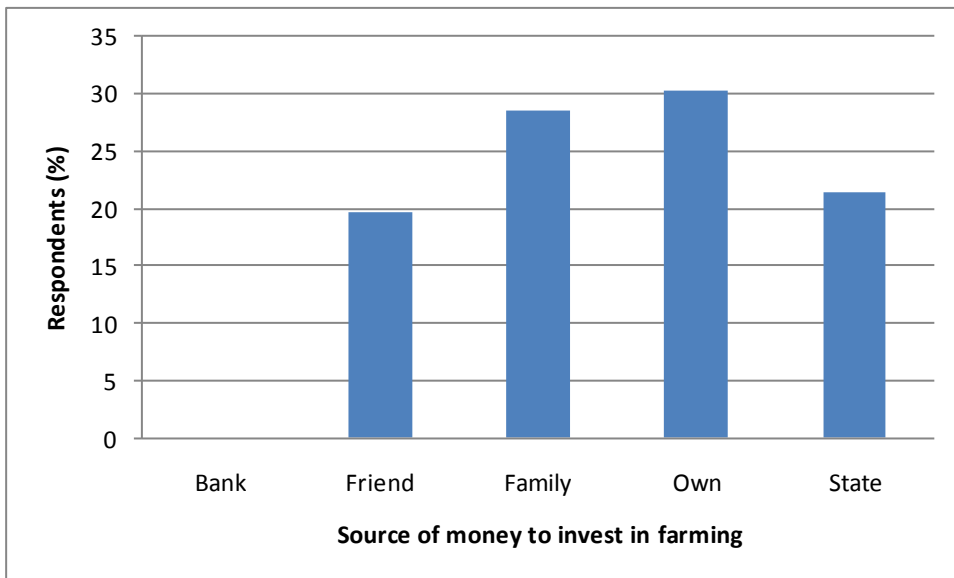


Figure 6.1: Source of money to invest in farming

The study revealed that 30 percent of respondents indicated that their source of income to invest in farming comes from their pockets while 20 percent of respondents got assisted by their families and 20% participants by their friends. Interestingly 21 percent of respondents were assisted by the state which is an indication that rural people have limited access for financial assistance. The study discovered that 0 percent of participants failed and has no access to financial assistances and it clearly indicate that rural people and smallholders are marginalised in terms of having smooth access to credits institutions. Furthermore, it was clear that no farmers or other local business benefited from the banks for financial assistance.

It was suggested by HSRC (2004) that by extending credit to rural farmers and smallholders can be the most progressive strategy to promote food production and household's food security. It was reported that rural population of Ntambanana are experiencing hardship in terms of gaining access to financial support and clearly indicated by the key informants that municipality does not fund people but they assist them through channelling them to relevant structures and institutions. Global Donor Platform (GDP) (2006) specifically noted that microfinance institutions do not play a prominent role to uplift the standard of small scale farming and the number of small

farmers faced serious repayment problems due to poor provision of services. The deduction that can be made out of this is that small scale farming projects continues to encounter a financial hurdle which in turn hampers their day to day operation.

In addition, it was vividly indicated that their duty is to provide them with skills of how to write proposal for funding. Extension officers indicated that the department of agriculture does not provide people with funding but they are assisted with seeds distribution and free tractor to assist with farming activities. Alamgir and Arorai (1991) suggested that easy access to financial institutions must be created for rural people and smallholders and the attitudes of financial institutions need to be revised through training of their staff and creating friendly environment to the needs of rural people and clear criteria need to be laid down to guarantee that smallholders and the rural poor receive the essential credit in time.

6.4 PURCHASING POWER

In general, the majority of people in South Africa lack cash to purchase food and this is caused by limited income opportunities and mostly it occurred in rural areas. The study discovered that the majority of people rely on governmental grants such as pension as indicated in Figure 4.5 and it was clearly indicated that even their income is very limited the majority range at R500-R1000 that led to lack of purchasing power. Ninety five percent of respondents indicated that since they lack purchasing power they have never benefited from food aid from any organisation while five percent have benefited from it.

HSRC (2004) noted with concern that South African households increasingly have to rely on pensions or other state social grants. Furthermore, incomes earned from both farm and non –farm activities allows household to access food through exchange either through the money economy. All participants of this study indicated that they purchase their food and non food items in town and it was reported that transport is a major challenge since that it is expensive due to poor roads. The study revealed that the problem is not with the

shortage of food but it is clearly that many people lack the purchasing power to buy available food. The issue of food price inflation and petrol prices are regarded as the major contributing factor to lack of purchasing power as it was alluded by participants that transport is expensive for them.

6.5 GENERAL PROBLEMS DISTRACTING FARMING ACTIVITIES

Figure 6.2 shows the problems that affect farming activities in general which were alluded by the respondents and focus groups during the discussions.

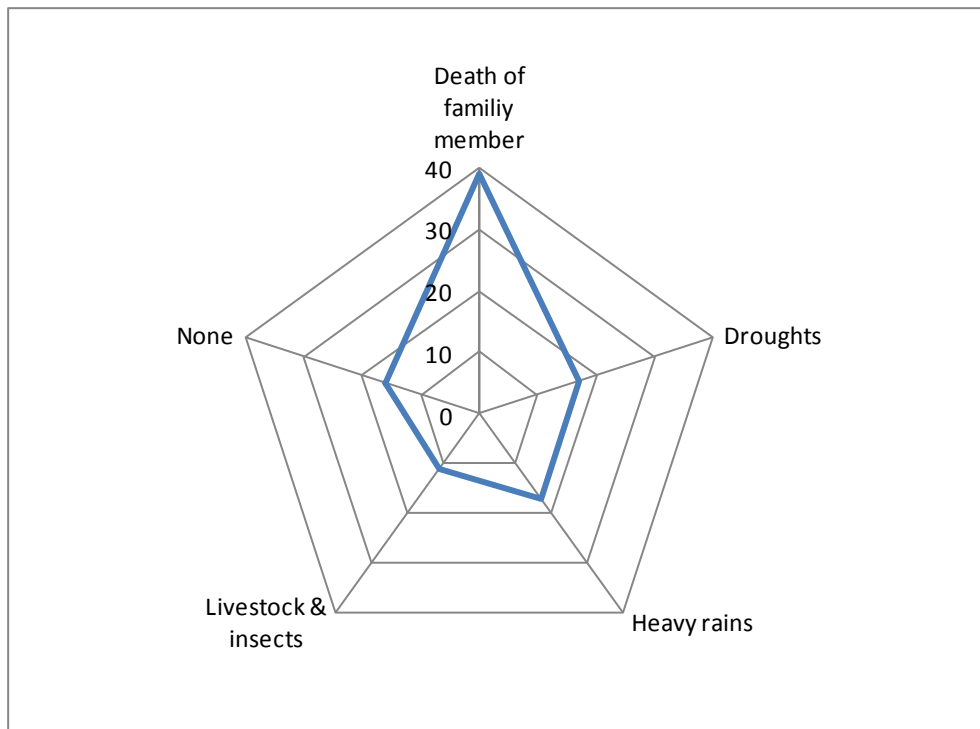


Figure 6.2: Events distracting farming activities

The graph shown in Figure 5.2 presents that 39 percent of respondents indicated that the death of family member and community members are distracting the farming activities because in their areas people are prohibited to practice farming until the person is buried. It was reported that it is their culture to mourn as instructed by traditional leaders. The issue of drought was reported as the thorny problem by 17 percent of respondents who

indicated that there is no other alternative to overcome this. It was clearly indicated that the study area has no irrigation facilities which are in place and dams that are inadequate and those dams that in the area are owned by white farmers who owned sugarcane fields.

Seventeen percent of respondents indicated that heavy rains have negative impact on crop and livestock farming that result to floods. It was reported that there are no facilities which can assist farmers to protect their crop and livestock from heavy rains and they stated that if the Department of Agriculture and Local municipality would assist them with the provision of dams that can turn heavy rains to be a main source of water as Ntambanana is known as the place of severe drought. The other 17 percent indicated that their main problem is that their farms or fields are not fenced and it is very easy for livestock to destroy their crops.

These problems and challenges are the indication of weak institutional support and inappropriate governmental policies are main responsible factors for the food insecurity and poverty in general. It is noted that the government need to pay more attention on improving the food security conditions of historically disadvantaged people. These problems indicate that government needs to improve service delivery to meet the need of people and enabling environment for food security.

6.6 SUMMARY

The findings of the effect of institutional support its challenges and opportunities on food security shows that there are more reviewing policies based on the rural development and the role of local leadership on enhancing households food security needs to be explored. The study revealed that households believe that weak institutional support created the state of food insecurity and improvement of communication regarded as an emergency strategy may overcome poverty in the area.

CHAPTER 7

7.0 CONCLUSION AND RECOMMENDATIONS

This chapter presents the conclusion and recommendations of the study. Different issues were raised in the study to indicate whether the objectives were proved correct or not relevant towards the study. The objectives of the study were formulated to assess availability of infrastructure and institutional support in rural areas as the means of alleviation of food insecurity.

7.1 CONCLUSIONS OF THE STUDY

The study revealed that in order to obtain food security infrastructural issues are crucial and regarded as the way to minimise food insecurity especially in undeveloped and developing areas such as rural areas. The findings of the study clearly indicated that to sustain food security requires high participation of public and private institutions with their financial assistance and providing them with skills as well as training where it is necessary. The study revealed that agriculture in most rural areas is regarded as the main source of life. The findings are presented on the basis of objectives as follows:

Demographic and socio- economic findings: The study revealed that Ntambanana area is made up of more unschooled and less skilled population. The majority of people dropped out of school due to socio- economical factors such as lack of financial support from family thus resulting to seek employment. Women are found to be more involved in food issues with an aim of ensuring food security at household level and their efforts are not clearly recognised as the contributing factor to ensuring food security.

It is indicated by the findings that adults and elderly people are highly involved in makings ways of bringing food on the table. Due to poor or lack of infrastructure the elderly are unable to do shopping and they rely on family members for transportation.

The majority of elderly people are actively involved in agricultural activities as the means of food security. The other factor is that the majority of elderly people are the pensioners and they have low purchasing power. The majority of people at Ntambanana are either employed on contract basis, work seasonal and in semi skilled jobs as indicated in the findings or they are farm workers and self employed.

The majority of them earn less than R1500.00 per month; this is attributed to high levels of illiteracy. Hence, they are not easily employable in white collar jobs. The population of Ntambanana has low purchasing power due to low income and this lead to food insecurity.

Objective 1: To identify infrastructural services available at Ntambanana area (storage facilities, roads, irrigation facilities and system, and transport facilities)

The availability of storage and packing facilities: The findings revealed that in Ntambanana there is a lack of storage facilities and this affects their produce and products. It clearly pointed out that the spoilage of produce and products are very high which leads to great losses. The study also revealed that local farmers or small scale farmers are discouraged to produce more because they do not have storage facilities to keep their products fresh. The local businesses also lack packaging facilities which also makes them unable to compete in the market. The availability of appropriate storage and packing facilities can play an important role in ensuring food security and rural farmers can generate more income.

The availability of roads in the Ntambanana and its impact on food security: The findings indicated that the roads are not in good conditions which are an indication of poor basic infrastructure that create limited access to market facilities or any destination. The study revealed that there is poor road network because there is one main gravel road which links to the area to a nearby town. The poor roads condition leads to expensive transport costs and time consuming for travelling, and it has negative impact on attracting

the market as well as sustaining food security. The findings also indicated that during summer season where there are heavy rains most of gravel roads are muddy that makes difficulty for vehicles to have access to the area. A well developed road network would encourage local businesses and entrepreneurs to produce more and be able to compete with other businesses.

The availability of transportation in the Ntambanana area: As indicated that Ntambanana has poor roads conditions that mean there is a lack of efficient and effective transport system which cripples the performance of local businesses. The most common transport mode that is available in Ntambanana, is public transport mainly buses that are transporting people and the kind of transport is regulated according to certain hours which inconvenience people. The study also discovered that bakkies are used as the means of transport that people have at their disposal and these are very expensive and not reliable because of issues of permit and regulations as indicated by the Department of Transport.

The availability and the use of irrigation facilities within the study area: The findings revealed that Ntambanana area is characterised as dry environment which makes population to struggle to have much produce and practice smooth farming. The study revealed that in Ntambanana water is utilised also for non-farming projects such as housing projects and other projects. There is no irrigation system in the area to assist local farmers to practice smooth farming and there is no reliable source of water where people could depend on. The inadequacy of water in Ntambanana has been proven in the study by the very high percent of people who are not supplied with water and mainly relied from boreholes as the source of water. Community taps are available for the community to use as the source of drinking water and are deprived to utilise them for farming purposes. There is lack of water storage facilities such as dams which may serve as the mitigating factor to overcome shortage of water.

The availability of markets and limited access to it: Achieving food security in Ntambanana means to overcome limited access to markets and build physical markets for local people. The findings revealed that causes for limited access to markets are created by the following factors: poor rural transport, marketing of rural products, lack of communication among stakeholders and lack of physical structures in the community and these factors contribute to food insecurity within the study area. The issue of lack or poor storage and packaging facilities are also linked to markets constraints. The study revealed that the majority of local businesses in Ntambanana do not have contractual agreements with markets due to their markets constraints.

Objective 2: To assess availability kind of institutional support provided in the area

The availability of extension services within the study area: The findings of the study indicated that in Ntambanana extension services are mostly needed because of high illiteracy rate. The institutions that provide these services will assist them by identifying problems as well provide them with problem solving skills. The study discovered that in order to overcome food insecurity the following services are crucial to be rendered: water supply, physical markets, construction of roads and communication facilities. The study found that extension officers from Department of Agriculture locally play a vital role to support and assist smallholder's farmers to expand their produce and assist them to find relevant markets. The findings of this research further indicate that local smallholder farmers are assisted with free seeds and fencing to mitigate constraints on farming. The results of the research have confirmed that rural agriculture is a major source of income and need to be taken as the amicable strategy to alleviate food insecurity in most rural areas and coupled with the improvements of infrastructural services.

The availability of financial support from various institutions and communication strategies: The findings of the research indicate that there is no adequate support of finance for local people to start their businesses and improving them. Furthermore, the majority of people in Ntambanana do not meet the requirements for loans due to their

employment status. The study revealed that lack of financial support in Ntambanana is caused by weak institutions which failed to communicate with local people for assistance. Based on communication the findings of this research indicate that there is communication breakdown amongst stakeholders and the majority of community members do not have access to communication strategies which are used by the municipality and other local institutions. Due to high illiteracy of Ntambanana population it is difficult to use the following ways for communication: internet, pamphlet written in English and lack of telecommunication. These factors contribute negatively towards allowing rural people to have even information about markets.

Objective 3: To establish information on the purchasing power of households and intra- familial distribution

The findings of this research indicate that Ntambanana area have low purchasing power because of their low socio-economic status which makes it difficult for household to bring sufficient food on the table. The findings of this research found that the majority of Ntambanana population is earning low wages while food price inflation is still an issue in nowadays and poor infrastructure worsening the situation. The transportation is expensive due to bad roads condition as well the town which is regarded as the source of food is far from rural Ntambanana that lead to high costs.

7.2 RECOMMENDATIONS

The evidence from the study confirmed that there is poor infrastructure and lack of institutional support from various organisations, it suggests that more attention should be paid to address these deficiencies that hinder food security. However, there are challenges which continue to affect the progress of rural development that also contribute negatively to sustain food security. Therefore the following recommendations can be made:

Improvement of infrastructure: The improvement of road systems linking the rural areas and town would make an easy access to markets and make transport available and

reliable for the local people. Good infrastructure would lead to rural areas able to compete with the urban markets and also able to attract internal and external investors. The study also recommends that the improvement of market system in agricultural products would be able to integrate rural and urban markets that would lead to rural economic growth.

Improvement of institutional support: It is recommended to relevant stakeholders to implement programmes such as training to small scale farmers, and mentorship in agricultural skills. Furthermore, the government needs to speed up the processes of resolving problems which are faced by rural people for example more projects and programmes need to be implemented in order to increase the purchasing power for rural people and these projects which would create job opportunities. Relevant stakeholders are encouraged to establish and improve strategies for dissemination of information for rural people and local language need to be used as the means of communication. Financial assistance for all rural businesses should be made available by relevant institutions. The creation of financial institutions which would cater the needs of the self- employed and small local businesses will contribute positively to household's food security.

7.3 RECOMMENDATIONS FOR FURTHER RESEARCH

Further research to investigate the role of public and private organisation in ensuring food security in rural areas, and the assessment and evaluation of policies that address food security issues and poverty alleviation programmes. Other research could be conducted on how to treat rural agriculture as an engine of economic growth and expose them to a modern agriculture and how to make them to exports their products globally.

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Appendix A: PROJECT INFORMATION AND INFORMED CONSENT

Receive my Greetings

My name is Mfundo Masuku and I am a post graduate student at the University of Zululand. I am doing a research project based on the effects of Infrastructural and Institutional services on food security and I need your assistance in getting the information for this research project. The project will be explained to you with the aim of making you to understand clearly what will be done and what will be expected from you so that you can decide if you want to participate in this project. Participation is voluntary and should you decide to participate, you may withdraw at any stage during this project.

WHAT IS THIS PROJECT?

The information on project is:

- The purpose of the research project is to collect information on what infrastructural and institutional deficiencies faced by Ntambanana population on food security.
- The information collected will be used to expand knowledge on how these problems can be eliminated and suggests programmes which will promote food security in rural areas.

WHY IS THIS PROJECT IMPORTANT

This project is relevant because it will assist rural population and institutions on how to deal with lack of infrastructure and weak institutional support in supporting or improving food security. Barrios (2008) says that physical and economic infrastructure has been regarded as important factors, but it seems that the policies and implementation guidelines is not evolved completely to support rural development.

PROCEDURE

The project will take place over a period of four weeks. The participants will be requested to complete questionnaires. For the focus groups, officials will be requested to undergo the process of answering the interview questions.

WHAT DO WE EXPECT FROM YOU?

- You will be asked to sign a consent form to participate in the project.
- We will ask you a number of questions and respond with honesty.

If you have any questions about the project, please do not hesitate to ask me at any time.

Thank you.

Mfundo Masuku

Project Leader

Mobile number: 0781145551

Tel: 0359026371

INFORMED CONSENT

I, the undersigned, (ID is optional
.....) of
(Physical address).

I have read the details of the project, or have listened to the oral explanation thereof, and declare that I understand it. I have had the opportunity to discuss relevant aspects with the researcher and declare that I voluntarily participate in the project. I hereby give consent to participate in the project.

Signature of the participant

Signed at on

Witness

Name Name

Signature..... Signature

Signed at Signed at.....

Contact telephone number

Appendix B: Community members or households (food security survey questionnaire)

The following questions were asked to community members or households included in the sample. Guidance was given to researcher before the survey on the content of the questionnaires and how they should approach and be respectful to correspondents. Respect also includes developing an understanding of the cultural norms of the participating group and treating people as equal participants in the data collection process.

Date :
Interviewer :
Name of the ward :
Name of respondent (optional):

Demographic Details

Fill in the relevant information and where possible mark with an X.

A.1. Gender		A.2. Age (Years)						A.3. Marital Status			
M	F	10-19	19-29	30-39	40-49	50-59	60 above	Single	Married	divorced	widowed

A.4 what is your highest educational level? (mark with an X)

No formal education	Primary school only	Secondary / High school	Tertiary education	Other specify

A.5 What is your employment status and under which income class do you fall in? (Mark as appropriate)

Employment status	Tick	Income class (Rand per Month)					
Full time farmer Part time farmer Formal employed Pensioner Unemployed Other (specify)		700	700 – 1500	1500- 3000	3000- 5000	5000- 10000	10000 above

B. Food Security (non – agricultural)

B.	Questions	Answers		
B.1.	Where do you buy food for your household?	Local Business		
		Town		
		Other		
B.2.	How much does your household normally spend on food per month?			
B.3.	Has your household ever benefited from food Aid?	Yes		
		No		

C. Food security (agricultural activities)

C.	Questions	Answers		
C.1.	Do you cultivate any land?	Yes		
		No		
C.2.	How big is size of your land?			
C.3.	Do you grow any vegetables?	Yes, for home consumption		
		Yes, for sale only		
		Yes , for consumption and sale		
		No		

D. Physical infrastructure

D	Questions	Answers				
D.1.	What is your main source of water?	Personal piped water				
		Community piped water				
		Spring				
		Tanker truck				
		River / stream				
		Other				
D.2.	How far are the water sources from your home? (walking distance)	Minutes		Hours		Days

Thank you for your participation

Appendix C: Questionnaire for emerging and smallholder farmers

E. 1 Where do you get money (capital) to invest in farming?

SOURCE	AMOUNT
Borrowing from bank	
Borrowing from friends	
Borrowing from your family	
My own savings	
State aid	
Other (such as :)	

E. 2 How do you cultivate your land? (Tick as appropriate)

	Own	Borrowed	Hired	Cost
Tractor				
Animal drawn				
Hand				
Other (Specify)				

F. MARKETS

F. 1. Which markets do you usually use for selling your produce?

MARKET	Reason
Formal markets	
Informal markets	
I do not sell	

F. 2. Approximately, how much produce did you sell in the previous season?

..... kg

F. 3. Where do you sell most of your produce to?

PLACE	Tick as appropriate	Reason
Farm gate		
Around the village		
Road side		
Nearest town		
Other countries(export)		

F. 4 Do you always find a market for all the goods you produce?

Yes		No	
-----	--	----	--

F. 5 If NO, what happens to the unsold produce? Mark with an X.

Lose to spoilage	Eat (family and friends)	Sell at low prices	Store and sell later	Process it

All enterprises

F. 6 How difficult is it to look for buyers? Mark with an X.

Easy	Fair	Difficult

F. 7 Which marketing systems are available in your area?

List the marketing systems	Mark those you are not satisfied with	Reason why you are not satisfied

F.8 How do you think the systems you are not satisfied with could be improved?

.....

.....

.....

.....

F.9 Do you have any contractual agreements or a guaranteed/ready market (formal or informal) with any agribusiness outlet e.g. vegetable shop, butchery etc?

Yes		No	
-----	--	----	--

F.10 Do you have regular customers, who always buy from you?

Yes		No	
-----	--	----	--

F. 11 If Yes, how long have you been trading with these customers?

.....

F. 12 How well do you know your customers?

.....

F. 13 How is your produce moved to the marketing points? (Tick as appropriate)

TYPE OF TRANSPORT					
Bike Truck Tractor Bus Other (Specify)	Bike	truck	tractor	Bus	Other (specify)
Own transport					
Hired vehicles (individual)					
Hired vehicle (group)					
Public transport					
Buyers transport					
Move animals by foot /head					

F. 14 How far are the marketing points?km

F. 15 How much do you pay for a single trip to the market? R.....

F. 16 What general problem do you experience in moving your produce?

Size of transport	Lack of transport	High transport cost	Other (Specify)

G. INFRASTRUCTURE

G. 1 What type of road do you use to the market?

Gravel only	Tarred only	Both

G. 2 In your own opinion, how do you rate the road?

Bad	Fine	Good

G.3 Are you satisfied with the total number of roads that link you to the market?

Yes		No	
-----	--	----	--

G. 4 Indicate the type of infrastructure you have access to

Infrastructure	Condition		
Infrastructure	Not available	Available	
Value adding machinery (e.g. packers, abattoir)			
Telephone			
Electricity			
Computer			
Water			
Other (such as :)			

H. EXTENSION SERVICES

H. 1 How do you rate the services provided by extension officers in your area?

Unavailable	Not helpful	Helpful enough

H. 2 Do you contact extension officers during the marketing period?

Yes		No	
-----	--	----	--

H. 3 What services are provided by extension officers?

Advice on marketing	Advice on record keeping	Other (specify)

H. 4 Are the extension officers always available when you need help?

Never available	Available sometimes	Always available

H. 5 List the problems that you face in contacting extension officers?

.....

.....

.....

.....

.....

I. INSTITUTIONAL SUPPORT SERVICES

I. 1 Are you aware of the role played by organisations in marketing?

Yes		No	

I. 2 Do you think that public institutions (such as local administration, national government, public organisations) are willing to help and to support your farm business? Explain

.....

.....

.....

.....

.....

I. 3 What are the main challenges that you face in running your farming business?

	Minor challenge	Major challenge
a) The search for information		
b) Lack of support by the government		
c) Lack of trust in the institutions		
d) Bureaucracy		
e) Financial		
f) Problems associated with crime		
g) Uncertainty of property rights		
h) Corruption problems		

I. 4 Before making any major farming decision, do you consult or seek advice from your family/friends?

Explain

.....

.....

I. 5 What influence do traditions have on your farming activities? Explain

.....

.....

.....

.....

I.6 Do you receive and use farming and marketing advice that is given by non-family members?

.....

.....

.....

Thank you for your participation

Appendix D: The following questions were asked during the focus group discussions:

1 Agricultural production

- 1.1 What major crops grown in the area?
- 1.2 What are key problems that affect your produce?
- 1.3 Do you use irrigation system?

2 Income sources

- 2.1 What major source of income for covering household basic needs (food and non- food needs).
- 2.2 Do you know any existing of financial institutions from which you can obtain the loan?
If yes what do you know?

3 Access to market

- 3.1 What major trading commodities (food grains, livestock)?
- 3.2 What major constraints that you are faced with when participating in the markets and when trying to access markets (barriers to market access)?

4 Infrastructure

- 4.1 Conditions for better market participation (what are these conditions, their benefits and what is lacking):
 - Infrastructure(roads)
 - Transportation
 - Facilities for storage and packing

Thank you for your participation

Appendix E: The following questions were asked to extension officers, municipality officials and Non – governmental organisation (focus group discussions)

- 1 What programs that your organisation has to assist the people of Ntambanana?
- 2 How do you communicate with people of Ntambanana?
- 3 Which projects do you have that assist Ntambanana people and which problems are they addressing?
- 4 Do you have any plans on how to improve roads and irrigation system?
- 5 How does your organisation assist people with finance?

Thank you for your participation

Isichibiyelo A: ULWAZI OLUMAYELANA NEPHROJEKTHI KANYE NOKUZIBOPHEZELA OKUNOLWAZI OLUPHELELE

Ngiyabingelela

Igama lami nginguMfundo Masuku owenza iziqu zeqhuzu eliphezulu eNyuvesi YakwaZulu. Ngenza uphenyo oluphathelele nemithelela yengqalasizinda kanye nalokho okudala ukufekela kweminyango eqondene nokwenza kube nokudla okwanele. Ngidinga usizo lwakho ukuthola ulwazi olufanele oluzophumelelisa lolu cwaningo. Indlela yokuhuba lolu cwaningo uzochazelwa yona ngokucacile kanye nokuthi yini okuzolindeleka ngakuwe ukuze uzimbandakanye ngokuthanda kwakho kulolu cwaningo. Ukuzimbandakanya kusekuthandeni komuntu akukho ophoqiwe kanti unelungelo lokuhoxa noma kuyinini.

IPHATHELENE NANI IPHROJEKTHI?

Inhloso yalolu phenyo:

- Injongo yalolu cwaningo ukuqoqa ulwazi olumayelana nengqalasizinda kanye nokufekela kweminyango ethize okubhekana nomphakathi waseNtambanana mayelana nokokudla okwanele.
- Ulwazi oluzotholakala luzosetshenziselwa ekwethasiseleni ulwazi kanye nokuthi izinkinga zalolu hlobo zingagwenywa kanjani kanye nokuqhamuka nezinhlelo ezikhuthaza ukukhuselwa noma zokwandisa izinhlelo zokudla okwanele ezindaweni zasemakhaya.

UKUBALULEKA KWE-PHROJEKTHI

Lolu cwaningo lushaya khona ngoba luzosiza umphakathi wasemakhaya kanye neminyango eyahlukene ukuze bakwazi ukumelana nokusilela kwengqalasizinda kanye neminyango ephaswe ngendlela exegayo uma kuza ngasekwenzeni ukuba kube nokokudla okwanele. U-Barrios, (2008) uthi ingqalasizinda emiyo kanye naleyo eyame emnothweni kuthathwa njengokunomthelela omkhulu kodwa kubonakala sengathithi imigomo yezinqubo kanye nezindlela zokufezekisa lokhu ayikathuthuki ngokuphelele ukukhulisa intuthuko yasemakhaya.

INDLELA EZOLANDELWA

Ucwaningo luzothatha isikhathi esibalelwa emasontweni amane. Labo abazimbandakanyayo bazocelwa ukuba bagcwalise amapheshana anemibuzo. Leso sigejane esikhethiweyo kanye nezikhulu bazocelwa ukuba baphendule imibuzo ethile.

ESICELA UKUBA UKWENZE

- Uzocelwa ukuba usayine iphepha elishoyo ukuthi uyazimbandakanya.
- Uzobuzwa imibuzo ethile okuzocelwa ukuba uyiphendule ngokuthembeka.
- Uma kukhona imibuzo onayo emayelana nalolu cwaningo unganqeni ukubuza.

Siyabonga kakhulu.

.....

UMfundo Masuku

Umholi wocwaningo

Ucingo oluphathwayo: 0781145551

Ucingo lwasendlini: 0359026371

IMVUME OYIQONDAYO

Mina, lo osayinde ngezansi,
Inombolo kamazisi (ayiphoqelekele) Ohlala
..... (Ikheli lendlu).

Ngiyifundile imininingwane cwaningo noma ngiyizwile incazelo yalo futhi ngiyavuma ukuthi ngiyayiqonda. Ngibenalo ithuba lokubamba izingxoxo ezimayelana nemibandela ethile kanye nocwaningo ngakho-ke ngiyazibophezela ngokungaphoqiwe ukusiza kulolu cwaningo. Ngiyavuma ukuthi ngizoba yingxenye yocwaningo.

Isandla sokusayina salowo ozimbandakanyayo
Isayinwe endaweni yase ngomhla ka-
.....

Ofakazi

Igama Igama
Ukusayina..... Ukusayina
Indawo yase..... Indawo yase.....
Ucingo engitholakala kulo

Isichibiyelo B: Amalunga omphakathi noma abomkhaya (imibuzo emayelana nokokudla okwanele)

Imibuzo elandelayo yabuzwa amalunga omphakathi noma abomkhaya abambandakanyekayo kwabakhethiwe. Umphenyi wanikezwa amazwi okwelulekwa ngaphambi kokuba kwenziwe uhlolomvo ngalokho okuqukethwe yimibuzo nanokuthi kufanele kulandelwe ziphi izindlela ezinhlonipho. Inhlonipho isho nokuqonda imigomo ethile ethinta amasiko alabo bantu abaphendula imibuzo kanye nokwemukela labo abaphendulayo njengabalingani.

Imininingwane yakho

Gcwalisa ngezimpendulo okuyizonazona ngophawu olungu- X

A.1 Ubulili		A.2 Isilinganiso seminyaka yokuzalwa						A.3 Phathelene nomshado			
M	F	10-19	19-29	30-39	40-49	50-59	60 Ngap hezul u	Ongas hadile	Oshadile	Ohlukani sile	Umfelokazi

A.4 Yisho izinga lemfundo yakho? Tshengisa ngophawu olungu - X

Angifundile	Imfundo yamabanga aphansi	Imfundo yamabanga aphakeme	Imfundo ephakeme	Okunye cacisa

A.5 Yisho umsebenzi owenzayo futhi uhola malini?

Izinga lomsebenzi	Khombisa la:	Izigaba zemali oyiholayo ngenyanga					
Umlimi ngokugcwele		700	700 – 1500	1500-3000	3000-5000	5000-10000	10000 Ngaphezulu
Umlimi wesikhashana							
Umqashwa							
Ohola impesheni							
Ongasebenzi							
Okunye cacisa							

B. Ukudla okwanele okutholakala ngaphandle kwezolimo?

B.	Questions (Imibuzo)	Izimpendulo	
B.1	Ukuthenga kuphi ukudla komuzi wonke / umndeni?	Ibhizinisi lendawo	
		Idolobha	
		Okunye	
B.2	Usebenzisa malini ukuthengela umndeni wakho ukudla ngenyanga?		
B.3	Engabe umndeni wakho wake wazuza ekumukelisweni kokudla?	Yebo	
		Cha	

C. Ukudla okwanele okutholakala ngezolimo

C.	Imibuzo	Izimpendulo		
C.1	Uyalima noma imuphi umhlaba?	Yebo		
		Cha		
C.2	Mkhulu kangakanani umhlaba owulimile?			
C.3	Uzitshalile yini izithelo?	Yebo, ukuthi kudle umndeni		
		Yebo, ukudayisa		
		Yebo , nokudayisa ukuthi kudle umndeni		
		Cha		

D. Ingqalasizinda

D	Imibuzo	Izimpendulo		
D.1	Niwathola kuphi amanzi?	Upompi wasekhaya		
		Upompi womphakathi		
		Umthombo		
		Ithangi Letilogo		
		Emfuleni		
		Okunye		
D.2	Kukude kangakanani nasekhaya lapho enithola khona amanzi?	Imizuzu	Amahora	Izinsuku

Ngiyabonga ngokuzimbandakanya kulolu cwaningo.

Isichibiyelo C: Uhla lwemibuzo olubhekiswe kubalimi abasafufusa.

E. 1 Uyitholaphi imali yokuqalisa ibhizinisi lokozolimo?

Umthombo	Inani
Ibolekwe ebhange	
Ibolekwe kubangani	
Ibolekwe emndenini	
Eyami ebiyongiwe	
Usizo lukahulumeni	
Okunye njenge	

E. 2 Uwulima kanjani umhlaba?

	Wami	Okwetshelekwayo	Okuqashisayo	Izindleko
Ugandaganda				
Ukulima ngezinkabi noma izimbongolo				
Ngezandla				
Okunye				

F. Indawo yohwebo/ yokuhwebelana

F. 1 Yiziphi izindawo zokuthengisa ojwayele ukuzisebenzisa ukuthengisa imikhiqizo yakho?

Indawo yokukhangisa	Isizathu
Izindawo zesikhangiso zesimiso	
Izindawo zokukhangisa ezingesiso isimiso	
Angidayisi	

F. 2 Ngokwesilinganiso, mingakanani imikhiqizo owayidayisa ngesikhathi sonyaka odlule?

.....Kg (Isisindo)

F. 3 Uyidayisa kuphi kakhulukazi imikhiqizo yakho?

Indawo	Tshengisa lapha	Isizathu
Esangweni lepulazi		
Edolobhaneni		
Eceleni komgwaqo		
Eduze nedolobha		
Kwamanye Amazwe		

F. 4 Ngabe uhlala ubathola abantu noma izimboni ezithenga imikhiqizo oyikhiqizayo?

Yebo		Cha	
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F. 5 Uma kuwu Cha, ngabe kwenzakalani ngaleyo mikhiqizo engadayisekanga? Tshengisa ngophawu- X

Kuyonakala	Udla nomndeni kanye nabangani	Dayisa ngamanani aphansi	Gcina bese udayisa kamuva	Ukwenza umkhikizo othize

Onke amakhono

F. 6 Kunzima kangakanani ukuthola abathengi? Tshengisa ngophawu- X

Kulula	Kukahle	Kunzima

F. 7 Yiziphi izinhlelo zokukhangisa ezikhona endaweni yangakini?

Balula uhla lwezinhlelo zokukhangisa	Faka uphawu kulezo ongagculiseki ngazo	Isizathu esenza ungagculiseki

F. 8 Engabe ucabanga ukuthi izinhlelo ezingakugculisi wena, zingathuthukiswa kanjani?

.....

.....

.....

.....

F. 9 Engabe unaso isivumelwano esimile nenkampane oyithengiselayo njengesitolo sezithelo noma senyama nokunye?

Yebo		Cha	
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F. 10 Ngabe unabo abathengi abahlala bethenga kuwe njalo?

Yebo		Cha	
------	--	-----	--

F. 11 Uma kungu Yebo, ngabe kunesikhathi esingakanani uhwebelana nalabo bathengi?

.....

F. 12 Ubazi kangakanani abathengi bakho?

.....

F. 13 Ngabe imikhiqizo yakho ifika kanjani kubathengi noma ezindaweni zokukhangisa?

Izinhlobo zezithuthi					
	Iveni	Iloli	Ugandaganda	Ibhasi	Okunye Chaza
Isithuthi sakho					
Isithuthi esiqhashwe nguwe					
Isithuthi esiqhashiwe iviyo					
Isithuthi somphakathi					
Isithuthi sabathengi					
Isithuthi sezilwane noma ngezinyawo					

F. 14 Ngabe kukude kangakanani lapho kuthengiselwa khona? ----- km

F. 15 Ngabe ukhokhela kangakanani uhambo ngalunye uma uyodayisa? R

F. 16 Ngabe iziphi izinkinga obhekana nazo jikelele ekuhambiseni imikhiqizo yakho?

Ubukhulu besithuthi	Ukuntuleka kwezithuthi	Ukubiza kakhulu kwezithuthi	Okunye cacisa

G. INQALASIZINDA

G. 1 Yiluphi uhlobo lomgwaqo olusebenzisayo uma uyodayisa?

Owomgubane	Owetiyela	Kokubili

G. 2 Ngokombono wakho uwubona unjani umgwaqo?

Mubi	Ulungile	Muhle

G.3 Ngabe wanelisekile ngokwenani lemgwaqo elenza kufikeke lapho okudayiswa khona?

Yebo		Cha	

G. 4 Khombisa ngokohlobo lwengqalasizinda okungeneka kuso

Ingqalasizinda	Isimo		
Ingqalasizinda	Kayikho	Kukhona	
Ubumqoka bemishini yokukhiqiza			
Ucingo lokukhuluma			
Ugesi			
Isiqoqelalwazi			
Amanzi			
Okunye njenge -			

H. Ukwengezwa kwezidingo

H. 1 Uzilinganisa kanjani usizo oluthola kubaluleki bakwezolimi endaweni yangakini?

Alukho	Alusizi	Olusizayo ngokwanele

H. 2 Niyaxhumana nabeluleki bezolimo ngesikhathi sokukhangisa nokudayisa umkhiqizo wenu?

Yebo		Cha	
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H. 3 Yiziphi izidingo enizunikwa ngabeluleki bezolimo?

Iseluleko ngokukhangisa/dayisa	Iseluleko sokugcinwa kwamabhuku	Okunye cacisa

H. 4 Ngabe abeluleki bezolimo bayabakhona njalo uma nidinga usizo?

Abaveli	Babakhona kwezinye izikhathi	Babakhona njalo

H. 5 Balula izinkinga obhekana nazo uma ufuna ukuxhumana nabeluleki bezolimo?

.....

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.....

.....

.....

I Izikhungo ezeseka ngokwezidingo

I. 1 Ngabe uyaqonda iqhaza elibanjwe izinhlangano ekukhangiseni imikhiqizo?

Yebo		Cha	
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I. 2 Uyacabanga ukuthi izikhungo zomphakathi zizimisele ukuzisa kanye nokweseka ipulazi lakho? Chaza

.....

I. 3 Yiziphi izinselelo obhekana nazo ekuphatheni ipulazi lakho?

	Inselelo encane	Inselelo enkulu
a) Ukufuna ulwazi		
b) Ukuntuleka kosizo kuHulumeni		
c) Ukuntuleka kokuthembana ezinhlakeni ezahlukene		
d) Umbuso ophethwe izisebenzi zikaHulumeni		
e) Ezezimali		
f) Izinkinga ezimbandakanya ubugebengu		

g) Ukunqondakali kwamalungelo omhlaba)		
h) Izinkinga zenkohlakalo		

I. 4 Ngaphambi kokwenza isinqumo esinqala esimayelana nezolimo, uyabonisa yini okanye ufune izeluleko emndenini noma kubangani bakho? Chaza

.....

I. 5 Imvelo noma isintu inamuphi umthelela ekwenzeni imisebenzi yezolimo? Chaza

.....

I. 6 Uyazithola yini izaluleko kwezolimo eziphuma kwabanye abantu abangasiwona amalunga omndeni futhi uyazisebenzisa yini?

.....

Ngiyabonga ngokuzimbandakanya kulolu cwaningo.

Isichibiyelo D: Imibuzo elandelayo ibuzwa amalunnga omphakathi asebenza njengenhlangotho noma njengeqoqo

1 Imikhiqizo yezolimi

- 1.1 Yiziphi izitshalo eziningi ezitshalwe endaweni yangakini?
- 1.2 Yiziphi izinto eziphazamisa izitshalo zenu?
- 1.3 Uyalusebenzisa uhlelo lokunisela?

2 Imithombo ngcebo engenayo

- 2.1 Ikuphi okuwumthombo wengcebo okwenza nikwazi ukugcina izidingo ezinjengokudla okwanele kanye nokunye okungayikho ukudla).
- 2.2 Uyazi ngokubakhona kwanoma isiphi isikhungo / umnyango wezezimali lapho eningathola khona usizo lwezimali?
Uma wuYebo wazini?

3 Ezokuhwebo noma ukukhangisa

- 3.1 Yini oyihweba kakhulu phakathi kokutshaliwe nemfuyo?)
Yiziphi izingqinamba ezinkulu obhekana nazo ngenkathi udayisa noma ekukhangiseni umkhiqizo wakho, futhi nangenkathi uzama ukuvumeleka ekukhangiseni(izithiyo ekuvumelekeni ukukhangisa)

4 Ingqalasizinda

- 4.1 Izimo ezingabangcono ukukhangisa ekuhlanganyeleni(yiziphi lezo zimo, izinzuzo zazo kanye nokuntula
 - Inqalasizinda (imigwaqo)
 - Ukuthuthwa
 - Izinto zokugcina imikhiqizo ilungile kanye nokupakisha

Ngiyabonga ngokuzimbandakanya kulolu cwaningo.

Isichibiyelo E: Imibuzo yabuzwa Abaluleki Bezolimo, Izikhulu zakwaMasipala kanye nezinhlangano ezizimele ezingekho kuHulumeni.

- 1 Yiziphi izinhlelo zenhlangano yakho ezingasiza kanjani abantu baseNtambanana?
- 2 Ngabe uxhumana kanjani nabantu baseNtambanana?
- 3 Engabe yiziphi izinhlelo(iprojekthi) onazo ezisiza abantu baseNtambanana, futhi yiziphi izinkinga ezizixazululayo?
- 4 Engabe unawo yini amacebo okuthuthukisa imigwaqo kanye nezinhlelo zokunisela?
- 5 Engabe inhlangano yakho ibasiza kanjani abantu ngokwezezimali?

Ngiyabonga ngokuzimbandakanya kulolu cwaningo.