

**An Assessment of the Role of Small-Scale Farming in Reducing Poverty in  
Kanyayo, Bizana District, Eastern Cape**

**By**

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This dissertation is submitted in partial fulfilment of the  
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in School of Architecture, Planning and Housing,  
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## **DECLARATION**

**Submitted in fulfillment/ partial fulfillment of the requirements for the degree  
Of Master in Town and Regional Planning, in the Graduate Programme in**

**School of Architecture, Planning and Housing, University of KwaZulu-Natal,  
South Africa.**

**I declare that this dissertation is my own unaided work. All citations,  
references and borrowed ideas have been duly acknowledged. I confirm that  
an external editor was used and that my Supervisor was informed of the  
identity and details of my editor. It is being submitted for the degree of  
Masters in Town and Regional Planning in the Faculty of Humanities,  
Development and Social Science, University of KwaZulu-Natal, South Africa.  
None of the present work has been submitted previously for any degree or  
examination in any University.**

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## ABSTRACT

This dissertation assesses the role of small-scale farming in reducing poverty in rural areas using household data collected from Kanyayo and interviews with Department of Agriculture, Bizana Local Municipality and other key community members. The reviewed literature confirmed that small-scale farming has a potential to reduce poverty if well supported. This support includes the eradication of problems facing small-scale farming, while at the same time empowering small-scale farmers through connecting them to reliable market outlets. The findings of the study indicated that small-scale farming in Kanyayo is faced by many problems. These problems include: labour shortage which is attributed to lack of youth involvement, laziness and sicknesses; insufficient rainfall; poor infrastructure and inadequate access to services; lack of connectedness to market outlets; lack of farming information. These obstacles to small-scale farming tend to constrain small-scale farming potential and thereby exacerbate poverty levels. Arising from the research several recommendations were put forward. These include: development of the labour force; irrigation schemes and construction of dams; delivering of services and infrastructure; market arrangements; accessible to farming information center. The study concludes that small-scale farming has a power to reduce poverty in rural areas but that power is based on removal of barriers to small-scale farming.

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## LIST OF ACRONYMS

ARC:	Agricultural Research Council
CASP:	Comprehensive Agricultural Support Programme
DFID:	Department for International Development
DWAF:	Department of Water Affairs and Forestry
FAO:	Food Agricultural Organization
GDP:	Gross Domestic Product
GIS:	Geographical Information System
HIV/AIDS:	Human immunodeficiency virus/ acquired immune deficiency syndrome
IDC:	Industrial Development Corporation
IDP:	Integrated Development Plan
IDS:	Institute of Development Studies
IFAD:	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
ILO:	International Labour Organization
LRAD:	Land Redistribution for Agricultural Development
MAFISA:	Micro Agricultural Financial Institutional Scheme of South Africa
MALA:	Ministry of Agriculture and Land Affairs
NAFU:	National African Farmers Union
NDA:	National Department of Agricultural
NGO:	Non Governmental Organization
ODI:	Overseas Development Institute
OECD:	Organization for Economic Co-operation and Development
SADC:	Southern Africa Development Community
SLA:	Sustainable Livelihood Approach
UN:	United Nations
WFP:	World Food Programme

# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

Access to nutritious food is a basic human entitlement. However, the majority of people in rural areas do not enjoy this entitlement because of their poverty. The rural poor depend on a number of livelihood strategies for their survival, but the majority will depend on small-scale farming as their main means of earning a livelihood for almost their entire lives. Out of the world's 1.2 billion poorest people, 75% live in rural areas, and for the most part depend on agriculture, forestry, fisheries, and other related activities for survival ([www.fao.org/es/esa](http://www.fao.org/es/esa)). In Sub-Saharan Africa, the majority of people live in rural areas, where poverty is severe, and almost all these rural households depend directly or indirectly on agriculture (Diao, Hazell, Resnick and Thurlow, 2007). Diao et al. (2007) further argue that agricultural-led growth played an important role in mitigating poverty and transforming the economies of many Asian and Latin American countries, but the same has not occurred in Africa. Diao et al. (2007) contend that empirical analyses in case studies of various countries find that poor performance of agriculture will continue to result from the broader participation of smallholder farmers, and that the growth of staple foods generates more poverty reduction than other agricultural crops. Hazel et al. (2007) state that agriculture is likely to be central to both rural development and rural poverty alleviation.

Despite a number of success stories, the small-scale farming sector is faced with many challenges that tend to undermine its productivity. A Malawian case study confirms this belief, noting that food insecurity is the result of declining soil fertility, inadequate landholdings, inadequate labour availability to small-scale farmers, and the low wages that are associated with this sector (Kerr, 2005). In such situations, food production may decline, despite a limited ability to purchase food. The new, commercial market will demand on quality, timely deliveries, and economies of scale, posing special challenges for smallholder farmers (World Bank, 2008).

As well as the challenges of production facing small farmers, they also face many constraints. Rural farmers cannot afford post-harvest technologies that would enable them to store crops until the prices increase out of season. The high level of theft from fields in many countries prompts farmers to harvest crops before full maturity and to avoid storage for marketing out of season.

In the context of South Africa, where development policy focuses on economic growth, reducing income inequalities, and eliminating poverty, agriculture is a key sector. This sector's contribution to national growth can be enhanced to increase income for the poorest communities through the encouragement of small-scale and medium-scale farmers; this should have the effect of improving household food security (National Department of Agriculture, 2000, cited in Magingxa, et al., 2009) and, where possible, of providing a marketable surplus. About 200, 000 – 300, 000 rural Black households in South Africa are dependent on small-scale farming, at least partially, for their livelihood (Perret 2000 cited in Magingxa et al., 2009). A number of policies have been introduced to improve the status of small-scale agricultural production in South Africa (Magingxa, Alemu, and Van Schalkwyk 2009), but despite these policies, small-scale farmers in South Africa still find it difficult to access resources and commodity markets, to obtain agricultural inputs and consumer goods, and to sell their products (Makhura and Mokoena, 2003, cited in Magingxa, et al., 2009). Magingxa, et al. (2009) further argue that this lack of access to profitable markets is a major reason why even those small-scale farmers who can produce a surplus remain trapped in the poverty cycle. In some areas of South Africa, such as Nkandla, where AIDS impacts seriously on physical health and labour availability, as the illness progresses, family members tend to spend a lot of time caring for the sick person and this exacerbates the labour shortages in agricultural work (Taylor and Cairns, 2001). For this reason, Taylor and Cairns (2001) concluded that an expansion of farming based on traditional crops such as maize, beans, and potatoes is unlikely to make a significant contribution to poverty alleviation, given the worsening impact of HIV/AIDS. Obviously the problems mentioned above may constrain the capacity of small-scale farmers to produce more food for household consumption and income generation. On the other hand, small-scale farming has been successful in some areas, for example, in Malawi, which has gone from being a food recipient to an exporter of maize (The Sunday Times, May 11, 2008).

Escalating food prices in 2007/2008 expanded the already large number of the poor. Von Braun (2009) notes that the sharp rise in global food prices in this period severely undermined the nutrition security of the poor, giving rise to social and political instability; these price rises also triggered the increased competition for already limited natural resources. However, this crisis renewed the focus on agriculture after decades when national policies had neglected and underinvestment in agricultural science, rural infrastructure and rural institutions (Von Braun, 2009). As non-farming livelihoods in rural areas are not

sufficiently viable to reduce poverty, and tend in any case to depend to some extent on agriculture, I realized in the course of my research that there is a need to assess the role that could be played by small-scale farming in reducing poverty in rural areas. As Hazel et al. (2007) state, farming has a high potential to create jobs and to deflate staple food prices. A case study which I conducted in the rural area of Kanyayo has been chosen in order to test the validity of arguments that small-scale farming is unlikely to reduce poverty, given the number of problems facing this sector.

## **1.2 Research Framework**

### **1.2.1 Purpose of the Study**

The aim of this dissertation is to investigate the prevailing socio-economic conditions in Kanyayo, and the extent to which small-scale farming at present contributes, and could in the future contribute to poverty reduction. My research will assess the capacity of small-scale farming in poverty alleviation in the Kanyayo area, and investigate constraints that hinder its effectiveness. At the end of this dissertation, I shall make recommendations concerning the strategies that small-scale farmers and other key players can adopt to boost small-scale farming activities and make small-scale farming not only sustainable but a more significant food provider for the rural poor.

### **1.2.2 Research Questions**

The main research question is:

To what extent, and in what ways, has small-scale farming been effective in reducing poverty in Kanyayo?

This has been broken down into the following sub-questions:

- What features of Kanyayo are conducive to development?
- How has small-scale farming evolved in the last 20 years in Kanyayo?
- What are the main reasons for practicing small-scale farming in Kanyayo?
- What contribution does small-scale farming make to poverty relief in Kanyayo?
- What the current programmes are in place to support small-scale farming in Kanyayo?
- What constraints are faced by small-scale farmers in Kanyayo?
- What planning interventions could support small-scale farming in Kanyayo?

### **1.2.3 Research Objectives and Hypothesis**

The main objective of this research is to assess the role of small-scale rural farming in reducing poverty in Kanyayo. The following are the specific objectives of this research:

- To assess the current farming activities in Kanyayo, and further, to examine community participation in small-scale farming;
- To find out challenges that Kanyayo small-scale farmers face;
- To make recommendations regarding small-scale farming in Kanyayo.

My hypothesis is that small-scale farming has the potential to reduce poverty in rural areas only if certain constraints are removed.

### **1.3 Research Methodology**

This section provides a report on the techniques used in this study. The first part briefly describes the motivation for selecting Kanyayo as the location of my case study. The second part provides a discussion of how secondary and primary data were collected. The last part of this section provides an overview of the pilot study and the procedures used in the analysis of data, as well as the necessary limitations of the study.

#### **1.3.1 Motivation for Selection of the Case Study**

The rationale for selecting Kanyayo was that it is typical of many rural settlements in South Africa. As such, an in-depth understanding of the circumstances surrounding small-scale farming in Kanyayo may yield lessons which could inform planning interventions there and elsewhere. While the case study method is a widely accepted approach to research, Leedy and Ormrod (2005) caution that in a case study a researcher cannot be sure that the findings are generalizable to other situations. My own home is in Kanyayo, which gives me good access to local information as a participant observer. However, I have had to be careful to guard against the risk of bias in selection of sources and in interpretation of findings.

#### **1.3.2 Use of Secondary Sources**

Secondary sources that were used for the study consisted of a) a definition of the study area using existing maps; and b) literature relating both to the area and to agricultural development.

**a) Definition of the study area.** Geographic Information Systems (GIS) maps assisted in providing the geographic location of the study area. These maps provide useful information

to: define physical and natural boundaries; to show the spatial extent of the study area and significant places in the surrounding areas; and to show the main access routes and distance to the nearest towns.

**b) Literature review.** International literature on the practice and experiences of small-scale farming was obtained from books, journals, and the Internet. Useful precedents were drawn from international studies. South African literature on small-scale farming strategies was collected from books, magazines, Internet and journals. Literature on the survival strategies of rural households in South Africa and particularly the Eastern Cape was obtained from books, journals and the Internet. The information on development conditions in Kanyayo and surrounding areas was derived partly from newspaper articles and from the current Bizana Integrated Development Plan of 2008; and partly from empirical research. The theoretical framework of this research was constructed on a basic needs approach, a sustainable livelihoods approach and household food security approach which were drawn from various books, journals and the Internet. Secondary sources alone, however, were not enough to provide answers to all the specific research questions which arose in my study of Kanyayo; the primary data which I collected in the area is also vital to my conclusions.

### **1.3.3 Primary Sources**

The primary sources consisted of the following: a) interviews with selected key informants; b) household surveys; and c) a survey of land use.

#### **a) Interviews**

The purpose of conducting interviews was to collect data from key informants from different environments and experiences in order to validate my research findings, and to collect data needed to answer research questions. In this part of the research, the information was collected through interviews with selected community members considered to be knowledgeable about small-scale farming in the area, and interviews with officials from the Department of Agriculture and Bizana Local Municipality. A 'purposive sample' (Leedy and Ormrod 2005) was used as it allowed the researcher to select those who had knowledge and experience concerning the study area. Leedy and Ormrod further note that interviews can yield a great deal of useful information, although interviews can be costly because the researcher travels long distances. In my research, structured interviews were used in order to collect qualitative information. The interviews conducted were face-to-face. The main aim of these interviews was to help me to answer research questions concerning farming practice, poverty and survival strategies. Since I myself grew up in

Kanyayo there were no problems related to local language usage.

My interviews with key respondents fall into two groups: first were individuals whose position or work makes them knowledgeable about small-scale farming, poverty and survival strategies in the area; second were a number of people actively engaged in small-scale farming in Kanyayo. The following people were interviewed after appointments had been made:

- a) The Local Economic Development (LED) assistant manager from Bizana Local Municipality. The purpose of this interview was to get his opinions on planning interventions that support small-scale farming in Kanyayo.
- b) Extension officers from Department of Agriculture in Bizana, who are experts in agriculture with vast experience in the field. These officials were interviewed concerning their views on current small-scale farming programmes and farming constraints in the area.
- c) A poultry farming group member in the study area. I wished to get views of respondent about the progress and constraints facing poultry farming.
- d) An informant who has been residing and practicing crop farming in the area for a long time. He was interviewed concerning his perceptions on the trends of small-scale farming in the last 20 years.

#### **b) Household Survey**

The purpose of the household survey was to collect data from community members who employed various survival strategies, some of whom were engaged in small-scale farming. As it was important to collect data in a manner which would relate to conditions which applied throughout the Kanyayo community, so my decision (after a complete list of households was obtained) was to use a simple random sample. I used questionnaires to gather data from the sample households; closed and open-ended questioning styles were used. I also questioned random individuals whom I met, in order to extend my findings beyond particular households and to gather information about the community at large. Part of the information that was captured by the questionnaire includes the following:

- The socio-economic characteristics of Kanyayo;
- Survival strategies used by households;



- Involvement of households and the community in small-scale farming;
- Challenges facing small-scale farming;
- Possible interventions to assist small-scale farmers.

The simple random sample was applied in this way: I identified and made a list of all households in the study area. The random sample table was used to draw a sample of 30 households to be interviewed. Replacement policy: was used: when the sample household head was not available for whatever reason, I went to the next household on the sample list. A questionnaire, administered orally, was used as a tool to collect data and was developed as a guide for conducting interviews. Questionnaires were administered in 30 households in the study area. Some of the questions that were asked included the following: the role of small-scale farming in reducing poverty and problems faced by farmers in the study area. The questionnaire consists of 17 questions (see Appendix 1). Each questionnaire was completed within ten minutes. No problems of reluctance or a will to conceal on the part of the respondents, occurred during the interview process. In collecting data, an interview prompt sheet was also used as a guide (see Appendix 2).

#### **c) Land Use Survey**

The purpose of the land use survey was to collect data on different types of land use in the study area; the data collected assisted in addressing research questions. I recorded different land use, including: cultivated land, grazing land, forestry, rivers, roads, community facilities and residential areas.

### **1.3.4 Field Work**

#### **a) Pilot Study**

To test the validity of the questionnaire and check whether it would yield relevant results a pilot study was conducted in mid-October 2009, in KwaNikhwe, a rural area located 5 km away from the southern part of town of Bizana. The researcher randomly selected ten households in the area. The household heads interviewed were happy with the questions asked and were willing to offer information generously: there were no parts in the questionnaire that were confusing to respondents.

### **1.3.5 Data Analysis**

After the data was collected, it was organized to give appropriate answers to the research questions listed in 1.2.2.. The data collected was analyzed in the following manner: raw data

from the household survey was inserted into a coding sheet and coding table and analyzed. In analyzing data, I used SPSS version 9.0 to speed up the analysis process. Detailed analysis of data collected from households included tabulations. An in-depth analysis of findings from interviews was made, based on themes, for example: problems, solutions, access to markets.

### **1.3.6 Structure of Dissertation**

Chapter two provides a conceptual framework and reviews international literature on poverty and small-scale farming. Chapter three provides a general discussion of rural poverty and a review of the literature on small-scale farming within South Africa. It further reviews agricultural policies in South Africa and describes small-scale farming within the Eastern Cape context. Chapter four describes Kanyayo location, its socio-economic characteristics, survival strategies, and level of access to services as well as the particularities of small-scale farming. Chapter five provides different perceptions of farming in Kanyayo. Chapter six contains the key findings of my research, my conclusions and recommendations.

### **1.3.7 Limitations of the Study**

Since Kanyayo settlement is sparsely distributed, I had to walk long distance from one sample household to the next one, and the rainy weather at the time of field work complicated the circumstances. Furthermore, all the attempts to interview Mayor of Bizana Local Municipality failed. However, this did not have any major impact on the results since information from the Bizana Local Municipality was obtained from Bizana Local Economic Development assistant manager.

## CHAPTER 2

### CONCEPTUAL FRAMEWORK

#### 2.1 Introduction

It is argued that small-scale farming with minimum constraints is likely to reduce poverty in rural areas of South Africa. This chapter starts by discussing the approaches which are relevant to this study. The second part of the chapter begins by defining small-scale farming, poverty and other key concepts that dominate the study, and then turns to review the literature on the role of small-scale farming in reducing poverty in an international context.

The theoretical framework for assessing the role of small-scale farming in reducing poverty in Kanyayo embraces the following approaches: sustainable livelihoods approach (SLA) which is the dominant element; basic needs approach; and the household food security approach. All these approaches are oriented towards poverty reduction and maintenance of sustainable development. Another approach is the enabling rural innovation approach which emphasizes the penetration of smallholder farmers to markets as another means of poverty reduction.

#### 2.2 Approaches

##### 2.2.1 Sustainable Livelihoods Approach (SLA)

Sustainable Livelihoods Approach (SLA) is a way of thinking about the objectives, scope and priorities for development, in order to enhance progress in poverty elimination (DFID, 1999). SLA aims to help poor people achieve lasting improvements against the indicators of poverty that poor people define (DFID, 1999). The premise of SLA is that the effectiveness of development activity can be improved through:

- systematic but manageable analysis of poverty and its causes;
- taking a wider and better informed view of the opportunities for development activity, their likely impact and fit with livelihood priorities; and
- placing people and the priorities they define firmly at the centre of analysis and objective-setting (DFID, 1999).

Sustainable Livelihoods Approach (SLA) is based upon evolving thinking about poverty reduction, the way the poor live their lives, and the importance of structural and institutional

issues (DFID, 1999). The benchmark for SLA's success is whether sustainable improvements in people's livelihoods have taken place (DFID, 1999). It is anticipated that this refocusing on the poor will make a significant difference to the achievement of poverty elimination goals (DFID, 1999).

Sustainable Livelihoods Approach (SLA) emerged during the 1990s (Turton, 2000). The idea of SLA was first introduced by the Brundtland Commission on Environment and Development in 1992, and United Nations conference on Environment and Development expanded the concept, advocating for the achievement of sustainable livelihood as a broader way for poverty eradication (Krantz, 2001). The origin of sustainable livelihood as a concept is widely attributed to Robert Chambers at the Institute of Development Studies (IDS) (Odi, 2003).

Sustainable Livelihoods Approach (SLA) focuses on what people already have, rather than focusing on what they do not have (Turton, 2000). A household may be enabled to gain sustainable livelihood security in many ways: through ownership of land, livestock or trees, rights to grazing, fishing, hunting or gathering; through stable employment with adequate remuneration; or through varied repertoires of activities (Chambers and Conway 1991). Rakodi (2002) says that the centrality to SLA is a need to recognize that those who are poor may not have cash or other savings, but they do have other assets such as their health, their labour, their knowledge and skills, their friends and family and their natural resources surrounding them. In assessing the role of small-scale farming, the researcher will consider assets that the rural poor in Kanyayo have. Livelihoods approach requires a realistic understanding of the assets that the poor have in order to identify opportunities or constraints that they come across (Rakodi, 2002). SLA argues that, it is important to start by analyzing strengths of the poor before analyzing their needs (Rakodi, 2002). It has been suggested that, there is a danger in analyzing strengths of the poor first because it may turn policy actions to those who have assets and neglect those who are very poor or may be without assets (Rakodi, 2002). In undertaking this study, strengths of the people in Kanyayo will be analyzed before undertaking analysis of their needs. Rakodi (2002) contends that sustainability is a core of the livelihoods framework when applied to rural areas and without it, development is wasted. In this context, sustainability is used to mean not only continuing poverty reduction, but also environmental, social and institutional sustainability (Rakodi, 2002). A livelihood is sustainable when it can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, while not undermining the natural

resource base (Scoones, 1998 cited in Rakodi, 2002, Chambers and Conway, 1991).

Sustainable Livelihoods Approach (SLA) needs to be responsible and participatory, allowing poor people themselves to be key actors in identifying and addressing livelihood priorities and outsiders need processes that enable them to listen and respond to the poor (Rakodi, 2002). In conducting this research on the role of small-scale farming in reducing poverty, people in the study area were asked to identify their livelihood priorities. Livelihood consists of the capabilities, assets (stores, resources, claims and access) and activities required for a means of living (Chambers and Conway, 1991). SLA provides a solid base upon which the notion of sustainable agricultural development will be explored by the researcher. SLA views the world from point of view of individuals, households and social groups who are pursuing livelihood strategies in volatile and insecure conditions and with limited assets and it implies sustainable poverty elimination will be achieved only if external support focuses on what matters to people, understands the differences between groups of people and works with them in a way that is congruent with their current livelihood strategies (Carney et al., 1999 cited in Rakodi, 2002). SLA recognizes that more attention must be paid to the various factors and processes which either constrain or enhance poor people's ability to make a living in an economically, ecologically, and socially sustainable manner (Krantz, 2001).

Sustainable Livelihoods Approach (SLA) draws on improved understanding of poverty, but also on other streams of analysis, relating for instance to households, gender, governance and farming systems, bringing together relevant concepts to allow poverty to be understood more holistically (IFPRI, 1999). The World Commission in Environment and Development argues that, the pursuit of sustainable development requires the following:

- a political system that secures for citizens the opportunity to participate effectively in decision making;
- an economic system that is able to generate surpluses and technical knowledge on a self-reliant and sustained basis;
- a social system that provides for solutions for the tensions arising from disharmonious development;
- a production system that respects the obligation to preserve the ecological basis for development;
- a technological system that can search continuously for new solutions;
- an international system that fosters sustainable patterns of trade and finance;

- a flexible administrative system that has the capacity for self-correction (World Commission in Environment and Development, 1987a: 65 cited in Odi, 2003).

Early experience in implementing SLA suggests that : it makes explicit the choices and possible trade-offs in planning and executing different development activities; helps to identify the underlying constraints to improve livelihoods and the means of overcoming these; helps to link improved micro-level understanding of poverty into policy and institutional change processes (IFPRI, 1999).

To its potential critics, SLA may appear excessively micro-focused, time consuming and complex, with only limited value-adding (IFPRI, 1999). It does not obviate the need for existing methods and tools, and yet requires investment of time and resources to implement wider perspectives and achieve a degree of synergy among existing initiatives (IFPRI, 1999). SLA can be regarded as useful in the abstract but difficult in practice because of: the complexity of conducting livelihood analysis; the difficulty of sharing a complex tool with partners; the reality that even if poor people do not live in sectors, professional partners do, particularly those in government; the long time-frame needed to make a difference to livelihoods; and the fact that qualitative results will be very difficult to assess (IFPRI, 1999).

Despite SLA weaknesses, there are experiences that highlight several strengths of an SLA (IFPRI, 1999). Perhaps the most positive lesson is the unanimous view from the evidence here that SLA does provide a useful framework for understanding the nature of poverty and how interventions can be better tailored to enhance livelihoods (IFPRI, 1999). Experience shows that it can be used at all stages in the planning cycle and applied to projects, programmes and sectors (IFPRI, 1999). It can improve the design of interventions in several ways, by identifying what information is needed for making sound decisions; identifying different livelihood interests between stakeholders (particularly poor groups) that need to be taken into account; emphasizing links between the local and policy levels; and enhancing cross-sectoral coordination (IFPRI, 1999).

Notable limitations of SLA include the following:

- Livelihood analysis for a nation is impractical: It is seldom feasible to undertake a detailed analysis of livelihoods across an entire country/ region to support national policy-making;
- Difficulty of unpacking and understanding structures and processes: While the SLA

framework points the way to more detailed household level analysis, using the assets pentagon and highlighting links between components, it provides no similar direction for meso or macro issues;

- Problems in overcoming obstacles to change in policies, structures and processes: Even if SL approaches highlight the need for change in structures and processes, they may not help bring about this change (DFID, 1999). The challenges of addressing inequality, conflicting socio-economic interests, or lack of implementation capacity remain enormous, with or without SLA. A range of other skills in governance, institutional reform, conflict resolution, capacity-building and negotiation are certainly needed (DFID, 1999).

The SLA framework cannot be used in isolation as a tool to design projects. It is essentially an integrating device, helping to form and bring together the perspectives which contribute to a people-centred SLA. As SLA relies on certain principles, but is in part opportunistic and context-specific, *relying on integration with other approaches and methods, and with other development initiatives, as the context requires.* Considerable time and skill are needed to use SLA perspectives in this way. One facet of the SLA framework is that it helps to indicate where existing methods and techniques should be focused, and to draw out from these implications for the livelihoods of the poor. In these ways, the SLA framework does not replace other approaches but builds on them. Experience has demonstrated the need to use other tools. For instance, stakeholder analysis is particularly important as in principle, livelihood analysis can apply to anyone, whether poor or not (IFPRI, 1999).

Dissatisfaction with the income/consumption model gave rise to basic needs perspectives which go far beyond income, and include the need for basic health and education, clean water and other services which are required to prevent people from falling into poverty (IFPRI, 1999). More recently, poverty has been defined in terms of the absence of basic capabilities to meet these physical needs, but also to achieve goals of participating in the life of the community and influencing decision-taking (IFPRI, 1999).

### **2.2.2 Basic Needs Approach**

This approach forms a useful conceptual base for examination of sustainable food production. The basic needs approach places emphasizes on the utilization of local material and human resources to produce goods and services to meet essential needs of the people and the success of this will lessen the dependence by third world to developed countries (Ghai, 1977). Proponents of the basic needs approach argue that there is a need to break

away from inherited and imposed structures to search for institutions and processes which seek innovative ways to meet the unique problems of the third world (Ghai and Afthan, 1977). The central emphasis of this approach is on meeting the basic needs of poor masses within the shortest possible time (Ghai, 1977). Attempts to use a basic needs approach since the 1980s have shown that the basic needs approach is not sufficient to alleviate rural poverty and it needs to be complemented by other approaches.

### **2.2.3 The Household Food Security Approach**

The reason why this approach will be used as a base for this study is that the approach emphasizes the availability of food and stable access to it. Consideration of access to food is essential to household food security. The idea of using small-scale farming as a means to improve food security will be taken from this approach. The household food security approach places emphasis on both availability of food and stable access to food; food availability at the national and regional levels and stable and sustainable access at the local level were considered essential to household food security (Frankenberger and McCaston, 1998). The interest in this approach by the researcher centred on understanding food systems, production systems and other factors that influence the composition of food supply and household access to that supply over time (Frankenberger and McCaston, 1998).

### **2.2.4 Enabling Rural Innovation Approach**

This approach will lay a good foundation upon which to base the study. Most of the ideas that dominate the enabling innovation approach are the ones that will inform the study in order to enable small-scale farming in rural areas to reduce poverty in meaningful ways. What makes this approach special for this study is that it emphasizes the capacitation of smallholder farmers in order for them to have access to markets, and also allowing effective participation in farming by members of society (Kaaria, 2007). The approach focuses on strengthening the capacity of smallholder, resource-poor farmers to access market opportunities and actively engaging themselves with the aim of creating an entrepreneurial culture in rural communities (Kaaria, 2007). It also focuses on fostering inclusion of rural women and the poor in analyzing and accessing market opportunities (domestic, regional and international) (Kaaria, 2007).

The background of this approach is that agricultural markets can play a significant role in reducing poverty, more especially in poor economies. According to this approach, there are three broad mechanisms through which agricultural growth can reduce poverty: a) the direct



impact of increased agricultural productivity and incomes; b) through the benefits of cheaper food for both urban and rural poor; and c) through agriculture's contribution to growth and generation of economic opportunities in the non-farm sector (Dorward et al., 2003 cited in Kaaria, 2007). However, markets can fail the poor more especially in remote rural areas, where markets can fail because of the risks and costs of participation in markets (John 2005 cited in Kaaria, 2007). According to this approach, the arrangements to link the smallholder farmers to regional and domestic markets also leave them vulnerable, due to lack of capacity to effectively engage in markets or to negotiate with these markets (Kaaria, 2007).

The central element of this approach lies in strengthening the capacity of research and development partners and rural communities to access and generate technical and market information for improving farmers' decision-making (Kaaria, 2007). The Enabling Rural Innovation Approach focuses on building skills and knowledge of communities, local service providers and farmers' organizations to engage effectively with markets (Kaaria, 2007). It insists on the participatory diagnosis that assesses community assets, market opportunities and constraints (Kaaria, 2007). It also encourages the involvement of farmers in decision making in all stages of the innovation processes (Kaaria, 2007). The approach further stresses gender equity and empowerment of women in all stages from: selection of communities/ group and partners; participatory diagnosis and community planning; identifying and selecting market opportunities; and capacity building (Kaaria, 2007). This research will be largely informed by this approach because it encourages the involvement of local people.

## **2.3 Concepts and Definitions**

This section presents key concepts and definitions used in the study. This section starts by defining small-scale farming and its characteristics followed by the definition of poverty, food security, food insecurity as well as transaction costs.

### **2.3.1 Definitions of Small-Scale Farming and its Characteristics**

In the South African context, small-scale farming is often associated with backwardness, non productive, non commercial, subsistence agriculture that is mostly found in the former homeland areas and associated with Blackfarmers (Kirsten & Van Zyl, 1998). Kirsten & Van Zyl (1998) further define a small-scale farmer as one whose scale of operation is too small to attract the provision of the services he/she needs to be able to significantly increase

productivity. Porter and Phillips-Howard (1997) define small-scale farming by comparing it with large-scale farming, where they see large-scale farms as capital intensive and heavily subsidized. White farmers in South Africa, operating at large scale, provided the bulk of market production while the small-scale Black subsistence sector suffered discrimination in terms of land rights, pricing, marketing, extension, research and infrastructure (Porter and Phillips-Howard, 1997). Definitions of small farms vary, the most obvious measure is farm size, and several sources define small farms as those with less than two hectares of cropland (Kirsten and Van Zyl, 1998). According to World Bank (2008) the vast majority of farmers in developing countries are smallholders, and an estimated 85% of them are farming on less than two hectares. Smallholder farming is also known as family farming; a small-scale farm operated by a household with limited hired labour remains the most common form of organization in agriculture, even in industrial countries (World Bank, 2008).

Although targeting of specific groups is difficult, it is known that small-scale farmers are those that receive only a portion of their gross income from farming, who usually have production rights rather than ownership of land, who mostly make use of family and casual labour and whose production objective may range from subsistence to infrequent or inconsistent surplus production for marketing purposes (Fraser, 2003).

The small-scale farming that I refer to is the one that is practiced in rural areas on a small-scale basis with the purpose of feeding family members and selling surplus. In this type of small-scale farming, people plant different crops such as vegetables, fruits among others. Rural people also engage in animal husbandry such as keeping goats, cattle, sheep, and chickens. In times of extreme poverty they occasionally sell these animals to get income as an immediate relief to their poverty.

### **2.3.2 Definition of Poverty**

The United Nations defines poverty, as a condition where people are living on less than \$1 U.S dollar a day ([www.unhcr.ch/development/poverty](http://www.unhcr.ch/development/poverty)). Coleman (2001 cited in Manona, 2005) defines poverty as more than lack of income, but also as being about the lack of opportunities, denial of choices, and low achievement in health, education, nutrition and other areas of human development.

Bradshaw (2006) perceives poverty as the lack of necessities such as basic food, shelter, medical care, and safety which are generally regarded as shared values of human dignity.

However, what is a necessity to one person is not uniformly a necessity to others (Bradshaw, 2006). Needs may be relative to what is possible and are based on social definition and past experience (Sen, 1999 cited in Bradshaw, 2006). For Bradshaw (2006), the basic meaning of poverty is relative deprivation; and the most common “objective” definition of poverty is the statistical measure established by the federal Government as the annual income needed for a family to survive.

The poverty line was initially created in 1963 by Mollie Orshansky at the U.S. Department of Agriculture based on three times her estimate of what a family would have to spend for an adequate but far from lavish diet (Bradshaw, 2006). I define poverty as a situation whereby people do not have enough food to feed themselves. Most of the time, these people survive on a number of short term strategies for their daily survival.

### **2.3.3 Definition of Food Security and Insecurity**

According to FAO Committee on Food Security, food security means that food is available at all times, that all persons have means of access to it, that it is nutritionally adequate in terms of quantity, quality and variety, and that it is acceptable within a given culture (Aina, 2007). Only when these conditions are in place can a population be considered food secure (Aina, 2007). Food insecurity, is defined as a lack of access to adequate, safe and nutritious food, and is closely associated with poverty (MALA, 1998).

### **2.3.4 Definition of Transaction Costs**

Transaction costs are the full costs of carrying out exchange (Coase, 1960 cited in Wynne and Lyne, 2003). They vary by product, type of agent in the marketing chain and the individual agent within a category of agents (Delgado, 1996 cited in Wynne and Lyne, 2003). Transaction costs also encompass: costs involved in the search for and screening of a trading partner; bargaining and decision-making costs; costs of transferring the product (typically transportation, processing, packaging and securing title, if necessary); costs of policing or monitoring the agreement to see that its conditions are fulfilled; costs of enforcing (or seeking damages for any violation) of the exchange agreement; and the costs associated with the risk and uncertainty of transferring goods and services in view of imperfect information (Dahlman, 1979; Staal et al., 1997 cited in Wynne and Lyne, 2003).

## **2.4 Review of Poverty and Small-Scale Farming from an International Perspective**

### **2.4.1 Poverty Background**

At the beginning of the twenty-first century, over 1.1 billion people were living in extreme poverty, subsisting on less than US\$1 a day (FAO, 2002). The FAO (2002) says that under-nourishment is a characteristic feature of poverty and a direct violation of a universally recognized human right. Under-nourishment also deepens other aspects of poverty, in the following important ways:

- It leaves people more susceptible to illness; episodes of illness in turn reduce the intake and absorption of food, producing a vicious downward spiral in which hunger and disease feed off each other;
- When pregnant and nursing mothers are undernourished, babies are born underweight and start life with a nutritional handicap that can affect their health throughout their lives;
- Under-nourishment can affect brain development in the womb and attentiveness in class, and so is associated with poor educational performance;
- When energy and protein intakes are inadequate for the requirements of work, muscle mass and labour productivity can be reduced; Along with illness, this affects wages and earnings;
- Micro nutrient deficiencies can also reduce work capacity; Surveys suggest that anaemia caused by iron deficiency is associated with a 17% loss of productivity in heavy manual labour;
- Investment and risk-taking are essential for economic growth, but people who live on the edge of starvation are likely to be extremely cautious about investing, since they cannot afford a drop in production or earnings (FAO, 2002).

Studies in Bangladesh, India, Pakistan and Viet Nam estimate that adult productivity losses due to the combined effect of stunting and deficiencies of iodine and iron considerably reduce the growth of incomes (FAO, 2002).

### **2.4.2 General Overview of Small-Scale Farming Internationally**

For two billion people who live and work on small farms in developing countries, life has become increasingly precarious, but with the right investments, policies and development programmes in place, smallholder farmers have a huge potential to increase food production, improving their lives and contributing to greater food security for all (IFAD, 2009). The FAO (2008) states that about two-thirds of the 3 billion rural people in the world

live of the income generated by farmers managing some 500 million small farms of less than 2 hectares each. Hence, efforts to boost agricultural production must focus largely on increasing smallholder productivity (FAO, 2008). Small-scale farming constitutes about 80% of African agriculture, producing largely staple foods (FAO, 2008). The FAO (2008) states that failure to include smallholder farmers in future strategies will result in further marginalization, increased rural poverty and rising migration of the rural poor to urban areas. Broad-based agricultural growth that includes smallholder farmers can have a large impact on poverty reduction (FAO, 2008). In addition to boosting food availability and lowering food prices, improved smallholder farmers' productivity generates higher incomes and demand for locally produced goods and services, resulting in broad based socio-economic development in rural areas (FAO, 2008). This dynamic process is a primary reason why agricultural growth is up to four times more effective in reducing poverty compared with growth in other sectors. Furthermore, the potential for increased productivity is often larger on smaller farms because of their efficient use of family labour (FAO, 2008). The role of small-scale farming in reducing poverty differs in different rural areas, these differences are largely determined by different conditions such as soil type, end results which are related to climate change and policies applied by different countries. Rice (2005) states that small-scale farms contribute significantly to the nation's food supply and to local economies.

Agricultural growth impacts on rural poverty reduction not only through farm incomes, but also through stimulating the non-farm economic sector in rural areas and small towns (IFPRI, 2007). According to the FAO (2007) agriculture is an important component of most rural economies especially in the developing countries. FAO also concludes that any successful rural development strategy will contain an agricultural development component (IFPRI, 2007).

In the case of Rwanda, it was indicated that rapid agricultural growth benefits the majority of rural households and that the distribution of benefits is relatively equal (Diao et al. 2007). In looking at overall poverty-reduction effects, based on 6% annual growth in both agricultural and non agricultural sectors, agricultural growth is more important at both the national and household levels (Diao, et al., 2007). While agriculture contributes over 50% of total GDP growth, it also contributes over 60% of the reduction in the national poverty reduction rate (Diao, et al., 2007). In Rwanda, it was also found that within agriculture, stable crop and livestock growth is the dominant source of poverty reduction across all

types of households, contributing an average 42 % of poverty reduction in rural areas (Diao, et al., 2007).

A number of empirical studies have examined the contribution of smallholders farming to agricultural growth and demonstrated that small farms suppress by providing an affordable platform from which poor households can experiment with ways to improve their livelihoods and help prevent premature urban migration and explosive growth of cities (Eastwood, Lipton, and Newell 2004; Hazell, 2004 cited in Diao, et al., 2007). Household surveys have shown that small-scale farm households usually have expenditure patterns that favour growth in the local non-farm economy, including rural towns (Diao, et al., 2007). Small farms also contribute to food security in rural areas where high transport and marketing costs can drive up food prices and at the national level, the higher land productivity of small farms enables poor countries to attain self-sufficiency in staples, such as in cereals, roots and tubers, and livestock (Diao, et al., 2007). Rural households provide an important market for domestically produced manufactures and services (Hazell and Roell, 1983 cited in Diao, et al., 2007).

The rural household survey conducted in 1974-75 in Kenya found that smallholders derived at least half of their income from sources which are not coming from the farming of their own land (Kenya Central Bureau of statistics 1977 cited in Diao, et al., 2007). As small farms struggle to diversify into higher value products, they must increasingly meet the requirements of their demanding markets both at home and overseas (Diao, et al., 2007). Although this is seen as opportunity for small-scale farms it is also seen as a threat to small farms (Maxwell 2005 cited in Diao, et al., 2007). State agencies no longer provide many direct marketing and service functions to small-scale farms (Diao, et al., 2007). The removal of subsidies has also made some key inputs such as fertilizers, prohibitively expensive for many small farmers, and the removal of price stabilization programmes has exposed farmers to greater price volatility. These problems are especially difficult for small farmers living in more remote regions with poor infrastructure and market access (Diao, et al., 2007). Furthermore rural farmers cannot afford post-harvest technologies to enable them to store crops until prices increase out of season (FAO, 2004).

Theft is a problem that small-scale farmers face and this sometimes discourages small-scale farming. The FAO (2004) notes that high levels of theft from fields in many countries prompt farmers to harvest crops before full maturity and to avoid storage for late sale.

Within this context, there is a growing view that most smallholders do not have a viable future in farming, and that agricultural development should now focus on large and commercially oriented farms that can be successfully linked to the new types of market chain (Diao, et al., 2007). Many of the economic and social advantages offered by small farms slowly disappear as countries develop and labour becomes scarce leading to an exodus of small farms' workers to towns for non-farm jobs (Diao, et al., 2007).

Most poor rural households rely on agricultural production for a significant share of their income; increasing agricultural productivity is closely related to reducing rural poverty (FAO, 2008). It follows that increasing food production and productivity should go beyond the objective of reducing prices in global markets to providing an opportunity for reducing rural poverty and hunger (FAO, 2008). The potential of food and agricultural production to reduce poverty and hunger depends largely on the degree to which smallholder farmers, representing 90% of the rural poor, are able to participate in productive and remunerative farming and off-farm activities (FAO, 2008). Agriculture plays three fundamental roles in poverty eradication:

- through contributing to economic growth and the quality of that growth in terms of its benefits to the poor;
- as a livelihood strategy for hundreds of millions of the world's poorest people; and
- through the sustainable management of natural resources (DFID, 2002).

IFAD (2009) says that supporting smallholder farmers would not only enhance world food security, but would make a significant dent in poverty. Smallholder farmers can contribute to greater food supply for the world. But firstly, smallholder farmers need secure access to land and water – as well as to rural financial services to pay for seed, tools and fertilizer (IFAD, 2009). Smallholder farmers also need roads and transportation to get their products to market, and technology to receive and share the latest market information on prices. Smallholder farmers need stronger organizations, so that they can have greater bargaining power in the marketplace and can influence national, regional and global policies related to agriculture. Above all, smallholder farmers need a long-term commitment to agriculture from their own governments and the international community, backed up by greater investment (IFAD, 2009).

### **2.4.3 Small-Scale Farming Opportunities**

Recent price volatility on international markets is putting pressure on global food security ([www.ifad.org/operations/food/](http://www.ifad.org/operations/food/)). In the long run, high food prices represent an opportunity

for agriculture including smallholder farmers throughout the developing world, but they will have to be accompanied by the provision of essential public goods. Farming households can see immediate gains; other rural households may benefit in the longer run if higher prices turn into opportunities for increasing output and creating employment (FAO, 2008).

The World Bank (2008) reported that most people in developing countries lived in rural areas, and most depend on agriculture directly or indirectly, so a more dynamic and inclusive agriculture could dramatically reduce rural poverty, helping to meet the millennium development goal on poverty and hunger. There are many success stories of agriculture as an engine of growth early in the development process and of agriculture as a major force for poverty reduction (World Bank, 2008). Taking for example China's rapid growth in agriculture thanks to the household responsibility system, the liberalization of markets, and rapid technological change has been largely responsible for the decline in rural poverty from 53% in 1981 to 8% in 2001 (World Bank, 2008). Studies have shown that improvement in farming activities can contribute enormously in poverty reduction. FAO (2008) note that improvements in agricultural productivity can provide a pathway out of poverty for rural households in several ways:

- for poor households that own land, increases in crop and livestock yields will generate greater output and higher incomes per unit of land and labour;
- for households that do not own land but provide farm labour, improvements in yields will increase the incremental productivity of labour, thus stimulating the demand for farm labour and raising farm wages;
- for households that do not own land or provide farm labour, improvements in yields will generate greater aggregate output, thus increasing the local supply of agricultural products, with consequent reductions in prices;
- higher agricultural incomes and higher net incomes in non-agricultural households that are net food purchasers will generate greater demand for food and other goods and services that might be provided by local farmers and other non-farm residents;
- improvements in crop yields made possible by enhancing water management will increase the incremental productivity of complementary inputs, such as labour, fertilizer, chemicals, animal health services, animal traction, and machinery. Improvements in the yields of crops and livestock might also stimulate labour demand in local processing and marketing activities, particularly in areas near urban centres (FAO, 2008).



According to the World Bank (2008) the increase in participation of smallholder farmers in dynamic domestic food markets requires paying special attention to deep-rooted inequalities in access to assets and public services, inequalities that challenge their competitiveness. Producer organizations and contract farming are essential for these smallholders to take part in value chains and cater to supermarket demands. The World Bank (2008) notes that public-private partnerships, with an agribusiness sector active in organizing smallholders as competitive suppliers in these markets are also important.

According to the World Bank (2008) there are clear social benefits in investing in the agricultural part of their incomes for two reasons: it is critical for their food security and basic nutrition, and it sustains their income in the absence of better employment options. The improvement in livelihoods requires social assistance, especially pensions for those too old to be retrained. Rural noncontributory pension programs have expanded rapidly, helping the younger generation gain earlier access to land and combating the selective migration of the more entrepreneurial out of agriculture (World Bank, 2008). Experience shows that helping smallholder farmers can contribute to a country's economic growth and food security (FAO, 2008). For example, Viet Nam has gone from being a food-deficit country to a major food exporter, and it is now the second largest rice exporter in the world; It achieved this largely through development of its smallholder farming sector (FAO, 2008). In 2007 the poverty rate fell below 15 %, compared with 58 % in 1979 (FAO, 2008 and IFAD, 2009). 73% of Viet Nam's population lives in rural areas, and agriculture is the rural population main source of income (FAO, 2008).

Higher food and energy prices are already putting millions of poor in developing countries deeper into poverty and raising the spectre of the world running low of food (Financial Times July, 2008). In a G8 Summit in Japan in 2008, the G8 leaders point out that food production needs to rise by 50 % by 2030 in order to meet growing demand (Financial Times July, 2008). Leaders of G8 the summit 2008 state that there is a need to ensure that the supply respond is also from 2 billion small farmers who live on small farms who are mostly poor (Financial Times July, 2008). These leaders further say that supporting the small farmers will contribute to world food security and make an important dent to poverty (Financial Times July, 2008). This support of small farmers will help farmers and their families to prosper on their land rather than migrating in desperation to urban slums (Financial Times July, 2008). There are over 850 million hungry people in the world and

high food prices are expected to add 100 million more into poverty and about 30 million will come from Africa (Financial Times July, 2008). The G8 leaders, say that investment in agriculture is a powerful tool for improving food security and reducing poverty (Financial Times July, 2008). The G8 countries further say that studies have shown that growth generated by agriculture is four times more effective in reducing poverty than growth in other sectors (Financial Times July, 2008).

Specific activities that will benefit small producers include: untying aid restrictions on where food can be purchased, providing technical support to farmers and cooperatives; improving their access to local markets, such as strengthening national agricultural commodity exchanges, improving warehouse receipt systems, reducing post-harvest losses, and supporting the WFP's Purchase for Progress Program and other explicit efforts to purchase food aid from small holder farmers; fostering the field-to-market concept and promoting natural and organic food products; providing extension services and promoting crops with comparative advantages; restoring livestock and sustaining socio-economical growth and supporting women's cooperatives through promotion of typical crafts and traditions agro-food products (G8, 2009 summit). The G8 countries have been engaged, often multilaterally through international organizations and development banks, in the implementation of programs aimed at developing infrastructure, roads and transport, promoting best irrigation practices, advancing efficient modern water management techniques, improving food storage and handling, and addressing desertification (G8, 2009 summit). Important activities have focused on establishing local value chains, on ameliorating the quality of the products in order to better respond to international standards and on fostering food production and access to markets through a favorable environment (road networks, transports, markets, etc) (G8, 2009 summit). The G 8 Countries believe that farmers need adequate mechanisms to manage risks and market crises (G 8, 2009 summit). Therefore G8 have supported the improvement of agricultural statistics systems and food security early warning systems, for example, the Integrated Phase Classification for Food Security, in cooperation with international organizations (G8, 2009 summit). Despite the aforementioned opportunities, there are problems which are hitting the small-scale farming in various regions of the world hard.

#### **2.4.4 Problems Facing Small-Scale Farming**

Small farmers are less able than large ones to bear the risks associated with producing highly perishable commodities, and perishability puts the farmer in a weak bargaining

position relative to the buyer. Most of the time small farmers do not have access to the information about market demand; nor do they have access to the information about the relationship between price and product characteristics such as colour, size, shape, texture, freshness (IFPRI, 2008). Buyers may not have access to information about the quality of output from specific smallholder farmers that make the buyers less willing to purchase from any smallholders at any given price level (IFPRI, 2008). Large farms may be more able than small ones to secure policy subsidies such as subsidized credit or better infrastructure. The profits of small-scale producers are more sensitive to transaction costs and are likely to diminish the competitiveness of smaller farmers more than that of large farms (IFPRI, 2008).

According to the World Bank (2008) food remains imperfectly tradable because of high transaction costs. Most of the world's smallholder farmers are struggling to live and to feed their families on less than US\$2 a day (IFAD, 2009). Many have not been able to respond to increased demand because they lack access to assets and capital, and they face higher transaction costs, which makes it difficult for them to adapt and respond quickly to market developments (IFAD, 2009).

Agriculture in Africa is labour intensive, as farmers rarely use advanced technology in farming; rather they use limited technology, such as hoes and cutlasses (Aina, 2007). Farmers in Africa do not have adequate finance hence they are unable to invest in modern technology (Aina, 2007). The majority of farmers in Africa are aging, as rural-urban drift is prevalent among the youths (Aina, 2007). For example in Botswana, the rural-urban drift has been phenomenal, while the rural population of Botswana constituted 90.4% in 1991, it fell to 47% in 2001 (Aina, 2007). Farmers in Africa live in areas where there is lack of basic infrastructure such as telephone, electricity, piped borne water, good road network, etc (Aina, 2007).

A large number of rural inhabitants in Africa are ravaged by HIV/AIDS; the majority of them live in rural areas, and are mainly farmers, thus this results in declining productivity (Aina, 2007). HIV/AIDS affects agriculture both directly and indirectly at the household level, changing supplies of labour, assets, patterns of farming and other activities; as well as affecting communities as whole and the wider economy; and some of these changes come back to affect farming households (Odi, 2005). Labour shortages in HIV/AIDS-affected households arise through loss of labour when people become unable to work through

illness, and when they ultimately die, as well as through labour being shifted from agricultural activities and into caring for household members who are sick (Odi, 2005). HIV/AIDS affects prime-age, economically active adults far more than other groups, leaving only the elderly and children to replace the labour lost to agriculture (Odi,2005). Faced by additional costs of medicine, fees to doctors or traditional healers, transport to health facilities and other items for the care of the sick, and often by lower incomes from loss of labour, affected households usually have to draw down on their assets (Odi, 2005). Rural households and communities may also suffer from the impacts that the disease has on the wider economy, for example:

- Government services may be diminished as staff are hit by sickness and death, or by the need to care for family members or attend funerals, and as budgets are strained by the costs of the epidemic;
- sickness and death in household members living in urban areas can lead to loss of remittances, but impose additional costs of caring if the person returns to the village for the final stages of their illness;
- supply chains for inputs and marketing may depend heavily for their functioning on the knowledge, skills and contacts of a few key intermediaries;
- demand for farm surpluses may be reduced: in countries most affected by the disease, gross domestic product per capita may fall over the next two decades and the proportion living in poverty rise (Odi, 2005).

Livestock health problems can prevent small-scale farmers from achieving optimal agricultural production, and many communities have little or no access to veterinary services (Turton, 2000). This can result in reduced productivity, disease and death of livestock, including livestock used to provide animal power (Turton, 2000).

#### **2.4.5 The Role of Water in Small-Scale Farming**

Access to water for irrigation and other farming activities in rural areas of South Africa remains one of the major challenges facing rural areas more especially during dry seasons (May-July). The FAO (2008) notes that improving access to water has a role in agricultural productivity for the following reasons: Water is an essential input in crop and livestock production; water scarcity is a feature of many rural livelihood realities; the lack of adequate water is linked to poverty – households facing water shortages are more likely to be poor or fall into poverty than households not facing such shortages; actions to address the problem of rural poverty by improving water availability make economic and social

sense. Irrigation can contribute to poverty reduction primarily by enhancing the productivity of labour and land (Smith, 2004), leading to higher incomes, higher wages, and lower food prices. Hussain and Hanjra (2004 cited in FAO 2008) describe three pathways through which irrigation affects poverty: at micro level, meso level, and macro level; at the micro level, irrigation enhances returns to the physical, human and social capital of poor households.

Some important elements of institutional reforms in irrigation include:

- better alignment of irrigation and drainage institutions, and transfer of responsibilities for operation, maintenance and management of irrigation and drainage systems to organized local user groups;
- cost-sharing for infrastructure improvement, accompanied with improved financial mechanisms for farmers;
- introduction, where appropriate, of systems of water rights and volumetric delivery for greater efficiency in water use;
- re-dimensioning of irrigation systems where they are not financially or environmentally viable (here, public participation of stakeholders is critical) (FAO, 2008).

Water is a crucial input for boosting agricultural production and other water-related livelihood activities (FAO, 2008). To achieve the greatest efficiency in the use of resources, water investment policies should take into consideration where water interventions can make a difference for rural livelihoods (FAO, 2008). In other terms, such interventions should be directed to livelihood zones where water is central to mitigating rural poverty (FAO, 2008).

#### **2.4.6 Smallholder Farmers and Markets**

According to Fraser (2003), developing countries are generally characterized by inefficiency of their marketing system and as a result are faced with a vicious circle: if the farmer does not obtain an economic return from the sale of surplus production, the farmer will tend to produce at a subsistence level only. The World Bank (2008) points out that inadequate transport infrastructure and services in rural areas push up marketing costs, undermining local markets and exports, particularly in Africa where less than 50% of the rural population lives close to all season roads. In a survey conducted in Benin, Madagascar and Malawi transport costs accounted for 50-60% of total market costs (World Bank, 2008). Improving road connections is thus critical to strengthening the links of farmers and the

rural economy to local, regional and international markets (World Bank, 2008). Another challenge facing smallholder farmers is that of perishability of products, where most high-value agricultural products require careful handling, special facilities (pack houses, cold storage, and refrigerated transport), and rapid delivery to consumers to maintain quality and reduce physical and nutritional losses (World Bank, 2008). In many developing countries, the long supply chain, poor access to roads and electricity, and inadequate infrastructure and services in physical markets add to the transaction costs and cause quality deterioration and spoilage losses (World Bank, 2008). In India for example, it is estimated that fruit and vegetable post harvest losses amount to about 40 % of total annual production, equal to a year's consumption in the United Kingdom (World Bank, 2008).

There is an urgent need to provide correct information to the small-scale farmers in order to speed up their access to markets. Market information keeps farmers and traders tuned to the demands and changing farming, marketing and investing (World Bank, 2008). Market information encompasses timely and accurate prices, buyer contacts, distribution channels, buyer and producer trends, import regulations, competitor profiles, grade and standard specifications, post-harvest handling advice, and storage and transport recommendations (World Bank, 2008). Public market information systems have often been disappointing, with information disseminated too slowly, in the wrong form, or too infrequently to be of real use to market participants (World Bank, 2008).

Access to functioning markets for both staples and high value commodities is a key prerequisite for agricultural development and improved productivity (FAO, 2008). Market access differs among developing regions, with sub-Saharan Africa having the lowest level of access, particularly for smallholder farmers (FAO, 2008). In many developing countries, smallholder participation is often constrained by: (i) a lack of infrastructure and transport; (ii) poor market information; (iii) inadequate and poorly enforced grades and standards; and (iv) poor farmer organization for bulk marketing (FAO, 2008). Smallholder farmers also need roads and transportation to get their products to market, and technology to receive and share the latest market information on prices ([www.ifad.org/operations/food/](http://www.ifad.org/operations/food/))

#### **2.4.7 Small-Scale Farming and Finance**

Promoting, improving or even creating rural institutions to support a wide range of rural financial transactions remains one of the fundamental challenges facing governments in developing countries (World Bank, 2003). Government sponsored agricultural lending

institutions have been successful in many now-developed economies such as Korea and Taiwan (China) (World Bank, 2003). However, many developing countries' governments' efforts to improve rural financial markets have a record of doing more harm than good, heavily distorting market prices; repressing and crowding out private financial activities; and creating centralized, inefficient, and frequently overstuffed bureaucracies captured by politics (World Bank, 2003). Some countries end up closing their agricultural banks, for example Bolivia and Peru (World Bank, 2008). Smallholder farmers can contribute to greater food supply for the world but first they need secure access to land and water as well as to rural financial services to pay for seed, tools and fertilizer ([www.ifad.org/operations/food/](http://www.ifad.org/operations/food/)). More than that, smallholder farmers need a long-term commitment to agriculture from their own governments and the international community backed up by greater investment ([www.ifad.org/operations/food/](http://www.ifad.org/operations/food/)).

Poor production planning and marketing skills, especially by small-scale processors, results in a failure to take account of inputs needed to process scheduled amounts of raw materials (FAO, 2004). Production rates are then insufficient for the amount of crop ordered from the farmer, and processors fail to collect the crop when agreed (FAO, 2004). Lack of resources for farmers ultimately arises from insufficient income from their crops, although there are multiple reasons for this (FAO, 2004). For example, delayed payments from buyers and lack of access to credit create indebtedness, and high interest charges for informal loans by rural money-lenders or middlemen continue the cycle of poverty (FAO, 2004).

## **2.5 Conclusion**

In this chapter, literature and some case studies have provided compelling evidence that small-scale farming has potential to reduce poverty in rural areas. However, the literature also showed that small-scale farming is constrained by several problems that need to be eradicated first in order to make farming successful and have power to reduce poverty. The next chapter reviews the literature on poverty and small-scale farming in the South African context.

## CHAPTER 3

### POVERTY AND SMALL-SCALE FARMING IN SOUTH AFRICA - A REVIEW OF THE LITERATURE

#### 3.1 Introduction

This chapter explores poverty and small-scale farming in the South African context, it then provides an overview of agricultural policies in South Africa. The final part of this chapter discusses small-scale farming in the Eastern Cape context and small-scale farming in Bizana Local Municipality where the Kanyayo case study is located.

#### 3.2 Background to Poverty in South Africa

An estimated 16 million South Africans are living in poverty, with its incidence highest in rural areas and among female-headed households. It is estimated that 72% of poor people live in rural areas and about 70% of rural people are poor (White Paper on Agriculture, 2005). In South Africa, rural poverty is one of the most powerful and intractable legacies of the Apartheid era. Apartheid denied Black people access to fertile land for agricultural purposes through legislation including the Natives Land Act of 1936 (Pycroft, 2000). Black South Africans were also forced to live in rural areas through the imposition of the bantustan policies, which made Black South Africans citizens of nominally independent homelands (Pycroft, 2000). During the 1970s and 1980s, the South African Government implemented a policy of forced removals by which Black South Africans were relocated from areas designed as white people only and dumped in the homelands (Pycroft, 2000).

Since the dawn of democratic local Government in South Africa in 1995 and 1996, rural municipalities have been unable to adequately address the infrastructure backlogs left by Apartheid or to reduce rural poverty significantly (Pycroft, 2000). Rural municipalities are faced by problems such as poorly trained and unmotivated staff, shortages of key skills and over-staffing in junior management (Pycroft, 2000). As a result of historical processes large number of rural households are poor. According to MALA (1998) poverty in rural areas is associated with agricultural policies which persistently marginalized small-scale Black farmers as their access to resources such as land, credit and technical know-how was curtailed. Poverty in South Africa is distributed unevenly over different provinces with the Eastern Cape in the lead by 71% (Cheru, 2001). Most rural communities in the Eastern Cape depend on small-scale farming as a means of survival.



### **3.3 Small-Scale Farming in a South African Context**

Small-scale agriculture in South Africa cannot be ignored as it has the ability to become the main source of employment (Delgado, 1990 cited Matungul, at el., 2001). In South Africa, like any developing country, small-scale farmers experience difficulties in participation in commercial markets due to a range of constraints which are reducing the incentives for participation (Wynne and Lyne, 2003). On the other hand, farmers who are engaged in small-scale agriculture have limited access to factors of production, credit and information, and markets are often constrained by inadequate property rights and high transaction costs (Lyne, 1996 cited in Matungul, at el., 2001; Wynne and Lyne, 2003). In spite of these problems, small-scale farming in Impendle and Swayimani in Kwazulu-Natal has managed to produce food for their own consumption and for the market (Matungul, Lynen and Ortmann 2001). Farmers in these two areas also sell their surplus through informal ways to their neighbours, local shops and to monthly pension markets (Matungul, at el., 2001). It is estimated that 1.1 million small farmers, mostly in the communal areas of the former homelands, who provide a livelihood to more than 1 million of their family members and occasional employment to other people (NDA, 2006 cited in Louw et al., 2008). These farmers produce food to meet their family's needs while they also supply local and regional markets where large numbers of informal traders make a living (NDA, 2006 cited in Louw et al., 2008).

According to D'Haese and Van Rooyen (1998), agriculture does not seem to be an attractive sector for young people, who rather migrate to the city for work. Low labour productivity is a further cause of low farm productivity; and the low crop productivity is mainly caused by many factors such as the use of inappropriate cultivators, ill-timed ploughing, weeding, little or no use of fertilizers and high pest infestation (D'Haese, et al 1998). D'Haese, at. al (1998) further says that most of the farmers lack liquidity and have limited access to other sources of finance, which make it impossible to afford tractor services or employ as many people as necessary.

With the advent of democratic Government in South Africa in 1994, there was a need to commercialize agricultural activities of small-scale farmers (FAO, 2004). However, these efforts had been hampered by many challenges, including insufficient access to markets, which is mostly attributed to poor infrastructure, and sometimes by poor quality of products (FAO, 2004).

### **3.4 Overview of Agricultural Policies and Legislation in South Africa**

The aim of this section is to review policies and legislation that influence small-scale farming. Past policies have contributed to rural impoverishment, whereas new policies aim to create the opportunities for reforms which will enable agriculture to make a much larger contribution to poverty alleviation and enhance national and household food security in future (MALA, 1998).

#### **3.4.1 Land Reform Policy**

Moseley (2007) argues that among wide range of discriminatory policies implemented during the Apartheid era in South Africa were restrictions on the ownership of farm land by Blacks outside of the former homelands. Since 1994, the post-Apartheid Government has been attempting to put land into the hands of historically disadvantaged groups through land reform (Moseley, 2007). Furthermore, the new democratic Government decided to put land reform at the forefront of its commitment to poverty reduction, particularly in rural areas. The White Paper on Agriculture (2005) states that the present structure of agriculture and rural communities is characterized by very uneven income distribution. This problem can be partly addressed by broadening access to agriculture via land reform and making available to small-scale farmers the mainstream of Government's technical and financial assistance to agriculture (White Paper on Agriculture, 2005).

As a result of this notion, a significant share of public financial resources has been devoted to land reform (OECD, 2006). The Land Reform Programme consists of three main components: land redistribution, restitution of land to people and communities who have been unjustly dispossessed;; and land tenure reform (OECD, 2006). Under the Land Reform Programme, grants are given to members of Black disadvantaged population to acquire land, or to undertake farming in other ways (OECD, 2006). In this programme, beneficiaries can access a range of grants, depending on the amount of their own intended contribution in labour or cash (OECD, 2006). Emerging from the land reform process, new programmes were introduced in 2005 to support the development of market-oriented family farms mainly by means of investment grants and the provision of micro-credit and financial services in rural areas (OECD, 2006).

One of the core objectives of Land Redistribution for Agricultural Development (LRAD) was to assist Black people to gain increased access to agricultural land, for use and ownership, by allocating grants (Louw, et al, 2008). The programme is aimed at providing

people with access to land for either settlement or agricultural purposes (OECD, 2006). It functions, *inter alia*, to settle small and emerging farmers on viable farming operations in the commercial farming areas. Unfortunately, and in contrast to the land restitution programme, the land redistribution programme has performed below target due to inadequate institutional capacity, poor financial resources, and a lack of appropriate agricultural support services and coordination (OECD, 2006).

### **3.4.2 Agricultural Finance Policy**

Finance policies for agriculture stipulate that a specific problem area to be addressed is the financing of beginner farmers. According to agricultural finance policy, farmers wishing to make use of credit should be trained and advised so that they understand budgets and cash flows, the role of interest rates, and the need to repay to ensure future credit worthiness. This policy states that the Government should facilitate and even subsidize the costs of training in order to reduce the burden on financial institutions; nongovernmental organizations may also be involved (White Paper on Agriculture, 2005).

Generally, farmers who do not have title deeds to the land they farm, or cannot meet the other conventional commercial bank security requirements, are often excluded from access to agricultural finance. Agricultural finance policy emphasizes that for such farmers the main criterion should be the ability of the borrower to repay rather than the traditional collateral requirements (White Paper on Agriculture, 2005). This policy further states that the repayment guarantees could include the credit history of the borrower and group credit rating, and greater use of character references and incentives. The best incentive to repay a loan will be access to future loans. The agricultural finance policy emphasizes that financial institutions need to adjust the payback period to suit the cash inflow of the client. This policy states that the ability to repay, the purpose of the loan and the source of the repayment do not necessarily have to coincide. Family income and off-family income (i.e. income produced by a family member from extra-familial activities), for example, can be regarded as potential repayment services. However, this does not mean that financial institutions have to refrain from considering concepts such as integrity, purpose of the loan, managerial ability and security (White Paper on Agriculture, 2005).

### **3.4.3 Micro Agricultural Financial Institutional Scheme of South Africa (MAFISA)**

The Micro Agricultural Financial Institutional Scheme of South Africa (MAFISA) is a short-term financial service provided by Government to assist the development of micro-

level farmers, farm workers, farm tenants, small landholders, landless, emerging farmers, processors of crops, micro-entrepreneurs and the working poor (Louw, Chikazunga, Ndanga, Bienabe, and Jardaana, 2008). The Government developed MAFISA as an appropriate scheme that will contribute to assisting the working poor to run existing agricultural businesses, start new agricultural businesses and develop these into fully commercial operations (Louw, et al., 2006 cited in Louw, et al., 2008). MAFISA is unlikely to take small-scale farmers to these heights because small-scale farmers are not subsidized in times of disasters and must repay loans even if there was no production. MAFISA is likely to be more helpful to experienced small-scale farmers than the beginners.

#### **3.4.4 Agricultural Information**

Comprehensive information about agricultural conditions, including physical and marketing conditions as well as production constraints is a prerequisite for planning and policy which will support farmers on an ongoing basis (White Paper on Agriculture, 2005). Data on field and veld conditions, soil moisture, pests such as locusts, agricultural production and food supplies in all parts of the country, should be collected regularly by the Department of Agriculture to monitor national food security (White Paper on Agriculture, 2005). Data on the climate, agro-meteorological forecasts, dam levels, water availability to households, household food security and nutrition in an early warning system for food and water security should be included (White Paper on Agriculture, 2005).

Agricultural information policy emphasizes that farmers require useful information on production methods and on market opportunities, and on making the most of or losing least as a result of agrometeorological conditions each season (White Paper on Agriculture, 2005). It is the government's responsibility to provide appropriate information, using all the national languages and a wide range of media. (White Paper on Agriculture, 2005)

The local knowledge of farmers will be recognized and validated and it will be ensured that the existing knowledge of farmers is complemented by research. According to the White Paper on Agriculture (2005), farmers use local varieties of seeds and adapt their practices to local conditions and this knowledge can be an important source of research and development material such as biotechnology. Researchers need to be more sensitive to the local knowledge of farmers, to check whether this knowledge has applicability and value in the wider system, and to incorporate this knowledge into the design of research programmes

(White Paper on Agriculture, 2005)..

### **3.4.5 Market Information**

According to MALA (1998), market information is crucial to the proper functioning of any market; it promotes efficient arbitrage between markets, which is to the benefit of both consumers and producers, and the efficient allocation of productive resources; market information improves the bargaining power of producers when dealing with traders and processors, and reduces transaction costs by reducing risks. If the markets information is improved in rural farming, farming in rural areas can yield better results. The South African Government also believes that deregulation of agricultural markets will go a long way to improve small and medium-scale farmers' access to marketing information. As the policy environment becomes conducive to small-scale production, and when these farmers are less excluded from existing marketing arrangements, it is likely that traders will provide more information to farmers to stimulate the volume of their trade (MALA, 1998).

Appropriate institutional arrangements were set in place by the South African Government with a focus on information dissemination that will enable farmers to make better decisions regarding what to produce, when to harvest, where to sell (MALA, 1998). Information disseminated includes the following: product requirements; quantity; quality and presentation; market size; input and producer prices and trends; supply and demand trends; marketing costs, including transport costs. In order to ensure that the government's role and responsibilities in relation to market access and market information are most effectively organized and properly resourced, new initiatives and procedures and their organizational and resource implications were being investigated in the 1990's (MALA, 1998). Access to markets information by small-scale farmers can help farming production in rural areas.

### **3.4.6 Animal Health Act of 2002**

The animal health act (Act No. 7 of 2002) emphasizes on measures to promote animal health and control of animal diseases. This act stipulates that any owner or user of land on which there are animals must take steps that are necessary to prevent the infection of animals with any animals; to prevent the spreading of any animals diseases or parasites. The animal health act (Act No. 7 of 2002) acknowledges that when there is a reasonably suspect of an animal infected with any animal diseases or parasite, that incident must be reported immediately in the prescribed manner to the national executive office and provincial executive officer. The animal health act Act (No. 7 of 2002) deals with animal health and it

is necessary for any farmer to be familiar with this act.

### **3.4.7 Agricultural Policy on Cattle Farming**

The past involvement of the Government has had a pervasive and destructive effect on the initiative and enterprise of cattle owners to manage their own interests. The highest priority with regard to cattle is the improvement of animal health (MALA, 1998). This includes the control of ticks to prevent tick-borne diseases, prophylactic inoculations, and the treatment of illness and injury. The reduction of Government involvement in the areas of animal health and marketing cannot be achieved in too short a time without jeopardizing the sector, but setting up competent cattle-owner associations to take over the collective interests previously administered by the Government is a prerequisite for the long-term sustainability of livestock improvement. They would take responsibility for the organization of tick control; obtaining acaricides, remedies and prophylactic injections; liaison with the private-sector suppliers of these commodities; marketing; and management of the common grazing resource. These associations would be the basis for the internal management of the herds and the point of liaison between cattle owner and the public and private sectors. Altogether, their functions would make them one of the most important economic structures in the rural areas and the foundation of the livestock economy (MALA, 1998).

### **3.4.8 Agriculture Policy on Small Stock and Poultry Farming**

The health and welfare of small stock, particularly in the subtropical areas, depends on a routine of dosing and dipping. Doing this effectively requires, firstly, that the owner must be aware of the effect of diseases and parasites and, secondly, that the control methods must be understood. (MALA, 1998). With the exception of the Eastern Cape, there appears to be a lack of trained extension staff dealing with small stock. A prerequisite for improvement in the sector is therefore that specialist advisory services be introduced or strengthened. In the marketing of fibre products, the formation of wool and mohair growers' associations will be a priority for the small-stock advisory service. These associations will be the means of securing shearing facilities, skilled classing of wool and proper packaging for the market for their members (MALA, 1998).

Poultry are kept throughout the rural areas and constitute a significant portion of the animals kept by poorer households for consumption and marketing (MALA, 1998). Poultry has the singular advantage of being able to provide producers with regular significant cash incomes, and therefore fit in well with the increasing need for alternative sources of income for rural

people. Even more so than the small-stock sector, poultry production has been market driven with limited support from the Government. The demand for poultry products in the rural areas is substantial - quite adequate to support local marketing enterprises. MALA (1998) stated that access to day-old chicks is a particular problem for poorer poultry keepers. Part of the solution would be the establishment of numbers of small-scale hatcheries, dispersed in the rural areas and serving local rural markets. There are already many experienced small-scale producers of broilers and eggs in the rural areas who are equipped for production and have established their supply networks. Farmers will be encouraged to make the technological advances necessary for the production of day-old chicks. They will require training and support for some time while they are gaining experience, as well as affiliation to an initiative such as Fowls for Africa or a commercial supplier of suitable birds, to obtain a supply of either hatching eggs or mother laying stock (MALA, 1998).

#### **3.4.9 Irrigation Policy and Agricultural Policy**

The overall objective of agricultural policy reform was to create opportunities for smallholder and resource-poor farmers, improve efficiency and therefore competitiveness of the sector; and to utilize resources sustainably (MALA, 1998). In the past, Government policies encouraged farmers to invest in capital-intensive infrastructure, including irrigation works which had the effect of reducing labour demand and the production of water-intensive and often inappropriate crops. Under the new water legislation a system of licensing will, in time, be introduced to regulate the access of all users to water resources. As competing uses for water resources increase, the cost of water to the end users, including farmers, will inevitably increase (MALA, 1998). This means that agriculture must change to more rational, economic and sustainable cropping and water-use patterns. The overall effect of past policies, which led to the construction of current irrigation systems, with free or low-priced water, and with controlled (and relatively high) output prices, was to reduce the efficiency of irrigation. Agricultural policy reforms, together with implementation of the National Water Act, are designed to improve efficiency so that scarce water is used on high-value, often labour-intensive crops (MALA, 1998).

### **3.4.10 Provincial Growth and Development Plan (PGDP)**

Provincial Growth and Development Plan ( PGDP) was formulated by the provincial Government of the Eastern Cape. The main focus of PGDP was on economic growth, employment creation, poverty eradication and income redistribution for the -10- year period 2004 to 2014. The PGDP provided the Eastern Cape the opportunity for medium -to- long range (10years) strategic planning to address major structural deficiencies in the Eastern Cape (Eastern Cape Provincial Government, 2004).

One of the objectives of the PGDP was to focus on increased agricultural production, incomes and employment by the poorest households, particularly in the ex-homelands. According to this plan the short to medium term, the State need to lead this process, with market-related interventions receiving greater emphasis over the medium to long term as the capacity of poor households to enter markets is developed (Eastern Cape Provincial Government, 2004). The objective suggests that State programmes need to be clustered around three areas of intervention: promoting food security through expanded smallholder production; expanding the asset base of the poor, particularly through effective land tenure reform; increasing the use of land for commercial agriculture in the former homelands, especially through ownership and institutional mechanisms that benefit the poorest households (Eastern Cape Provincial Government, 2004).

## **3.5 Placing Kanyayo Case Study in Context**

### **3.5.1 Small-Scale Farming in Transkei**

In Transkei, cattle production is beset with problems such as poor winter feeding, low production rates and high mortality rates which is accelerated by drought (Porter and Phillips-Howard, 1997). Veterinary services and disease control in Transkei are limited thus the buyers are reluctant to buy stock from Transkei more especially sheep (Porter and Phillips-Howard, 1997). Marketing of local agricultural produce is barely developed in Transkei, because of the limited transportation and other infrastructural facilities (Porter and Phillips-Howard, 1997); there is a general absence of rural periodic markets. In the Nompqa case study

*“Local residents identified damage to crops by livestock as a major obstacle to field cultivation, because fields are not fenced and are surrounded by communal grazing lands. They argued that this damage has become more of*



*a problem over time and identified two reasons for this. First, as the number of children attending school increased, their involvement in the herding of livestock declined. Secondly, as fewer and fewer people continued with field cultivation, it became increasingly difficult for the remaining farmers to protect their fields and obtain the cooperation of their family and neighbours to prevent livestock from wandering onto their fields. When many people were involved in cultivation, and large tracts of land were under cultivation, there was a much broader consensus and collaborative effort to ensure that crops were protected ”(Andrew and Fox 2004: 701).*

Insufficient yields could also be due to planting at sub-optimal times, low rainfall, insufficient weeding, losses due to theft and damage from livestock, or even low growing demand and it is therefore possible, that insufficient yields may also be the result of resource constraints and high risks in addition to degradation processes (Andrew and Fox 2004). On the basis of this analysis, it is argued that successful African farming depends first and foremost on market access and conditions on the demand side (demand for farm produce and the effects of economic policies on such demand), and in lesser part on supply-side factors (access to capital, inputs and the ability of farmers to bear risk) (Wiggins, 2002 cited in Andrew and Fox, 2004). The loss of access to credit and other agricultural inputs would have had a negative impact on yields and brought forward the date of abandonment (Andrew and Fox, 2004).

### **3.5.2 Small-Scale Farming in Bizana Local Municipality context**

Bizana Local Municipality is located in the eastern part of the province of Eastern Cape. It is bordered by Kwazulu-Natal in the east, Quakeni Local Municipality in the west, Ntabankulu Local Municipality in north and the Indian Ocean in south. Bizana Local Municipality is 2 806 km<sup>2</sup> and has a population of 251545; the population density is 84 people per km<sup>2</sup>. In regard to gender, females and males constitute 56% and 44% respectively (Bizana IDP 2007/2008). Bizana Local Municipality unemployment increased from 67.9% in 1999 to 75, 4% in 2003. The local Municipality has not experienced any reduction in the levels of poverty. The percentage of people living in poverty increased from 75.8% in 1999 to 77, 6% in 2003 (Bizana IDP, 2008).

In Bizana, small-scale farming is used as a pathway out of poverty by the majority of the rural poor. Bizana Municipality has put aside a budget of about R 1 million to implement a

massive vegetable programme (Bizana IDP, 2007/2008). According to Bizana IDP (2008) the Agricultural Research Council (ARC) developed a comprehensive agricultural profile of the whole of the OR Tambo District Municipality including Bizana. The following are some of the observation (findings) from the research undertaken by the ARC:

- Potato suitability – Bizana has the potential to produce 60 – 80 tons of potatoes per hectare in an area covering 47 565 hectares;
- Cabbage – 60 - 80 tons of cabbage per hectare can be produced in an area covering 6 657 hectares and 40 – 60 tons per hectare can be produced in an area covering 30 277 hectares;
- Sorghum – marginal to optimal areas suitable for sorghum production measure about 22 137 hectares;
- Dry Beans – Optimal areas suitable for dry bean production measures 40 000 hectares;
- Maize Yield – between 4 and 7.9 tons per hectare can be produced in an area measuring 71 065 hectares (Bizana IDP, 2008).

These findings clearly suggested that large parts of Bizana local Municipality including the area of Kanyayo, has a potential for various farming activities.

### **3.6 Conclusion**

The literature has revealed that small-scale farming has the power to reduce poverty. Yet it is faced by a lot of challenges. On the other hand, despite the presence of pro-small-scale farming policies in South Africa, the impact on the ground is not yet seen. The next chapter provides a case study description.

## CHAPTER 4

### KANYAYO – CURRENT SITUATION

This chapter describes the Kanyayo settlement and the socio-economic characteristics of the people living there and their livelihood strategies, in order to set the context for the report on small-scale farming in the following chapter.

#### 4.1 Kanyayo Settlement

##### 4.1.1 Location and Background of the Study Area

Kanyayo is about 400 km<sup>2</sup> in extent and is located in the deep rural areas of Bizana Local Municipality. It is situated between two rivers, namely Umtentu in the west and Umtentshwana in the east, and is bordered by the villages of AmaNdengane and AmaNgutyana in the north. The area is surrounded by the villages of Amapisi in east, Kwacoka in west and Kwakhanyayo and Amadiba in south. Cultivation is the dominant economic activity, but livestock production is widely practiced. The area is largely dominated by steep slopes. Table 1 summarizes the location of the study area.

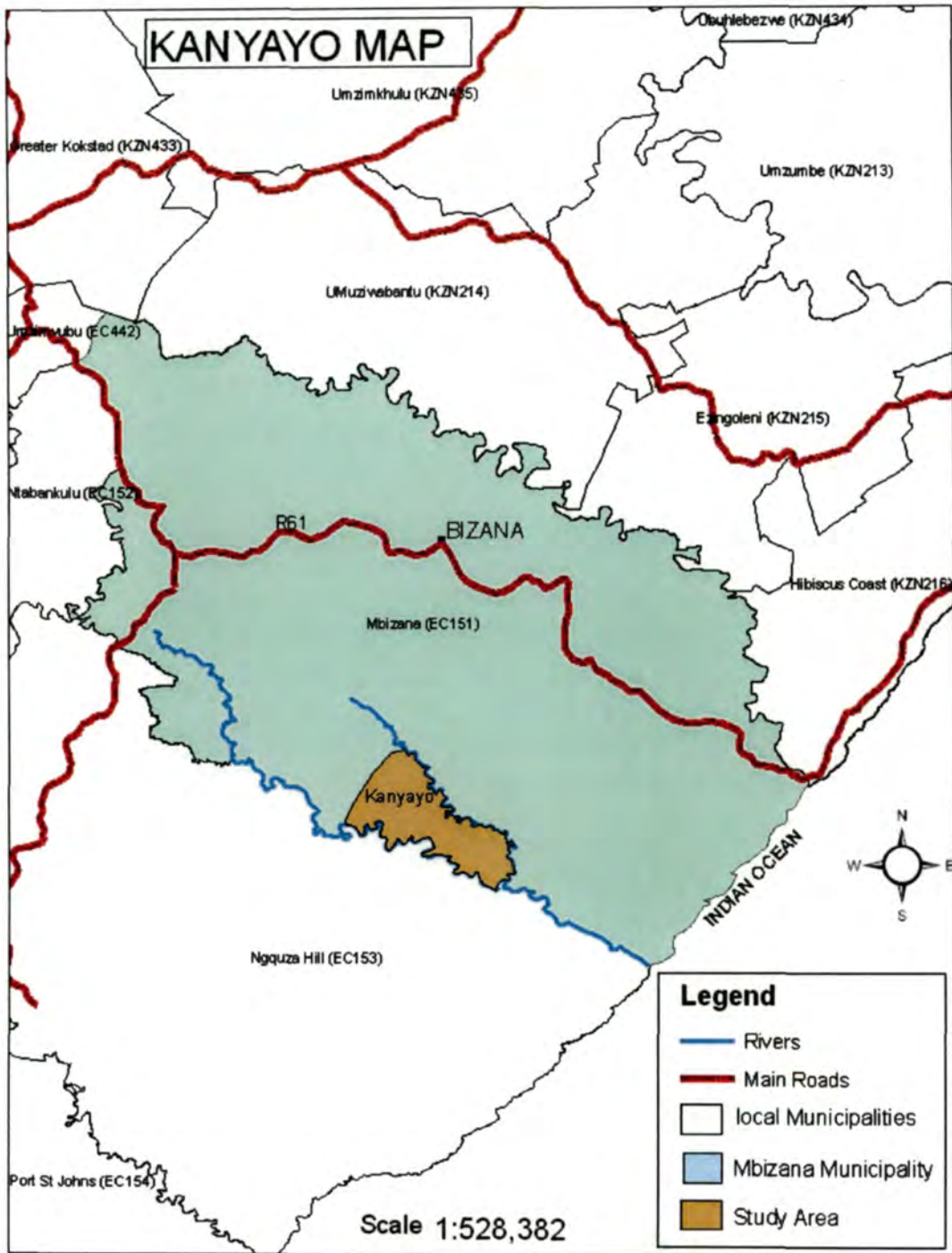
The area is under the control of a chief and headman, whose office is hereditary, and also under control of ward councillors elected through a democratic election system. Kanyayo falls under the Mpondo Kingdom under the Qaukeni traditional authority. The southern part of Kanyayo is characterized by dispersed settlements, while the northern part is largely nucleated settlements along roads.

**Table 1: Description of the Study Area**

<b>Study area</b>	Kanyayo
<b>Local Municipality</b>	Bizana
<b>District Municipality</b>	O R Tambo
<b>Province</b>	Eastern Cape
<b>Country</b>	South Africa
<b>Rural/urban area</b>	Rural area
<b>Approximate Area</b>	400 km <sup>2</sup>
<b>Coordinates</b>	S31 04 00 E29 48 00

Author's construct

Figure 1: Kanyayo map



Source: School of Architecture, planning and Housing, University of KwaZulu-Natal (2009)

#### **4.1.2 Land Use**

Land use in Kanyayo is not formally planned and as a result households chose to cultivate land based on its suitability. Although land ownership is communal, some households have the advantage of being allocated big plots of land for cultivation. However, the dispersed settlement pattern is a major constraint on development. Although the different types of land usage (residential, agricultural, pastoral) are not clearly defined, during field observations the following land usage categories were identified: cultivated land; grazing land; residential areas; forestry; rivers; roads; and community facilities. Most of these land usages can be identified in Figure 2 below.

**Figure 2: Settlement pattern in Kanyayo**



Source: Google Earth Image

From my observations in Kanyayo, large areas of arable land are dominated by maize cultivation. There is also mixed use of agricultural land, as maize, beans and pumpkins are sometimes cultivated together. Amadumbe (*colocasia antiquorum*) and potatoes are usually grown separately, not mixed with other crops. Based on this land use survey in Kanyayo, it

appears that land use varies according to seasons: maize is only cultivated between August and April during summer. In winter, land usually cultivated is turned into pasture.

During field observation which I undertook in Kanyayo, I observed that grazing land is used for cattle, sheep and goats. However, some household members use grazing land for harvesting medicinal plants for healing or selling to traditional healers' market in urban areas. Grazing land is also used for hunting wild animals (such as rabbits) and for harvesting thatching grass.

It emerged from my field observations in Kanyayo that residential areas were characterized by a mix of economic activities. The residential areas have gardens for cultivating maize, vegetables and fruit. The compatibility of different kinds of land use was clearly visible when kraals of large livestock animals were separated by goat and sheep kraals. Some households used their residential areas for conducting businesses, such spaza shops and sales of liquor. Because of the lack of churches, some households used their residential areas as places of worship. Others were using residential areas for renting accommodation to people working in the area but coming from distant areas, such as teachers. Residential areas were also used as burial sites because there were no planned cemeteries in the area.

Large parts of Kanyayo were occupied by pockets of forest. Forests were used as browsing areas for goats and for the harvesting of traditional medicines, as well as being sources of fuel. Some households used forests for hunting. They also harvest materials from forests to construct houses, kraals, sledges and yokes. The area covered by forest has increased in Kanyayo because of the abandonment of cultivated land, more especially in the Umtentu river valleys.

Rivers are used as sources of water. Households use water from rivers for cooking, drinking and washing. Rivers are also used as sources of water for livestock. Some households use rivers for ritual activities such as baptisms. Roads which link Kanyayo local areas, surrounding areas and the town of Bizana occupy only a tiny part of the land in Kanyayo, as there are few roads, and none of them are tarred. Some land is occupied by facilities such as schools, clinic, churches and general dealers.

#### **4.1.3 Biophysical Description**

##### **a) Climate**

Average annual rainfall in Kanyayo is 1200 mm. Most rainfall in the area is received during the wet season (September to February). The climate is classified as mild sub-tropical with relatively high humidity. Less rainfall is received during the dry season (May – July). On average, June is the driest month with a mean of 47.6 mm and March was the wettest with a mean of 154.87 mm ([www.ecparks.co.za/management-plan/Mkhambati](http://www.ecparks.co.za/management-plan/Mkhambati)).

##### **b) Topography**

From my observation Kanyayo is characterized by steep slopes, especially along rivers and drainage lines, which dominate the whole area making cultivation impossible in those steep areas. Large hectares of land are not cultivated because of steepness and this contributes to reduction of agricultural productivity in the area.

##### **c) Vegetation**

From my observation Kanyayo is dominated by indigenous forest more especially along rivers and alien plants are beginning to invade indigenous vegetation in the area. Large areas of land are covered by grassland acting as feeding area for grazers such as cattle, goats and sheep.

#### **4.1.4 Infrastructure and Service Levels**

##### **a) Roads**

There is one gravel road connecting Kanyayo to the R61 between Bizana and Magusheni. This main road is not well maintained thus making access to town very difficult. The situation is even worse during rainy seasons. The area is served by six access roads which are not properly maintained and inaccessible during rainy seasons. The majority of households depend on buses and vans as their main mode of vehicular travel.

##### **b) Access to electricity**

According to Bizana IDP (2008) 13,764 households out of a total of 48,778 households in Bizana local Municipality have been connected to grid electricity. Kanyayo households are among those who are still not connected to electricity within the Municipality even though the nearest electricity grid was just only about 30 km away from the area. From the researcher's observation during the field undertaken in Kanyayo the majority of households used fuel woods for cooking and warming, and used candles and paraffin for lighting. Some

household members walk long distances (up to 10 km) to collect fuel woods. I also observed that a lot of time is spent by households trying to collect wood and that time could be spent in farming activities if the area was electrified.

**c) Sources of water and level of access**

Bizana IDP (2008) reported that the primary responsibility for ensuring access to water services to Bizana inhabitants rests with the District Municipality. The 2004 Department of Water Affairs and Forestry (DWAF) Reference Framework estimates that 45% of the population in Bizana Local Municipality does not meet Reconstruction and Development Programmes (RDP) standards for access to water services (Bizana IDP, 2008). Similarly applied to Kanyayo, all households had no access to tap water. The lack of bulk water supply was a problem, despite the presence of the Umtentu River that could be used for dam construction. In northern part of the area there was water service infrastructure but with no water. The attempts to find reasons for this water stoppage failed. Therefore all the households in Kanyayo had to rely on streams and boreholes for water while others used rainwater which is harvested through water tanks in their homes. From the researcher's observation some of the sources of water are unsafe, sometimes resulting from sicknesses such as diarrhoea and cholera. Water sources were far away to some households. From researcher's observation some household members had to walk long distance to fetch water; the majority of households walked about 100 meters to 1 km carrying water. During winter most of rivers become dry, posing a huge challenge in the area.

**d) Sanitation and Poor waste disposal**

From my field observation households use pit-latrines within their sites and those with no toilets used forests. There is no refuse disposal in the area, households dig hole within their yards and bury waste, or sometimes burn their waste.

**e) Telecommunications**

From my field observation all households in Kanyayo have no access to land line telephones. The majority of households use cell phones. There is cellphone network in the area, and all cellphone users do not have any problems concerning use of their cellphones.



#### **4.1.5 Level of Access to Facilities**

##### **a) Access to schools**

From my field observation there are three Government schools, all junior secondary schools (grades 1 – 9). Due to the spatial location of these schools, accessibility to these schools is not a problem. On the other hand, Kanyayo has no high school (grades 10 – 12), as a result a large number of pupils rely on high schools outside Kanyayo traditional boundaries. Access to high school is very difficult; the maximum distance to the nearest high school for some learners is about 10 -20 km to school.

##### **b) Primary health care facilities**

Kanyayo is served by one clinic. From field reconnaissance the area has no satellite clinic or mobile clinic. To some household members the maximum distance to the clinic by transport is about 20 minutes. It is about three hours by foot. There are no hospitals and the majority of households rely on St Patricks hospital and Greenville hospital situated far away from the study area.

##### **c) Other community facilities**

There is no post office; households receive their letters through schools. There are no community centers with facilities such as a library or social grant pay-point. There are no community halls or sportsfields.

I observed that in the area that shops were far away for some households, Kanyayo residents end up buying grocery in bulk to avoid walking long distance going to the shops. This has been confirmed by the majority of households who participated in the study. The households that were interviewed mentioned that their groceries sometimes sustained their households for the whole month. When asked about modes of travel, a large proportion of sample households in Kanyayo walked when they go to work, shopping and to school within the area.

#### **4.1.6 Dwelling Types**

I observed that the main type of dwelling in Kanyayo is traditional dwelling type (house built by mud and thatched by grass). There are few formal dwelling types (built by bricks) and there were no informal dwelling types.

## 4.2 Socio-Economic Characteristics

Kanyayo has a population of about 4 000 people. In the northern part, population density was generally high compared to the southern part where the population density was generally low. There were about 600 households in Kanyayo.

### 4.2.1 Gender Representation

Table 2 below shows the way in which gender is represented in the sample population with female respondents dominating slightly (53%) over male respondents who constitutes 47%.

**Table 2: Gender Representation**

<b>Gender</b>	<b>Households %</b>
Females	53
Males	47
<b>Total</b>	<b>100</b>

Source: Field survey 2009

### 4.2.2 Age Group

Table 3 below summarises the age categories of people that were interviewed.

**Table 3: Age in Years**

<b>Age category</b>	<b>Households %</b>
18-25	23
26-35	23
36-45	27
46-55	17
56-64	3
+65	7
<b>Total</b>	<b>100</b>

Source: Field survey 2009

### 4.2.3 Size of Households

An understanding of household size in this study was important because successful farming requires enough labour. This means that those households with a large number of people were likely to provide more labour and produce more. As indicated in table 4 below, there were more households (67 %) with 5-8 people.

**Table 4: Household Size**

Number of people in a household	Number of households	Households %
3	1	3
2	4	13
4	5	17
5	5	17
6	4	13
7	5	17
8	6	20
<b>Total</b>	<b>30</b>	<b>100</b>

Source: Field survey 2009

### 4.2.4 Employment

Table 5 below reveals that 23% of interviewed respondents had part-time jobs and 7% of sample households were casually employed. A large proportion of sample households were unemployed (50%). Only 10% of sample households were employed full time. In most cases employed households were mostly successful because they had adequate money to hire labour, and adequate cultivation equipment and are able to buy fertilizers and hire tractors easily.

**Table 5: Employment of Respondents**

Employment status	Households %
Full-time	10
Part-time	23
Casual	7
Unemployed	50
Other	10
<b>Total</b>	<b>100</b>

Source: Field survey 2009

#### 4.2.5 Education Level

From the households that were interviewed, education levels ranged from no schooling to university education. Table 6 reveals that the education level in the study area is generally low, with a high proportion of interviewed households with primary education (40%). Only 3% of households from sample households never attended school. Only 7% from the sample households had University education.

**Table 6: Education Level**

<b>Education status</b>	<b>Households %</b>
No education	3
Primary school	40
High school	27
Matric	13
Post matric	10
Tech/university	7
<b>Total</b>	<b>100</b>

Source: Field survey 2009

#### 4.2.6 Household Earnings

Table 7 below reveals huge income differentials with a large proportion of sample households (83%) in Kanyayo earning between R301-2000/month. Very few households earned more than R8000 and only 3% of households interviewed earned less than R300. Most households in the R 301 – 2000 category depend heavily on grants. Those in the upper group have salaries. These figures present a stark picture. Assuming an average household size of 8, households with an income of R2000/month are below the internationally accepted poverty line of \$ 1 US/day ( $R2000/8 = R250/\text{person}/\text{month}/30 = \text{approximately } R8/\text{person}/\text{day} @ \text{US\$} = R8.00 - \text{average in 2009}$ ). This indicates that the majority of sample households were below the poverty line.

**Table 7: Household Earning Per month**

<b>Household earning per month</b>	<b>Households %</b>
<R300	3
R301-2000	83
R2001-4000	7
R4001-8000	0
>R8000	7
<b>Total</b>	<b>100</b>

Source: Field survey 2009

### **4.3 Livelihoods Strategies and Small-Scale Farming in Kanyayo**

Most Kanyayo households used a variety of survival strategies. As revealed by the households survey that I undertook that large number of households (77%) were engaged on small-scale farming activities, but farming alone was unable to sustain all households in the area and as a result there were other livelihood strategies. These are discussed below.

#### **4.3.1 Livelihood Strategies**

Households in the study area have mixed strategies there were *on-farming and off-farming* sources of income; the probable reason for this mix was largely determined by the problems that were facing the farming sector. As a result of these problems, households end up engaged in other economic activities. Households in Kanyayo were engaged in a variety of economic activities ranging from running general dealers to shebeens. There were two general dealers in the area and approximately 5 to 6 people employed in each of these general dealers. Some people within the area and surrounds were employed as herders. Some households owned mini-taxis, and while other household members were employed as taxi drivers and driver assistants. There were household members who worked in local schools in professions such as teaching, some work in these schools as assistants, such as cleaners and security guards. Other household members worked in pre-schools that were found in this area. Some were working as domestic workers in local households and others were employed to work in gardens, cultivating crops and removing weeds. Some were working in Kanyayo clinic as professional nurses and some as cleaners. Other household members were working as builders. People operated businesses within their homes including shebeens and spaza shops. Some household members were selling fruit and chips in local schools during break times.

### **4.3.2 Small-Scale Farming**

From field observation Kanyayo small-scale farming was based on crop production and livestock production. The number of cattle owned by households ranged from 1 to 50 cattle. Households used cattle for cultivation and weeding. From the cattle, households get meat and milk for feeding their families. Sometimes households sell their cattle to get cash and solve other households related problems such as sending their children to schools or getting cash to alleviate poverty. Lack of water supply in the area sometimes resulted to poor cattle production. Less grass sward in the area was another cause for poor cattle production. Some households own goats that ranged from 1 to 100. Generally, households used goats for various purposes, such as for ritual purposes and for meat and milk. Some households own goats for selling when they need cash to buy other household needs.

From the researcher's observation Kanyayo was characterized by different farming levels. There were those who cultivate several hectares of land; these households have enough cattle for cultivation and enough cultivation equipments and have money to hire labour during weeding season. These households farm for poverty relief and income generation. The second group cultivates enough land for only consumption purpose. The third group was made up of those who were not farming at all. More than that, in Kanyayo there were several hectares of land which used to be cultivated but were no longer cultivated. Some households used cattle to plough fields and those who did not have cattle hired tractors. Those households that did not have cattle but had gardens situated far away from roads, ended up hiring cattle from other households. This indicated that the whole process of cultivation was expensive.

The area was served by two agricultural extension officers from Bizana Department of Agriculture. However, these officers were based in Bizana not in Kanyayo. It was always difficult for Agricultural extension officers to access Kanyayo due to poor road conditions. These officers provided advice concerning farming practice to the area. In terms of farming support infrastructure there were no dams and no irrigation schemes. From the researcher's observation, households in Kanyayo owned livestock but the condition of these livestock was bad and this was caused by poor veld management in the area and lack of water. Some problems facing these farmers include expensive medication for livestock. Expensive fertilizers also constrained farming production in this area. Another problem facing farming in the area was that of theft more especially theft of cattle.

The Department of Agriculture in collaboration with Bizana Local Municipality, through the LED office, were engaged in various farming activities in Kanyayo. There were three farming projects in Kanyayo. One poultry farming project which was formed by group of people. This group received support after application. Their market outlets were pension pay points and the surrounding areas. There was one project for vegetables; the project members sold their vegetables to surrounding areas. There was one farming project for goats which was still in its initial stages.

The next chapter examines small-scale farming in Kanyayo in more depth.

## CHAPTER 5

### SMALL-SCALE FARMING IN KANYAYO – RESEARCH FINDINGS

The findings presented in this chapter are based partly on interviews with a number of key informants, partly on the household interviews and partly on the researcher's observations. The chapter starts with a discussion of the perceptions of small-scale farming and related issues, followed by a series of reports on the perspectives of a selection of different interviewees. The final sections synthesise these issues.

#### 5.1 Small-Scale Farming: General Perspectives and Perceptions

##### 5.1.1 Participation in Small-Scale Farming

Table 8 below shows that the majority of households interviewed in Kanyayo (77%) were involved in small-scale farming activities. Of those households engaged in farming, a large proportion grew maize as their main crop, in combination with other crops such as beans, pumpkins, amadumbe (*colocasia antiquorum*), potatoes, spinach, carrots and sweet potatoes. The majority of households interviewed practiced mixed crop farming (maize, beans, pumpkins, amadumbe) with animal farming (cattle, goats, pigs, sheep, chickens). Findings revealed that households practiced subsistence farming, but when there was a surplus, they sold the surplus to other local residents or sometimes at small scale informal markets at pension pay points.

**Table 8: Participation in Small-Scale Farming**

Status	Households %
Not farming	23
Practicing small-scale farming	77
<b>Total</b>	<b>100</b>

Source: Field survey 2009

##### 5.1.2 Purposes of Small-Scale Farming

Table 9 below shows that out of farming households, 26% farmed for consumption purposes while 74% farmed for both home consumption and selling. When sample households were asked about their normal prices when selling farming produce, the majority reported that prices for goats and sheep ranged from R 500 to R 1200 depending



on the size of an animal. Prices for cattle depended on size, sex and age and normally ranged between R 4000-R 8000. When householders were asked about price determination for their crops, they said that price depends on the amount of product that is required by the consumer and sometimes depends on negotiations.

**Table 9: Purposes of Small-Scale Farming**

<b>Farming purpose</b>	<b>Households %</b>
Farming for eating	26
Farming for both eating and selling	74
<b>Total</b>	<b>100</b>

Source: Field survey 2009

### **5.1.3 Awareness of Small-Scale Farming Support Programmes**

When I asked householders about any farming programmes put in place by government, the majority (80%) of householders interviewed were not aware of any existing farming programmes. Only 20% of households were aware of government programmes geared towards reducing poverty in rural areas through small-scale farming. When the householders were asked about the effectiveness of these programmes, the majority were unsure.

### **5.1.4 Household Perceptions on the Role of Small-Scale farming in Reducing Poverty**

When asked about the role of farming in reducing poverty, all householders that were interviewed agreed that farming plays a significant role. People even said, “When you farm, you save a lot of money because instead of buying food you depend on farm produce”. They reported that those families that farmed intensively did not experience poverty. Some claimed that if households farmed intensively there would be no poverty. Respondents mentioned that some households within the area managed to harvest farm produce that sustained their families for the whole year. When asked about the success of those households, many said that they worked hard. Others argued that although farming is labour-intensive, it can reduce poverty drastically.

### 5.1.5 Householders' Perceptions of the Problems Facing Small-Scale Farming

Small-scale farming in Kanyayo is plagued by an array of problems; which affect farming production in this area. When householders were asked about problems that were facing small-scale farming in Kanyayo, a large proportion (47%) mentioned insufficient labour as the main problem, given that farming activities need labour at all stages, especially during the weeding stage. During the interviewing process, the problem of insufficient labour was frequently cited by households. The households explained that insufficient labour in Kanyayo is attributed to the following: some children attend school; some people migrate to urban areas in search of jobs; some people have to take care of sick relatives. Other explanations of labour shortage that were regularly mentioned by households was the lack of support from young people between the ages of 18 and thirty-five. Some householders (30%) perceived inadequate rainfall in some years as the main problem, since farming in the area is mainly facilitated by rainfall. Other problems listed by the interviewed householders include: lack of security (3%) such as fencing of gardens; some householders (17%) mentioned that young people are lazy when it comes to weeding and that is another main limiting factor in farming produce; and diseases (3%), more especially insects infestation. Table 10 presents a list of problems facing small-scale farming in Kanyayo. This implies that if these problems remain unsolved, farming in Kanyayo is unlikely to yield good results.

**Table 10: List of Farming Problems Identified in Kanyayo**

<b>Farming problems identified</b>	<b>Households %</b>
Insufficient labour	47
Inadequate rainfall	30
Laziness	17
Lack of security	3
Diseases	3
<b>Total</b>	<b>100</b>

Source: Field survey 2009

### 5.1.6 Solutions Offered to Small-Scale Farming Problems by Households

Table 11 below provides the list of recommendations that were suggested by the sample households in Kanyayo. The majority of households recommended that farming needs

people who are dedicated and committed in order to be successful. A sizable proportion of households (37%) recommended that more labour was needed in farming, because farming is a labour intensive activity. A total of 13% of sample households mentioned that there was a need for the Government to assist people in the following ways: through introduction of farming workshops; and through training and provision of information that will capacitate small-scale farmers to be able to increase food production. According to sample households, availability of enough water is needed to address farming constraints because sometimes rain does not come at the time for cultivation. As a result of that delay, households end up with less produce. At the same time, when there is insufficient rainfall, animals die. About 3 % of households suggested that there is a need for irrigation schemes so that people will be able to cultivate for the whole year. A total 10 % of sample households recommended that there is a need to encourage young people to be involved in farming. Others (3%) commented that fencing of gardens will help in boosting agricultural produce in Kanyayo.

**Table 11: Households Solutions to Small-Scale Farming Problems**

<b>How to improve small-scale farming</b>	<b>Households %</b>
More labour	37
Hard work	17
Weeding	13
Government assistance	13
Youth involvement	10
Security	7
Provision of Water	3
<b>Total</b>	<b>100</b>

Source: Field survey 2009

### **5.1.7 Households Sources of Income from Farming and Non-farming Activities**

Through the research, it was discovered that sources of income vary across the study area. Some households derived income from on-farm sources that includes planting and selling of maize, potatoes, colocasia antiquorum, spinach, carrots and sweet potatoes and livestock. A large proportion of households in this area also derived their incomes from off-farm sources such as grants, remittances, and casual wage earning within the region. A large proportion

of households in Kanyayo combined both on-farm and off-farm income for their survival. It was observed that households that have multiple sources of income practiced farming more effectively because they used their varied sources of income to support farming.

## **5.2 Individual Interviews**

Interviews were conducted as part of consolidating the data collected through the surveys of householders and land use. Interviews were conducted with a resident small-scale farmer, a chicken farming group in Kanyayo, agricultural extension officers and a local development assistant manager for Bizana Local Municipality. These informants' perspectives are presented below.

### **5.2.1 Individual Perspective: A Resident Small-Scale Farmer**

This farmer is 54 years old and had been farming in the study area for more than 30 years. When asked about the main constraints that were facing farming in Kanyayo, he listed the following: insufficient rainfall; lack of youth support; and insufficient weeding. He mentioned general laziness as another factor that limits food production in the area. By way of example, he commented that households cultivate their gardens very well but when it comes to weeding they become lazy, and without weeding, crop production is reduced. In terms of government support, he stated that there were farming programmes in place. However, when asked about farming progress in the area, he reported that there has been no major progress and that production from farming has dropped drastically in the last 20 years. Responding to questions about improving farming in the area, the farmer recommended that more agricultural training was needed and there was a need for youth involvement in agricultural activities, as well as more government support through various interventions such as improving infrastructure and helping Kanyayo residents to have access to market outlets.

### **5.2.2 Individual Perspective: A Chicken Farming Group**

The project was started by a group of women who first practiced chicken farming in their backyards. They then decided to come together and apply for assistance from Bizana Local Municipality and the Department of Agriculture. These two institutions supported the project by providing a building, fence and other poultry farming equipment. The project provides jobs to its 15 members and also helps the surrounding community to have access to cheap chickens. Although group members were engaged in other farming activities at their homes, they also spent a lot of time in activities associated with their chicken project.

When one of the group members was asked about the poverty level of the members of those families who were involved in a project, she said that, “none of the members are now suffering from hunger”. When asked about the price of a chicken, she said that the normal price for each chicken is R 40 irrespective of how much it might weigh. When asked about constraints facing farming, she stated that in the case of their project, chickens were dying and sometimes people were not buying. Other problems facing their project include: high transaction costs, such as hiring of transport to go to the market thus ending up without low profits; limited access to market outlets since their produce is only sold at pension pay points and surrounding areas; undeveloped physical infrastructure and poorly maintained roads.

### **5.2.3 Individual Perspective: Agricultural Extension Officers**

Two Agricultural extension officers, Mr. K. Hlangwana and Mr. T. Madini, are based in Bizana (some about 30 kms from Kanyayo) and are responsible for providing support to small-scale farmers in Kanyayo. These extension officers reported that there are three farming programmes in Kanyayo: one for vegetables, one for poultry farming and one for goats. The Department of Agriculture supported the local community by giving them seeds and fencing their gardens, pastures and also providing buildings for poultry farming, but people needed to apply as groups in order to receive assistance. Regarding market access, people need to phone Kei Fresh Produce in Umtata and the transport will come and fetch farming produce at Bizana Local Municipality's costs. This market was only organized for vegetables. There were no reliable markets for other farming produce, so people organized markets for themselves. These extension officers emphasized that assistance was available for people who applied.

According to extension officers, farming in Kanyayo was faced by problems such as cost of hiring tractors, fertilizer expenses, and lack of reliable market outlets. There was also a lack of interest by youth in farming activities and poor infrastructure. In terms of farming progress in Kanyayo, they reported that it was slow. The extension officers also stated that it was very difficult to access Kanyayo because of poor roads and dispersed settlements and this complicates things for extension officers. The extension officers suggested the following recommendations: a need for dam construction; provision of electricity in the area; people need to be supported with farming information; a need for fencing of arable land and people need to be trained in small-scale farming activities.

#### **5.2.4 Individual Perspective: Local Economic Development (LED) Assistant Manager for Bizana Local Municipality**

The LED assistant manager, Mr. T. Cwili, has been working for Bizana Local Municipality for more than three years. He reported that there were farming programmes in Kanyayo supported by Bizana Local Municipality and the Department of Agriculture. The aim of these programmes was to assist local communities to alleviate poverty and generate income. Mr Cwili reported that before people receive any financial aid they need to prove to the Municipality that they have already started a project on their own. The normal support from the Municipality ranged between R10 000 to R20 000. Regarding market access, he said that people are encouraged to come forward and the Municipality will try to arrange a contract with a market. Mr Cwili indicated that for small-scale farming to be successful, people need to have a positive mindset and must show an interest in producing food. "People need to have clear vision if they want to be successful in farming activities". Mr Cwili reported that people need to be mobilized and encouraged to participate in agriculture activities and need to be exposed to some successful farmers. He stated very clearly that households need to know that they need to free themselves from poverty.

Reconnaissance

### **5.3 Conclusions**

This chapter has revealed that while the majority of households in Kanyayo are involved in Small-scale farming, they are faced by a number of problems. The households interviewed for the study recommended the following solutions to farming problems identify in Kanyayo:

- more intensive labour practices;
- Government assistance,
- youth involvement to ensure strong, able body input into farming;
- security (e.g. fencing of gardens); and
- provision of water.

In addition, the perspectives of different role players in this chapter provides a clear picture of farming related issues, and forms the foundation upon which the next concluding chapter is based.

## CHAPTER 6

### SYNTHESIS, CONCLUSIONS AND RECOMMENDATIONS

This chapter opens with a synthesis and discussion of this study, and discuss findings from the literature and the fieldwork. It then proceeds to report on the findings based on the research questions before making a number of recommendations on interventions to make small-scale farming in Kanyayo more effective.

#### 6.1 Synthesis and Discussion

The literature suggests that helping rural farmers can boost small-scale farming production. As noted by the FAO (2008), helping smallholder farmers can contribute to a country's economic growth and food security. The findings confirmed that helping small-scale farming can help reduce poverty. This clearly indicates that small-scale farming needs to be assisted in various ways in order to be successful. Part of this assistance includes access markets. As stated by the G8 summit (2009), there is a need to improve access to markets for small-scale farmers. This implies that if rural small-scale farmers are assisted in entering reliable market outlets, small-scale farming can reduce poverty.

On the other hand, there are barriers that need to be eliminated in order to help rural small-scale farmers to enter the market more easily. As was identified in the literature review, the World Bank (2008) argues that inadequate transport infrastructure and services in rural areas push up marketing costs, undermining local markets and exports, particularly in Africa where less than 50% of the rural population live close to an all-season road. In many developing countries, the long supply chain, poor access to roads and electricity, and inadequate infrastructure and services in physical markets add to the transaction costs and cause quality deterioration and spoilage losses (World Bank, 2008). Farmers in Africa live in areas where there is a lack of basic infrastructure such as telephone, electricity, piped water, good road network, etc (Aina, 2007). In the study area it was observed that poor infrastructure and low levels of access to services hinders small-scale farming prospects. This means that without proper infrastructure and better access to household services, farming will not be able to make a dent on poverty.

Insufficient labour in small-scale farming undermines farming production in rural areas. The literature confirmed this, as Odi (2005) states that labour shortages in HIV/AIDS-

affected households arise through loss of labour when people become unable to work through illness, and ultimately die, as well as through labour being shifted from agricultural activities into caring for household members who are sick. Findings of this study also indicated that households were faced by the problem of insufficient labour. This means that without adequate labour, small-scale farming is unlikely to make a meaningful impact on poverty reduction in Kanyayo.

Water availability in small-scale farming can play an important role in rural farming production. The FAO (2008) found that improving access to water has a role in agricultural productivity for the obvious reason that water is an essential input in crop and livestock production. In the study area it was insufficient rainfall was another problem facing farming. This means that lack of water in rural areas is a barrier to farming progress, and as a result households end up with less farming production.

The literature revealed that the youth is often reluctant to participate in small-scale farming. As D'Haese and Van Rooyen (1998) notes, agriculture does not seem to be an attractive sector for young people, who rather migrate to the city for work. The findings of this study confirmed that there was a lack of youth involvement in farming activities. Youth involvement in farming activities is likely to boost farming, and when the youth is not interested in farming, production is likely to drop.

The selected literature on South African farming confirmed that the majority of households relied on farming to feed themselves. According to National Department of Agriculture (NDA) (2006 cited in Louw, et al., 2008) it is estimated that 1.1 million small farmers, mostly in the communal areas of the former homelands, provide a livelihood to their family members and occasional employment to other people. These farmers produce food to meet their family's needs while they also supply local and regional markets where large numbers of informal traders make a living (NDA, 2006 cited in Louw, et al., 2008). The study found that the majority of households in Kanyayo were engaged in small-scale farming for consumption purposes and for selling, and that they were selling their farm production to the local and regional markets. This means that to the majority of rural households, small-scale farming plays a significant role in reducing their poverty and small-scale farming is used as an income generator by most households.

In a study conducted in Rwanda, it was found that stable crop and livestock growth was the



dominant source of poverty reduction across all types of households, contributing in average 42% of poverty reduction in rural areas (Diao, et al., 2007). This was confirmed in Kanyayo where the majority of households were engaged in crop and livestock farming. This clearly confirmed that the majority of rural households regard crop and livestock farming as a better way to reduce their poverty than other farming activities such as forestry and fishing. However, that does not mean that fish and forestry farming are not important.

In the literature, it was stated that farming is constrained by diseases. MALA (1998) also suggests that to improve the small-stock sector it is necessary to control key diseases, particularly bluetongue; the reduction of internal parasites; and, in the case of wool sheep, the elimination of scab. Turton (2000) also found that livestock health problems can prevent small-scale farmers from achieving optimal agricultural production, and many communities have little or no access to veterinary services. The issue of diseases also emerged from the findings of the case study as another problem facing farming, a total of 3 % of sampled households mentioned diseases as one of the problems facing small-scale farming. This means that when diseases are not well controlled, farming cannot yield good results.

The findings of the study and much of the literature supported the hypothesis of this study. The majority of households in the case study confirmed that small-scale farming has a power to reduce poverty but there are constraints that need to be removed in order to allow small-scale farming to prosper. The literature supports the findings of the study that various case studies found that small-scale farming has a potential to reduce poverty but there is a need to remove constraints in small-scale farming. However, there was a disagreement in Impendle and Swayimani case studies because it was found that although small-scale farmers have limited access to factors of production, credit and information, markets often constrained by inadequate property rights and high transaction costs (Lyne, 1996 cited in Matungul, et al., 2001; Wynne & Lyne, 2003). Small-scale farmers in Impendle and Swayimani in Kwazulu-Natal have managed to produce food for their own consumption and for the markets (Matungul, et al., 2001). Farmers in these two areas also sell their surplus through informal ways to their neighbours, local shops and to monthly pension pay point markets (Matungul, et al., 2001).

## **6.2 Key Findings**

The aim of this section is to present key findings of the study based on the main objective of the study and research questions.

### **6.2.1 The Role of Small-Scale Farming in Reducing Poverty**

The findings of the study clearly suggested that small-scale farming has the potential to reduce poverty but that potential is constrained by a number of problems. On the other hand the research also indicted that farming requires people to work hard in order to be successful. All sample households in the study area agreed that farming plays a significant role in reducing poverty.

### **6.2.2 Characteristics of the Existing Development in Kanyayo**

Findings and observations indicated that the level of infrastructure and access to facilities in Kanyayo were generally low. The area was not electrified; there was no piped water and households relied on rivers as their main source of water. These conditions constrained the small-scale farming progress in the area.

### **6.2.3 Evolution of Small-Scale Farming in Kanyayo in the Last 20 Years**

The study revealed that small-scale farming activities in Kanyayo had declined over the last 20 years. This decline in farming production was indicated by land which was previously cultivated but is no longer cultivated. This trend might be associated with number of problems such as the ones that are listed in table 10.

### **6.2.4 Main Reasons for Practicing Small-Scale Farming in Kanyayo**

Findings indicated that a large number of interviewed households in Kanyayo were involved in small-scale farming. The majority of households farmed for consumption purposes and a small proportion for generating income. The fact that the majority of households were engaged in small-scale farming was an indication that households farmed for survival strategies as there were no industries to employ people in this area. Of the 23% who were not farming, most of them were faced by problems that were beyond their control, for example, sickness and old age.

### **6.2.5 Contribution that Small-Scale Farming Makes to Poverty Relief in Kanyayo**

A large number of interviewed households were of the view that small-scale farming has the capacity to reduce poverty, but that small-scale farming needs hard work and commitment. Findings indicated that households with sufficient labour or enough money to hire labour are likely to be successful in small-scale farming.

### **6.2.6 Current Programmes in Place to Support Small-Scale Farming in Kanyayo**

The majority of households were not aware of farming programmes that were geared towards reducing poverty in the study area. Findings also indicated that there were some households within the study area who were aware of farming programmes, but not sure of the effectiveness of these programmes. People need to be informed about poverty reduction programmes because the majority of people are not taking advantage of these farming opportunities simply because they do not know about existence of these small-scale farming programmes.

### **6.2.7 Problems Facing Small-scale Farmers in Kanyayo**

There were number of problems that faced small-scale farming in Kanyayo. Findings indicated that a significant proportion of sample households perceived insufficient labour as the major problem facing small-scale farming, while 30% of sample households regarded inadequate rainfall as a major problem. Laziness was also mentioned by 17% of the sample households. A marginal proportion of households (3%) perceived the lack of security (e.g. fencing of crop gardens) as a problem and other 3% of sample households mentioned diseases as another problem facing small-scale farming. The agricultural extension officers in Bizana that were interviewed during the course of the research mentioned the following problems: some households could not afford to hire tractors; to buy fertilizers; and there was also a problem of poor infrastructure in Kanyayo.

### **6.2.8 Planning Interventions to Support Small-Scale Farming in Kanyayo**

The findings of this study indicated that in order for small-scale farming to be successful, people need to work hard. It was recommended by interviewees that there is a need for Government support in areas such as: fencing of crop gardens; improvement of infrastructure; and organization of farming information centers to advise small-scale farmers on technicalities, such as post-harvest advice.

## **6.3 Implications for Spatial Planning and Poverty Reduction in South African Rural Areas**

Based on the findings of the study the following recommendations were suggested:

### **6.3.1 Developing the Labour Force**

There is a need for labour force development, an effort that must involve co-operation of local people, government, NGOs and business enterprises. Laziness was frequently

mentioned during the interview process as another cause for less production in farming activities. That means the maximization of labour force use is also required from the small-scale farmers themselves. There is also a need to identify incentives to change attitude of the youth regarding agriculture.

### **6.3.2 Improving Water Supply**

Insufficient rainfall was also mentioned by a large number of interviewed households. Government in this case needs to intervene by providing irrigation and by constructing dams for animals and for people and these dams need to be fenced. There are two non-perennial rivers (uMtentu and uMthentshwana) with adequate water to be used as main sources of water for irrigation schemes. There is also a need to provide water supply to all households in the area. This could assist small-scale farmers in garden irrigation.

### **6.3.3 Controlling Agricultural Diseases**

Diseases were found to be another contributing problem to the prosperous of small-scale farming. There is a need to control seasonal diseases and Government can assist in this regard by training small-scale farmers to be able to recognize animals diseases. Government also needs to effectively control both internal and external parasites affecting sheep, goats and cattle. Households need to take care of their farming by keeping animals clean and diseases free, while also taking care of their crops.

### **6.3.4 Youth Involvement**

The findings show that youth have no interest in farming suggesting that there is a need to come up with incentives that will attract youth involvement in farming activities. One intervention could be to establish a youth farming club in Kanyayo; another could be to give young people access to their own land. At present, young people are not given land to farm unless they are married.

### **6.3.5 Market Access**

As there is no formal market in the area people sell their farming products to neighbours and at pension pay points. What is recommended is a free market (all people are free to come and sell their farming produce) that will be based in the town of Bizana and that will be open on certain days of the month. At the same time there is a need to negotiate with supermarket owners in Bizana to support these farmers by ordering their farm produce. Government institutions in Bizana such as hospitals and prisons could buy produce from

rural farmers. Reliable market outlets are likely to encourage involvement of more households in farming activities and also attract more young people.

#### **6.3.6 Promoting Information Centers**

There is a need for farming information centers to assist small-scale farmers to access farming information more easily. These centers could assist small-scale farmers in identifying animal diseases earlier and provide advice in all stages of farming, for instance during ploughing, weeding, post-harvest handling and access to markets. These farming centers should be based in the area and be easily accessible. Small settlements like Kanyayo should have their own farming information center. There is also a need for a massive campaign to encourage households to participate in farming. This campaign needs to be divided into phases: Phase one will be on encouraging people to farm; Phase two will be encouraging people to look after their farms, for example they need to remove weeds, treat sick animals and fence gardens to avoid any damage to their crops. In Phase three, post-harvest handling stage, people will be advised on how to handle their production after harvesting. During Phase four, people will be advised on matters related to market outlets and given assistance to enter the market.

#### **6.3.7 Improving Infrastructure**

There is no doubt that the improvement of infrastructure in the area is likely to impact positively on small-scale farming. The findings of the study indicated that accessibility in and out of Kanyayo was very difficult due to poor road conditions. This tends to exacerbate poor access to market outlets within and beyond this area. This underlines the need to improve road conditions in the area.

#### **6.3.8 Delivering Services**

Many households used fuel wood for cooking, which resulted in a lot of time being wasted when member of households collect fuel wood. This reduces time that might be used in farming activities and implies that there is an urgent need to provide electricity in the area to assist small-scale farming to prosper. Electricity supply in Kanyayo will also assist in keeping some farming products fresh, as households can use refrigerators.

#### **6.3.9 Management of Pastures and Fencing of Gardens**

Grazing land in the area was poorly managed and this resulted in soil erosion and loss of grassland. These resulted in animals being in poor conditions. It is recommended that there

is a need for structures which will be responsible for management of pastures. Households need to be trained by the Department of Agriculture and local Government to manage pastures. Since households are involved in livestock production and crop production, that means there is a need to fence gardens to avoid damage that might be caused by livestock to crops.

#### **6.4 Recommendations for Future Research**

During the research process, it was difficult for this researcher to get information for the area, as the only information was at an aggregated level at the scale of the local Municipality or wards. More local and disaggregated data is needed. Therefore, the researcher recommends that future research on farming needs to be conducted into specific aspects of small-scale farming at sub-ward scale. Though it was not part of this study to investigate the role of institutions in small-scale farming, this researcher realized that institutions can play a significant role in farming activities. Therefore there is a need in future to investigate the capacity of institutions such as churches, schools, NGOs, various departments and local municipalities in encouraging or assisting people to participate in small-scale farming.

#### **6.5 Conclusions**

As stated in the introduction, this study has investigated the role of small-scale farming in reducing poverty, and the constraints that faced small-scale farming in Kanyayo. The findings of the study revealed that a large number of households in Kanyayo farm to fight poverty and at the same time to generate income. My findings confirmed that households in the study area are faced by a large number of problems and these problems tend to constrain the progress of small-scale farming. The results of the study have indicated that small-scale farming is likely to reduce poverty but only if some of these problems can be eradicated.

Access to market outlets for small-scale farmers is the most important problem that needs to be addressed in rural areas. A member of the chicken project in the study area revealed that market access is the main problem. She suggested that small-scale farmers need to be assisted to reach reliable market outlets. My research suggests the crucial importance of an enabling rural innovation approach which could strengthen the capacity of smallholders, resource-poor farmers to access market opportunities and actively involve them in creating an entrepreneurial culture in rural communities (Kaaria, 2007). This approach stresses market orientation that enables smallholder farmers to successfully link themselves to

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## APPENDIX 1: KANYAYO QUESTIONNAIRE

**NB: Respondent is free to not participate or to withdraw their participation in this research as long as she/he likes, but participation is appreciated. All information will be treated with confidentiality and respondent's anonymity will be protected and treated with respect.**

### PART 1 – DEMOGRAPHIC INFORMATION

Respondent Number

1. Gender  1. Male  2. Female

2. Age in years  1. Less than 18  2. 18-25  3. 25-35  4. 35-45  5. 45-55  6. 55-65  7. +65

3. Employment  1. Full-time  2. Part-time  3. Casual  4. Unemployed  5. Other

4. Head of household

Head of household	Male/Female	Age	Occupation
Relation to the household			

5. Household size

Number of people in a household

6. Level of education	1. No education	2. Primary school	3. High school	4. matric	5. Post-matric	6. Tech/university
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**PART 2 – SMALL-SCALE FARMING RELATED QUESTIONS**

7. Do you practice farming?	1. Yes	2. No
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If no, why not?

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If yes, what type of farming?

1. Grow crops (what type of crops?)	2. Keep animals (specify type of animal)

8. What are you practicing farming for?

1. Eating	2. Selling	3. Both
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If you sell your farming products, where do you sell and at what price?

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9. In what ways does farming contribute to your household income?

10. How could small-scale farming reduce poverty?

11. Do you know of any programmes in place to support farming in the area?	1. Yes	2. No
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If yes, how effective?


12. What are problems facing farming in the area?

13. What can be done to improve small-scale farming in the area?

**PART 3 – SERVICE RELATED QUESTIONS**

14. What level of services (water, electricity, roads, sewerage) have been provided since 1994?
---

1. Water	2. Electricity	3. Sanitation	4. Roads	5. Other
Water Inside yard	Cooking	Flush toilet	Gravel road	
Stand pipe	Lighting	Flush septic tank	Tarred road	
Community stand over 200 M	heating	Chemical toilet		

1. Water	2. Electricity	3. Sanitation	4. Roads	5. Other
		VIP		

**15. If these services have been provided in your area, what are problems facing these services?**

Water

a)

b)

c)

d)

Electricity

a)

d)

c)

d)

Sanitation

a)

b)

c)

d)

Road

a)

b)

c)

d)

e)

**16. How do you buy food? For example buying in bulks.**

**17. Does your food sustain your household for the whole month?**

16. How do you buy food? For example buying in bulks.

What modes of travel do you use for work, school and shopping
a) Bicycle
b) Bus
c) Car
d) Minibus/ taxi
e) Foot
f) Horse

18. What sources of income does your household depend?
a)
b)
c)
d)
e)

19. Household earning per/month	1. < R300	2. <R301 - 2000	3. R2001 - 4000	4. R4001- 8000	5. > R8000
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**APPENDIX 2: INTERVIEW PROMPT SHEET**

**Thank you very much for your time.**

**INTERVIEW PROMPT SHEET**

**DATE:** \_\_\_\_\_

**TIME:** \_\_\_\_\_

**AGE:** \_\_\_\_\_

**GENDER:** \_\_\_\_\_

**NAME:** \_\_\_\_\_

**RESPONDENT NUMBER:** \_\_\_\_\_

1. How has small scale farming changed in the last 20 years in Kanyayo?


2. What are the main constraints facing farming in the area of Kanyayo?


3. Have you noticed any major farming progress in the area?




4. What programmes are in place to boost small scale farming in Kanyayo?


5. Are there any Government planning interventions to support small scale farming in the area?


6. What can be done to improve small scale farming activities in the area?
