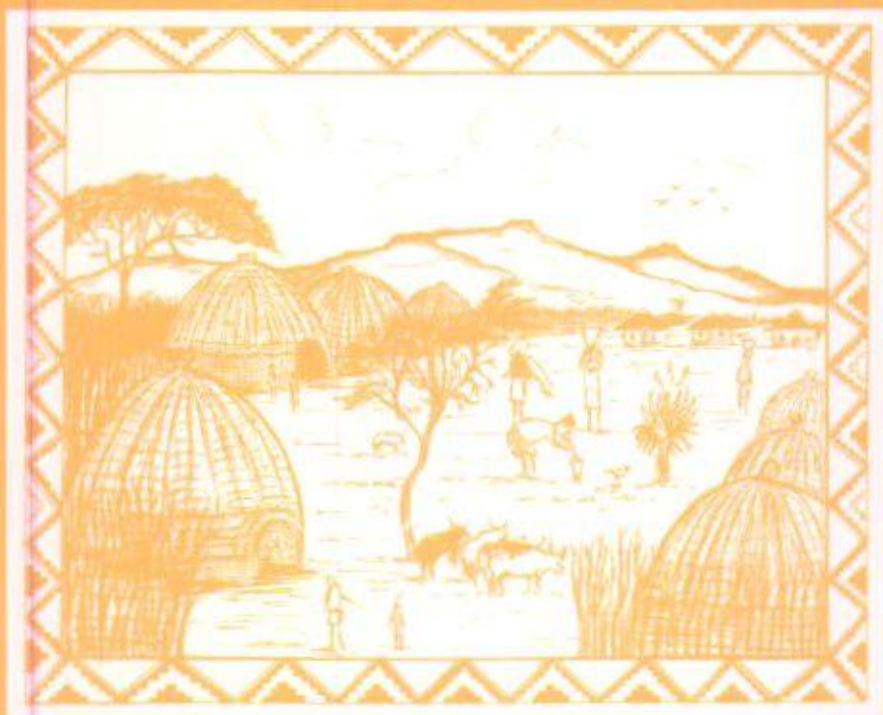


Household Livelihood Security in Rural KwaZulu-Natal, South Africa



Sazile M. Mtshali

Stellingen behorende bij het proefschrift

Household Livelihood Security in Rural KwaZulu-Natal, South Africa

Sazile M. Mtshali
Wageningen, 21 juni 2002

1. The general assumption that female-headed households are more vulnerable than male-headed ones seems to have no firm foundation in a situation where the socio-economic status of both types of households is below the minimum household standard of living (this thesis).
2. In a southern African rural context the homestead fulfils the functions of the household. It always provides a ready fallback option for extended family members who lose employment, need permanent linkage with ancestors and those who retire at the end of their working career (this thesis).
3. Contemporary home economics programmes in developing countries reflect ideal Eurocentric situations rather than the socio-cultural realities of everyday life of rural households (Barbara Rogers, 1980).
4. Conscientisation, which occurs as a process at any given moment, should continue whenever the transformed reality assumes a new face (Paulo Freire, 1985).
5. Science has to be a completely open activity; otherwise it will die (Robert Solow, 1990).
6. Power lies at the heart of the problem of poverty in Southern Africa. Without it those who are poor remain vulnerable to ongoing processes of impoverishment (Francis Wilson and Mamphela Ramphele, 1989).
7. Social disintegration will not disappear with the institution of a democratically elected government, as some would like to think (Ramphele, 1992).
8. A democratically elected government will have greater difficulties dealing with lawlessness, criminality and irresponsibility, because it has to be more responsive to popular demands and criticism (Ramphele, 1992).

Household Livelihood Security
in Rural KwaZulu-Natal,
South Africa

Sazile M. Mtshali

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in Rural KwaZulu-Natal,
South Africa**

Sazile M. Mtshali

Proefschrift

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op gezag van de rector magnificus
van Wageningen Universiteit,
prof. dr. ir. L. Speelman,
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TABLE OF CONTENTS

<i>Acknowledgements</i>	V
<i>Table of Contents</i>	VII
<i>List of Tables</i>	XI
<i>List of Figures</i>	XI
CHAPTER 1 INTRODUCTION	1
1.1 Research motivation	I
1.2 Rural livelihood in South Africa	4
1.3 Gender dynamics in rural livelihood	6
1.4 Rural development extension systems	10
1.5 Indigenous rural people's knowledge	11
1.6 The research problem	11
1.7 Research objectives	12
1.8 Research questions	13
1.9 Outline of the thesis	14
CHAPTER 2 CONCEPTUAL AND THEORETICAL FRAMEWORK	15
2.1 The household	16
2.2 Gender	21
2.3 The livelihood system and its components	25
2.4 Rural livelihood strategies	33
2.5 Household resource management	36
2.6 Household food security	38
2.7 Livelihood outcomes	43
2.8 Rural livelihood security	44
2.9 Theoretical framework of the study	46
2.9.1 Context	47
2.9.2 Inputs	48
2.9.3 Throughputs	49
2.9.4 Outputs	49
CHAPTER 3 RESEARCH DESIGN AND METHODOLOGY	51
3.1 Research design: qualitative and quantitative approaches	51
3.2 Orientation stage	52
3.3 Unit of analysis	52
3.4 Methods of data collection	52
3.5 Sampling	56
3.6 Validity and reliability	56
3.7 Employment of assistants	57
3.8 Data analysis	58
3.9 Time schedule of the research	58

3.10	The study area	59
3.10.1	South Africa	59
3.10.2	KwaZulu-Natal	61
3.10.3	Ubombo District	63
3.10.4	Umthunzuni District	66
CHAPTER 4 THE PROFILE OF THE RURAL HOUSEHOLDS AND THEIR LIVELIHOODS		69
4.1	A comparison of livelihood indicators at study area level	69
4.1.1	Service provision	69
4.1.2	The context of livelihood assets and resources	73
4.2	The household structure	78
4.2.1	Household composition	79
4.2.2	Gender and generation division of labour	85
4.3	Household assets and resources at the household level	88
4.4	Household livelihood strategies	96
4.5	Conclusions	102
4.5.1	The profile of the average Ubombo household	103
4.5.2	The profile of the average Umthunzini household	104
CHAPTER 5 GENDER AND HOUSEHOLD LIVELIHOOD VULNERABILITY		107
5.1	Introduction	107
5.2	Gender-based vulnerability	108
5.3	A quantitative analysis of vulnerability	112
5.4	Case studies	118
5.5	Discussions and conclusions	139
5.5.1	Discussion of case	139
5.5.2	Indicators of vulnerability	142
5.5.3	Conclusions on vulnerability	143
CHAPTER 6 INDIGENOUS KNOWLEDGE AS CONTRIBUTING TO LIVELIHOOD SECURITY		147
6.1	Introduction	147
6.2	Indigenous knowledge as a valuable resource	149
6.3	Case studies	152
6.4	Income generating activities	157
6.4.1.	Umthunzini	158
6.4.2	Ubombo	161
6.5	Household food security	161
6.5.1	Food gathering	162
6.5.2	Types of food crops produced	162
6.5.3	Food production activities	165
6.6	Discussions and conclusions	167
6.6.1	Discussions	167
6.6.2	Conclusions	170

CHAPTER 7	THE ROLE OF AGRICULTURAL AND RURAL DEVELOPMENT EXTENSION SERVICES IN LIVELIHOOD SECURITY	171
7.1	Introduction	171
7.2	Extension services in the study area	173
	7.2.1 Approaches to extension	173
	7.2.2 Methods of extension	175
7.3	Gender perspective in extension	177
7.4	Constraints in the extension delivery services	178
	7.4.1 Constraint of men	178
	7.4.2 Constraints of women	179
	7.4.3 Constraints of the extension service staff	181
7.5	Household livelihood security as a basis for extension	182
7.6	Discussions	182
	7.6.1 Assets	182
	7.6.2 Transforming structures and processes	185
	7.6.3 Information and communication technologies(ICTs)	186
7.7	Conclusions	190
CHAPTER 8	THE ROLE OF THE HOUSEHOLD IN RURAL LIVELIHOOD SECURITY	193
8.1	Introduction	193
8.2	Household types and headship	194
8.3	The agency of the household	198
8.4	The household livelihood security concept	199
8.5	Household strategies and resource management	201
8.6	Institutional support for rural livelihood security	202
8.7	Conclusions	204
CHAPTER 9	CONCLUSIONS AND RECOMMENDATIONS	207
9.1	Conclusions	207
	9.1.1 The household structures and processes	207
	9.1.2 The appropriateness of the concept of household in examining rural livelihood security	210
	9.1.3 Gender and indigenous knowledge systems in rural livelyhood security	211
	9.1.4 The role of agricultural extension in enhancing rural livelihood security	212
	9.1.5 The significance of indigenous knowledge systems (IKS) to agricultural extension services	214
	9.1.6 The extension service staff's approach of gender and indigenous knowledge	215
9.2	Some theoretical considerations	216
	9.2.1 Indicators for food security and livelihood security	216
	9.2.2 The relationship between household and homestead	217
	9.2.3 The vulnerability of female-headed households	218

9.3	Recommendations	219
9.3.1	The household	219
9.3.2	Gender issues	220
9.3.3	Extension services	220
9.3.4	Institutional transformation	221
9.3.5	Information and communication technologies (ICTs)	221
	BIBLIOGRAPHY	223
	GLOSSARY	243
	ACRONYMS	245
	SUMMARY	247
	SAMENVATTING (Summary in Dutch)	251
	APPENDICES	
	Appendix 1 Questionnaire	255
	Appendix 2 A guideline for the community survey	265
	CURRICULUM VITAE	271

LIST OF TABLES

3.1	Time schedule	59
3.2	A summary of the socio-economic data of the areas of study	68
4.1	Provision of services in Ubombo and Umthunzini Districts	70
4.2	Subscription to religious faith	77
4.3	Dependency ratio in three categories	81
4.4	Age of household head	82
4.5	Household headship according to gender	82
4.6	Marital status of head of household in Ubombo	84
4.7	Marital status of head of household in Umthunzini	84
4.8	Educational level of head of household in percentages	85
4.9	Number of housing units per household	90
4.10	Type of housing as an asset	91
4.11	Water source for the household	91
4.12	Type of sanitation	92
4.13	Source of energy for the household	93
4.14	Ownership of fungible household assets	93
4.15	Crops grown by the households in the study area	99
4.16	Amount of land available to individual households	100
4.17	Ownership of livestock	101
5.1	Wealth and gender according to headship in Ubombo and Umthunzini	114
5.2	Wealth according to residence	114
5.3	Economic dependency ratio according to gender of household head in Ubombo and Umthunzini	116
5.4	Working status of all household heads in Ubombo and Umthunzini	117
5.5	Working status of household heads according to gender	117
5.6	Selected indicators of vulnerability of households	143

LIST OF FIGURES

2.1	Model of components of livelihood system that guided operationalisation of the study	46
3.1	Map of the study area: KwaZulu-Natal	50
4.1	Distribution of persons in households in Ubombo	80
4.2	Distribution of persons in households in Umthunzini	80
4.3	Distribution of household size, in four categories	80
4.4a	Yearly income in Ubombo	94
4.4b	Yearly income in Umthunzini	94
5.1	Genealogy of a pensioner female-headed household, Umthunzini	119
5.2	Genealogy of a <i>de jure</i> female-headed household, Umthunzini	124
5.3	Genealogy of a pensioner female-headed household, Ubombo	127
5.4	Genealogy of a <i>de jure</i> female-headed household, Ubombo	131
5.5	Genealogy of a male-headed household, Umthunzini	136

CHAPTER 1 INTRODUCTION

This introductory chapter discusses the background of the study. It considers the research motivation, rural livelihood in South Africa, gender dynamics in rural livelihood, rural development extension systems and indigenous rural people's knowledge. Furthermore, this chapter presents the research problem, objectives and research questions. It also provides an outline of the subsequent chapters of the thesis.

1.1 Research motivation

My motivation in undertaking this study stemmed from many years of concern about the relevance and appropriateness of formal and non-formal education programmes of home economics for the rural South African context. Home Economics or Domestic Science was introduced in many parts of Africa through the formal school system, as part of Christian missionary activities. Like in many other African countries, early home economics programmes in South Africa were based on British and North American models which guided curriculum development and practical work (Kwawu, 1993). Home economics subjects offered at school and tertiary level have always reflected a British or American life style. Therefore the majority of African rural household members find the theory and practice based on these models limited to ideal situations rather than their own socio-economic and cultural realities of everyday life. The contents of home economics programmes often appeared to be irrelevant to the basic structure and composition, division of labour, gender roles, assets and resource of rural households.

In KwaZulu-Natal (KZN), I have observed the inappropriateness of the pre-service and in-service training of home economist in preparation for service delivery in the KZN Department of Agriculture and Environmental Affairs (DAEA). Throughout the historical development of home economics in South Africa, the home, family, household, gender, social class, urban bias and racial discrimination have remained central issues. In a study conducted on the historical development of home economics education and training in African mission institutions in KZN, home economics was revealed to be a profession that had a low status, was female-dominated and looked down upon by other professionals (Mtshali, 1997).

As a profession, home economics has been criticised for contributing to the invisibility of women in society and for perpetrating female stereotypes that are linked to women's reproductive roles, such as cooking, child care, nutrition and health care, housewifery, laundering, knitting, needlework and other domestic tasks (Meintjies, 1987). These stereotypes are based on the model of education for womanhood in a Western setting where socio-cultural living conditions are different from those of rural South Africa. Home economics is still a discipline of importance in some schools, tertiary institutions, and agricultural and rural development extension services for women. It continues to be a discipline mainly devoted to furthering education for womanhood in homemaking. The model of education of women for womanhood has been a powerful weapon of the previous government to reinforce inappropriate feminine roles in the private and public spheres through home economics extension services. In a South African context home economics was used by both the missionaries and the state as one of the means to facilitate adoption of Western, white,

middle class values to guide daily living. For instance, rural women are encouraged to adapt to Western duties, leisure activities and dietary patterns. Hence formal ways of doing simple tasks, such as eating, setting of tables, use of cutlery, flower arrangements and table manners have to be learnt formally. These unfamiliar domestic duties and expectations put pressure on women's limited resources, namely time, money and energy. They tend to increase rural women's workload and make them feel inadequate when they fail to master the skills of sewing, food or interior decoration.

Kwawu (1993) states that the African home economics programmes are based on Western frameworks, mission statements and philosophies, goals and objectives, content and materials. For this reason, the home economics profession is criticised for not taking into consideration the needs of African households, in particular those living in rural areas and that form the majority of households. The main motivation of this study is to create awareness that there is a need to critically evaluate the home economics' conformity to Euro-American norms and disregard of the socio-economic and cultural realities of rural communities. There is a dire need to reorientate, redefine and reconceptualise the home economics discipline in order to train rural development extension agents that could contribute significantly to rural livelihood security, particularly of the resource poor households.

In the planning of formal and non-formal learning programmes what should be taken into consideration is the relevance of what is taught to the rural development communities. For instance, the agricultural policy to mainstream gender in agriculture should be taken into consideration in this regard. The perspective of the home economics and rural development professionals should be broadened in order to improve communication and the relationship between the field of agriculture and home economics. This would facilitate development of curricula, which focus on livelihood activities of the rural households as resource-generating, consuming and organising units.

In a South African rural situation, most reproductive and productive activities take place in the domestic sphere or household domain. Consequently, this study considers the household as a micro-level unit of analysis and action. An analysis of the rural household gives an insight into its basic structure and composition, basic needs, constraints, gender and generation dynamics, vulnerability and coping strategies, household food security, access and management of resources. All these issues remain major concerns for the education system, rural development extension delivery systems and rural livelihood security. An understanding of the household and its processes is of great importance to policymaking and programme implementation of sustainable rural development. New approaches to understanding rural life are needed to re-organise home economics and agriculture education in a holistic manner through an interdisciplinary approach. Therefore a study was undertaken to examine the importance of the household in rural livelihood security.

This research project was conceptualised when the historically Black university (HBU), University of Zululand (UZ) in KZN was experiencing financial constraints. During that time the demand for higher quality education was becoming high. Higher education in home economics and agriculture was at a crossroads because the political transformation created a need for greater educational relevance and higher quality

graduates than before 1994. The agricultural policy (NDA, 1995) demands university students with different skills and knowledge. Agricultural economic development, mainstreaming gender in agriculture and household food security aspects of the policy require curricular revision which includes important topics that are generally missing. Examples of these are gender in agricultural development, farming systems, household food security, agribusiness and marketing, environmental protection and population issues. Furthermore, the university needed to play a development role through outreach activities and by establishing linkages with rural communities.

In 1995 Prof. Paul Lubout, the former head of the Department of Agriculture at the UZ, proposed the merging of the departments of Agriculture and Home Economics after his six-month sabbatical leave in the Netherlands. Consequently, in April 1996 Prof. Anke Niehof visited the Department of Home Economics, UZ to establish a linkage between it and the former Department of Household and Consumer Studies at Wageningen Agricultural University (WAU)¹. Curricular revision and staff development was considered crucial in producing well-trained graduates who would contribute to the national development efforts. A project proposal for collaboration between the UZ and WAU in comparative household and consumer studies and rural development was prepared and submitted by Prof. Niehof for funding to the SAIL Project Programme. One of the objectives of the project was to establish the participation of staff in a Ph.D. sandwich programme at WAU. My application for a fellowship was approved by WAU to start a six-month Ph.D.-sandwich programme. Consequently the UZ granted me a six months study leave to start the Ph.D. sandwich programme at the beginning of September in 1997. The research proposal was prepared under the supervision of Prof. Niehof.

When I returned to South Africa in February 1998, numerous applications to the parastatal and international organisations to get funding to do field research in South Africa were unsuccessful. However, in June 1999 the Rural Development Information in the Republic of South Africa through Telematics (RDISAT) project offered me financial assistance to conduct field research. The main aim of the RDISAT project was to build institutional capacity for the production and presentation of electronically accessible and flexible learning packages in the field of rural development. The three themes are covered by the project, the first one being the Household and Resource Management and Food Security (HRMFS) of which I am a member of the International Technical Working Group (ITWG). The other two themes of the project are Rural Enterprise Development and Sustainable Land-use Systems. This research project is relevant to the long-term objectives of contributing to the existing body of knowledge on rural development issues in South Africa and to professionalisation of UZ staff (RDISAT, 1997).

With the support of RDISAT funding, I was able to complete field research in July 2000. The second six months of the sandwich programme were utilised from August 2000 to January 2001 to analyse data and to write the thesis.

¹ Now Wageningen University and Research Centre (WUR)

1.2 Rural livelihood in South Africa

South Africa is a middle-income developing country with an adequate per capita income at national level. However, the experience of most South African households is that of continued poverty and inequality that was particularly shaped by the impact of the apartheid policies of the government before the establishment of the new democratic one in 1994 (Food Security Working Group (FSWG), 1997). As a result of centuries of colonialism and four decades of apartheid era, South Africa's rural households experience an undesirable situation of poverty.

The impoverishment of the rural population stems from the fundamental inequalities in terms of access to resources that contribute to livelihood security, such as land, capital, knowledge, skills and basic services (Reconstruction and Development Program (RDP), 1996). Furthermore, the environmental effects of poverty, for example deforestation, declining land productivity, soil erosion and others have a negative effect on providing rural livelihood security (Elliot, 1994).

The inequalities inherent in the South African economy are well documented (Human Sciences Research Council (HSRC), 1996). A number of researchers have described the distribution of income among households as the most unequal in the country. Even among geographical regions, poverty and inequality between rich and poor is apparent. For instance, out of the nine South African provinces, three of them have a human development index (HDI) that ranks among the lowest in the world. The HDI is a figure that expresses the development standard of a community or region. These provinces are KwaZulu-Natal (KZN), the Eastern Cape and the Northern Province with HDI of 0.58, 0.48 and 0.40, respectively (HSRC), 1996). The three provinces were former 'homelands' characterized by a high level of deprivation in comparison with the rest of the country.

It is evident from the nation-wide household survey that was conducted under the Project for Statistics on Living Standard and Development (PSLSD) that rural areas experience the highest incidence of poverty. About 70 % of the rural dwellers estimated as being poor when compared to 17 % of the population in metropolitan areas. Furthermore, it has been estimated that 95 % of those living below the poverty line are Africans (Posel, 1997). As a result of the extent of poverty in former "homelands" such as KZN, the majority of individual, households or entire communities are unable to satisfy their basic needs (May, 1996).

In South Africa the African household is complex and dynamic with boundaries that are constantly shifting. Like in other southern African countries, such as Swaziland, the common form of domestic organisation is the landholding patrilineal rural homestead² or *umuzi*. Russell (1993) asserts that the homestead is prevalent in rural areas and it is appropriate to use it as a unit of analysis instead of the universal, standard household. At the beginning of the 20th century the household became the unit for data collection and analysis in Britain and other Western countries. Consequently, this model of institutionalising statistics was adopted by African societies where the domestic organisation is different from the Western societies.

² A homestead is a cluster of dwellings, kitchens and animal kraals and sheds, with its associated fields. Members of the homestead have in common their descent from a male head, which entitles them to space and identity within the homestead.

The diversity and complexity of household is increased where rural-urban migration is prevalent. Homestead boundaries are difficult to define since there are members who reside in rural areas and those who live in urban areas near their place of employment. Often members who leave their rural home to join or create other households in urban places, do not lose their homestead membership nor their kin-based responsibility to contribute to the support of various homestead members in cash or in kind (Russell, 1993). It is common to find individuals who are linked to more than one household but to one homestead. Consequently, assets and resources of such individuals are thinly distributed among more than one household. For livelihood security, a number of activities and strategies are undertaken by South African rural people to generate income. Some of the livelihood strategies are wage labour, social pension, remittances from household members working in urban areas, unpaid domestic and farm labour, and illegitimate activities (Carter and May, 1997). Rural livelihood in South Africa is complex because of a number of activities and strategies involved in generating it. In rural South Africa, agriculture is often considered as an integral part of rural livelihood but access to other forms of income and to assets strengthens the distribution of resources within the household. A number of activities can be undertaken to generate income, such as wage labor, social pension, remittances from household members working in urban areas, unpaid domestic and farm labor and illegitimate activities (Carter and May, 1997).

In pursuing detailed information about the living conditions and circumstances of all South Africa's inhabitants at national and provincial level in rural areas, the 1997 Rural Survey was conducted to seek data on actual farming activities. It was also to determine to what extent rural households in the former "homelands" had access to land and to income-generating activities. The survey found that about 31.4% of the population lived in rural areas in the former "homelands" of South Africa. The results also show that access to farming land is very important for rural households but this alone was not sufficient to ensure a proper livelihood (Statistics South Africa (SSA), 1999). The key findings also indicated that the overwhelming majority of households (93%) were engaged in subsistence farming but very little income was generated from the sale of a variety of crops, livestock and animal products. Only a small proportion (3%) of the 2.4 million households in the sample relied on farming activities for their main source of income. Rural households received other income such as salaries and wages from members of the households (SSA, 1999).

A number of important factors, such as gender, racial, urban and rural differences or inequalities have been identified pertaining to households and rural livelihood in KZN which is the largest province in the country, in terms of population size and is mainly rural. KZN has a great proportion (83%) of Africans compared to the national proportion of 76% (Orkin, 1998). The province is a relatively poor region, which needs assistance from the national and provincial governments to address the poor socio-economic conditions in the region and to provide services for basic needs of the households and communities (Schwabe et al., 1996). In addition, the topography of KZN contributes to the impoverishment of the region because of its characteristically steep slopes and rugged terrain that restricts the extent to which the land can be used for the growing of crops. Therefore, rural livelihood in KZN should be understood as the complex outcome of the historical context of poverty and inequalities of various factors. Some of these examples are the lack of resources with which an income can be generated, shocks such as drought, loss of employment, ill health, unexpected

death and long-term trends of being born in resource poor households that are trapped in poverty.

For many decades measures have been taken with limited success to alleviate and eliminate rural poverty. However, a livelihood approach has emerged as a framework for working with people, supporting them to build upon their own strengths and realize their potential. This approach acknowledges the effects of policies and institutions, external shocks and trends. Furthermore, it recognizes the complexity of rural life. Thus the livelihood perspective is considered to have a holistic outlook and endeavors to explain key causal relationships and influences in such a way that the information remains manageable (Carney, 1999). For the purposes of this thesis, an examination of the sustainable livelihood framework is appropriate because it provides an analytical tool for improved understanding of livelihoods in the context of poverty and vulnerability. For this reason a livelihoods approach is important at the micro-level of household because it puts rural people at the center of development (Farrington et al., 1999).

1.3 Gender dynamics in rural livelihood

As in all societies, men and women are assigned tasks, activities and responsibilities according to their sex. In most patriarchal societies, gender and power relations are skewed in favour of men; different values are ascribed to men's tasks and women's tasks (March et al., 1999). The structure of the sexual division of labour and the degree of rigidity of the separation between prescribed male and female tasks vary greatly. This diversity often impacts on the livelihood patterns of households (Durham, 1991). Gender roles and relations are significant in generating rural livelihood security. However, from multiple perspectives, women find themselves in subordinate positions to men. As in most societies, also in South Africa women are socially, culturally and economically dependent on men (Narayan et al., 1999). Both men and women play a role in the sphere of productive and community work, but women's contributions may be less visible.

The roles that women play in any given society vary. Women's positions are determined by legislation, religious norms, economic status or class, cultural values, ethnicity and types of productive activity of their country, community and household (Williams et al., 1994). Moser (1993) distinguishes a set of three roles women have in society:

- *Productive role:* This includes work done by both women and men for pay in cash or in kind. It includes both market production with an exchange-value and subsistence or home production with use-value, and also potential exchange-value. Men and women perform productive or economic activities, such as crop and livestock production, food processing, handicraft production, marketing and wage employment. But not all productive work is valued or rewarded in the same way, particularly in national statistics. This indicates that women's productive activities are often less visible and less valued than men's;
- *Reproductive role:* The reproductive and nurturing activities are assigned by the culture between men and women. These include childbearing and rearing responsibilities, care and maintenance of the household and its members, such as cooking, washing, cleaning, building and maintaining of the shelter. Girls and women perform most of the reproductive work. Reproductive activities are labour

intensive, often unpaid and time-consuming. Reproductive work is not counted in the national economic statistics;

- *Community management and politics role:* Community activities involve the collective organisation of social services and events at the community level; women undertake activities that are usually an extension of their reproductive role. Women participate in community projects to ensure the provision and maintenance of scarce resources of collective consumption. Examples of these are water supplies, child and health care and education. Community management roles include serving on committees related to women's perceived roles. This is usually unpaid work undertaken by women in their spare time. Community politics involve activities undertaken primarily by men at community level. This is usually paid work, either directly or indirectly, through status and power.

Moser (1993) identifies two types of gender needs resulting from the division of labour. Women have particular needs that differ from those of men because of their triple role. The first set of women's needs is described as *practical gender needs* (PGN). These arise out of gender division of labour and women's subordinate position in society but they do not challenge the status quo. PGN are practical in nature and often concern inadequacies in living conditions, such as water and fuel provision, health care, childcare, food preservation, processing and preparation and employment. *Strategic gender needs* (SGN) are needs that women identify because of their subordinate position in society. SGN vary according to particular contexts, related to gender division of labour, power and control, and may include such issues as legal rights, domestic violence, equal wages, and women's control over their bodies. Meeting SGN assists women to achieve greater equality and changing existing gender roles, thereby challenging women's subordinate position (Moser, 1993; Williams, 1994).

In patriarchal rural societies in Sub-Saharan Africa men's agricultural and productive work may result in a cash income, whereas women may be producing food for family consumption, and the cash value remains hidden (March et al., 1999). In community life, men generally have the role of public representation. However, women's role in community organisations may be crucial, but less visible. Women's work is time consuming, strenuous and taken for granted. Society and development programme planners do not value this work. Gender analysis studies reveal that inequalities in the relationships of women and men in South African society are still prevalent (Williams, 1994).

Since the colonial era, the majority of the able-bodied men left the rural areas KZN to engage themselves in non-agricultural activities in the mines, factories and services in urban areas. It has been estimated that at least 60 percent of rural households are female-headed (Williams, 1991). In general, predominantly rural areas have relatively young populations and children that are often left with their mothers while their fathers and male relatives migrate to seek work in industrial areas. In addition aged people form a larger portion of the population in rural than in urban areas, as they play important roles in extended family (Erasmus, 1995).

Firebaugh (1994) identifies *de jure* and *de facto* female-headed households as significant units for policymakers and makes a distinction between the two types of female-headed households. *De jure* female-headed households are those where the

male head is permanently absent as a result of death, divorce, and desertion and in the case of unmarried women, whereas in *de facto* female-headed households the husband is temporarily absent from the home half or more of the time. An increasing number of both *de jure* and *de facto* female heads of households face a number of constraints in fulfilling their productive roles, particularly in agriculture (Mrewa, 1996). After harvesting women perform a number of activities related to food production, namely transportation, winnowing, storage, processing, preservation and preparation of food. Women also contribute heavily in household chores of fetching firewood and water. It is clear that the essential precondition of raising women's contribution to rural livelihood security is to increase their access to capital assets and cash income (Mrewa, 1996). In female-headed households income and other resources are mostly spent on family well being, such as children's nutrition, health and education as compared to male-headed households (Firebaugh, 1994).

Female-headed households are increasingly becoming an important group in South Africa. They need support in generating household livelihood security. The South African Poverty Participatory Assessment (PPA) reports that many of the poorest households were female-headed. It is common to find a grandmother or single female left to look after the whole family (Narayan et al., 1999). Rural poverty interventions directly or indirectly affect and are affected by the household and gender relations. Therefore it is important to explore intra-household gender dynamics (Narayan et al., 1999).

As a result of rural-urban migration, women's triple role becomes an increasing burden. Though rural women's household activities are mostly unpaid and largely invisible in the national economic account, they contribute to human development (United Nations Development Program (UNDP), 1996). Reproductive work involves the care and maintenance of the household and its members, including bearing and caring for children, preparing food, collecting water and fuel, shopping, housekeeping and family health care. In poor rural communities, reproductive work is labor-intensive and time-consuming and is always the responsibility of women and girls (Moser, 1993). Productive work involves the production of goods and services. Both men and women can be involved in productive activities, such as agricultural production. However, women's productive work is often less visible and less valued than men's (March et al., 1999). Community work includes the collective organization of social events and services to improve the community and local political activities (Moser, 1993).

In rural areas, women and their children get involved in agricultural activities and income-generating activities. There are almost no opportunities for women to earn money to supplement the uncertain irregular remittances from migrant labourers. Frequently, the meager old age pension payments are the only source of income for rural households. Sometimes poverty-stricken rural women get involved in seasonal and agricultural work on nearby commercial farms (Williams, 1991).

In view of the lack of opportunities and access to employment, rural women continue to be involved in subsistence agricultural production and non-agricultural activities. However, meaningful agricultural production efforts have tended to concentrate on small-scale commercial or cash crop production, which is men's domain. Women are often subsistence farmers, limited to production for home consumption because of

several constraints, like lack or shortage of land, lack of credit facilities, inappropriate extension services, lack of inputs and access to markets. Despite low returns from agriculture, subsistence agriculture remains a significant activity for many households in the communal areas. Sometimes small proportions of income are derived from this source (RDP, 1996; SSA, 1999).

Because of the context of poverty and inequalities that prevail in rural areas, households have developed multiple income sources in non-agricultural activities. These include wage labor; small and micro enterprise activities, for example hawking; petty commodity production such as the making of clothes and handicrafts; money lending and child minding; claiming against the state in the form of pensions and disability grants; claiming against household and community members and illegitimate activities such as drug-trafficking and petty crime (Carter and May, 1997). According to researchers, rural women play a pivotal role in these activities. Hence, they make a remarkable contribution to rural livelihood generation. It has been recognized that independent income earning by women increases their influence over economic decisions of their households. Furthermore, the chances that income would be spent to the benefit of household members, especially children are increased (RDP, 1996).

In rural areas, women are responsible for the household's health-care as an integral aspect of their reproductive role. The spread of human immuno deficiency virus/acquired immune deficiency syndrome (HIV/AIDS) has an impact on both rural and urban households. Researchers have found that AIDS-related illnesses have detrimental effects on the effectiveness of various productive activities of rural households. Agricultural production as well as incomes are reduced. Thus the spread of HIV/AIDS makes rural livelihood options more limited (Ory, 1999). The most economically vulnerable female-headed households are those in which one of the following circumstances prevails: HIV/AIDS family member(s), landless households, households having children of adolescent unmarried mothers, households who migrate for employment and refugee households (Firebaugh, 1994).

Unlike other disasters of flood, earthquake, war or famines, the impact of AIDS upon the household through time is gradual and incremental over a 5 to 15 year period. Furthermore, AIDS has unevenly distributed impact between households (Barnett and Blaikie, 1992). AIDS related illnesses and death might affect access to both social and economic resources and the level and type of vulnerability in different types of households. The resources that are important to coping with AIDS in the household are labour; land; cash reserves; household skills of caring; parenting and managing the household in a crisis situation; income-generating activities and the wealth of relatives who may be able to help care for orphans and others (Barnett and Blaikie, 1992).

Bos and Leutscher (1995) assert that in AIDS affected households productive labour time of still healthy family members is diverted to caring for the sick. Hence the production output is decreased. They also state that the unusually high levels of illness and death among young children and the economically important 15-45 years of age groups reduce agricultural productivity and deteriorate household food security. Households confronted with AIDS use a number of coping strategies, such as migration to assist sick family members, relatives and neighbours (Bos and Leutscher, 1995). The pandemic of HIV/AIDS is having a negative impact on the household

livelihood security. Affected households need sustainable coping strategies to overcome livelihood insecurity.

The latest national survey of HIV prevalence among women attending antenatal clinics in October/November 1996, found that an average of 14% of pregnant women were HIV-positive, giving a total estimate of over 2.4 million HIV-infected people in South Africa (May, 1998). Therefore this epidemic threatens rural livelihood security and it is particularly the poor females that are vulnerable to HIV/AIDS.

1.4 Rural development extension systems

Extension services are a key link for increasing food production and transforming rural household economies to contribute effectively to livelihood security. In KZN, agricultural and home economics extension delivery systems are among the few institutions directly serving poor rural households to promote rural development (KZN Department of Agriculture, 1996). These systems are however, patterned after United States of America's (USA) models, which traditionally separate household and agricultural production (Weidemann, 1985). Consequently, extension services tend to overlook the vital economic roles of rural women in agricultural production and livelihood security. Home economics extension services respond selectively to women's domestic and reproductive activities, whereas agricultural extension services serve the productive role of men. Currently, home economics extension programs marginalize women from developing their full potential in both commercial and subsistence agriculture. Although women's roles in agriculture have been widely discussed and well-documented, agricultural and rural development extension delivery systems are still geared to reach male small-scale farmers. Rural women are discriminated against in accessing resources to improve their food production. As Boserup already stated in 1980 that women in developing countries, did not easily access adequate land and agricultural inputs, such as fertilizers, seeds, credit and appropriate extension service, her statement is still valid even today. The Directorate of Agricultural and Rural Development of the KZN Department of Agriculture provides home economic support services geared towards women and girls. The Home Economics Division provides training in income-generating activities, such as sewing, cooking, baking and nutrition (KZN Department of Agriculture, 1997). Extension programmes directed at women's domestic activities are inadequate and inappropriate even when they include vegetable production and small livestock husbandry.

The prevailing types of rural development extension delivery systems in KZN indicate that planners and researchers give recognition to the traditional planning stereotype of the USA model. Despite the drastic changes in provincial government policies since 1994, rural extension systems in KZN are still based on outdated and inappropriate approaches for serving the rural population. Often an assumption is made that the rural household structure consists of a nuclear family of husband, wife and their children. It is also taken for granted that there is a clear gender division of labor where a man is a breadwinner doing productive work outside the home, such as agriculture. The wife is responsible for all reproductive activities of caring for the family and related domestic tasks in the home (Moser, 1993). Within planning and implementation of extension programmes, little attention has been paid to the understanding of the household and its influence on rural livelihood security.

1.5 Indigenous rural people's knowledge

The knowledge of the indigenous people is practically invisible in the official history of South Africa. As a result of colonial rule and apartheid regime, African people were perceived as backward, uncivilised and unknowledgeable. The realities and criteria of living were adopted from European and North American countries without any attempt to connect or adapt to local practices. Indigenous knowledge (IK) comprises ideas, experiences, practices and information that has been generated locally, or generated elsewhere but has been transformed by local people and incorporated in the local way of life. It contains more information on local diversity and complexity than scientifically derived knowledge (Van den Ban and Hawkins, 1996).

According to Davis and Ebbe (1993), indigenous people consider IK part of their overall culture and vital to their survival as people. Much of the existing IK is based on work in agriculture and food systems. Generally, in indigenous rural communities, everyone has a detailed familiarity with the environment. However, IK relating to local, complex, diverse, dynamic and unpredictable realities of rural people's livelihood is often undervalued by researchers (Chambers, 1997). In examining the role of IK in generating livelihood security, it is essential to identify and comprehend how gender differences influence the structure of the overall indigenous knowledge systems. The gender aspect in agriculture is particularly significant in examining the holistic perspective used by rural communities in diversifying ways of securing their livelihoods. IK at household level can play an important role in rural livelihood security.

1.6 The research problem

Despite the wealth of South Africa in terms of the country's capita Gross Domestic Product (GDP), the experience of the majority of the country's households is either one of outright poverty, or of continued vulnerability to become poor (FSWG, 1997). Over one-third (36.4 %) of all households in South Africa and 49 % of all people can be classified as being poor. Approximately 50 % of all households in rural areas are poor and 68.1 % of people living in rural households live in poverty. According to a composite indicator showing access to basic needs, 72 % of rural African households live in conditions, which could be described as inadequate or intolerable. A strict bias is apparent with 83 % of women-headed households falling into these groups as compared to 62 % of male-headed households. Three frequently attempted livelihood strategies used by rural households are agricultural production, claims against the incomes of migrant household members, employment in the secondary labor market and claims made against the state for pensions (May et al., 1995). The situation of poverty is manifested in ill health, food insecurity, illiteracy and many such related conditions.

KwaZulu-Natal is one of the three provinces with the lowest HDI in the country (HSRC, 1996). Statistics and surveys throughout KZN indicate that the incident of poverty is higher in rural than in urban areas. The number of rural women is ever increasing, mainly as a result of rural-urban migration. Hence *de facto* female-headed households are prevalent in rural areas. In recent years HIV/AIDS is having an impact

on households where one member, most often the father has HIV/AIDS, will also become *de jure* female-headed. A number of research studies have repeatedly emphasized the plight of rural women, children and the youth in rural communities (May, 1996). The impact of HIV/AIDS on households includes high costs of prolonged illness as expenditure on health increases. Some households incur debt in order to meet additional health costs. Often income is lost and relocation of work and domestic responsibilities need to be organised (Barnett and Blaikie, 1992).

Rural households in KZN have limited access to assets, and highly constrained options for the use of available assets. About 5 % of the population can be viewed as destitute, with effectively no prospect of livelihood security. Furthermore, 15 % are highly vulnerable to falling into this position. Fourteen percent of households earn wages and 8 % combine such employment with other activities including accessing pensions, remittances from other household members, agricultural production and petty trading (Initiative for the Development and Equity in African Agriculture (IDEAA), 1999). Rural livelihood systems are often under constant change and affected by physical, environmental, economic, social and political factors (Elliot, 1994). A rural household usually engages in several or many livelihood activities over a year. However, researchers sometimes overlook the diversity and complexity of rural livelihood and survival strategies. Livelihood security is basic to well being of individuals and households. According to Chambers and Conway (1992) livelihood security depends a lot on policies that affect agricultural and rural policies.

It is against the background of widespread poverty and inequalities in rural South Africa that this research project focuses on the empirical reality of the rural households in the study area in KwaZulu-Natal. By examining and analyzing the household, this study will indicate that the intra- and inter-household dynamics and variables within the household are significant to rural livelihood security. It is envisaged to build a new theoretical framework that would give direction to planning and implementation of appropriate extension delivery systems in rural areas.

This study regards the household as an essential micro-level unit of analysis and planning in securing rural livelihood. Therefore the main goal of this research project was to gain an insight into the role of the households that provide support to the rural population and their influence on livelihood security. Thus the research problem was formulated as follows:

To determine the role of the rural household in achieving livelihood security and the appropriateness of extension services in supporting and enhancing this role.

1.7 Research objectives

For the purposes of this study, the objectives were categorized into three, namely descriptive, theoretical and applied objectives.

The *descriptive objectives* were to:

- Present a descriptive picture of KZN rural households with respect to the structure and composition; role of gender and generation; the household division of labour; capabilities, power and authority and the household life course;
- Describe household livelihood indicators, such as resources and assets; income and expenditure;
- Describe the indigenous knowledge systems relevant for livelihood generation and food security;
- Describe the effect of seasonality on the household's livelihood security;
- Identify felt and unfelt practical gender needs.

The *theoretical objectives* were to:

- Examine the concepts of household and livelihood security and the relationship between them in a (South) African rural setting;
- Analyze how households function, utilize resources and assets and how they contribute to food security and livelihood security;
- Analyze the concept of household and its appropriateness for the African context;
- Identify coping strategies of the household;
- Construct a model on how households relate to livelihood security;
- Examine practical gender needs at the micro-level in relation to the wider institutional environment, and determine the relationship between practical and strategic gender needs.

The *applied objectives* were to:

- Examine the role of agricultural extension services in enhancing rural household livelihood security;
- Analyze the role of gender in constructing livelihood security;
- Examine the role of indigenous knowledge systems in constructing rural livelihood security;
- Examine how food security is embedded in livelihood security;
- Contribute to the food security policy development process in South Africa;
- Contribute to the development process of the extension methodology policy in KZN.

1.8 Research questions

Based on the three categories of the research objectives of the study, the researcher posed the following research questions:

- How do household structures and processes relate to rural livelihood security?
- How appropriate is the concept of household in examining rural livelihood security and household food security in an African context?
- What is the significance of gender in rural livelihoods and indigenous knowledge systems to the agricultural extension services in supporting rural livelihood security?
- What is the role of agricultural extension in enhancing rural livelihood security?
- What is the significance of IKS to agricultural extension services in support of rural livelihood security?

- How does agricultural extension service staff approach issues of gender and indigenous knowledge?

1.9 Outline of the thesis

The following Chapter 2 discusses the conceptual and theoretical framework based on existing literature. The main concepts are: the household; gender; livelihood system and its components; resources and assets – social capital, human capital, physical capital, natural capital and financial capital; rural livelihood strategies; household resource management; household food security; livelihood outcomes; vulnerability and rural livelihood security. The conceptual and theoretical framework presents the key variables and their relationship in guiding the inquiry of the study and theory building.

The research design and methods used in collecting data is presented in Chapter 3. It gives an explanation on how a sample was selected, instrumentation, pilot work, and training of interviewers, limitations of the study, the plan for data analysis and the time schedule of the study. It also presents the profile of the research area of two districts, namely Ubombo and Umthunzini in KZN. It also examines their demographic and socio-economic profile.

Chapter 4 discusses the profile of households and their livelihoods in the area of study. It examines the household structure and livelihood processes and multiple activities and strategies undertaken by households to generate livelihood security. These include agriculture, employment, non-agricultural activities, migration, and investment in education and intervention programmes.

Chapter 5 examines livelihood of female-headed households and discusses livelihood entitlements in households that live on old age pension.

In Chapter 6 the indigenous knowledge as an asset in constructing livelihood security is presented. It examines the role of different knowledge held by men and women. It stresses the significance of gender awareness in determining types of IK that may be shared by households and communities.

Chapter 7 examines the role of agricultural and rural development extension services in livelihood security. It discusses gender differentiation in the extension service delivery system and how it impacts on the livelihood security of rural households. Furthermore it discusses extension approaches, provincial government policies on agriculture and rural development, poverty alleviation programs and their coordination and empowerment of the rural households.

Chapter 8 discusses the role of the household in constructing rural livelihood security. It includes the appropriateness of the household concept to the African setting and the support or lack of it in playing this role.

Chapter 9 presents the conclusions and recommendations.

This chapter explores the conceptualisation of the household as the unit of the study's analysis, with emphasis on the rural livelihood system and its components. It also examines the relevant concepts and their interrelationships in generating rural livelihood security. The aim is not only to make an inventory of concepts but also to add to the theory of the significance of the household to rural livelihood security. The broad conceptualisation of the household and rural livelihood security needs differentiation and theoretical elaboration. Therefore, this study used a systems approach in formulating the conceptual and theoretical framework that guided its operationalisation. A systems theory was developed as a model to describe and explain the dynamic interrelationships of the system's components, which mutually and continually influence each other (Dallos, 1995). A systems approach uses a holistic perspective as it examines the whole rather than parts or components. Hence this chapter examines rural livelihood as a system. However, the concepts and their relationships were analysed to establish a total pattern of relationships that were important in generating rural livelihood security. Thus this chapter views the rural livelihood as an integrated set of concepts that function to accomplish positive livelihood outcomes that reflect livelihood security. The establishment of the interrelationships between the household and rural livelihood security was important for the formulation of a theoretical framework.

The household is considered from an ecosystems perspective. Deacon and Firebaugh (1988) consider ecosystems as the totality of organisms and environments that interact independently. Families and households are placed in the overall context of society and are recognised for their significant role as micro-level units in our complex societal environment. The household depends on and interacts with various external systems in the macroenvironment and vice versa. It depends on all levels of government, the private sector or businesses, Non-governmental organisations (NGOs) and community-based organisations (CBOs). The microenvironment is made up of physical habitats, including homes and yards and social aspects relating to kin, friends and neighbours. The household is part of the microenvironment. The household interacts with the microenvironment through societal systems: socio-cultural, political, economic and technical, and the natural and structured surroundings (Deacon and Firebaugh, 1988). Systems theory emphasises not only interconnectedness of the components of the system, but also the interaction or interface between different systems (Goldsmith, 1996). An interface is the common or shared boundary of systems. Bristor (1995) asserts that systems are entities with boundaries on a continuum ranging from opened to closed. This indicates how much and how little will be allowed to come into the system in the form of information or resource. Household systems cannot be completely open or closed, thus boundaries of many household units are flexible.

However, the essence of systems theory is the emphasis on how the interaction of concepts affects the whole. The system framework is a useful way to organise data to help understand a situation better. Its flexibility allows us to define systems and their boundaries in a number of ways tailored to the issue of focus (Bristor, 1995). Consequently, the concepts are first examined and discussed. At the end of the chapter a theoretical framework is presented, using a systems approach. The household is the

core of analysis. It is the immediate context within which the provision for primary needs and livelihood generation take place (Niehof and Price, 2001). The *inputs* of the livelihood system are assets and resources brought in to facilitate the performance of household activities and processes in order to generate livelihood security. In the livelihood system, the processing of inputs through livelihood strategies is called *throughput*. The end results or outcomes of the household livelihood strategies and activities are referred to as *outputs* of the system. Livelihood security represents the desired output of the livelihood system.

This study regards the household as the level of analysis for researching rural livelihood. Based on the research questions stated in the previous chapter, in this chapter the following concepts will be examined: *household; family; gender; rural livelihood system and its components, namely resources and assets; rural livelihood strategies; household resource management and household food security; livelihood outcomes and vulnerability; rural livelihood security*. After an examination and discussion of the concepts, a theoretical framework of the study is presented.

2.1 The household

In this study the household is a micro-level unit of analysis and action. The household has been chosen as the unit of analysis because it is the level that mediates between the realities and choices perceived by individual members and the abstract level and constraints imposed by larger external societal, political, economical and social factors (Wolf, 1991). There are numerous definitions of the household in literature. The concepts of family and household are often regarded as interchangeable, but they are not. The household is the most important institution in which rural people live. It is a basic unit of society where individuals both cooperate and compete for resources. It is a primary place where individuals confront and reproduce societal norms, values, and power and privileges (Narayan et al., 1999). Pennartz and Niehof (1999) define the household as a social unit comprised of individuals of varying age and both sexes who over a long period of time are enabled to pool income from multiple sources in order to ensure their individual and collective reproduction and well being. The household is considered “the scene of economic allocation, arranging collectively for food, clothing and shelter of its members, and seeking to provide for these needs over the long term with some measure of security against uncontrollable disruptions of the climate, the market economy and the state” (Netting, 1993: 16). Its form depends upon cultural norms, environmental conditions and local circumstances. The household is a social unit that combines production, distribution, transmission and reproduction (Clay and Schwarzweller, 1991; Netting, 1993). It is common that members of the household are biologically related and share a common residence.

The boundaries and composition of the household are subject to continuous change as a result of alterations in the basic economic system, constraints on housing or redefinition's of kinship obligations (Kunstadter, 1984; Wallerstein and Smith, 1992). Spijkers-Zwart (1980) describes the household as a group of people who live in a common residence and are obliged to perform interdependent activities directed towards the satisfaction of their needs. In a rural situation, reproductive and economic or productive activities take place in the domestic sphere or household (Clay and Schwarzweller, 1991). Many household tasks are classified as non-work and non-

productive because they are performed in the private sphere or home domain as opposed to those carried out in the public sphere or workplace.

The private sphere or domestic domain is often devalued as it is linked to women's reproductive function of childbearing, childcare, food preparation and domestic work. However, it is essential in meeting basic needs of individuals and households. In contrast to the private sphere, the public sphere is valued and associated with men. It emphasises the global goals of governance in order to maintain public order and to monitor the production, acquisition and distribution of resources through political and economic systems (Thompson, 1995). There seems to be a need to reconceptualise the dynamics of and the relationships between productive and consumptive activities taking place in the rural household and inter-household activities in the community. Furthermore, an examination of the interaction between the household unit and physical, environmental, demographic, socio-cultural, economic and political factors is important. An analysis of these intra- and inter-household dynamics is significant in planning and implementation of extension programs (Guyer and Peters, 1987).

For the purpose of this study, a definition by Rudie (1995) was considered as an adequate point of departure to describe the household. It reads: "A household is a co-residential unit, usually family-based in some way, which takes care of resource management and primary needs of its members." (Rudie, 1995: 228). This definition was chosen because it has three important dimensions of household livelihood, namely residence, family and resource management. These dimensions are critical in satisfying primary needs of households.

In South Africa, the household is complex and dynamic with boundaries that are constantly shifting. The diversity and complexity of rural households increases, particularly where rural-urban migration is prevalent. Homestead membership boundaries are difficult to define between those who reside in rural areas and those who reside in the urban areas of employment. Often homestead members who leave their rural home to join or create other households in urban areas do not lose their homestead membership nor kin-based responsibility to contribute to the support of various homestead members in cash or in kind (Russell, 1993). It is common to find individuals who are linked to more than one household but to one homestead. Consequently, assets and resources of such individuals are thinly distributed in more than one household.

In their study of rural poverty in South Africa, Carter and May (1997:12) identify the following eight categories of households:

- Marginalised households have no access to wages or remittances from formal sector opportunities, and have no access to welfare transfers (in the form of pensions);
- Welfare dependent households have access to welfare transfers (pensions), and receiving no wage or remittance payment;
- Remittance dependent households have access to a remitted income, although no wage is received. Transfer payment may be present;
- Secondary wage dependent households have wage income earned by people living at home employed in the 'secondary' labor market³;

³ The secondary labour market is the formal workplace outside the home or domestic domain.

- Primary wage dependent households have access to wages earned by people living at home employed in the ‘primary’ labor market⁴;
- Mixed income households with secondary wages combine wages earned in the ‘secondary’ labor market;
- Mixed income households with primary wages combine wages earned in the ‘primary’ labor market with small business and other self-employment income;
- Entrepreneurial households earn incomes in excess of R1000 per month from agricultural activities, and/or business activities.

These categories refer to different packages of claims made by the household. They can be regarded as comprising households with common sets of survival or livelihood strategies. Sometimes, households can move between categories as the socio-economic status of their members’ changes over time. Since the household is family-based, it is important to examine the concept of ‘family’.

Family

The concept of *family* and *household* are often treated as interchangeable, but they are not (Jelin, 1991; Marsh and Arber, 1992). The family is comprised of individuals who are related by blood or marriage whereas households are not always family-based units. A household may comprise unrelated persons, such as colleagues, friends, lodgers or lone individuals. It is however, acknowledged that most households are family-based (Chant, 1997). The limits of the household and of the family are extremely permeable but there is a lack of conceptual clarity about the overlap (Marsh and Arber, 1992). In the definition of Rudie (1995), the family is one of the three dimensions of the household. The family has a biological substratum related to sexuality and procreation, constituting the social institution that rules, channels and confers social and cultural meanings to these needs (Jelin, 1991; Pennartz and Niehof, 1999). The family is part of a larger network of kinship relations whose members are related either genetically or by marriage. In most societies, such as South Africa, the family unit has a formal, legal definition. The law and social roles and principles specify who may marry whom (Marsh and Arber, 1992). The family constitutes an interacting social group that shares residence, cooperates economically and shares activities related to daily maintenance (Jelin, 1991).

Kinship

Kinship is an important aspect in describing a family-based household. It is the most basic principle of organising individuals into social groups, roles and categories. It is the socially recognised relationship between people in a culture who are, or held to be, biologically related.

Members of a kinship group are given the status of relatives by birth, marriage, adoption, or other acceptable ritual. In the context of KZN, kinship units normally have a larger number of relatives, which include an array of functions to perform. There are certain demands and expectations placed upon the members. In KZN, a kinship unit usually includes the nuclear family of two parents and their children, members of the traceable extended family and all people with the same surname. In KZN descent is traced through the male in a patrilineal kinship system. Maternal relatives are important as well, as long as their descent is traceable. All persons with

⁴ The primary labour market is the informal domestic or local domain.

the same surname as an individual's mother are regarded as relatives. As a result of dynamic social changes, it is common for unmarried women to have children out of wedlock. These children are incorporated into their mothers' kinship network. They are often given the surnames of their mothers. They grow up under the guardianship of grandparents. If the grandparents die, they become the responsibility of the eldest uncle. Kinship units serve various functions, such as production, political representation and even religious duties for the worship of ancestors, who are considered members of the kin group. The kinship structures reinforce cooperation in formulating livelihood strategies. In times of shocks and stresses, members of the kinship unit help support each other in accessing limited resources.

For both the household and family, activities of production and consumption of goods and services are important. These require time and work provided by members. The provision of assets and resources of a collective nature is an important input into the household. At a higher level, the state provides public services, such as transport, electricity, water, sanitation, educational, health and social welfare facilities, agricultural and rural development activities. These are geared to the maintenance of the community as a whole (Jelin, 1991). Members of households and families who are not self-sufficient to meet their basic needs, for example the elderly, sick and disabled, are usually supported by the state in South Africa. They either get a monthly old age or sick pension or disability grant from the Ministry of Welfare.

The boundaries between the household, family and homestead are extremely permeable. The degree of participation in household activities and commitment is determined by social norms that govern the differential commitment expected from the various members according to their position in terms of age, sex, and kinship ties with other members (Jelin, 1991). However, this study considers the household as the basic socio-economic unit that contributes significantly to rural livelihood because of the three dimensions that it includes.

Homestead

Traditionally, African society was organised around the extended family. In polygynous societies, daily livelihood was organised around a mother and her children. The husband of many wives and father of their children was the head of the homestead⁵ or *umuzi*. It was the responsibility of the mother to provide for the daily needs of her children and relatives. In such a family setting the husband and father might be absent for long periods of time hunting or visiting other relatives and other wives. For the purposes of rituals and ceremonies, the extended family included a number of descendants of a common male ancestor. These people are always expected to attend and participate in funerals, weddings and other traditional ceremonies (Armstrong, 1997). Despite social change, this type of organisation is still prevalent in KZN. Like in other Southern African countries, such as Swaziland, the common form of domestic organisation in KZN, is the landholding patrilineal homestead or *umuti* (Russell, 1993).

⁵ The family-base residential dwellings, animal units and the adjoining tracts of land in the isiZulu language are called *umuzi*.

The homestead fulfils the functions of providing a residence for its related family members and a place where resource management takes place. The homestead is the permanent of both the rural dwellers and the migrants who work away from home. Findley (1997) emphasises that migrants who have lived in cities for many years often continue to view the village of birth as their permanent home. Throughout their working lives migrants send remittances to rural homesteads as an investment for their retirement. They also prepare for continued participation in homestead customs and rituals. As a result of rural-urban migration, some members of the family live apart most of the time. Often the linkage between the rural homestead and the urban home is maintained through exchanges of financial, human, physical and social assets. These assets will be explored later in this chapter. Men could be working and staying in urban areas, while women and children live in rural areas. Sometimes women live in urban areas with or without their children as migrant workers. Relatives also live together. Armstrong (1997) asserts that the family in southern Africa represents a change of traditional aspects of living together and co-dependence of members. In patrilineal societies, family members were co-dependent, resided together, shared food and labour and participated in rituals. However, as a result of rural-urban migration, family members might not share a common residence but they remain dependent upon each other.

According to Ellis (2000) the homestead unit is the broadest social grouping in South Africa. The homestead unit membership includes those individuals who have the right to be based in it and to participate fully. There are sub-units of the homestead, such as nuclear families, unmarried women and their children. Some members reside in the homestead permanently and others provide mutual support by sending remittances from urban areas. Often the homestead fulfils the three functions of the household as described earlier in this chapter. When that happens the definition of the household and that of the homestead overlaps. In rural KZN three types of homestead settings can be identified: a homestead occupied by one extended family-based household; an extended family in more than one household that occupies one homestead; more than one household in more than one homestead occupied by an extended family. This often happens in cases of polygamous marriages, with wives who live in separate homesteads and the husband is the head of their homesteads. However, the homestead includes all those who live in it. Also migrants, who are more or less permanently away, are still regarded as members of their homestead of origin.

As a result of industrialisation and urbanisation in South Africa, KZN rural people have redistributed themselves throughout the country through rural-urban migration. This also leads to larger and more extended families in cities. In cities the family is an important means by which the members can absorb shocks and face risks of failure in economically insecure times. Furthermore, studies have shown that in all African settings where rural-urban links exist between members of the extended family, there is evidence of commitment by both rural and urban kin to maintain linkages (Findley, 1997). Periodically members of the extended family return to their rural homestead. The homestead is regarded as the main home where members of the extended family meet. It is where family ties are strengthened. Family members meet to conduct family ancestral rituals and ceremonies, resolve intra-familial conflict and to discuss matters of importance to the family. The homestead always provides a ready fallback option for the extended family members who lose employment, need permanent linkage with ancestors and those who retire at the end of their working career.

Headship

Household headship is always an issue in census and survey data on economic activities and the social, housing and environmental conditions of the households. Identification of household members through their relationship to the head of the household is important for census and survey data collection. Different household units are identified through the head of household (Adegboyega et al., 1997). Headship helps to identify main economic activity of the household. This identification leads to finding out about the source of income for the household. Hedman, et al. (1996) state that the term head of household is used to cover a number of different concepts referring to the main economic provider. It includes the main decision-maker and the person who is designated by others as the head. In a Western context the definition of head of household reflects the stereotype of the man in the household as the person in authority and the breadwinner (Moser, 1993).

The concept of headship carries a number of assumptions. It assumes the existence of hierarchical relationships between household members. The head is considered as the most important economic provider and has overriding authority in important household decision matters (Budlender, n.d.). Within Statistics South Africa (Stat SA), a head of household can either be male or female or the person who assumes economic responsibility for the household. The interest in household headship arises because of the perceived differences between households headed by women and those headed by men. Women-headed households have become a cause for concern and are perceived as a vulnerable category. Chant (1997) asserts that women's critical responsibilities in household life are under-acknowledged. She points out that in many countries, household headship is often integrally bound with masculinity. Men are exerted with authority as household heads.

In rural South Africa, household headship becomes difficult to define in situations of polygamous families and rural-urban migration. Considering the dimensions of Rudie's definition of the household, the sharing of residence in polygamous families does not take place. None of the wives stay with the husband on a permanent basis but he has control over the economic and social household decisions that each co-wife may have to make. Sometimes senior members of the husband's extended family sanction women's decisions rather than the husband. In cases of migration, husbands are away from the homestead most of the time but they are still considered as heads of households. Thus their wives become *de facto* heads of households in their absence. Among rural people in South Africa, headship is not based on the role of economic provision. It is mainly based on sex, blood relationship with other members and the person's age. Members in a three-generation household can regard the grandparent as the head. This can be the case because of age and position of the grandparent in the extended family. Pensioners exert significant control and power within households because their social pensions provide a source of income.

2.2 Gender

Gender is an old word that has taken on a new meaning containing a set of inter-related ideas. In order to understand its meaning, it is fundamental to make a distinction between sex and gender. *Sex* refers to physical or biological differences of the body between men and women (Giddens, 1993). However, *gender* is socially

constructed. The term refers to the psychological, social and cultural differences between males and females (Giddens, 1993; Williams et al., 1994).

It is important to understand that boys and girls are socialized to become men and women, respectively. From an early age gender differentiations between boys and girls are developed in the household. Giddens (1993: 166) asserts that "early aspects of gender learning by infants are almost certainly unconscious." Society defines what is masculine and feminine behaviour and the activities that are regarded as appropriate for males and females and how they should relate to each other. What individuals learn depends on the household and society into which they are born, their position within it, their relative poverty or wealth and their ethnic group (Williams et al., 1994). For unlike sex, gender roles are different and change over time. In some societies, such as in the Sub-Saharan Africa, women are farmers. They produce between 60 and 80 percent of agricultural products. Yet their key role as food producers is only recently becoming recognised (FAO, 1998). Sometimes as a result of migration, war, desertion of married women by their husbands, the custom of having a man as the head of household has been modified to enable women to take the entire responsibility of the household (Williams et al., 1994).

Gender roles and division of labour

In all societies, men and women are assigned tasks, activities and responsibilities according to their sex. The actual pattern of men and women tasks is based on each society's beliefs about the productive functions of the sexes (March et al., 1999). However, gender-specific roles and responsibilities are often conditioned by household structure, access to resources and local conceptual boundaries at national and international levels. Relations of power between men and women are manifested in a range of practices, such as the division of labour, intra-household food distribution and decision-making (Rogers, 1990). South African women, particularly in rural areas are mostly disadvantaged or excluded in relation to social and economic resources and decision-making. Power relations that prevent women from realisation of their full potential operate both in private and public spheres (CGE, 1996).

At household level, each member performs certain activities usually on the basis of gender and to a lesser extent on the basis of age and status. These activities are classified into three major categories discussed in chapter one as reproductive, productive and community management activities. The division of labour seems to be quite culture-specific and the rigidity of gender division of labour is quite variable from one culture to another. Rogers (1990) states that sometimes men take over women's traditional tasks of food production when new technology or the development of cash markets is introduced and there are profits. Thus in such cases women become economically disadvantaged.

Bhattacharya and Rani (1994) emphasise that household activities are an essential contribution to generation of livelihood security through utilisation of assets and resources, for example social, human, physical, natural, economic, and financial capital. Therefore, an understanding of intra-household gender dynamics is important in identifying the roles and responsibilities of various members of the household. This also includes an understanding of their access to and control over resources and benefits under prevailing institutional norms and mechanisms. In many settings,

particularly in Africa, household members have unequal access to the goods owned or obtained by the household. Access to food, health and education is often based on the perceived economic contribution of the members (Rogers, 1990). Even distribution of food within the household often fails to meet the needs of all members when available quantities are inadequate. In rural South Africa, there is discrimination against women and girls in household food distribution (Ndlovu, 1983).

In its policy paper on gender transformation, the Commission on Gender Equality (CGE) states that in South Africa, gender relationships are structured in a hierarchical form so that women are subordinate to men and have less power, opportunity and access to resources. Furthermore, the CGE states that an analysis of the features of the present division of labour indicates that:

- Women are subjected to inferior status;
- Women carry an unfair burden of reproductive work;
- The reality of women's role and involvement outside the home is ignored;
- Men are denied the opportunity to care and nurture (CGE, 1996).

Gender needs

Gender needs are important in development planning. It should be considered that women have particular needs that differ from those of men, not only because of their triple role, but also because of their subordinate position in terms of men. Moser (1993) distinguishes two types of gender needs. First, *practical gender needs (PGN)* arise out of gender division of labour and women's subordinate position in society. The PGN are a response to immediate perceived necessity, identified within a specific context, such as water provision, child and health care and employment. Second, *strategic gender needs (SGN)* assist women in achieving greater equality and changing their existing roles, thereby challenging women's subordinate position. Examples of SGN pertain to legal rights, protection against domestic violence and equal pay for equal work.

As a result of migration by men to seek employment in urban areas and the impact of the HIV/AIDS epidemic, a high percentage of rural households in South Africa are headed by women. It is common that female-headed households are concentrated among the poorer strata of society and often have lower income and assets than male-headed households. This is the case because females in rural areas of developing countries often do not have equal access to education and wage employment. Often male migrants find it difficult to send money to their families in rural areas because the cost of living is high in urban areas. Their wages are sometimes only sufficient to cover their own individual expenses. In many cases when remittances are sent home, they are controlled by the husband's kin (Findley, 1997).

Firebaugh (1994) identifies the most economically vulnerable female-headed households as including those: with an HIV/AIDS member; landless households with a single earner; with children of adolescent unmarried mothers; who migrate for employment or for political conflict and war. Furthermore she states that a female-headed household in which the mother becomes HIV positive is extremely vulnerable as she develops AIDS. When the mother dies, she leaves orphaned children. Landless female-headed households with one income earner who is unable to work become vulnerable to food insecurity and starvation. Unmarried adolescent motherhood may

have a negative impact if the mother lacks an educational level that would enable her to earn an income that is sufficient for her needs and those of her children. Rural-urban migration creates vulnerability as it involves the husbands who depart to urban areas and other rural areas to work. They leave behind wives as *de facto* heads of households. Women who are left behind have major reproductive obligations. They are responsible for food production and have non-agricultural responsibilities. They also take on new responsibilities of their migrant partners hence their workload increases. In southern Africa decision-making about migration is made in conjunction with the head of the homestead. Thus the parents, uncles and women with authority in an extended family have a say in the decision. Consequently, most migrants send remittances to the homestead head and not to their wives. The head of homestead decides on how money is allocated (Findley, 1997). Therefore female-headed households remain economically vulnerable.

The problems of female-headed households in rural areas vary according to their degree of access to productive resources. Rural women play a key role in household food security. However, they often lack access to and control over resources that are critical in the development of food security strategies. These include access to land-use rights, credit facilities, agricultural inputs, appropriate technologies, education, training and extension services and decision-making at household, community and national levels (March et al., 1999). Gender asymmetries in household resource allocation limit women's ability to adopt productivity-enhancing technologies hence the quantity of their harvest is negatively affected. Findley (1997) asserts that there is evidence the women farmers tend not to receive agricultural extension assistance. They have difficulty in negotiating loans for fertilisers or other inputs. Whenever, food is limited, women give preference to children and everybody else in the household. They are the last to get food hence they are more vulnerable to malnutrition and ill health than men. Unequal gender relations within the household and the community are influenced by social mechanisms and ideologies that women are inferior to men (Abbas, 1997). The female-headed households remain an important segment of the rural population in South Africa with gender needs that should be addressed. Female-households are a heterogeneous group that Chant (1997) classifies into: lone female; single-sex/female-only; female-dominant; grandmother-headed and embedded female-headed units. The female-headed households will be discussed in Chapter 5.

Since the establishment of the democratic South African government in 1994, there has been an increased awareness of gender issues in policy papers and documents (NDA, 1995). Furthermore, the government has put in place strategies to promote gender equality at national and provincial level in order to ensure effective development interventions. The main goal of government policies and plans is mainstreaming gender. This means to integrate gender concerns into every organisation's priorities and procedures in the public and private sectors and in non-governmental organisations (NGOs). The principle of equality is a key objective of planning processes, policies and programmes. It is hoped that the implementation of the principle of equality would address both the symptoms and root causes of problems caused by gender inequality impacting on rural livelihood security.

Contemporarily, the African family in KZN still has productive, reproductive, ceremonial and other functions as prescribed in traditional law. The rural community

recognises the family as legal authority and representative. According to the traditional law, the legal functions of the family were based on hierarchies of gender, age and position. Men took the lead in representing families' interests in the community. In addition, older men and women traditionally have authority over younger men and women. Men and the older generation have the power to access and distribute resources, including land (Armstrong, 1997). It is documented that in patrilineal societies, women as well as young family members have less authority in the household. However, with access to wage employment, women and younger people have the power that comes with money. Sometimes the old generation finds it difficult to enforce their decision on young household members on whom they are financially dependent. While men often fail to impose their decisions on women who have independent access to economic resources. The power hierarchies based on age, gender and position in the family are weakening because of socio-economic change. But spiritual belief systems remain the foundation of values, such as respect for elders and ancestors in order to achieve success, happiness and fortunes (Armstrong, 1997). Consideration of strategic gender needs (SGN) in the prevailing practice of traditional law in rural areas of KZN, it becomes difficult for women to focus on them. More emphasis is on practical gender needs (PGN). One of the SGN that needs attention is violence against women, in particular wife battery and sex violence. Mbugua (1997) considers domestic violence to be extremely widespread in Africa but it remains largely unquantified and undocumented. African women have not been empowered to address this strategic gender need.

The concept of 'gender' has implications for the household and livelihood security. It is important in transforming ideas about the existing extension services into strategies and actions, particularly in household food security and improved policy-making and planning. For sustainable livelihood security, it is important to ensure that women, as well as men, have the support and access to the resources that they need to pursue an improved quality of life. Gender is an integral and inseparable part of rural livelihoods. Men and women have different assets, access to resources and opportunities. As a result of social discriminatory practices in rural South African households, female children often have lower access to education than male children. Their access to productive resources as well as decision-making tends to occur through the mediation of men. Women's disadvantaged position in society should be considered in any programme to improve household livelihood security (Ellis, 1999).

2.3 The livelihood system and its components

The concept of livelihood system allows for a more comprehensive and holistic understanding of the context of poverty. The system can be analysed by identifying its inputs, throughputs, outputs and feedback (Goldsmith, 1996). Inputs refer to whatever is brought into the system, in this case, assets and resources. The processing of these inputs is referred to as throughputs or transformation. Livelihood activities, strategies and resource management are the throughputs. Outputs refer to the end results or outcomes of the throughputs. Feedback occurs when part of the output is returned to the input in the form of information. The feedback of the system can be positive or negative. Positive feedback refers to information that anticipates and promotes change often indicating that a new course of action is needed. Sometimes the feedback is negative, indicating that the system is deviating from its normal course. Corrective

measures may be necessary if the desired outcomes are to be achieved (Goldsmith, 1996).

Livelihood approaches provide a framework for thinking through rural development objectives and priorities, and for putting people at the centre of development. They do not replace other rural development approaches but they build on them and on lessons from the past and more recent poverty assessments (Carney, 1999). In literature there are numerous definitions of “sustainable livelihood”. Farrington et al. (1999: 2) state “a livelihood is sustainable when it can cope with and recover from stresses and shocks, and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base”.

A sustainable livelihood approach emphasises macro/micro-links focusing on the effects of macro policy and external factors with realistic insights into people’s own strengths and problem-solving capacities (Farrington et al., 1999; Carney, 1998). Furthermore, a sustainable livelihoods approach “draws on this 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” (Farrington et al., 1999:2). Thus a sustainable livelihood framework has been developed to facilitate understanding of the nature of poverty and how it can be addressed.

In order to gain an insight into the concept of rural livelihood security, relevant concepts are examined. These include the livelihood system, resources and assets, rural livelihood strategies, household resource management, household food security and livelihood outcomes and vulnerability.

The livelihood system

Chambers and Conway (1992: 7) define a livelihood as “adequate stocks and flows of food and cash to meet basic needs.” Thus a livelihood is understood broadly as people and their capabilities, activities, assets, both social (claims and access) and material (resources and stores) and gains from what they do (Chambers and Conway, 1992). Livelihood generation is all activities undertaken by people to meet their basic needs and for the “results or outcome of those activities the term livelihood is used” (Niehof and Price, 2001). The definitions of the concept of livelihood raise concerns because they fail to distinguish between the dimensions of process, activities, assets and resources, and outcomes. Numerous activities undertaken to generate livelihood indicate the working of a multifaceted and dynamic system, referred to as the livelihood system (Niehof and Price, 2001).

The concept of livelihood system suggests an integrated household economy with individual members who participate in market or non-market economic activities (Engberg, 1996). Members of households often live in two systems of action, namely the private and public spheres that are both socially constructed (Thompson, 1995). When relating this to our discussion on gender, this implies that cross-culturally, women and men are most influential in the private and public sphere, respectively.

In Third World countries, particularly in rural areas of South Africa, the integration of household and farm activities is more visible in the private sphere. Farming

households produce food for consumption and for sale if there is a surplus. However, both women and men work in the home and workplace or community to earn cash or in kind to generate livelihoods. Therefore, the concept of livelihood system is concerned with the whole of the household in the private as well as the public sphere. Engberg (1996: 151) defines a livelihood as “ the mix of individual and household survival strategies, developed over a given period of time, that seeks to mobilize available resources and opportunities.” Livelihood strategies include paid and unpaid work, accumulation and investments, borrowing, food production, income enterprise, social networking, community managing and cooperation and changing in consumption patterns and sharing (Engberg, 1996).

The livelihood system has its components, namely:

- Inputs: resources and assets;
- Throughput: livelihood strategies and resource management;
- Outputs: livelihood outcomes, food security, and livelihood security. These components will be discussed below.

The household is seen as the locus where the livelihood system is anchored.

Resources and assets

Resources and assets are a means to achieve livelihood security. They are a means to satisfy the needs of the household livelihood system. They vary in kind and in their potential for meeting the complex and unique needs of individual members (Deacon and Firebaugh, 1988). According to Swift (1989) by Chambers and Conway (1992) resources and stores are tangible assets commanded by the household. Resources are defined as available items that can be sold such as land, water, trees and livestock; and farm and productive equipment, such as tools, durable possessions and housing (May et al., 1995). Stores include food stocks, stores of value such as jewellery, textiles and cash savings in banks and credit schemes (Chambers and Conway, 1992).

The important point about assets and resources is to be able to access to them when they are needed. Access means having the opportunity to use the resource in practice. Thus it refers to the real opportunity to collect water from the river for gardening or to gather firewood from the forest by women. Another example of access can be an opportunity to get information about food market prices or the possibility for wage labour in another area (De Haan, 2000). Access is an intangible asset of the household (Chambers and Conway, 1992). Every household and every member of it has a certain access profile to resources and tangible assets depending on one's rights by tradition or by law (De Haan, 2000). Furthermore, in the framework of sustainable livelihood, assets include social capital, human capital, physical capital, natural capital and financial capital and its substitutes (Ellis, 1999).

Social capital can be described as the social networks and associations to which people belong (Ellis, 1999). This is about the quality of relations among people, for example whether one can count on support by family, household or mutual assistance among neighbours. Social capital is defined as the benefit of membership of a network support. In a study conducted in 1995 into poverty and living conditions in Senegal, Narayan et al. (1999) report that rural people stated that their most important asset was an extended and well-placed family network from which they could derive jobs, credit and financial assistance. Uphoff (n.d: 1) describes social capital as an

accumulation of various types of “social, psychological, cultural, cognitive, institutional and related assets that increase the amount (or probability) of mutually beneficial cooperative behavior”. The cooperative behaviour benefits others as well as oneself. Kinship networks, friends, neighbours and the community are critical assets and coping mechanism for the rural households (Fonseca, 1991).

Social capital is a two-way process because social networks provide benefits such as access to scarce resources. However, membership also entails having claims and entitlements made upon one’s resources (May, 1996; Narayan et al., 1999). Social networks are important, in particular for rural women, for mitigating uncertainties, such as a vulnerable financial situation, ill health, unstable relations with husbands and numerous up-and-down situations in the household. In some communities, a time of crisis may result in strengthened social cohesion and may even generate new relations that improve overall social capital as poor communities find resourceful ways of overcoming their problems (Robb, 1998).

Informal networks alone are not sufficient basis for coping strategies, especially for rural women. They usually participate in formal social networks or organisations in groups. Women’s groups generally promote the social and economic development of the poor rural population. They do this by enabling members to improve their livelihood strategies. Most of these groups engage in traditional women’s activities based on the home economics extension model, such as sewing, crocheting, baking and so forth. Community groups offer collectively owned or managed assets and resources. For example, community gardens inputs are shared to produce more food.

In examining social capital, it is important to identify claims made on individuals or households, relatives, neighbours, community groups, NGOs, the state and the international community. Claims are an intangible asset defined as “demands and appeals, which can be made for material, moral or other practical support or access” (Chambers and Conway, 1992: 11). Often claims of food, implements, loans, gifts or work are frequently made at the time of stress or shock. By claims they mean that people can call upon material, moral and practical assistance or support.

In describing the components and complexity of rural livelihood in South Africa, Carter and May (1997) state that poor households exercise a multiplicity of claims passing through many distinctive claiming systems. They show that making claims against the state in the form of pensions and disability grants is of critical importance to rural household income. Furthermore, many rural households rely upon a share of the migrant’s income in the form of remittances for livelihood security (Carter and May, 1997). Another form of livelihood generation or strategy is a claim for assistance by rural people against community members through use of kinship ties (Carter and May, 1997; Niehof and Price, 2001). In South Africa, claims against community members for assistance is often rendered through community reciprocity, such as *ilima* or “work parties” or mutual help in undertaking livelihood generation activities, such as planting, weeding, and fetching of water and others. Sometimes households assist one another by absorbing family members (May et al., 1995). Kinship relations and networks are an important asset as they are a basis for claims to support (Niehof and Price, 2001).

The flexible usage of family and household links is common in rural communities. May et al. (1995) emphasise that financial assistance is the most often mentioned support offered by social and kin networks. Money is borrowed from household or community members to meet a particular expense, such as school fees. Another example is the use of the pensions of the elderly to pay for the household's living expenses. Sharing accommodation, child minding and support in times of shock are other important forms of assistance rendered by social and kin networks.

In South African rural areas, family networks include assistance of siblings, as well as support from parents and parents-in-laws. However, as a result of the institutional arrangements within traditional marriage where women move to their husband's kraal and into the control of his parents, women's network support becomes limited. The parents of married women are often unable or unwilling to support their married daughters. Generally, women's networks relate to the care of children, *ilima*, and the production and exchange of food and services. Men tend to develop networks that secure employment, urban residence and management of a distant rural home to exercise control over the household's cash income. These networks become redundant and irrelevant with loss of employment (May et al., 1995).

Sen's entitlement approach suggests that the ability to make claims and assemble a secure livelihood strategy has its basis in the household's social and economic endowments and the claiming systems to which the endowments give access. Entitlement is the way in which access to resources is obtained. Some rural households access food by producing it with endowments like land, skills and plough; by selling labour or cash crops to buy food or by transfer of food or money through gifts and loans (De Haan, 2000). Entitlements in turn enhance people's capabilities. In this context endowment refers to owned assets and personal capacities through which entitlement to resources can be exercised. The claims that the household is entitled to make are largely determined by moral rules, social convention and negotiations occurring within the household. According to May et al. (1995) what Sen (1981) calls the entitlement mapping defines the set of the endowments. Sometimes the endowments are used to claim other commodities through market and other forms of exchange. The entitlement approach gives insight into patterns of vulnerability that characterise the real income claiming mechanisms utilised by agents who occupy distinct portions of the endowment space in the pure exchange economy of the economic theory. Therefore entitlement failure depends on the commodity that endowment can command. A poor household is exposed to direct entitlement failure as a result of shock because of its vulnerability (May et al., 1995).

It is generally acknowledged that among African rural households wealth is unevenly distributed, for example in a study conducted into poverty and livelihoods in rural South Africa, it was found that 20 percent of rural households had no assets of any kind. Hence those households were extremely vulnerable to any loss of income or entitlement failure (May, 1996). Besides claiming against family, household and community members, the elderly in South Africa can claim from the state in the form of pensions and disability grants. Such claims contribute to the rural household income (May, 1995).

Assets are converted into resources when there is a demand in everyday living and in times of crisis (Niehof and Price, 2001). For example, an intangible resource, such as

confidence can be an asset if a decision to adopt new technology has to be taken. Although social capital or networks have positive aspects, there are some negative attributes associated with social capital outlined by Portes (1998: 15-17):

- Exclusion of outsiders (the same strong ties that bring benefits to members a group enables it to bar others from access);
- Excess claims on group members that can prevent the success of a business venture;
- Restriction on individual freedom as the community or group participation creates demands for conformity. Intense community life and strong enforcement of local norms tend to reduce privacy and autonomy of individuals;
- Downward leveling norms where there are situations in which group solidarity is cemented by a common experience of adversity and opposition to mainstream society. Individual success stories undermine group cohesion hence the downward leveling norms that operate to keep members of a downtrodden group in place. It is only the ambitious members who escape.

Access or the opportunity to use resources, stores or services or to obtain information, material, technology, employment, food or income is critical in securing livelihood security (Conway and Chambers, 1992). Social networks provide an opportunity to households to access resources and assets. Therefore they are an important critical claiming strategy for mutual support and survival.

Human capital comprises health, education and labour of household members (Ellis, 1999; Narayan et al., 1999). It is the sum total of human resources, all capabilities and traits that people use to achieve goals and other resources. Investing in human capital is a lifelong goal of households and communities (Goldsmith, 1996). Formal academic education and workplace skills training or non-formal education are important components of human capital. They are significant for improving livelihood prospects (Ellis, 1999). Education and training increases human resources by improving individual's access to opportunities for employment and income generation. Human resources include skills, talents, abilities, knowledge, health, feelings and caring.

Indigenous knowledge is human capital embedded in the lives of rural people. This is true, particularly in women's lives, because of their role in safeguarding household food security and family nutrition. Therefore it is an asset and a driving force for self-development. Indigenous knowledge is based on people's experiences and those of their ancestors built up over many generations (Scoones and Thompson, 1994). Contemporarily there is an interest in the scientific and economic value of traditional knowledge, for example in the areas of food security, medicinal plants and crafts (Davis and Ebbe, 1993).

The human resources that are required to provide productive labour consist of cognitive, psychomotor and emotional skills. Engberg (1990) distinguishes social skills and physical strength as important human resources. Access to human capital in the form of educated and functionally literate labour, having a person of pensionable age and a migrant household member in another are the most common endowments of rural households in South Africa (May et al., 1995). Livelihood security is enhanced if the household invests in its member's human capital development and potential. A

great number of studies indicate that poverty is closely associated with low levels of education and lack of skills (Ellis, 1999).

Health is another core component of human capital. Good health is an important asset because most rural people rely on physical labour for income in cash or in kind. Chambers (1989) identifies the bodies of most poor people as their main asset. The body has a number of dimensions, which include health, strength, time availability, and the ability to take decisions over utilisation of labour. Health impairment or illness and premature death cause a severe drain on household resources and affect the economic stability of the household (Narayan et al., 1999). This is particularly relevant in view of the HIV/AIDS epidemic in South Africa and the Mseleni Joint Disease (MJD) that is prevalent in the district of Ubombo.

Actually, it is clear that the strength and livelihood security of a community depend on its stocks of human capital. An individual's access to livelihood assets and resources can be limited by lack of education and training. Health constraints can affect the ability of people to perform essential tasks and can bring severe distress and even destitution to households. Another constraint to human capital development is nutrition inadequacy that impairs the ability of people to perform biologically, thus diminishing strength and endurance and this in turn affects working capacity (Jaft, 2000).

Natural capital is the natural environment that provides a number of assets which can be converted to resources, such as air, rain, water, land, rivers, forests, wild plants and animals. Therefore it provides a critical resource base for rural household security. Livelihood activities can improve productivity of renewable resources. They can also destroy them by contributing to desertification, deforestation, and soil erosion, declining water tables and others (Chambers and Conway, 1992). Livelihood activities can be regarded as unsustainable if they do not preserve or enhance the natural resource base for the present and future generations (Chambers and Conway, 1992). The use of a natural resource base is usually done communally.

The concept of nature as a resource implies that nature is primarily conceived of as a means of production, a good for consumption and a pre-condition for human health. Therefore nature is a sustenance base (Van Koppen, 2000). Nature as a resource provides material needs for food production, living space, health conditions and supply of energy and livelihood materials. Farming communities in developing countries still depend on wild plants as an important source of household food security. Women in Northeast Thailand gather wild food of varied types, such as plants, insects, rats, paddy crabs, frogs and fish (Leimar-Price, 1997). This is one example of seeing nature as an important resource for livelihoods.

However, the natural environmental conditions can also be a critical source of vulnerability for rural communities. In KZN, the majority of rural households are found in the steep slopes and rugged terrain of the province. During the apartheid era, the white population monopolised good agricultural land. The remaining terrain in rural areas was and remains often unsuitable for agriculture. It inhibits the construction of major infrastructural services needed to provide basic services for enhancing rural livelihood security.

Climatic conditions are sometimes a risk to the household food security and strategies to cope with them are essential. For instance rainfall variations pose food insecurity. Hence household coping strategies in years of low rainfall and severe drought resulting in crop failure are needed. Narayan et al. (1999) state that extreme weather conditions, such as drought and floods usually have a devastating effect on poor rural communities because they have a greater exposure to such shocks. Seasonal fluctuation in food and water availability is another source of vulnerability for rural communities (Narayan et al., 1999). Natural resource degradation erodes the assets and productivity of individual households. However, when nature is a resource, environmental protection and nature conservation is given priority in enhancing livelihood security.

Physical capital comprises assets that are human made. These include the infrastructure, such as the road network, electricity, medical clinics and hospitals, schools, electricity markets and so forth. These assets are provided as communal resources. At the household level, physical assets that can be converted into resources are land, agricultural equipment, household and other productive equipment, housing and other personal or household property (May, 1995; Narayan et al., 1999). Ownership of or access to land and land-use rights, livestock and productive equipment are identified as an important asset in South African rural areas (Carter and May, 1997). Accumulating physical or material assets is considered to be one of the primary strategies for dealing with deprivation and household livelihood insecurity. It is documented that poor people often choose to retain a few scarce assets during times of hunger, illness or other hardship (Narayan et al., 1999).

Financial capital and its substitutes are one of the important assets in the sustainable livelihood framework. Financial capital includes money, credit, stocks and fungible assets (Ellis, 1999). The assets, which the household can convert to cash in some way are referred to as fungible assets (May et al., 1995). Households without assets are extremely vulnerable to any loss of income. They have no safety nets of their own and they lack any possible resource, which could be used as security against credit (May et al., 1995).

Rural people in South Africa usually earn their income from wages, and small and medium enterprises. Often they do not have access to credit facilities because they lack assets to back them up as security. Credit is time allowed for payment to enable people to acquire money, goods and services by undertaking an obligation to repay for these from future income. To qualify for credit adds a sense of security for households in the times of needs and emergency situations (Deacon and Firebaugh, 1988). Appropriate credit facilities enable individuals and households to widen their income earning options. Generally, rural households in South Africa have low incomes and they spend a large portion of their income on food. Thus the percentage of households with savings is very low at 14.1 (May et al., 1995). Lack of useful and credible financial institutions in rural areas of KZN could also contribute to the low percentage of households that save money. Ellis (1999) states that there is a need to facilitate the spread of rural financial institutions that are self-sustaining on the basis of savings and loans organised according to conventional banking criteria. Such financial institutions would support livelihood strategies aimed at improving rural livelihood security.

Power relations among individuals in the households shape how resources and assets are controlled and used. The extent to which different resources can be mobilised depends directly on how power is shared within households, communities, and other social institutions (Narayan et al., 1999).

2.4 Rural livelihood strategies

Rural people in South Africa undertake manifold activities that yield them food, shelter, clothing and money to buy goods and services. Sometimes they produce crops, livestock and other items for household consumption. They can produce crops, livestock and handicraft for sale or engage in wage labour or any other activity that support their livelihood.

“Livelihood generation refers to the bundles of activities that people undertake to provide for their basic needs” (Niehof and Price, 2001: 2). Livelihood activities are planned and structured. For the outcome of activities the term livelihood is used. To clarify the term strategy, Goldsmith (1996: 89) defines it as “a plan of action, a way of conducting and following through on operations. Strategy implies the careful thinking out of details and the consideration of outcomes.” Therefore people have strategies by which their activities are structured.

Goldman et al. (2000) assert that the key to empower rural people is to broaden the range of strategy options through diversification of livelihood choices. Diversification reduces vulnerability. It has been shown that in sub-Saharan Africa, reliance on agriculture tends to diminish continuously as income level rises. This means that the more diverse the income portfolio the better off is the rural household (Ellis, 1999). Therefore livelihood strategies should be analysed, as they are a critical part of the throughput of the livelihood system (Niehof and Price, 2001).

This study takes into consideration that members of the household utilise household strategies to meet their basic needs, enhance their capabilities and cope with securing livelihoods. Anderson et al. (1994: 20) define the concept of strategy as “the overall way in which individuals, and possibly collectives, consciously seek to structure, in a coherent way, action within relatively long-term perspectives”. Strategies are long-term plans for success and are higher constructs, which form general prescription for action. Household strategies are reviewed and amended as the situation demands.

The behaviour of households is shaped by many factors (Clay and Schwarzweiler, 1991). Considering that the household is composed of individuals differentiated on the basis of age, gender, employment status, income level, education, and other variables, power and influence is not equally distributed within most households (Clay and Schwarzweiler, 1991). Adults and men usually have more influence in shaping household strategies than children and women. However, as a result of lack of analysis of household relations, it is taken for granted that cohesion and coherence rather than conflict are the basis of intrahousehold relationships. Individual members of the household try to achieve certain objectives through their involvement in decision-making. They consider household strategies as collective action. However, “within the household there are joint strategies and there is joint decision-making. But, at the same time, individual members can have their own strategies and take their own decisions, either or not for the benefit of the household as a whole” (Niehof and

Price, 2001: 10). Decision-making within an African household is a widespread process aimed at consensus, in which adult members with the required authority participate. Decisions on livelihood strategies, such as migration, the education of children, marriage and women's economic activities are taken in this way. However, the least powerful participants in all household decision-making are the women, children and adolescents (Adepoju and Mbugua, 1997).

Household activities are considered important for sustenance, survival and reproduction of the future generations of workers for the domestic domain and workplace. However, domestic or household activities are not valued as productive as those performed in the workplace. Therefore there is contradiction in viewing activities that sustain and support each other, at the household level and outside it. Household livelihood security depends on the totality of various activities, such as incomes, production of food and other goods and so on. Divisions within the household are usually influenced by the pattern of gender division of labour. Often household members face problems of cooperation and conflict, simultaneously. Cooperation adds to the total of what is available and conflict divides what is available among the members of the household. Social arrangements regarding intrahousehold resource allocation and division of labour can be viewed as responses to the combined problem of cooperation and conflict (Sen, 1990). Livelihood strategies are planned and implemented in the context of unequal patterns of social arrangements within the household. Cooperative arrangements influence the distributional parameters and the household's response to conflicts of interest.

Anderson et al. (1994) describe the concept of strategy as the overall way in which individuals and collectivities try to structure coherently, activities and actions within a relatively long-term perspective. Therefore strategies are defined as "higher order constructs which form general prescriptions for action" (Anderson, 1994: 20). In context of this study livelihood strategies are general prescriptions that the household takes into account when making plans within structural constraints. Strategic thinking is related to the possession of resources. Deprivation and insecurity tend to deter planning. The concept of strategy is helpful in understanding the actions of individuals and their households and also the strategies by which the activities are structured. Livelihood strategies as well as decision-making and management are part of the system's throughput (Niehof and Price, 2001). An example of household livelihood strategy in KZN can be rural-urban migration. A rural household may decide to sponsor its member to engage in the labour migration system. However, the migrant is expected to keep contact with and to maintain the household through visitations and remittances (Adepoju and Mbugua, 1997).

Wolf (1991) states that in patriarchal societies, the men head of household make decisions in the interest of the collective good. Such decisions may not be of interest to some members of the household. For instance, sons might benefit more than daughters in accessing resources, education, health care and employment to name a few. Thus household strategies emerge from various decisions and can be observed in actions reflecting decisions about migration, education, labour, health and other issues (Wolf, 1991). Household strategies involve "risk-aversion, satisfying, status enhancement, safety-first, capital accumulation cooperation, income maximisation, dictatorial benevolence or bounded rationality" (Kabeer, 1991: 12).

Zoomers (1999) designed a typology of livelihood strategies based on her experiences in rural Bolivia in South America. The typology distinguishes four categories of livelihood strategies:

- *Accumulation strategies.* These involve an establishment of a minimum resource base guided by a long-term strategic view of future income sources. Strategies are migration, temporary land acquisition in exchange of capital, inputs or labour and labour recruitment strategies whereby investment in social networks is used;
- *Consolidation strategies.* Consolidation strategies are investments in stabilising the household's well being and improving the quality of life. These include investments in children's education, purchasing a second home as part of education strategy and consumer strategies involving purchasing of luxury goods or consumer items;
- *Compensatory and survival strategies.* Households that are dealing with a temporary crisis such as crop failure, loss of labour power and capital, and so on, and those that lack resources of agricultural production, such as land, inputs, credit, training and others. To break out of the undesirable situation, households can resort to a number of strategies. They find solutions in temporary or permanent migration, restriction of consumption and expenses, such as eating less and removing children from school. Selling strategies can be undertaken involving selling of land, livestock and other goods in response to a crisis. Exchange strategies can be resorted to, such as receiving food in exchange for work, exchanging goods and working land belonging to others. External support strategies imply relying on support from children or other household members for survival and livelihood security;
- *Security and risk-reducing strategies.* These strategies focus on risk minimization, such as diversification of crops and other activities, sharecropping so that farmers can operate in incipient markets in risky situations and stockpiling which enables households to create buffers by producing or purchasing assets. It also includes investments in social relations.

Livelihood strategies are contextual and the above categories are not fixed. They depend largely on the objectives and priorities of households. They are multi-dimensional as no one strategy can serve all objectives at the same time.

Carter and May (1997) identify a number of activities that rural households in South Africa use to generate income. These diverse activities include:

- Agriculture for own consumption and for sale;
- Small and micro enterprise activities, such as hawking, petty commodity production of clothes and handicrafts, niche markets in the service sector, such as child minding, money lending and contract agricultural services;
- Wage labour, including working as migrant labourer, farm workers and and commuter labourers;
- Claiming against the state for old age pensions and disability grants;
- Claiming against household and community members for remittances from the migrant's income.

Other activities distinguished by Carter and May (1997) that contribute to livelihood strategies are:

- Unpaid domestic labour, largely performed by women;
- Illegitimate activities that include drug trafficking, prostitution and petty crime;
- Non-monetised activities in which households engage in order to either stretch their income or to gain access to additional entitlements.

Diversification of livelihoods is an important component of rural livelihood security. In Southern Africa, a range of 80-90 % of the households relies on non-farm income sources. It is widely recognised that a capability to diversify is beneficial for households at or below the poverty line. Diversification contributes positively to livelihood sustainability as it reduces proneness to stress and shocks. However, non-farm earning opportunities can result in neglect of labour-intensive conservation practices if labour available is reduced. Diverse livelihood systems are less vulnerable than undiverse ones and have been shown to be sustainable over time (Ellis, 1999). Assets or lack of them is fundamental to livelihood strategies that are facilitated by household resource management.

2.5 Household resource management

The concepts of household and resources have been examined. Therefore household resource management deals with the process of using household resources to achieve livelihood outcomes, such as more income, improved food security and reduced vulnerability. Goldsmith (1996) defines the management process, as using what one has to get what one wants. This process includes thinking, action and outcomes or results. Furthermore, management provides new ways of critiquing life situations and offers new perspectives on the nature of change.

Managing resources means working out what resources are needed by the household, where they might come from, and how they can be put to use. It involves seeing available assets as a resource that can be used to meet its basic needs. Engberg (1996) indicates that the purpose of management is to help persons have more control over their own circumstances and the changes occurring within their lives and in the near environment. Effective management then requires an individual to play a participatory role in dealing with change. Where poverty is prevalent, particularly in rural areas, access to resources is critical in determining livelihood security. The universal resource access need for which priorities have been identified, include access to safe water, sanitation, adequate food, health services, decent income from productive work and education (Mumaw, 1996). Lack or limited resources of the rural households make it difficult for them to achieve livelihood security. Resource management issues faced by households differ depending on the assets ownership, availability and access. Decision-making on how to use assets and resources is an important component of household resource management.

Decision-making is a basic component of household resource management. Decisions are judgments and conclusions about some issue or matter. The decision-making process begins with a process of making a choice between two or more alternatives. It encompasses all sorts of situations, needs and interests of the household (Goldsmith, 1996). Decisions need to be made everyday and the decision-making process can be overwhelming if insufficient knowledge is not available to make it work successfully (Glaser, 1996). In rural areas of KZN, decision-making is applied to matters of division of labour, access and allocation of resources. For example, people should

decide who should take care of livestock when all children are at school. The household head decides how much land is to be allocated to each of his sons. In cases of limited resources, the household make decisions whether girls or boys should go to school or find employment. An individual's position of power in an African household, gender and generation are important in influencing the decision-making process (Armstrong, 1997). Thus familial power can be assessed by the outcome of the decision (Chen, 1996). In household resource management, problem solving involves making many decisions that lead to a resolution of a problem. Household problems are usually more complex than individual ones and they need managerial skills to resolve them before they become full-blown problems involving intense household conflict. A household study on food security conducted in rural KZN reveals that the head of household makes all decisions. According to the cultural norm, the man makes final decisions. Women tend to make decisions pertaining to their reproductive and food production roles. Men usually make long-term decisions, such as land use patterns, livestock and building of a new house (Van der Herberg, 1999).

Rural households in subsistence economies are often vulnerable to risks hence they employ management strategies to deal with such situations. They need the ability to deal with ever changing situation within the household. Despite vulnerability, effective household resource management can provide solutions or approaches to problems experienced by households in coping with consequences of vulnerability (Mauldin, 1996). Poor households need higher incomes, better access to basic services and productive assets and a supportive social environment that helps their efforts to secure a better life (Jolly, 1993). It is important that a certain level of resources and functioning must be present for the household to begin the process of household resource management (Musi and Nickols, 1996). Vulnerable livelihood systems need effective coping strategies to bridge difficult periods. Most households in rural KZN have a vulnerability status while others are leaning towards extreme vulnerability. The degree of vulnerability determines what strategies can be carried out. In other words strategies can make resources and assets available and in turn they influence the vulnerability status. This relationship can be described as an upward or downward spiral. Whether people fail or succeed to obtain resources and assets, the vulnerability status is influenced by their strategies (Van der Herberg, 1999). Therefore household livelihood strategies are important to the livelihood system.

Households with limited access to cash income rely on consumption strategies and off-farm sources of income. Some of the strategies used by rural populations to maintain their livelihoods are cultivation, herding livestock, migration of household members, mutual help, investment in education of children to name a few (Chambers and Conway, 1992). According to Musi and Nickols (1996) household managerial strategies that are often used by the Swaziland households in the southern African region are applied for achieving food security. Diversity and diversification is one of the household management strategies. Ellis (2000) defines livelihood diversity as the existence of many different income sources at a point in time. This requires diverse social relations to underpin them. Diversification can be interpreted as the creation of diversity as an ongoing social and economic process. It reflects factors of both pressure and opportunity that cause families to adopt complicated and diverse livelihood strategies. In a rural development context, diversity and diversification implies varying and expanding activities away from farming as the primary means of

livelihood. That is to say that farming is just one part of the overall household livelihood strategies (Ellis, 2000).

Musi and Nickols (1996) give examples of diversification in Swaziland. They include diversification of income, such as paid employment, remittance from non-resident household members; crops, such as domestication of wild plants, multi-cropping; dietary patterns, such as reduction in numbers of meals, reduction in food portions, giving food to children only, borrowing food; marketing activities, such as selling of durable goods, agricultural implements, livestock, selling beer and so forth. Thus the ability to manage resources using appropriate strategies by the household contributes to the reduction of food insecurity, reduced vulnerability and hence contributes to livelihood security.

Assets and resources are the inputs to management and more attention must be paid to the nature and equitable distribution of resources in each socio-cultural environment. A gendered perspective on how resources are and should be allocated is important. Women and children are more vulnerable than men to problems experienced by households in resource management in conditions of poverty, environmental degeneration, broken relationships and homelessness (Engberg, 1996). Livelihood strategies and resource management, including decision-making, are the throughput of the livelihood system. The output hopefully being reduced vulnerability, increased food, and livelihood security.

2.6 Household food security

Poverty is the underlying cause of hunger and malnutrition in developing countries. However, over the past three decades, the world food production has grown faster than the population. Therefore there is progress in increasing global food security. Despite increasing world food supplies, millions of people in developing countries are food insecure (FAO, 1997). In many of the developing countries between 60 and 90 percent of disposable income is spent on food. Population growth and global food production has expanded. This has led to the price of most grain to fall in real terms. However, the food-population ratios that are important for food security are not the global ones but those at regional, national and household levels (Jones, 1990). Contemporarily, the African continent is experiencing a food production crisis. Jones (1990) outlines five contributory factors to this crisis. First, in many countries agricultural production has been disrupted by political and military conflict, particularly in Angola, Mozambique, Ethiopia, Sudan and Somalia. Second, fourteen countries do not have adequate environmental resources. They are ecologically fragile because of desertification, deforestation and severe drought. Third, African governments assign low priority to agriculture, and small investments are reserved for export crops. Fourth, state centrism in Africa contributes to inefficiency, mismanagement and corruption. Government controls consumer prices for basic foods in order to benefit urban consumers. This is done to the detriment of rural producers. Fifth, research on improved varieties of traditional African food crops is still at an early stage. To these it may be added that agricultural extension often fails to recognize women as real farmers in sub-Saharan Africa.

Adequacy and stability of food supplies at the national level is important in understanding contributory factors to household food insecurity. The International

Fund for Agricultural Development (IFAD) study identified the three most vulnerable groups to food insecurity. They are smallholder farmers, nomadic pastoralists and, crosscutting these two groups, women-headed households. The main cause of food insecurity among smallholders is stagnating agricultural production whereas among women-headed households is growing economic and social difficulties, as well as migration and civil wars (FAO, 1997). In rural southern Africa, men often migrate to find work in the city while their wives, children, parents and other members of the family remain behind to work in the fields to produce food. The migrant is faced with numerous obligations to support parents, maintain agricultural production by providing cash and to support himself and his family. Most migrants find work in the labour-intensive, low-productivity, and informal and unregulated sector. They do not earn a sufficient income to satisfy their needs and those of the family left behind in rural areas. Their household becomes vulnerable to food insecurity if the migrant fails to send remittances home. The formal sector cannot employ most of the migrants because of their low levels of education and skills (Jones, 1990).

The nation-wide household survey that was conducted under the Project for Statistics on Living Standard and Development (PSLSD), showed that South African rural areas experience the highest incidence of poverty with about 70 percent of the rural dwellers estimated as being poor, compared to 17 percent of the population in metropolitan areas (Posel, 1997). The majority of the poor are politically, economically and socially marginalised in rural areas. This is another example indicating that food insecurity is on the increase in rural areas. South Africa's state of national food security indicates a level of sufficiency, but the problem of household level food insecurity remains a great concern (FSWG, 1997).

The concept and understanding of food security has been defined and evolved over a number of decades through increasingly integrated attention for the social, economic, technical, cultural and environmental dimensions. In the 1970s food security was mostly considered in terms of national and global food supplies. The food crisis in Africa in the early 1970s stimulated international concerns regarding supply shortfalls caused by drought and desertification (Frankenberger and McCaston, 1998). In the 1980s it became clear that national food security did not translate into individual and household food security (FSWG, 1997). However, micro-level food security challenges cannot be addressed in isolation from the macro aspects. Thus, as a result of the desperate state of food insecurity experienced by most South African households, the FSWG (1997) proposes that a new food security policy should concentrate on individual and household food security. Such a policy should address issues of food security both at macro- and micro-levels.

This study is concerned with the micro level dimension of food security, regarding the way in which households cope with food insecurity and the intrahousehold and interhousehold food distribution. Food security "exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary and food preferences for an active and healthy life" (Singer, 1997: 3).

According to FAO (1997) food security entails:

- Food availability: Sufficient quantity of safe and nutritious food, supplied through domestic production, net imports and available net stocks;
- Stability of supplies: A reliable supply of food products at all times and for all people (space and time);
- Access to supplies: Sufficient resources, social and demographic factors and physical access affecting the ability to acquire food;
- Food utilisation: Adequate diet, care and hygiene practices, water, sanitation.

In terms of policy objectives, food security refers to meeting the food requirements of the present and future generations in a sustainable manner. The goal is to ensure that people “*at all times* have both physical and economic access to enough food to satisfy the requirements of normal body functions, growth, and daily activities.” (Briones et al., 1999: 65). However, individual and household food security depends on their assets, income, work, health, food preparation habits and conditions, intra-household food distribution, local food supplies and costs of other essential daily consumer items, such as water and fuel (Hubbard, 1995).

Gender is an important variable in household food security (Niehof, 1999). Rural women in South Africa play important roles in their households and communities as well as in national economies. They produce, gather and prepare food. They also care for their household members and participate in income-generating activities. However, they are constrained by their limited access to critical resources and services. In rural South Africa, both men and women farmers do not have access to adequate resources, but women’s access is even more limited due to cultural and social factors. The gender division of labour underlies role differences in food and cash crop production. Women’s roles are mainly in food production and men take control of cash crops. Men’s and women’s differential managerial and financial control over production, storage, processing and marketing of agricultural products are important in decision-making and task allocation. Men are often responsible for land clearing and ploughing whereas women do weeding, transplanting, harvesting and post-harvest work, such as food storage, processing, preparation and waste management. In rural KZN men are responsible for cattle and goats and women take care of pigs and chickens.

For sustainable household food security women need access to critical resources, such as land, credit, agricultural inputs, education and extension services, research information, appropriate technology and decision-making processes. Women also need better access to technical information to support their pivotal role in securing, preparing food and assuring improved nutritional status at household level. Difficulties in gaining access to resources to productive resources for both women and men will contribute to food insecurity.

Food insecurity

Although the South African food situation has always been and still is characterised by an apparent state of sufficiency for the nation, it is clear that most rural households experience continued poverty which is manifested in food insecurity and ill-health (SAHR, 1995). *Food insecurity* is the converse of food security as defined above. It means that food insecurity exists when people lack access to sufficient amounts of

safe and nutritious food. Therefore they do not consume the food required for normal growth, development and an active and healthy life.

The theory of food security does not have a monocausal explanation for food insecurity and hunger (Von Braun, 1994). Gladwin and Thomas (n.d) note that vulnerable households may experience transitory or chronic food insecurity when their resources are inadequate for them to meet their basic needs for food. They describe transitory food insecurity as a short-term food security problem caused by a shock to the food production and economic system, when income or resources necessary to adjust to the shock are not available. Chronic food insecurity is viewed as a long-term problem caused by lack of income and assets to produce or buy adequate food for the household to meet its basic needs of food. To secure food, these households should have multiple livelihood strategies, such as agricultural intensification and livelihood diversification. None of these strategies are capable by themselves of sustaining the household (Gladwin and Thomas, n.d.). Households that are vulnerable to food insecurity use coping strategies to overcome their problem. Davies (1993) describes coping strategies as people's responses to declining food availability and entitlements in abnormal seasons or years. Coping is regarded as a short-term response to an immediate and unexpected decline in access to food. Coping strategies are concerned with livelihood system success. They are significant for a sustainable livelihood security approach to understand rural households and communities.

Coping with food insecurity

At the World Food Summit organised by the FAO in 1996, heads of State and government agreed that poverty eradication is critical to improve food access, by all at all times. They also made a commitment "to enable food insecure households, families and individuals to meet their food and nutritional requirements and to seek to assist those who are unable to do so" (FAO, 1997: 9). This objective was to be achieved by governments in partnership with all actors by:

- Developing and updating a national food security and vulnerability information and mapping system, indicating areas and populations at risk of hunger and malnutrition and elements contributing to food insecurity;
- Implementing cost-effective public works programmes for the unemployed and under employed in the region of food insecurity;
- Developing well-targeted social welfare and nutrition safety nets to meet the needs of the food insecure.

The terms vulnerable and vulnerability are commonly used in the development discourse, but they need specificity. In the context of household food security, people are vulnerable to food insecurity when they do not have enough food to meet their basic requirements. They need adequate purchasing power or appropriate utilisation of resources at household level. Food insecurity and poor conditions of health and sanitation are the major causes of poor nutritional status. *Vulnerability* refers to the full range of factors that place people at risk of becoming food insecure, including those factors that affect their ability to cope with livelihood challenges (FAO, 1997).

Food insecurity can be caused by climatic conditions, such as rainfall variations. Often in years of severe drought, crop failure causes food insecurity. In many African

developing countries, agricultural production for rural livelihood depends on climatic seasonality. Kigutha (1994) states that rainfall patterns could be a constraint to agricultural production and affect duration and severity of food shortages. In this way, seasonality affects food security, nutritional status and health of household members. It has been documented that yearly seasonal stress could be a long rainy season alternating with the dry season. Workloads tend to be very high during rainy season and could contribute to weight loss and ill health (Taal, 1989). It is common that between planting and harvest period there is a shortage of food and prices to buy it are high. Consequently, seasonality affects the allocation of household resources and food security (Kigutha, 1994). During periods of adverse climatic seasons, households have to devise strategies to cope with food insecurity.

Households pursue a particular mix of coping strategies depending on a complex range of criteria linked to different dimensions of vulnerability. Resilience and sensitivity are two of the most important ones. Highly resilient systems have the capacity to bounce back to a normal state after food crises, which is contingent upon having coping strategies that are reserved for periods of unusual stress. The sensitivity dimension of vulnerability of a livelihood system refers to the intensity with which the shock is experienced. However, in highly sensitive systems, coping strategies are not available to cushion the shock. Thus vulnerable livelihood systems that are characterised by properties of low resilience and high sensitivity find it hard to cope with food insecurity. In contrast to coping, adapting is considered to be a more permanent change in the mix of ways in which food is acquired. People in secure livelihood systems practice coping strategies only when necessary. However, those in vulnerable systems are more likely to pursue adaptive strategies. They seek to use all available options at all times to maximise benefits between increasing resilience and reducing sensitivity. Vulnerable livelihood systems hit by drought are less able to cope than secure systems. The ability to mitigate this vulnerability is contingent upon their capacity to adapt (Davies, 1993).

At international and national levels food insecurity and vulnerability information and mapping systems (FIVIMS) use existing information-gathering systems and promote the sharing of information between partners to cut costs (FAO, 1997). World Food Programme (1996) regards the concept of vulnerability as being composed of two components. The first, is the risk of exposure to different types of shock or disaster. The second is the ability of the people to cope with different types of shock or disaster without damaging their long-term livelihood security. These two components add to the poverty dimension. In recent years the notion of “claims” and “entitlements” from the social networks is another determinant of vulnerability. If there are failures or inability to claim or access entitlements, members of the household become vulnerable. Of crucial importance in addition to poverty alleviation is the effectiveness of the household and community strategies employed in coping with vulnerability and food insecurity (FAO, 1997).

Households and individuals can gain access to food by producing it themselves, purchasing it, or through transfer from public or private sources. If these mechanisms fail to permit access to adequate food on a regular basis, people will experience food insecurity. According to Chambers (1997) most poor people have several sources of support and they maintain a portfolio of activities. Their coping strategies vary by region, community, social group, household, gender, age, season and time in history.

Food strategies may be classified into social, economic and resource management mechanisms (Briones et al., 1999).

Social coping strategies include interhousehold transfers in cash and in kind, food sharing, food barter from social networks, family splitting such as putting children out to others, especially relatives, securing child maintenance payments and state pensions (Briones et al., 1999; Chambers, 1997). Economic mechanisms to cope with food insecurity are cultivation of food, wage employment, selling of assets such as work animals, farm equipment, migration of some household members, income generation of various types, for example food processing, hawking, vending, making and selling handicraftwork, seasonal food-for-work, public works and relief (Briones et al., 1999; Chambers, 1997). Other less visible strategies include begging, theft, eating less and deferring medical treatment and expenditure (Chambers, 1989). Household resource management is another strategy of coping with food insecurity. These include changing dietary and meal preparation patterns, wild food gathering, food storage, and diversification of agricultural activities (Briones et al., 1999).

Food security is a necessary but not sufficient pre-condition for ensuring optimal food consumption, nutritional status and health of the individual (Holmboe-Ottesen and Mugabe, 1997). Individuals may live in food secure households but eat nutrient poor diets that may contribute to their malnourishment and ill health. Sometimes improved availability of food and a household's access to food may not translate itself to dietary adequacy for all household members. Children, the elderly and women are the most vulnerable because they may not have power to decide on how household resources are to be used. Lack of information about food and nutrition can also contribute to their vulnerability.

Existing and future policies should address factors that contribute to food insecurity. They have to deal with issues of production, storage, processing, distribution, marketing, pricing, quality and safety of food and waste management. Nutrition and health of vulnerable groups at household level is critical in household food security. Furthermore, understanding the gendered nature of household food security is the key to address the problem of food insecurity (Niehof, 1999). This is because the control over human, material and environmental resources is often different for men and women within rural households. Decision-making strategies tend to follow gender roles. Entitlements that give access to assets and resources are also gender-specific (Niehof and Price, 2001).

2.7 Livelihood outcomes

Possession of assets is important in livelihood generation, whereas lack of them hinders the ability to design and implement livelihood strategies. The household utilises a number of strategies to manage its available resources and to achieve livelihood outcomes. When assets and resources are scarce or limited the household devise coping strategies to sustain livelihood security. However, the risk of livelihood failure determines the level of vulnerability of a household to basic needs. Therefore, secure livelihood outcomes are achieved when households have secure ownership of, and access to assets, resources, stores, and income-generating activities to offset risks, ease shocks and meet contingencies. In the livelihoods framework Farrington et al. (1999: 3) identify positive livelihood outcomes as: more income, increased well

being, reduced vulnerability, improved food security and more sustainable use of natural resource base. It is important that livelihood outcomes should be sustainable for rural livelihood security.

Chambers (1989) defines *vulnerability* as defencelessness, insecurity and exposure to risks, shocks and stress. A vulnerable individual or household lacks means to cope without damaging loss. Vulnerability is the opposite of security and it is a recurrent concern of the poor. Therefore reducing vulnerability and enhancing security should be included in planning programmes that support livelihood security. Vulnerability often tends to capture the concerns of the poor to a greater extent than other concepts concerned with the analysis of deprivation. It identifies the indicators of the prevailing rural livelihood insecurity, which characterises the lives of the poor rural South Africans (May, 1996). Vulnerability refers to the negative outcomes for households, individuals and communities of various kinds of change over time. These processes may either be economic, social, environmental or political (May, 1996).

To reduce vulnerability, households need the means to make investments, to build up stores, and to establish claims that make them less insecure (Chambers, 1989). Livelihood strategies of the poor are diverse. They are used to handle better contingencies and bad times and to minimise irreversible loss. It seems more cost-effective to reduce vulnerability and prevent impoverishment. Taal (1989) asserts that community and kinship ties often play a crucial role in minimising vulnerability, particularly at the onset of crop failures, depletion of food stocks, and very high food prices.

Sustainable use of natural resources is one of the important desirable outcomes in the rural livelihood system. Ecological systems are often endangered by ecologically unwise agricultural practices. Land degradation in the form of soil loss and declining fertility resulting in soil erosion frequently occur. Heavy use of chemical fertiliser and concentration of feedlots and animal production cause major nitrogen contamination of groundwater in many regions of the world. Contamination of water by pesticides represents a growing problem throughout the world (Sachs, 1996). Contaminated water supplies add extra hours to rural women's work as they spend time seeking safe sources of water. The natural resource base is important to rural livelihood security as it provides for the basic needs of humans and animals, in the form of food, materials for shelter, clothing, health care and education. Therefore a more sustainable use of natural resources by households is inevitably a desirable outcome of the livelihood strategies in generating rural livelihood security.

2.8 Rural livelihood security

Household livelihood security is fundamental to rural livelihood security. Frankenberger and McCaston (1998: 3) define household livelihood security as "adequate access to income and resources to meet basic needs (including adequate access to food, potable water, health facilities, education opportunities, housing, time for community participation and social integration)." They assert that the concept of household livelihood security allows for a more comprehensive understanding of poverty, malnutrition and the dynamic and complex strategies that rural households use for survival. According to Chambers (1989) livelihoods are secure when households have secure ownership of, or access to, resources and income earning

activities, including reserves and assets, to offset risks, ease shocks and meet contingencies. Furthermore a livelihood is sustainable when it “can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation...” (Chambers and Conway, 1992: 36-37).

The sustainability of livelihoods depends on how assets and capabilities are utilised, maintained and enhanced so as to preserve them. Chambers and Conway (1992) separate the concept of sustainability into environmental and social aspects. Environmental sustainability is concerned with whether livelihood activities maintain and enhance or deplete and degrade the natural resource base at local level. For instance, household livelihood activities may contribute to deforestation, soil erosion, salinisation and so forth. At global level, livelihood activities can make “a net positive or negative contribution to the long-term environmental sustainability of other livelihoods” (Chambers and Conway, 1992: 13). Some examples of environmental sustainability at global level are issues of pollution, global warming and the ozone layer.

Social sustainability is a necessary complement of the environmental sustainability of livelihoods. According to Chambers and Conway (1992: 14) social sustainability refers “to whether a human unit (individual, household or family) cannot only gain but maintain an adequate and decent livelihood.” The concept of social sustainability has a reactive and proactive dimension. The reactive dimension is concerned with coping with stress and shocks. Stresses are pressures which are typically continuous and cumulative, predictable and distressing, such as declining rainfall, declining income, ill health and seasonal shortages. Shocks are impacts which are typically sudden, unpredictable, and traumatic, such as floods, fires, and epidemics. The impact of any type of crisis strips people of their possessions and it entrenches a culture of poverty in the face of unexpected destruction. Sustainable livelihoods can avoid or resist stresses and shocks, provided there are tangible and intangible assets to do so (Chambers and Conway, 1992). Reducing vulnerability is fundamental to reducing the impact of stresses and shocks.

The proactive dimension of social sustainability of a livelihood depends on positive and dynamic competence, ability to perceive, predict, adapt to, and exploit changes in the physical, social and economic environment. Social sustainability of a livelihood also involves maintaining and enhancing capabilities for future generations. To enhance intergenerational sustainability, households often invest in education and the acquisition by children of skills other than those available within the household.

Chambers and Conway (1992: 16) assert, “security is a basic dimension in livelihood sustainability.” Assets can be vulnerable as stores of food can be stolen or destroyed by natural elements. Claims may be lost as with the death of a productive household member. Households can be deprived of their resources or their resource rights. Access to education or health services may be unavailable (Chambers and Conway, 1992). Reducing vulnerability of households would contribute to rural livelihood security.

2.9 Theoretical framework of the study

On the basis of literature reviewed on concepts important for this study, a model is presented using a systems approach. The aim is to indicate the interrelationships of the components of the rural livelihood system to which the concepts refer. Figure 2.1 outlines this model. It was adapted from the sustainable livelihood framework by Farrington et al. (1999). The model makes it easy to understand the rural livelihood system and it guided the operationalisation of the study.

Explanation of the model

In this study the rural household was chosen as the unit of analysis. It has a central place as the main actor and as the locus in which the livelihood system is anchored. The concept “household” was discussed extensively at the beginning of this chapter. At the end of this discussion, the definition of household is stated as: “a co-residential unit, usually family-based in some way, which takes care of resource management and primary needs of its members.” (Rudie, 1995: 228). This definition was selected as a point of departure for this study. The sustainable livelihood framework assumes that rural people pursue a range of livelihood outcomes by drawing on a number of assets to undertake a variety of activities (Farrington et al., 1999). This model explains the significance of the household as a socio-economic and multi-functional unit to which individuals belong. Therefore Figure 2.1 will be explained in more detail in the next section under four subheadings: context, inputs, throughputs and outputs. The concepts in the boxes and their interrelationships as indicated by arrows, will be clarified.

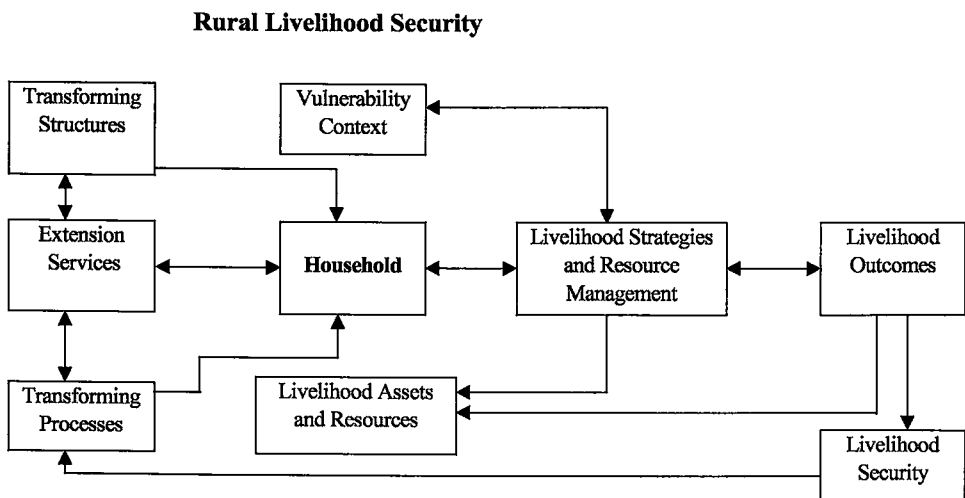


Figure 2.1 Model of components of livelihood system that guided operationalisation of the study

2.9.1 Context

The rural household is embedded in a multiple institutional setting, which is captured in the boxes. It is also influenced by the vulnerability context, as we shall explain below.

Transforming structures and processes

The transforming structures refer to policy or governance institutions. They include different levels of government, namely national, provincial and local. In addition, the non-governmental organisations, community-based organisations and the private sector are important transforming structures as they encompass the agencies that inhibit or facilitate the exercise of capabilities and choices by individuals and households. Working independently or in partnership with the government, they provide opportunities for asset accumulation and improved rural livelihoods. Transforming processes include policies, institutions, laws, incentives (relative prices), and social relations (Ellis, 2000). The role of transforming structures and processes determines the household's access to assets and opportunities and how these can be converted to into desirable livelihood outcomes.

For household livelihood security, transforming structures and processes are important in enhancing sustainability of livelihoods. Good policies of the state should improve access to assets and resources and reduce vulnerability. Thomas (2000) states that economic growth, environmental sustainability and macroeconomic stability enhance livelihood security. The state provides service delivery through its ministries at national level. Then at provincial and local levels there are structures responsible for intervention programmes and services that affect livelihoods (Carney, 1998; Thomas, 2000). The role of the non-governmental organisations, community based organisations and private sector is critical in increasing opportunities for rural livelihood security (Farrington, et al., 1999). In rural KZN, traditional authorities are important and recognised as legitimate and accountable to the rural communities. The leadership of tribal authorities comprises the chief or *inkosi*, headman and councilors.

Vulnerability context

Rural livelihood security is influenced by the prevailing vulnerability context. Rural households are vulnerable to stresses and shock. Examples of continuous and predictable stresses are seasonal food shortages and declining assets and resources. Other types of stresses build up gradually. These can include environmental degradation such as declining yields on soil (Chambers and Conway, 1992). Mseleni Joint Disease (MJD) that will be discussed in Chapter 3 is another example of a condition that contributes to the vulnerability context in Ubombo. Shocks that can be sudden and unpredictable are floods, fires and diseases. Political conflict and violence is an example of shock that affected some communities in Umthunzini. Some households lost assets through fire and theft. In the context of vulnerability, the household works out livelihood coping strategies to respond to stresses and to adapt accordingly. Even in the event of shocks, rural households adopt coping strategies to deal with the emergency.

2.9.2 Inputs

Resources that enter the system in various forms to affect the throughput processes in the achievement of outcome or output are called inputs (Bristol, 1995). In this model inputs include information flowing through the extension services, livelihood assets and resources.

Extension services

Extension services are critical mediating factors for livelihood generation because they facilitate the development of capacities by rural households and their access to assets and resources. They also have an influence on the household livelihood strategies and resource management. Hence extension services influence the type of livelihood outcomes for rural households. The national agricultural and rural development strategies benefit from increased collaboration between government policies and the multisectoral extension organisations. The non-governmental organisations (NGOs) are capable of responding flexibly and rapidly to the household livelihood needs and changing circumstances because they are small and horizontally structured. However the community-based organisations (CBOs) can potentially play a role in representation in the rural livelihood system (Thomas, 2000).

South Africa has poverty policies at national level and all departments are asked to contribute to poverty eradication. Furthermore, the country has a National Rural Development Framework focusing on three provinces with the lowest HDI (Goldman et al., 2000). One of these provinces is KZN. The extension services can play a major role in coordinating the multisectoral initiatives to support a poverty-focused rural livelihood generation. They are also in a position to improve the effectiveness and linkage of service delivery with households.

An enabling environment for rural livelihood security should be enhanced by a progressive policy context. A right-based legal system, consistent policies and institutions, such as families, households and culture, should support livelihood security. The policy context should be gender-inclusive and extension services should aim to facilitate empowerment and participation of both genders in supporting livelihood generation through interacting with the household (Thomas, 2000). Extension services form a link between the household and the policy structures and processes as they identify priority areas for policy intervention or improvement. They identify livelihood needs of mostly vulnerable households, promote community development organisations, build capacity of individuals and households and facilitate household livelihood strategies and resource management. In this model the extension services are directed to the household to influence its livelihood strategies and household resource management hence the livelihood outcomes and rural livelihood security. The double arrows indicate the process of feedback⁶ to the system.

Livelihood assets and resources

Assets and resources are the inputs to the system. They are critical for household livelihood generation. Assets are classified into social, human, natural, financial and

⁶ Feedback is information received by the system from the environment and is returned to the system as inputs.

physical capital. Assets can be converted into resources when necessary (Niehof and Price, 2001). Households need to access, own, claim and control assets and resources in order to undertake their activities and strategies for livelihood generation. Livelihood strategies and household resource management have influence on the vulnerability context, the accumulation of assets and resources and the quality of life of the household. Assets and resources have been discussed earlier in this chapter.

2.9.3 Throughputs

The transformation of asset resources from inputs to outputs is called throughput. The household is the central unit of livelihood generation. The household concept overlaps with that of the homestead. Livelihood activities and strategies and household resource management are important components of the throughput. The household is the arena in which livelihood strategies are developed and implemented, and household resource management takes place. Throughput comprises productive, reproductive and community activities, planning, implementation, decision-making and evaluation of whether actions and outcomes conform to plans. A system's overall effectiveness can be measured by comparing the output with the input (Bristor, 1995; Deacon and Firebaugh, 1988). Livelihood strategies and household resource management has direct interrelationship with the household's assets and resources. They have an influence on livelihood outcomes and rural livelihood security.

2.9.4 Outputs

Outputs refer to anything produced by a system (Bristor, 1995). The outputs of this model are presented as desirable livelihood outcomes that are fundamental for rural livelihood security. There is an interrelationship between livelihood strategies and household resource management and outcomes. The level of livelihood security is determined by outcomes. In the context of this study, examples of desirable livelihood outcomes are more income, improved food security, reduced vulnerability, more opportunities to escape poverty, empowerment and improved quality of life, sustainable use of resources and assets. Livelihood outcomes feedback to assets, resources, livelihood strategies and household resource management. Rural livelihood security is feedback to the transforming structures and processes.

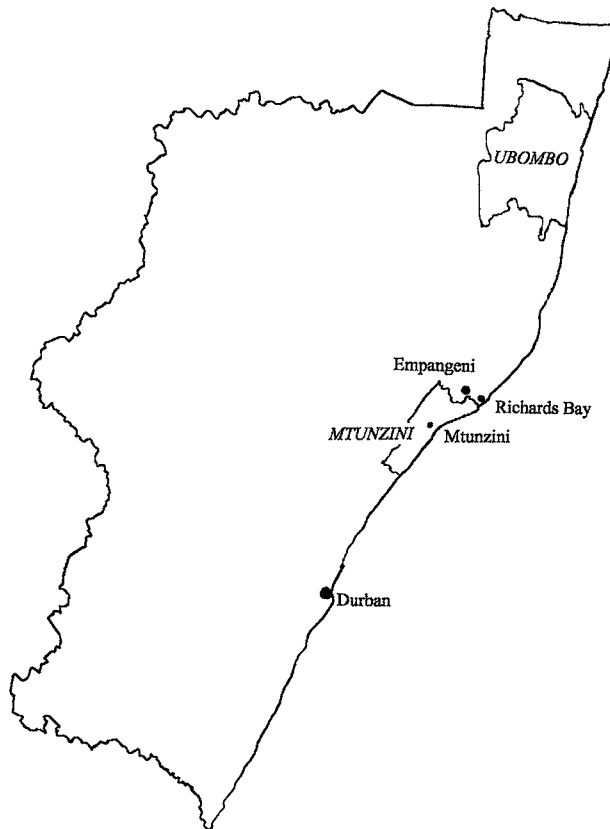
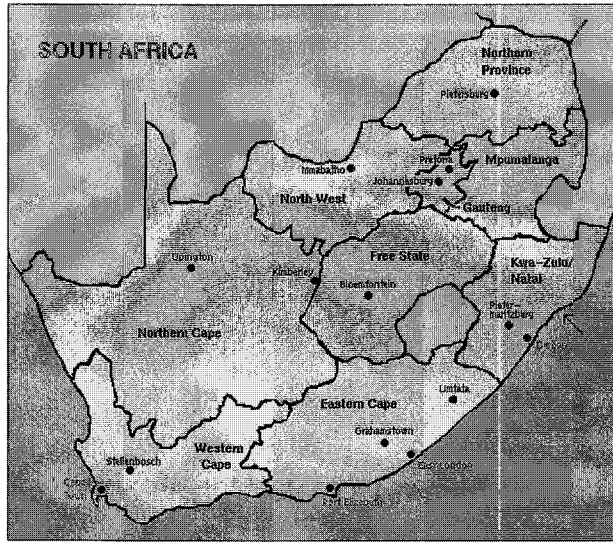


Figure 3.1 Map of study area: KwaZulu-Natal

This study explored the importance of the household in generating rural livelihood security and the appropriateness of extension services in supporting and enhancing that role. It required explanation and correlation of certain issues. There was also a need to understand the household structure, assets and resources, intra- and inter-household dynamics and actual meaning and purpose of certain household activities used as strategies to generate livelihood security. This chapter gives an insight into how the research project was conducted. It discusses the research design; orientation stage; the unit of analysis; methods of data collection; sampling; validity and reliability; employment of research assistants; methods of data analysis; time schedule of the research project and the area of the study.

3.1 Research design: qualitative and quantitative approaches

The research design was descriptive but a combination of quantitative and qualitative research methods was undertaken because they complement each other (Scrimshaw, 1990). Both quantitative and qualitative research have philosophical foundations, characteristics and techniques that made them ideally suited for the exploration of some of the research questions yet inadequate for the investigation of others. In the past, research efforts have focussed exclusively on producing knowledge from the analytical-empirical perspective using traditional quantitative methods associated with the dominant scientific paradigm.

Quantitative research views reality as singular, static and existing independent of observers. It tends to focus on reliability and replicability and aims to produce generalisations about causal relationships between aspects of the phenomenon of the study (Chapman and Maclean, 1990; Scrimshaw, 1990). However, qualitative research methods are directed towards gaining an understanding of the meaning of people's everyday lives from their point of view. Consequently, the qualitative research approach provides detailed descriptions of particular social settings under investigation, as well as explanation of the behaviour that occurs (Narman, 1995). Qualitative research recognises that people do not construct meaning in a vacuum, but within a socio-cultural environment in which they live. Thus they construct meanings through interaction and negotiation with others (Chapman and Maclean, 1990).

Quantitative research was used to answer questions that were mainly based on descriptive and some theoretical objectives of the study. Whereas qualitative research was employed to answer questions formulated from theoretical and applied objectives. The qualitative approach of the study was employed to assist the researcher in unveiling sensitive data, for example gender roles, income, and extension services. Such data was needed to provide a better understanding into the role of household in influencing rural livelihood security. The descriptive survey was used to quantify data. Key informant interviews, focus group discussions (FGDs) and case studies were used to collect qualitative data. The empirical research was conducted in five stages: *orientation stage; key informant interviews; FGDs; household survey and case studies.*

3.2 Orientation stage

After I had written the research proposal, I planned to do a profile of the communities in the area of the study. I wanted to share some preliminary ideas about issues that I proposed to investigate. The first step that I took was to inform the regional director of the Northeast region of the KwaZulu-Natal (KZN) former Department of Agriculture⁷ (DOA) in Eshowe about the study and to ask for advice and permission on how to approach the communities in the two districts of the study. Two separate meetings were held with the DOA heads of districts in Ubombo and Umthunzini. In both districts, I was informed that I should work with Community Development Committees (CDCs) because they had representation of the different wards under the jurisdiction of tribal *amakhosi*. Meetings were held with some members of the Development Committees. At this stage contacts were made and key informants to be interviewed were identified. Community profiles were compiled on the basis of data collected from secondary sources (HSRC, 1996; StatsSA, 1999).

During the five stages of the field research, additional research tools were used to supplement the main instruments that were used to collect data. These included literature review, observation, field notes and unstructured interviews with the local community members in the study area.

3.3 Unit of analysis

The unit of analysis was a critical factor in this study. When the study was planned, the household was considered to be the unit of analysis. However, during the operational stage, it became clear that the equivalent of the Western concept of household was the homestead in KZN. As it was explained in Chapter 2, the homestead is prevalent in rural KZN. Therefore it was more appropriate to use it as the unit of analysis instead of the universal, standard household. Homestead membership boundaries were difficult to define, mainly because of the rural-urban migration patterns. The study considered the unit of analysis as composed of a group of people who were mostly relatives, sharing the same residence (homestead), eating together, sharing activities and resources. The operational definition included family-based individuals who shared residence, ate together, shared livelihood resources and strategies. Members of the homestead who were included in the operational definition were those that had lived in the household for at least six months during the year of the study.

3.4 Methods of data collection

The methods of data collection included unstructured interviews and observation. Field notes were written and analysed. This section examines four methods of data collection that were undertaken; key informant interviews, FGDs, household survey and case study inquiry.

⁷ Now Department of Agriculture and Environmental Affairs (DAEA)

Key informant interviews

It is often possible to collect valuable information from a few members of the community who are particularly knowledgeable about certain matters in the area. Therefore, a community survey was undertaken to collect data from key informants through individual interviews. The researcher identified five appropriate groups from which the key informants were to be drawn and then selected four informants from each group. These groups were from the agricultural extension services, health sector, education sector, community groups and enterprises. In the selection of key informants the inclusion of the government officials, local leaders and representatives of women, men and the youth was ensured. The researcher and two assistants interviewed a total of 20 key informants in each area.

An interviewer guide with a list of topics and issues to be covered was used. The guide included the following topics: *Particulars of respondent; demographics; health; sanitary facilities; water supplies; energy sources; agriculture and extension services; education; transport; communication; community organisations*. The atmosphere in the key informant interview was informal and the researcher framed the actual questions during the course of the interviews. The informants were probed by the researcher whenever necessary to elicit more information. Notes were taken and developed later.

The advantage of the key informant interviews was that the researcher was able to access confidential information that would not have been revealed in other settings. The informants freely told of incidents, local happenings, or conditions that explained some causes of constraints to the community. The interview setting also allowed flexibility to explore new issues that had not been anticipated but were relevant to the purposes of the study. However, the disadvantage of this method was that it was not possible to predict or prove that the key informants were knowledgeable, informed and open to discuss relevant issues. It was difficult to prove that informants were representative of their group in the information they offered. The opinions of key informants were helpful, but for a wider view the researcher needed to follow up with FGDs.

Focus group discussions

Focus group discussions were conducted to find other views than those of the key informants. They were conducted primarily for generating themes or issues to be further probed using a household survey questionnaire. The researcher together with the assistance of the local extension staff and representatives of the CDCs identified groups of people who were thought to share similar types of experiences of livelihoods. The extension workers did not participate in FGDs but they were interviewed as key informants. Ten separate groups of 10 to 15 people met for FGDs in each district. The FGDs were categorised into men, women, the youth and a mixed group of men and women. On behalf of the researcher, the community leaders and the extension staff asked targeted individuals to participate in FGDs. Incentives for transport were offered to those who used public transport.

A guide for discussions comprised the main issues on the following topics:

- Gender and generation division of labour;
- Access to; control over and distribution of resources and assets;
- Intra-and inter-household entitlements;
- Felt needs and constraints;
- Extension services;
- Rural development agencies in the area;
- Use of wild fruits and plants for food;
- Livelihood strategies (including indigenous knowledge);
- Participants' perception of food and livelihood security.

FGDs were conducted in community leaders' homesteads, church halls and school classrooms. The researcher informed the participants of what was required of them both in terms of content and process of the FGDs. The amount of time to be used was spelled out. Then the researcher introduced the issues for discussions, encouraged participation by all and ensured that no one dominated the discussions. A research assistant took notes of the discussions and observations. Generally, the FGDs lasted for 2-3 hours. The researcher also recorded important points made. Views and attitudes of the participants were probed. The issues and themes generated in FGDs were used to prepare an interview schedule for the baseline household survey.

Household survey

A household survey was conducted to find out about the general situation of household livelihoods. The numbers of respondents interviewed in Ubombo and Umthunzini were 122 and 150, respectively. Due to political interference in Ubombo district, it became unsafe for the interviewers to continue with 28 remaining household interviews in one village. There were misunderstandings and misconceptions in the community about the study. During the period of fieldwork, KZN was preparing for the local government elections to be held in November 2000. Thus some people spread false information that the interviewers were canvassing membership for a political party. In view of the confusion, the researcher decided to stop working in the village where the community had been misinformed. A questionnaire with closed-and open-ended questions was used to collect data. The topics covered by the household survey were:

- Household composition and structure;
- Household livelihood indicators;
- Participation in community organisations;
- Perceptions of needs;
- Perceived quality of livelihood;
- Community level of livelihood;
- Household perceptions of livelihood security;
- Development priorities for household livelihood security.

The questionnaire was first drafted and translated to the local language *isiZulu*. It was then tested to find out if it actually worked. The questionnaire was tried out on a small group of 24 people who were not part of the sample in each district. Pilot work helped the researcher to find out whether the questions were understandable and answered appropriately, whether there was enough space to record the answers and the duration

of the interview. During the pilot stage, the interviewers practiced using the questionnaire in the same way that it would be used in the actual survey. After completion of the pilot questionnaires, the researcher together with the interviewers looked at the responses and discussed any problems pertaining to the questions asked in the questionnaire and how long it took to complete the questionnaire. The interviewers reported that some respondents were reluctant to answer questions pertaining to income, savings, pension payments, number of cattle owned, health and organisations. Such questions were reworded and rephrased as they were considered to be sensitive. It was ensured that appropriate data would be elicited from the respondents despite the rewording. In addition consistency questions were added to validate the responses. The final draft of the questionnaire was then produced.

The questionnaire was administered by face-to-face interviews at the homesteads of the respondents. The interviewers were instructed to interview the head or the *de facto* head of the homestead. If the head or substitute was not available, interviewers made an appointment to interview him or her when available within five days. In a cluster of homesteads in a village, interviewers selected every third homestead for inclusion in the sample. If it was not possible to interview a respondent in the third homestead, the next one was used as a substitute. Some respondents refused to be interviewed because they were not going to get a financial reward from the exercise. Others thought the study was a government rural development project. Thus the researcher and interviewers had to explain carefully the actual purpose of the study. Those respondents who were willing to participate were interviewed. A total of 272 respondents were interviewed in the study area.

The case study method

Case studies were conducted in order to collaborate certain facts that had already been established in the household survey. This method was undertaken to probe important issues in-depth and to gain valuable insights into variables of typical cases that cannot be done by a survey. Case studies were selected from the baseline household survey sample according to key variables in relation to livelihoods. In-depth interviews were carried out with respondents. An interview guide, comprised of key questions in the study, was designed as a checklist. The interviews lasted for one to two hours. Questions were varied and probed in depth. Twelve respondents were selected in each district looking at characteristics with respect to the following: *high and low economic status; gender headship; pension-dependent household; migration; farming.*

The general case study guide questions were formulated under the following topics:

- The household structure;
- Livelihood indicators;
- Access to household resources;
- Power and decision-making within the household;
- The components of rural livelihood;
- Infrastructure;
- Livelihood strategies;
- Livelihood security.

Some of the questions were as follows:

- What activities do women and men do in this household?
- What access and control do women and men have over resources and benefits?
- What has this household put aside for use in times of hardships, such as drought, illness, death of an income earner?
- What traditional knowledge does this household find useful for survival and support?
- What opportunities or constraints are there for men and women in this household?
- Who decides how household money is to be used?
- In what other income earning enterprises, is this household involved besides agriculture?
- What is the significance of the agricultural extension and rural development work to your household livelihood security?

3.5 Sampling

Household survey

A nonprobability sampling method was used to select a sample for the household survey. The method of selection was based on the judgement of the researcher and available resources. The selection of the sample was purposive, as typical households were believed to be mostly in selected wards. In selecting the sample, it was acknowledged that there would be no way of forecasting, estimating, or guaranteeing that each household in the study area would be represented in the sample. The total number of households in both districts was not available in the tribal authority offices and the district magisterial offices. The researcher used census documents to get an insight into the type of population from which the sample was to be drawn.

In the Ubombo district, five wards out of ten were selected to be included in the sample. Thus a total of 122 respondents were interviewed. Whereas four wards out of six were included in Umthunzini district, here 150 respondents were interviewed.

Case study enquiry

Twelve case studies were selected for interviews in each district. Two cases were selected from each of the six categories already mentioned above.

3.6 Validity and reliability

The methodological concepts of validity and reliability provide a common foundation for the integration of qualitative and quantitative techniques. Validity means the degree to which scientific observations measure what they purport to measure. Whereas reliability refers to replicability or the extent to which scientific observations can be repeated and the same results obtained. (Scrimshaw, 1990). In a quantitative research approach, surveys are carefully designed to collect data in the most objective manner. They often suffer inaccuracies based on respondents' perceptions of their own behaviour. However quantitative approaches have their limitations. Surveys fail to reveal motives and to uncover behaviours, which may be consciously or unconsciously concealed. They may focus narrowly on specific variables and are then

unsuitable for eliciting important motives underlying the behaviour. Results of the survey can be very different depending on who is interviewed (Scrimshaw, 1990).

But the qualitative approach has limitations as well if evaluated against the quantitative approach. These are subjectivity, discretion and replicability. First, researchers often tend to interpret behaviour and other social events within the context of their own understanding of issues. This behaviour becomes a source of subjectivity leading to problems of reliability and validation. Second, researchers exercise a great deal of discretion. The free style of qualitative research gives the opportunity for researchers to make and adjust decisions, in the field according to the best of their judgement. This discretion can be misused to the detriment of the study. Third, it is difficult to replicate qualitative studies because of the flexibility, subjectivity and discretion involved. Several qualitative methods that were used were adjusted for suitability according to the researchers' interpretation of the context (Narman, 1995). In this study the main limitations were time factors, limited financial resources and lack of suitable infrastructure for communication.

The question of validity and reliability within research are just as important within qualitative and quantitative methods, though they may have to be treated somewhat differently (Narman, 1995). It is acknowledged that all research methods have their advantages and limitations. Hence this study combined several methods: observation, unstructured and structured interviews with key informants, FGDs, survey and case studies. Each method was used to supplement and check the others in the process of triangulation (Giddens, 1993).

3.7 Employment of assistants

On her return to South Africa at the end of January 1998, the researcher assembled and trained six final year undergraduate students who were completing their Bachelor of Home Economics degree at the University of Zululand (UZ). These students were experienced and had all worked as extension field officers in rural areas of KZN before they commenced their university studies.

Selection of good research assistants and interviewers was vital to win the co-operation of the community. They were selected on the basis of their open, polite, and friendly personalities, their fluency in the local language, *isiZulu* and gender. The researcher and the UZ students conducted ten focus group discussions (FGDs) in each district of the study. The FGDs were conducted to collect data on indigenous knowledge systems, particularly on food sources. In addition, key informants were interviewed for this purpose as well. Assistants were also trained to interview key informants in both districts.

When the researcher received funds for doing fieldwork in July 1999, it became necessary to employ and train four additional assistants on how to conduct FGDs. Two of them were un-employed female home economics graduates (one woman holding a diploma in human resources who was also unemployed during that period) and one experienced male extension officer employed in the Department of Agriculture at UZ. Ten FGDs were conducted in each district.

In January 2000, six and ten research assistants were hired to conduct interviews for pilot work and the household survey in Ubombo and Umthunzini, respectively. Then in June 2000, six assistants from those who conducted household survey interviews were trained to assist with case studies.

Training programme for assistants

Training for conducting FGDs and key informant interviews took three days. This included introducing the background of the research project, method of data collection, trial interviews, facilitation of FGDs and supervised field trials. The training sessions for the household survey also took three days in each district. The first day was spent on lectures in preparation for data collection and trial interviews. On the second day pilot work was conducted in the field and on the third day the researcher and assistants reviewed completed questionnaires. Problem areas and questions were identified and corrections were made in preparation of the final draft of the questionnaire.

The interviewers were trained to work in pairs of a male and female so that one of them could lead in asking questions while the other interviewer recorded the answers and also carry out observation work. It also helped to have a sex mixed pair because a male interviewer was always available to interview male respondents whereas the female interviewers interviewed women heads of homestead. In rural KZN, it is more acceptable to have a female interviewer dealing with a female interviewee. Rural men also prefer to be interviewed by other men.

3.8 Data analysis

Key informant interview and FGDs notes were analysed by hand hence themes for the development of the household questionnaire were formulated. A private statistician at the University of Durban-Westville entered the results of the household survey. He used the SPSS statistical package to supply frequency distribution of data. Further analysis was conducted at Wageningen University.

Case studies were analysed manually. Qualitative data from FGDs key informants and observation were developed into themes and analysed to support other data.

3.9 Time schedule of the research

The study was undertaken from at the beginning of September 1997 and completed at the end of January 2002.

Table 3.1 Time schedule

Date	Activities
September 1997 to January 1998	Proposal writing and attendance of relevant courses at Wageningen University
February-March 1998	Orientation, informal interviews
April 1998	Training of assistants
May-June 1998	FGDs for IKS
July-August 1998	Key informant interviews
September-October 1998	FGDs for IKS
August-October 1999	FGDs for main study
November 1999	Preparation of the questionnaire
December 1999	Revision of draft questionnaire
January-February 2000	Training of interviewers, pilot work, survey interviews
March-July 2000	Data entry, case studies
August 2000-February 2001	Data analysis and writing up
November 2001-January 2002	Writing up

3.10 The study area

This section discusses the study area. It gives a brief overview of the country of South Africa and the province of KwaZulu-Natal. And then Ubombo and Umthunzini districts are examined.

3.10.1 South Africa

The Republic of South Africa occupies the southernmost part of the African continent, stretching latitudinally from 22 to 35 southward and 33 eastward. Its surface area is 1 219 090 km². South Africa is bordered by the Atlantic Ocean to the west and the Indian Ocean to the south and east. It has common boundaries with the republics of Namibia, Botswana and Zimbabwe, while the Republic of Mozambique and the Kingdom of Swaziland lie to the northeast. The Kingdom of Lesotho is completely enclosed by South Africa in the southeast (Government Communications Infonautics Corporation (GCIC), 2000).

The earliest inhabitants of South Africa were the San who were later joined by the Khoisan people (GCIC, 2000). Bantu speaking people came to South Africa in the 11th century. In 1652, the Dutch East India Company established a trading post at the Cape. First trials on various agricultural crops were conducted and stock farming was started on a small scale with sheep and cattle bartered from the Khoikhoi. The British annexed the Cape in 1806. Consequently, this led to the Great Trek of the Boers to settle inland north of the Cape settlement. In 1910 four provinces, namely Cape Province, Natal, Orange Free State and Transvaal, formed the Union of South Africa. Between then and 1989 the white only government introduced racial discrimination and the apartheid system in which Africans, Asian and Coloureds were segregated. Under the apartheid system about 14% of the land was set aside for Africans in ten 'homelands'. Four such territories were declared independent by the South African government. These were Transkei, Bophuthatswana, Venda and Ciskei. However, they were not recognised by other nations as independent. In 1994 free elections were

held and a democratic government was formed. Thus the 'homelands' were reabsorbed into South Africa. Under the new constitution, nine provinces were delineated: *Northern Cape; Western Cape; Eastern Cape; Free State; KwaZulu-Natal; North West; Gauteng; Mpumalanga and Northern Province.*

According to Census 1996 figures, there were 40.58 million people in South Africa; of these, 76.7% classified themselves as African; 10.9% as White; 8.9% as Coloured⁸ and 2.6% as Asian⁹. A few members of the Khoi and San also remain. There are 11 official languages, including IsiZulu, IsiXhosa, Afrikaans, Sepedi, English, IsiNdebele, IsiSwazi, Tsonga, Tswana, Sotho and Venda. South Africans are mostly religious people. Christians form 68% and there are also Muslims, Hindus, and believers of traditional African religion (GGL, 2000; GCIC, 2000).

The topography and surrounding oceans influence the climate. Temperature conditions in South Africa are characterised by three main features. First, temperatures tend to be lower than in other regions at similar latitudes, such as North Africa and Australia. This is due to the greater elevation above sea level of the subcontinent. Second, despite a latitudinal span of 13 degrees, average annual temperatures are remarkably uniform throughout the country. Owing to the increase in the height of the plateau towards the northeast, there is hardly any increase in temperature from south to north as might be expected. The third feature is the striking contrast between temperatures on the east and west coasts. Temperatures above 32°C are fairly common in summer from December to February. During this period some provinces are notably hot and humid, such as KwaZulu-Natal coast, Mpumalanga and the Northern Province (GCIC, 2000).

South Africa has an average annual rainfall of 464 mm, compared to a world average of 857 mm. Usually the annual rainfall is less than 500 mm. The annual rainfall is regarded as the absolute minimum for successful dry-land farming. South Africa's rainfall is typically unreliable and unpredictable. Large fluctuation in average annual figures is the rule rather than the exception in most area of the country. Periodically, South Africa is afflicted by drastic and prolonged droughts, which often end in severe floods.

South Africa is a middle-income, developing country with an abundant supply of resources, well-developed financial, legal communications, energy, and transport sector. The country has a stock exchange that ranks among the 10 largest in the world. It has a modern infrastructure supporting an efficient distribution of goods to major urban centres throughout the Southern African Development Community (SADC) region. However, the economy of South Africa is almost entirely controlled by Whites, with a workforce that is largely non-White. Mining is the foundation of the country's wealth. Gold accounts for two thirds of mining revenue. South Africa is also a leading producer of diamonds, chrome, platinum, vanadium, manganese and fluorspar. There are also large deposits of copper, coal, uranium, antimony, iron ore, and other minerals. Agriculture, stock raising, forestry, fishing and tourism are very important to the economy of the country. Crops include maize and other grains, vegetables, peanuts, deciduous and citrus fruit, cotton, tobacco and sugarcane.

⁸ Persons of mixed descent.

⁹ Largely persons of Indian descent and people who have immigrated to South Africa from the rest of Africa, Europe and Asia, who maintain a strong cultural identity.

Economic growth has not been strong enough to cut into the 30% unemployment, and economic problems remain from the apartheid era, especially the problems of poverty and lack of economic empowerment among previously disadvantaged groups (GGL, 2000; GCIC, 2000). The area of the research project was in KwaZulu-Natal.

3.10.2 KwaZulu-Natal

KwaZulu-Natal is one of the nine provinces situated in southeastern South Africa. The Eastern Cape, borders KZN on the south, on the west are Free State and Lesotho, and on the north are Mpumalanga province, Mozambique and Swaziland. Before the establishment of the democratic government in 1994, KwaZulu-Natal was governed by two administrations. Natal fell under the jurisdiction of the South African government and was administered by the Natal Provincial Administration (NPA). KwaZulu was a 'homeland' for Zulu-speaking people. KwaZulu was then a semi-autonomous self-governing state and controlled by the KwaZulu government. However, since April 1994, the province's administration has been unified under the provincial government of KZN.

The province can be divided into three geographic zones: a lowland region along the Indian Ocean coast; rolling plains in the central section of the province and a mountainous area including two ranges, the Drakensberg Mountains in the west and Lebombo Mountains in the far north. The subtropical coastline of KZN has some of South Africa's best-protected indigenous coastal forests, such as Dukuduku and Kosi Bay. It is also along this coast that the St. Lucia Estuary is located. Average temperatures in the province range from 17° to 28°C in the warmer part of the year, that is in the months of October to April and in the cold months from 11° to 25°C. The annual rainfall totals about 690 mm, with rain falling most months of the year (Edgar, 2000).

KZN covers an area of 92,100 square km of land. According to the 1995 October household survey (OHS), there are approximately 1,6 million households in KZN containing 8.8 million people. This is equivalent to 18% of the country's households and 21% of the country's population. Households in KZN are therefore relatively large, compared to the household size in South Africa as a whole. Population distribution figures in KZN indicate that the province still has the highest Asian population in the country, constituting 9.4% of the province's population. About 82% of KZN's population is African, 6.6% is White and 1.4% is Coloured. KZN has 43.1% and 56.9% of urban and non-urban population, respectively. The Zulu people make up the majority of the population. Consequently, the main language is *isiZulu* whereas other languages include English, Afrikaans and *isiXhosa* (Ngwane and Hirschowitz, 1998).

Most Africans and Whites in KZN are Christians while Indians are mainly divided into Hindus and Muslims. KZN is the only province in South Africa with a monarchy specifically provided for in the constitution. The capital of KZN has not yet been determined. The two possibilities are Pietermaritzburg, which was the capital of Natal, and Ulundi, which was the administrative capital of the former 'homeland' KwaZulu. Durban is the largest city in KZN. It serves as major port and a centre for manufacturing and tourism. Richards Bay is one of the other important cities

containing mines and a port that primarily serves as an outlet for coal exports (GCIC, 2000; Edgar, 2000).

KwaZulu-Natal's economy centres on agriculture. The main crop is sugarcane grown along the Indian Ocean coastal belt. The coastal belt is also a large producer of subtropical fruit, such as bananas, guavas, litchis, nuts, mangoes and pawpaws. The farmers in the hinterland concentrate on vegetable, dairy and stock farming. Another major source of income is forestry in the areas around Vryheid, Eshowe, Richmond and Harding. Coalmines operate in the northern part of the province around Newcastle, Dundee, Glencoe and Vryheid. Tourism also ranks as an important industry, with many visitors attracted to coastal resorts, the Drakensberg Mountains, and national parks, such as Hluhluwe Game Reserve, Umfolozi Game Reserve and St. Lucia Marine Reserve (Edgar, 2000). The unemployment rate in KZN is 45%, the highest among Africans in rural areas, and 33% in urban areas. KZN has a relatively poorly skilled labour force, as almost 23% of adults in the province have received no schooling. The province is a relatively poor region with a Gross Geographical Product (GGP) per capita of R3 289 compared to the national average of R4 595 (HSRC, 1996). There is a huge gap between the urban and rural per capita income of people living in KZN.

According to Schwabe et al. (1996) 57% of households in KZN are living in poverty hence the province ranks third out of nine with regard to poverty level. Furthermore, an analysis of nationwide household income data shows that the majority of poor households in South Africa are African, situated in rural areas. Many of the rural poor households have female household heads. It is also documented that the poorest districts in KZN are those in former KwaZulu remote rural areas with a high dependency ratio, such as Ingwavuma with 14:1. These districts are far from metropolitan work opportunities. There are discrepancies in comparing access to facilities and services between urban and rural households. The service need index confirms that the former KwaZulu districts in the province have the greatest backlog in service provision. The index is a combination of service provision for health, education, police, postal, water, sanitation, electricity, housing, retirement and road facilities within different districts.

Physical accessibility to the area plays a major role in determining whether services are provided in a district. Without sufficient road infrastructure into rural areas, no means is provided with which service providers and development agencies can access regions. As an example, Ubombo has the poorest provision of road infrastructure in the province that contributes significantly to it having some of the lowest levels of service provision, particularly electricity, in KZN (Schwabe et al., 1996). However, more data are required to improve the baseline information that has already been provided and documented about rural livelihoods in KZN.

Thus this study concerns empirical research that was undertaken in Ubombo and Umthunzini districts in KZN. Ubombo is situated in a remote rural former KwaZulu 'homeland' far from metropolitan centres. Whereas Umthunzini is also a rural area in former KwaZulu 'homeland' but situated closer to metropolitan work opportunities in Richards Bay and Empangeni. This study was conducted in one of the four regions of the KZN Department of Agriculture and Environmental Affairs (DAEA) the

Northeast Region. Ubombo and Umthunzini districts were selected as the area of study for comparative purposes.

3.10.3 Ubombo District

Ubombo district includes areas that were under the administration of the former Natal and KwaZulu 'homeland'. The part of the district that was former Natal was not included in the study. This was a former White Natal farming district, which was one of the most well-off districts with the lowest dependency ratio in rural KZN. It had a population of 2,929 in the 1991 census (Krige, 1996). Ubombo district is situated in the Northeast region of the KZN DAEEA. The district is bordered to the north by Ingwavuma district, Nongoma and Mahlabathini districts to the west, Hlabisa to the south and the Indian Ocean to the east. Lubombo Mountains of about 800 km long extend from south of the Mkuze River north into the Northern Province. A number of rivers, including the eastward-flowing Mkuze, Olifants, Pongola, Ingwavuma and Usuthu, cut their way through the range of these mountains.

Ubombo and Ingwavuma districts were not historically part of the original kingdom of Zululand, as the northern boundaries of the kingdom were not clearly defined in the 19th century. The Swazi Kingdom lay to the north and in the northeast the direct authority of the Zulu king shaded into the tribute areas of the Thonga chiefdoms. A cluster of small independent tribes loosely grouped together as the Thonga's inhabited the region between the Lubombo Mountains in the west and the sea. The territory of the Thonga's included the southern parts of the present day Mozambique. In the west the Thonga territory blurred into land controlled by the Swazi and in the south into land controlled by the Zulu's. The Thonga people paid tribute to their powerful Zulu neighbours, but did not form part of the Zulu Kingdom and thus were not defeated by the British in 1879. However, in 1887, the Thonga territory was annexed together with Zululand. Both the Zulu's and the Thonga's were brought under the British administration. The whole area came under the control of the British settlers in Natal and was subjected to the determinations of the Zululand Delimitation Commission. Thus the boundaries of African reserves or areas were established in 1904. However, a vast corridor of land, loosely described as the Makhathini Flats was already settled by the indigenous African people, but it became designated as Stateland, its inhabitants as squatters (Uthungulu Regional Authority, 2000).

Ubombo is influenced by the south Indian Ocean tropical cyclone belt that is generally dominated by seasonal dry winters and wet summers with periodic major floods. The average annual temperature is approximately 21°C. The coastal dunes experience high rainfall, between 1200 and 1300 mm per annum. The interior is drier with an annual rainfall of about 600 mm. The vegetation in the district is exceptionally diverse and ranges from forest, thickets and woodlands to grassland and swamps. Rural communities rely on the collection of plants and wood for food, medicine and fuel. In spite of the apparent abundance of water from the rivers, Lake Sibaya and the Jozini Dam, rural areas of Ubombo derive most of their water from natural sources, such as springs, rivers and boreholes. It is common that many of these sources dry up in the winter months.

Ubombo has a number of natural tourism resources. Lake Sibaya is South Africa's largest freshwater lake with a surface area of between 60 and 70 sq. km. Sodwana

Bay National Park is the best-developed reserve in the sub-region, in terms of the tourism infrastructure. The resort consists of the 413 ha Sodwana Bay Resort. Another reserve is the Mkuze Game Reserve located to the north east of Mtubatuba. It is a 34000 ha reserve consisting of large tracts of open savannah woodland. Hippos and crocodiles are found in Ndumo Pan. A wide variety of game is found in this reserve.

The Provincial Government and Uthungulu Regional Council have the prime responsibility for the delivery of services and facilities. Ubombo district falls under the jurisdiction of Ubombo Regional Authority. Traditional authority leaders are ex-officio members of Uthungulu Regional Council. In Ubombo ten *amakhosi* are in-charge of the ten tribal authority wards. Ubombo is the capital town of the magisterial district and it plays a significant administrative role. It provides the functions of the magistrate's court as well as hospitals. However, this town has not grown in size despite its distinct administrative and social functions. The reason for this can be that the town cannot be accessed by tar road and it is located at the top of the Lebombo Mountains. Consequently, there is limited traffic passing through this town, as it is only a destination, due to its social and administrative function, rather than a node of activity and movement.

Social and demographic factors

The population of Ubombo district is 113,410. According to statistics 44.12% of the population is male, while in the former Natal portion of Ubombo males represent 59.66% of the population. These figures indicate migrant labour movements from the former KwaZulu areas (where subsistence agriculture is practiced) to the former Natal and commercial farming areas (StatsSA, 1996). Demographic indicators show that more than half of the Ubombo district's population is under the age of 15 years representing 51.4%. The 15-64 age category represents 45.06% and the over 65 year age category is at 3.54%. These statistics is indicative of high dependency ratios in the district (Uthungulu Regional Authority, 2000).

The unemployment level in the district is very high. The unemployment rate for Ubombo is 49% (HSRC, 1996). The district has two hospitals, namely Ubombo and Mseleni and clinics, both hospitals service between 40,000 and 50,000 persons within their 20 km radius. Ubombo has four community and sports centres for recreation. Access to postal and police services are very limited. According to statistics, the economic growth rate of 1.31% in Ubombo is slow. The community and social services play an important role in terms of employment in Ubombo. People are mainly employed in agriculture and mining, trade, construction, electricity, gas and water. The agricultural sector dominates the district economy in terms of employment. The most important sectors in Ubombo, in order of their GGP are agriculture, government, informal sector, and community and social services. New jobs in the informal sector accounted for 36% in the period between 1991 and 1995. The creation of jobs by the informal sector can be explained by the relative decline of other sectors of the economy and a general shift from formal to informal employment (Uthungulu Regional Council, 2000).

The HIV/AIDS epidemic is likely to have a significant effect on development throughout the country. There are no figures available for the incidence of HIV/AIDS in Ubombo district. Estimated evidence from NGOs working in the area indicates that

as much as 10% of the labour force is lost every year due to the virus. Other estimations from pre-natal clinics indicate that one in every two women visiting these clinics is HIV positive. It has been suggested that one of the reasons why the prevalence of the HIV/AIDS virus is so high in this relatively remote part of the country is the high level of migrant labour. The virus has a direct negative impact on economic growth and development. Malaria is another endemic disease within the district and has serious impact on economic development. Another crippling disease that is endemic in Ubombo, in Mseleni area is only described by its symptoms, namely Mseleni Joint Disease (MJD). Despite more than two decades of research, the cause of this disease characterised by severe arthritis is not known.

The medical profession first noticed Mseleni Joint Disease in the early 1970's. However, both Zulus and Thongas had already known about MJD for a long time especially the Thongas, which already lived in the area when the first missionaries settled in Mseleni around 1912. MJD was named after the area because of highest incidence of the disease, but it is also highly prevalent in neighbouring areas. It first affects the knee and hip joints hence the indigenous Africans named it *isindulo* or *unyonga* (hip joint). The bone growth is affected and there is a high incidence of dwarfism in the area. Besides humans, some plant forms as well as fish in the nearby Lake Sibaya are dwarfed (Pooley, 1997).

According to studies conducted in 1973, it was found that out of 2015 people living in Mseleni area, 267 were affected by MJD. The highest proportions of these were adult women, perhaps because many of the men leave the area to work in other areas. In 1981, 15% of females and 6% of males living in the Mseleni area were affected by MJD. Numerous studies have been conducted to find the source of the disease. The local vegetation and the diet of local people have been examined with a view of discovering possible nutrient deficiencies or poisons. Some researchers have suggested that MJD is caused by lack of certain trace elements, in particularly manganese. The sandy soils found in the Mseleni area contain very little manganese. Furthermore, maize and peanuts, the staples of local people's diet are very low in manganese. It seems the sandy Fernwood soil may play a role in MJD. On the dusty and sandy roads and paths in the area, many victims were seen hobbling painfully while going to the hospital for their treatment. Most of them are bent, crippled and dwarfed. Disability grants are paid out to the sufferers and sometime patients are operated upon in hospitals outside the area. The MJD has a serious impact on the economic development (Pooley, 1997).

In Ubombo there exists a number of opportunities and constraints in terms of agricultural livelihood strategies. Over 95% of households are involved in some form of agriculture, but they do not produce sufficient quantities of food to meet household food requirements. Subsistence farmers produce cotton, sugarcane and to a lesser degree timber. The main staple crop is maize. Other crops include groundnuts, sweet potatoes, beans and pumpkin. Vegetables and fruit are produced from wetland gardens. Transportation of agricultural produce for marketing is always a problem because of the poor infrastructure. Livestock production (cattle, goats as well as poultry) occurs in the district. Uthungulu Regional Council (2000) has identified the following factors as causing constraints to the development of agriculture in the district:

- Insufficient water supplies because the irrigation from Jozini Dam mainly feed the State owned land sugarcane fields, which makes households dependent on rainfall;
- Poor agricultural potential because of limited access to resources of production, such as land, credit facilities, inputs, extension services and markets;
- No land tenure security;
- Poor supportive services, such as extension, credit facilities and cooperatives to provide inputs;
- Financially disadvantaged inhabitants;
- Poor knowledge of economic farming practices;
- Marketing problems.

Generally provision of services is very poor in Ubombo as compared to other districts in less remote areas. These are services for education, health, clean water supplies, sanitation, electricity, roads, police, telecommunication and postal agencies.

3.10.4 Umthunzini District

This study was conducted in the portion of the Umthunzini district that was under the former KwaZulu 'homeland'. Umthunzini magisterial district is situated in the southern part of the KZN DAEA Northeast Region. Three magisterial districts to the north, west and south, namely Lower Umfolozi, Eshowe and Lower Uthukela, border it and to the east of the district is the Indian Ocean. Umthunzini district includes eight towns, namely Mtunzini, Tugela Mouth, Esikhawini, Gingindlovu, Amatikulu, Mandeni and Isithebe. There are two industrial centres of economic importance in the Lower Umfolozi district north of Umthunzini. They are Richards Bay and Empangeni towns.

The name Umthunzini means a place in the shade and the area is endowed with ecological heritage. The town Mtunzini has developed but it fulfils a recreational and residential function. Being a residential town, Mtunzini consists of the State and municipal offices, trade, tourism and schools. It also accommodates administrative functions of the Mtunzini magisterial district. The climate is generally moderate. The lowest average temperatures are recorded from May to September with the lowest minimum average of 12.4° C in July. The highest maximum average temperature in January is 28.1° C. The area is humid and the highest average humidity of 91% occurs in June. The highest rainfall figures of 346.1 mm occurs in February and the lowest in March is 23.8 mm. Employment opportunities are scarce in Mtunzini but there are main sources of employment for the district in industry, commerce and education in Richards Bay, Mandeni, Empangeni and the University of Zululand. North of the town of Mtunzini is Port Dunford, which is essentially a forest station. Generally Umthunzini is made up of a community that has developed largely around the sugar cane industry. The industrial centres of Richards Bay, Mandeni and Empangeni influence the economy of the district (Kramer, 2000).

Richards Bay was formerly only a small fishing village. It has been developing fast since the opening of the Port of Richards Bay in 1976. The Port led to the establishment of big industries, such as Richards Bay Minerals and Alusaf. In addition, flourishing commercial and tourism venues were developed. The Port has

advanced facilities for ships coming from the East and is the closest port to Gauteng province. It has excellent rail, air and road links to the rest of the country. Marshlands, freshwater lakes, tribal settlements and sugarcane and timber plantations surround the town. The tourism industry is flourishing and industrial development of Richards Bay is progressing well.

Mandeni, which lies across the Uthukela River, is an industrial area, second only in significance to Richards Bay/Empangeni region on the north coast. In 1950 a huge paper mill was built on the northern bank of Uthukela River. Thus it brought a big influx of people, mainly from rural areas north of the river to Mandeni. After the establishment of the paper mill, the Isithebe industrial area was developed nearby. This led to further employment opportunities. Empangeni is another industrial area that has opportunities for employment for the population of Umthunzini district. It is significant for warehousing, wholesaling, bulk sales and a variety of commercial enterprises. Furthermore, the largest sugar mill in the Southern Hemisphere is located in Felixton a suburb of Empangeni. As a major regional services and retails centre, Empangeni continues to grow at a positive and substantial rate.

The magisterial district of Umthunzini covers an area of 428 sq. kilometres and has a total population density of 43 per square kilometre. According to the last census the total population was 18,455 (HSRC, 1996). In this study area the urbanised percentage is 34 as compared to zero in Ubombo district. This study was conducted in the former rural KwaZulu 'homeland' section of the magisterial district.

In rural areas of the district small-scale and subsistence farmers plant sugar cane, maize, beans, vegetables and fruit. There are also community vegetable gardens and poultry projects.

Table 3.2, on next page, shows the overview of the socio-economic indicators of the country, province and the two districts in which the study was conducted. The data are based on the last census held in 1991.

Table 3.2 A summary of the socio-economic data of the areas of study

Indicator	South Africa (country)	KwaZulu-Natal (province)	Ubombo District	Umthunzini District
Total Population	37,479,200	7,955,528	113,409	18,455
Population Density (per sq km)	30.712	86.345	42.128	43.019
Percentage Urbanised	49	38	0	34
Dwelling Units	7,117,000	1,404,000	13,623	3466
Average Household Size	5.3	5.7	8.3	5.3
GDP (million rands)	282,589	42,798	N/A	319
Per capita income (per annum)	4595	3289	706	7745
Functional Literacy (units)	46	44	20	42
Unemployment rate (%)	19.5	25.6	37.9	2.9

Source: Tait et al. (1996): 251-252, 257.

CHAPTER 4 THE PROFILE OF THE RURAL HOUSEHOLDS AND THEIR LIVELIHOODS

This chapter discusses the data on the profile of the rural households and their livelihood activities and strategies in the two districts of Ubombo and Umthunzini. Data present the household as the unit of analysis. They also answer research questions based on the descriptive objectives of the study. For the purposes of this study, the adjective rural, describing the household type, needs to be explained because it is often seen as synonymous with agriculture and farming communities. It is important to note that few rural households practice agriculture in South Africa. Therefore this study's rural households include those that are engaged in agricultural activities and those, which are involved in non-agricultural activities, such as wage employment, small and medium enterprises and trading (Niehof and Price, 2001).

In order to present a clear profile of the rural households and their livelihoods, emphasis is placed on the relationship between assets and the capabilities rural people possess. Ellis (2000) describes the term 'capabilities' as the ability of individuals to realise their potential as human beings. That is, to be adequately nourished and free of illness and to be able to develop skills and experiences to make informed choices and participate in the life of the community. Capabilities are influenced by personal and household livelihood strategies; strategies which develop over time. Availability of and access to assets together with activities determine the livelihood generated by the household. The construction of livelihood should be viewed as an ongoing process that changes with time and circumstances of the households. Assets can be built up, eroded or destroyed. Activities in rural areas often fluctuate with seasons and years. Access to assets, resources and opportunities may change for the household due to socio-cultural changes, events and institutional context of livelihoods. This chapter discusses livelihood indicators in the study area level and livelihood assets and resources at the household level.

4.1 A comparison of livelihood indicators at study area level

The context of the study area was discussed in Chapter 3. This section will start by a comparison of livelihood indicators based on the survey at the study area level. Table 3.2 presents the summary of socio-economic data of the study area. It shows that Ubombo has a higher average number of persons per household as compared to Umthunzini. This indicates that more assets and resources are required to generate livelihoods in Ubombo than Umthunzini. Furthermore, it is also notable that, per capita income is very low in Ubombo as compared to that of the country, province and Umthunzini. Literacy levels and employment ratios portray Ubombo as a relatively disadvantaged district.

4.1.1 Service provision

In addition to socio-economic indicators, Table 4.1 shows secondary data on important service provision in the study area. Service provision focuses on water, sanitation, health and educational facilities, postal services and police protection.

Table 4.1 Provision of services in Ubombo and Umthunzini Districts

Service Provision	Ubombo	Umthunzini
% Population with access to on site water facilities	0.00	32.98
% Population with access to septic tank or waterborne facilities	0.00	32.98
Average population per health facility	3 658	1 846
Number of primary and secondary schools	85 for 40 832	11 for 3 232
Average population per postal facility	16 201	2 636
Average population per police facility	56 705	3 691

Source: Schwabe et al. (1996)

Whiteford (1996) asserts that the majority of poor households in South Africa are African. They are situated in rural areas and many of them have female household heads. Regions which have high levels of poverty in KwaZulu-Natal (KZN) are those in which the majority of households are involved in subsistence agriculture. Often these households have adult males working away in metropolitan areas. The high level of poverty occurring in many KZN districts is illustrated by the percentage of households living below the minimum living level (MLL)¹⁰. The MLL for Ubombo and Umthunzini is 86 percent and 27 percent, respectively (Schwabe et al., 1996). According to Wilson (1996) the index of need at district level comprises five variables:

- Percentage households living below the MLL;
- Functional literacy indicating local skills levels, economic diversity and implications for locally based employment creation;
- Dependency ratio is the number of people dependent on each working person;
- Total households in a district;
- Population density in a district.

The index of need provides a perspective of overall levels of need in a district. Ubombo and Umthunzini have an index of service need of 75 and 31, respectively.

Access to safe drinking water and sanitation is a basic need that is tied up with food security, health and productivity of rural households. Inadequate water supplies and sanitation also have major environmental implications. Emmet (1996) states that the distribution of water supplies and sanitation facilities is influenced by two major factors. First, whether the district formed part of the former 'homeland' of KwaZulu before the establishment of the democratic government in 1994. Second the degree of urbanisation. In addition to these two factors, dimensions of race play a crucial role in determining access to water and sanitation facilities. Therefore Whites, Indians and Coloureds in the study area have more access to these facilities than Africans.

¹⁰ The Minimum Living Level (MLL) is calculated for urban areas and is specific to the size of the household i.e. the MLL rises as the household size rises. A household is regarded to be living in poverty if its annual income falls below the MLL for African, as calculated by the Bureau of Market Research.

According to key informants, focus group discussions (FGDs) and the survey, most of rural households depend upon pit latrines and some of them do not have access to any toilet facilities. For water supplies, rural households mainly rely on rivers, streams, springs, boreholes and a limited number of communal taps. It was reported that during times of drought, water sources usually dry up. When there is such a crisis situation, emergency water tanks are provided by the provincial and local government to supply communities with water.

Health

According to Ngwane and Hirschowitz (1998) in KwaZulu-Natal (KZN), 86 percent of the African household use public health facilities compared to 23 percent of white households that make use of private sector facilities. Table 4.1 illustrates access to health facilities in the study area. Both districts indicate that they are in need of improved health facilities. However, Ubombo is more in need of health services than Umthunzini.

Education

As a result of racial inequalities under apartheid legacy, the African population of KZN has been deprived of educational opportunities. Their educational attainments are lower than those of the country as a whole. Women have less access to education than men. Twenty one percent of African women in KZN have received no education at all (Ngwane and Hirschowitz, 1996). Generally, KZN's remote rural areas, such as Ubombo, have a large number of children out of school. A high school drop out ratio of children in Ubombo is one of the major problems. Some of the reasons for these problems are related to poverty. Poor households fail to pay fees and buy books and uniforms. In some cases, the schools are too far away for children to reach them on foot. Sometimes the households feared that their female children might get raped when they walk long journeys to and from schools. Other parents do not value education, particularly for girls. Table 4.1 illustrates that Ubombo is disadvantaged in accessing educational facilities than Umthunzini. Ubombo is one of the disadvantaged districts that have less access to educational facilities in KZN (Schwabe, 1996).

Communication

Few households in South Africa and in KZN have a telephone inside the dwelling. In KZN, only 12 percent of African households have a telephone inside the dwelling. Seventeen percent of households in KZN have access to communal pay telephones, while 31 percent have access to telephones at shops or clinics (Ngwane and Hirschowitz, 1996). Telephone services in the study area are considered to be of critical importance for contacting household members, particularly those who are migrants. As a result of steep slopes and broken terrain of Ubombo, that access to telephone services is extremely low. In both districts there is a high demand for public telephone services because the household telephone service is too expensive for the majority of the households. Some parts of Umthunzini district have limited access to telephones.

During the apartheid era, thousands of households could not receive or send mail to their families, friends and creditors because the facilities were not available. Rural households are worse off than urban ones. The postal service is considered to be one

of the basic needs by participants in FGDs. There are limited postal services in the study area but Ubombo is more disadvantaged than Umthunzini. Table 4.1 indicates the average population per postal facility. In the FGDs participants stated that many of the households could not receive or send mail in time to their families and relatives who lived in other parts of the country as the postal facilities were not available. Both Ubombo and Umthunzini need more postal agencies in different wards of the districts. A postal agency is a small post office that is managed by a private individual for a small fee.

Police safety and security

KwaZulu-Natal in comparison to other provinces of South Africa is considered to have a higher level of violence. Generally, rural areas of KZN have less access to police services than urban areas. In the past era, the planning of police services was closely related to the size of the population and the crime rate of the area. However, population growth and migration have resulted in major population changes throughout KZN and inadequate provision of police service facilities. Rural areas are disadvantaged in the provision of police services. Some of the reasons for this situation are lack of infrastructure, lack of adequate residential and office accommodation leading to understaffing of the police facility. Rural people have to travel long distances to reach police facilities. Often the police reaction time in rural areas is slow. This may be due to insufficient number of suitable police vehicle, poor road infrastructure, rough terrain and limited manpower (Schwabe, 1996). The key informants and participants in FGDs consider police service provision as inadequate in both districts. There is a dire need for improved police facilities because of the increased crime rate in both areas.

Physical infrastructure

Dasgupta (1993) states that the accessibility of roads is a significant factor in the rate of adoption of new ideas even at district level. He emphasises that roads, electricity, cables, irrigation canals and potable water supplies are a pre-condition for socio-economic development. Actually, the physical infrastructure is an important aspect of the country's economy. In KZN the distribution of roads is not equitable in terms of population size but rather population density. Rural areas have a high population but the density is low and this has resulted in a poor road infrastructure for the people living in them (Schwabe, 1996). Many of the wards in Ubombo do not have access to a formal road infrastructure. In some wards access to main roads is non-existent. One of the major problems of providing adequate road infrastructure is the high cost involved in providing the service in a sparsely populated rural area. The rugged terrain and lack of road infrastructure also contribute to areas not having been identified for the provision of electricity. Poor access to suitable road infrastructure is a constraint to livelihood generation, as the people cannot easily access nearby markets.

In KZN 83 percent of African households in urban areas use electricity for lighting, compared with only 20 percent in rural areas. Thus the majority of rural households use wood as a source of energy. Furthermore, only 8 percent of rural African households have running tap water inside the dwelling in KZN. The majority of households use rivers, dams and wells as the main sources of water, while 19 percent

of the rural households obtain water from boreholes (Ngwane and Hirschowitz, 1996). Ubombo is worse off than Umthunzini in terms of houses with electricity. The lack of service provision in the study area is directly linked to the poor socio-economic status, availability of assets and resources in the study area.

4.1.2 The context of livelihood assets and resources

The concepts of assets and resources were examined in Chapter 2. This section explores the context of livelihood assets and resources in the study area. These will be discussed as natural capital, social capital, human capital, physical capital and financial capital.

Natural capital

Ubombo is endowed with many assets that can be converted to resources such as water sources, land, forests, wild plants and animals. The major rivers in the district are Mkuze River and Pongolapoort River. The country's largest freshwater lake, Lake Sibaya is an important source of water in the district. However, it provides potable water for Mseleni and Mbazwana villages. These villages used to be administered by former Natal Provincial administration (NPA) and not the KwaZulu 'homeland' hence they have access to this water source. Mkuze River supplies water to the small villages of Mkuze and Ubombo.

Key informants reported that rural households did not have access to safe drinking water. They derive their water from rivers, springs and boreholes. Water from boreholes is considered to be safe to drink but has a saline taste. The community complained that during winter months water sources dried up and problems were experienced with drinking contaminated water from the rivers. Common water-borne diseases¹¹ prevalent in the area are typhoid, cholera and bilharzia in children. A lot of time and effort is used to collect water for domestic use by households. Therefore, one of the major basic needs expressed in FGDs was an improvement in the access of rural households to clean safe water. The key informant on nature conservation expressed concern that some rural households without access to piped water relied on boreholes. Furthermore, this key informant reported that over pumping of underground water could result in depletion of ground water resources. He said such depletion could lead to saline intrusion and render water unfit for consumption.

Natural vegetation is another asset that is used by rural communities to provide household resources. Forests are a source of wood for fuel, housing and food; as households collect plants for food and building materials. Vegetation on grazing land provides food for the livestock. Wild animals are hunted for meat. Thus natural assets are essential for household food security. Chapter 6 will explore the significance of indigenous knowledge in the study area. Details of natural resources and their contribution to food security will be presented. The district has protected areas such as Mkuze Game Reserve, Sodwana Bay National Park and Sodwana State Forest. These areas serve as tourism resources for the district. According to the Uthungulu Regional Council there is a major driving force behind tourism and development in the Uphongolo Sub-region. The Lubombo Spatial Development Initiative (SDI) is a

¹¹ Water-borne diseases are caused by pathogens in the water supply.

multinational initiative of Swaziland, South Africa and Mozambique. The aims of the Lubombo SDI include the following:

- The generation of economic growth;
- The facilitation of public and private sector partnerships;
- The maximisation of job creation from these developments;
- The broadening of ownership patterns.

It is hoped that the Lubombo SDI would promote community-based tourism that should offer some benefits to rural people in the district. Tourism would strengthen rural livelihoods through job creation and sustainable nature conservation. Another important natural resource is the land. Most rural households practice subsistence agriculture in their communal land. Due to the high agricultural potential of some of the State owned land and the tourism potential of the area, the Department of Land Affairs has been striving to create commercial farming ventures (Uthungulu Regional Authority, 2000).

In Umthunzini district, natural assets and resources are available for rural livelihood generation. Rivers that supply the district with water are Uthukela River, Amatigulu River, Umlalazi River and Umhlathuze River. Despite the abundance of water in the study area, rural areas have limited sources for clean and safe water for households. They rely on rivers, springs, boreholes and a few communal taps. These are in Amatigulu Nature Reserve, Umlalazi Reserve and Ongoye Forest Reserve. The Port Durnford-Umlalazi-Siyaya Coastal Park is a new tourism area in the district. In rural areas, homesteads include land for cropping and *ad hoc* grazing. Traditional leaders control the distribution of communal land. Sugarcane cropping is a dominant agricultural activity in Umthunzini. Small-scale growers are largely located within tribal authority areas. This has led to the emergence of a number of highly successful small-scale farmers. However, due to the lack of land within tribal areas, they have been unable to expand their operations (Uthungulu Regional Authority, 2000). Diversification of crops to overcome vulnerability of sugar prices is promoted. Therefore in addition to sugar cane, rural households grow a variety of crops and fruits are grown by rural households.

Physical capital

The context of this study pertaining to physical capital has been discussed and revealed patterns of critical service provision. Key informants and FGDs in both districts reported that physical accessibility to the area played an important role. Physical assets are essential in support of rural livelihoods. These include the infrastructure assets, such as roads, irrigation canals, power lines and water supply equipment, tools for agricultural and other income generating activities, buildings for community services and many others. Man-made assets are not readily accessible to the rural communities. The FGDs participants reported that it was essential to have sufficient road infrastructure into the rural areas so that service providers and development agencies were able to reach rural households. Service provision would facilitate rural development initiatives by saving labour time. It can also avoid illness and diseases, such as cholera and typhoid that are prevalent in both districts. Ubombo has the poorest provision of road infrastructure in KZN. As a result, it has some of the lowest service provisions. Sandy soils and extensive wetlands also hinder the provision of adequate road infrastructure and other services in Ubombo.

Financial capital

Financial capital means money to which the household has access, such as savings and credit (Ellis, 2000). Access to credit in the form of loans for increasing production of agricultural produce and goods for sale is a problem in the study area. Most households do not have any savings or access to credit facilities. Those who kept livestock use them as fungible assets in case of an emergency need. In the time of an emergency need, such as an illness, death or lack of school fees, livestock can be sold to get financial capital in the form of cash. Some households in the study area keep indigenous chickens, goats and cattle. These animals play a major role as the link between the household and the ancestors of the family when they are slaughtered for rituals.

More households keep cattle in Ubombo than Umthunzini. In traditional Zulu society, cattle are inextricably integrated into the spiritual and cultural life of the people. Cattle are specifically significant in marriage and traditional ceremonies. Cattle are important for the payment of bride wealth or *ilobolo*. Together with chickens and goats, cattle are essential for use as a sacrifice in rituals. Cattle are a resource when they are used for draught power in food production and transportation. Their kraal manure is utilised to fertilise soil in crop fields and gardens. They also provide food, such as milk and sour milk or *amasi*.

Some of the major constraints experienced by households in keeping livestock in the study area were discussed in FGDs and with the informants. They are inadequate water supplies, lack or insufficient grazing land, poor infrastructure, lack of electricity and extension services and training on how to use grazing camps. The key informants reported that extension officers did not have transport to reach rural households and farmers in both districts. Therefore poor communication with the government extension is a constraint. Along the roadside in Ubombo there are under-the-tree butcheries where beef is sold. However, the cattle owners reported that there was a high level of stock theft in Ubombo. The butcheries along the roadside are usually supplied with cattle by people who do not own them. Financial capital also included excess crops and vegetables that were sold to get cash income.

Social capital

The social capital refers to social networks and associations in which households participate. Rural households draw on social networks, such as family, kinship group, personal friends or neighbourhood security mechanisms. Ellis (2000) states that resources and time committed to extending and maintaining such social networks is an indication of an investment in future livelihood security. Swift (1998) describes social capital as being comprised of networks of ascriptive and elective relationships. Ascriptive relationships are vertical, such as in authority comprising claims on patrons, chiefs and politicians. Elective horizontal relationships are often observed in voluntary organisation (Ellis, 2000). In both Ubombo and Umthunzini, social capital is crucial in supporting the household and for rural livelihood security. Households derive support from the family, religious affiliations and community organisations.

The rural household constitutes the foundation of social networks used for pooling resources and labour, for help in finding a job, for providing advice, information and

initial capital for enterprises, saving money, borrowing small amounts of money, exchange of services and emotional support. They also play a major role in unemployment, old age, sickness, bereavement and ceremonies. Members of the household are obliged to support and contribute to the welfare of other members and their kin group. In both districts, key informants and FGDs stated that kinship relations were considered important. Kinship groups were always available to provide support in times of joy and sorrow. Thus they were socially and economically significant. In addition, economic contribution from the migrants in urban areas was important to the livelihoods of rural households that depended on remittances.

Religious affiliation was another base for social networks. African people are deeply religious and their religious values are influenced by Christianity, Western culture, politics, science, technology and new methods of solving problems (Adepoju and Mbugua, 1997). Most of the African adults in KZN subscribe to religious faith. The majority is affiliated to Christian religion whereas others believe in their ancestors. According to the Zulu tradition, when a person dies, the soul departs the body to join other spirits who are down below the earth. It is believed that after a sacrifice is performed following a period of mourning, the spirit is integrated with the body of the ancestors. The spirit of the dead family member is brought back to the homestead as one of the protective ancestral spirits. The dead family members are regarded as being concerned with the welfare of their living descendants. They provide protection and fortunes to their descendants who respect them. When the ancestral spirits withdraw their protection, the descendants become vulnerable to all sorts of misfortunes and diseases. Ancestral beliefs contribute to strong cooperation between household members and their extended family. Cooperation and moral obligations to the household and kin are viewed as a way of avoiding ancestral anger and misfortunes. As a result of social change and education factors, the youth are becoming detached from some of their parents' beliefs. According to FGDs, a blend of traditional African and Western Christian ideas still persists. The Christians in the study area live in two worlds of religion. Although they are Christians, the majority of households still believe in the power of ancestral spirits as they need support and protection of the ancestors. It is evident that most households adhere to complex rituals for ceremonies, such as weddings and funerals. These rituals often include slaughtering of animals, such as cattle, goats or chickens.

Nineteen and thirty denominations of churches were identified in Ubombo and Umthunzini, respectively. In this study the religious faiths are divided into four categories: mainstream denominations; other Christian denominations; traditional African religion and ancestral believers. Table 4.2 illustrates categories of religious faiths prescribed to by the heads of households. In some cases members of the same household subscribe to different religious faiths. The influential factors to these differences are mainly education of grown up children and urbanisation. Creighton and Omari (1995) state that cooperation and conflict co-exist in family life. Sometimes individual members have both competing interests and a common interest in household welfare. Often there are many beneficial cooperative outcomes compared to non-cooperation. For example economic cooperation is more important to the household than a religious one. Therefore household members tolerate their religious differences. In analysing cooperative conflicts, Sen (1990) found that conflict of interest between individuals who live together in households sharing concerns and experiences and acting jointly is viewed against the background of

pervasive cooperative behaviour. This type of conflict is seen in the gender divisions that relate to family arrangements. Thus the nature of the household requires that conflicts be molded in a general format of cooperation.

Table 4.2 Subscription to religious faith

Faith	Ubombo		Umthunzini	
	N	%	N	%
Mainstream denominations	22	18.0	48	32.0
Christian Zion denominations	49	40.2	46	31.6
African Churches	16	13.1	28	18.7
Ancestral beliefs	35	28.7	28	18.7
Total	122	100	150	100

The different types of religious faiths are a strong form of social network for moral, social and economic support. In the mainstream denominations, such as the Roman Catholic Church, Anglican Church, Methodist Church, Presbyterian Church and Lutheran Church there are associations for men, women and the youth. These associations serve to unite groups to support each other. Some Christian Zion Church denominations are important to rural households because they allow them to practice ancestral rituals and ceremonies. They also have diviners who are able to treat diseases and illnesses that cannot be treated by Western doctors, such as evil possession or *ufufunyane*, trance possession or *indiki* and evil tracks or *umeqo*. Members of these denominations support each other when their households have a crisis. African Churches include those that were established by African spiritual leaders, such as the Nazareth Church and St John's Apostolic Church. Religious faiths are an essential social capital. Ellis (2000) considers social capital as the most difficult asset to describe. The processes that create those who belong and those who do not with respect to social capital, are complex and difficult to unravel within rural communities.

In addition to faith-based organisations, another source of social capital in the study area is community organisations. These are mainly based on income generating activities. It is also evident from the FGDs and key informant interviews that women participate more than men in these organisations. Men are active in cash crop farmers associations while women are involved in community gardening associations. Men also play a major role in tribal political affairs. They are given leadership positions as headmen and councillors. Besides women's involvement in gardening associations, they also cooperate with each other to engage in community projects that are of benefit to them in their productive role. These projects include water supplies, childcare, sewing and savings clubs. Most of the savings clubs are based on a rotated-savings principle in which money is equally distributed to members until all are involved in a system of reciprocal gift exchange.

Human capital

Human capital refers to the labour available to the household. It includes education, skills and health of its members. Labour is more effective as an asset if household members are healthy and free of illness (Ellis, 2000). Health impairment or illness can affect the ability of people to perform essential tasks and can bring severe distress and even destitution to households. Even nutritional inadequacy impairs the ability of people to perform biologically and this in turn affects the working capacity of individuals (Jafry, 2000). The impact of prevalent diseases, such as Mseleni Joint Disease (MJD), malaria, cholera, typhoid and HIV/AIDS in the study area leads to the decline in agricultural production and loss of household income or labour. Many other household functions such as provision of health, education and food security are affected.

At the macro-level, the household's capabilities generate activities in response to needs and opportunities depend much on provision of education and health services. These capabilities also depend on the vulnerability context, structures, processes and assets as illustrated in the theoretical framework. Table 3.2 indicates that Ubombo is more deprived of human capital than Umthunzini as illustrated by the levels of functional literacy, capita income and unemployment. Ubombo is worse off because of its remoteness to industrial centres. Umthunzini is better located for reaching employment opportunities and for diversifying household livelihood activities. Household size, composition, age, sex and the dependency ratios are important indicators of the level of livelihood security.

4.2 The household structure

Before the study was conducted, an assumption was made that a rural homestead consisted of one or more households. However, during the survey period it was found that the homestead consisted of people who shared the residence and often ate together and shared activities, assets and resources. It was also made clear by the respondents that the most important linkage among members of the homestead was their common descent from a male head or biological relationship with him. A homestead is regarded as a symbol of the members' permanency of their claim to kinship membership and entitlements. Even members of the homestead who are settled and living in other areas or parts of the country, are always considered as members for as long as the homestead still exists. Those who live in urban areas consider their real life to be in the traditional areas. They go back to retire and die in peace, free of the burdens of town life. Among the Africans in KZN, a rural homestead is a permanent home and a retreat for all its members. It is where members of the family meet for celebrations and ancestral ceremonies based on their patrilineal descent. The ancestors or spiritual beings are also considered as members of the homestead and kin group.

Traditionally, men belong to the homesteads of their fathers for life whereas women belong to their homesteads until they get married. A woman becomes a permanent member of her husband's homestead provided all the requirements of the traditional marriage are fulfilled. However, as a result of socio-economic changes, married working or professional women are recognised as members of their fathers' homesteads irrespective of their marital status. They are human capital because they

can provide assets and resources when needed to do so by their families. The homestead is the basic domestic socio-economic organisation in the study area. In some cases, the boundaries between different homesteads of the same kinship group overlap. For example, if there were a shortage of sleeping accommodations in one homestead, some members, particularly children would go and sleep in their relative's homestead. Sleeping often includes dinner, breakfast and participation in some household tasks, such as fetching water, milking and laundering. Although there is an overlap between the homestead and the household, this study's operational definition of the unit of analysis was defined in chapter two.

The lack of boundaries between some homesteads of related rural people and the possibility of multiple household memberships by a person who shares food in more than one unit presents an analytical problem. Household membership is a problem in some situations, such as with polygamous marriages, where one male is regarded as the head of more than one household. A husband in a polygamous situation eats in different households on different days. Another problematic situation is that of a person who belongs to the homestead but works in an urban area as a migrant. A person who works in urban areas sends part of his income to a rural household and uses the balance to support himself and his urban family or household. This person has some property rights in either or both areas. Sometimes a migrant worker in this position might have dwellings which are kept locked in his rural homestead when he is away in urban areas. To clarify boundaries of the household, the operational definition included people who shared a homestead, ate together and shared resources at least for six months before the interview of the survey was undertaken. The head of the household is considered as the person who is in authority. This person controls the maintenance of the household and exercises the authority to run the household. He or she might not be the main economic provider. Where appropriate *de jure* and *de facto* heads of households are considered. Data pertaining to household *composition, gender and generation division of labour, power and authority, availability of, access to and allocation of resources, intra-household cooperation and community resources* will be discussed.

4.2.1 Household composition

Household size and age

The majority of household heads are born in the area of the study or surrounding districts. The average household size is 7.59 in the study area. However, for the two districts it is 8.42 and 6.92 in Ubombo and Umthunzini, respectively. In Ubombo the highest range is within 5-8 persons whereas in Umthunzini it is 4-7. Figures 4.1, 4.2 and 4.3 outline the household size in both districts.

The demographic dependency ratio pictures the number of persons in the non-economically active ages (under 15 and 65 and above) to the number of persons in the potentially economically active ages (15 to 64). The ratio is multiplied by hundred. Basically, the higher the ratio the more dependants in relation to potentially economically active people. We calculated the dependency ratio per household in the sample. The average dependency ratios for Ubombo and Umthunzini are 75.4 and 89.9, respectively. In Table 4.3 the distribution of the ratios classified into low, medium and high, is given for the two areas. From the averages and the table it can be

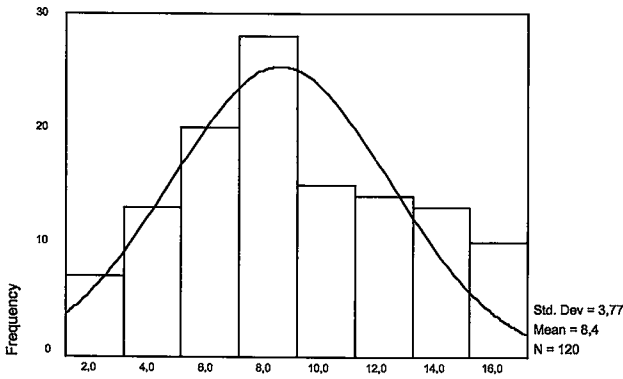


Figure 4.1 Distribution of persons in households in Ubombo

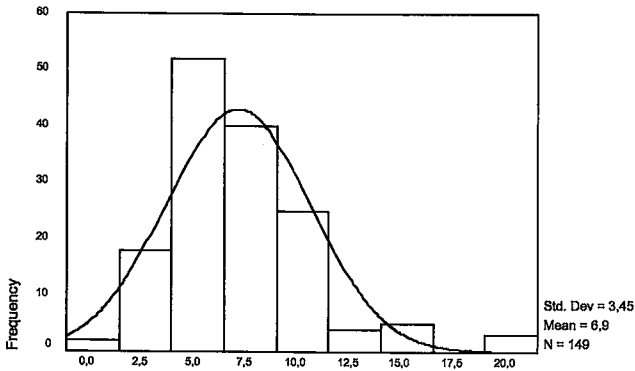


Figure 4.2 Distribution of persons in households in Umthunzini

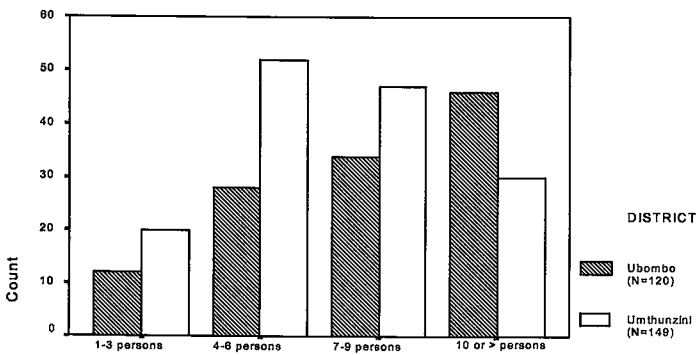


Figure 4.3 Distribution of household size, in four categories

concluded that there is a difference in average and distribution of the dependency ratio between the study areas, although the differences are not statistically significant. In South African situation one would have to be careful with the interpretation of even a statistically significant difference in terms of economic dependency. This is because of the fact that in the group of people aged 65 and over there will be pensioners. As it is, in rural households in South Africa often people in the potentially economically active ages will depend on the pension of people who, in terms of their age, are classified as dependent. In Chapter 5 we will develop an economic dependency ratio that is more relevant to rural livelihood vulnerability than a demographic dependency ratio.

Table 4.3 Dependency ratio in three categories *

	Low 0-50	Medium 51-100	High >100	Total
Ubombo	51	51	20	122
Umthunzini	57	45	36	138
Total	108	96	56	260

* $p = 0.116$

The Chi Square test indicates that there are no significant differences between the two districts.

In the study area, there are many children born to unmarried mothers. Most of the unmarried mothers are teenagers who are still dependent on their parents for livelihoods. Illegitimate children add to the number of a household's dependents. In Ubombo unemployed members of households, aged between 15 and 64 years tend to migrate out of the area to seek work in industrialised areas and on commercial farms. Children are often left with the rural household members. In many cases the grandmothers are responsible for the well-being of grandchildren when their mothers are absent. In Umthunzini some unemployed people often look for work while living in their homesteads because it allows them to seek work in the district. A high dependency ratio has a negative impact on livelihood security because available assets and resources have to be shared by a relatively large number of people. Food shortages are often a problem in households with too many dependents.

Age

The age structure of a population is the result of a dynamic process involving fertility, mortality and migration. In South Africa large differentials exist between the different population groups in terms of their fertility levels. The age structure of the rural South African population is mostly influenced by labour migration and fertility patterns. The highest fertility rates are found in the former homelands, such as KwaZulu. Hence there is a larger proportion of infants and children than adults. In addition, labour migration removes adults from the area and a larger proportion of the population below the age of 15 remains in rural areas. Young people migrate to find employment in other areas. However, there is the highest proportion of the elderly in the rural districts as many people return from urban areas to retire (Tait, et al., 1996). The age structure is important in showing the dependency ratio of the population in the study area.

The respondents were asked their actual ages and those of their household members. Those who were uncertain of their age were asked to give their year of birth. In addition, the interviewers were given a guideline with dates of important historical events that would help respondents to estimate the year of birth. Some of the elderly were not sure of their birth year. Therefore the age categories rather than actual ages are used to present data. Table 4.4 shows the age categories of the heads of households.

Table 4.4 Age of household head

Age categories	Ubombo		Umthunzini	
	N	%	N	%
20 – 24	2	1.6	3	2.0
25 – 29	6	4.9	6	4.0
30 – 39	17	13.9	37	24.7
40 – 49	35	28.7	40	26.7
50 – 59	29	23.8	22	14.6
60 – 64	10	8.2	9	6.0
65 – 69	10	8.2	15	10.0
≥ 70	13	10.7	18	12.0
Total	122	100	150	100

Gender

Gender is an integral part of rural livelihood and a significant feature of the household. The differences that prevail regarding access, control and distribution of assets and resources are often gender specific. The composition of the household headship by gender is depicted in Table 4.5.

Table 4.5 Household headship according to gender *

Sex	Ubombo		Umthunzini	
	N	%	N	%
Male	68	55.7	54	37.2
Female	54	42.3	91	62.8
Total	122	100	145	100

*Differences are significant, $p = 0.003$

Headship of the household

For the purposes of this study, the head of household was considered to be the person who had the most authority to run the household. This person had to be designated by other household members as the head and should have resided in the homestead for a period of six months before the study was undertaken. Therefore *de jure* and *de facto* female heads of households were considered. These types of households were described in Chapter 1. In Ubombo and Umthunzini, 55.7 percent and 37.2 percent of households have male heads of households, respectively. Female heads of households

compose 42.3 percent and 62.8 percent of households headed by females, respectively.

Headship by gender was statistically compared between the two districts. There is a significant difference between the areas' household headship according to gender. A chi-square value of 9.1 indicated a highly significant difference for household headship according to gender between households of the two districts. Umthunzini has a higher percentage of female heads of household than Ubombo. The reason for this difference could be that most of Umthunzini men migrate to work in Richards Bay, Empangeni, Isithebe and other urban areas. They tend to live away from their homestead in order to save on transport costs.

Marital status

As a result of social changes, modernisation and development, the family has been undergoing rapid transformation. The African family has taken many diverse forms, functions and responsibilities (Adepoju, 1997). Marriage is another issue that presents a problem in rural areas of South Africa. Contemporarily, two forms of marriages were identified in the study area. The first form is the monogamous civil marriage between a man and woman. It follows Western law procedures and registration. The civil marriage takes place in a church or magistrate registration office. The second form is the customary marriage that is potentially polygamous. It is an alliance between the families of the man and woman who intend to marry. Armstrong (1997) states that the civil marriage is defined by the State, comes into being at a particular point in time and ends upon divorce or death. The customary marriage goes through a process of negotiations and ritual ceremonies. It usually takes a long time to finalise a customary marriage because of all the processes involved in its preparation.

In the study area, a combination of civil and customary marriages is common in all homesteads. Most Christian families go to church to get married and have their marriages registered by the state. In addition to the church ceremony, marriage negotiations between the families also take place. These include traditional protocol and ritual ceremonies that are followed in customary marriages, such as *ukucela* (the initial process of orientation and request for a woman from her family for marriage). *Ukucela* is followed by *ukulobola* (payment of bride wealth to the woman's family) and *ukwaba* (presentation of gifts by the bride to the groom's family).

In a rural African community marriage is a major source of social status for women. A married woman enjoys higher status than an unmarried one. Childbearing, particularly of males confers additional status to her. In patrilineal African societies, polygyny allows a man to take more than one wife. Historically, polygyny was a source of wealth and status for the man. Each additional wife enabled a man to have access to more land for her and their children. A man needed to pay bride wealth before getting married, many wives indicated his ability to pay for each. A polygamous marriage follows traditional procedures, which also provides some status for the wife. For instance, senior wives are consulted before a man could take a subsequent wife. As an institution, polygyny provides the protection of marriage to women in conditions where a woman without a man is extremely vulnerable (Armstrong, 1997).

In FGDs, it was reported that a married woman remains connected to the husband's family for life. Customary marriages did not accommodate divorce. Even death did not end a customary marriage between families. Therefore, a widow is often expected to remarry the deceased husband's brother or a man from her husband's lineage. It was also reported that it had become very costly to prepare for marriages and to pay bride wealth. Consequently, there are many unmarried women with children living in their parental homesteads. In this study the marital status of the head of household was defined according to the respondent's perception of marriage. Table 4.6 and Table 4.7 illustrate the marital status of the head of household in Ubombo and Umthunzini, respectively.

Table 4.6 Marital status of head of household in Ubombo

Marital Status	Male		Female	
	N	%	N	%
Married	48	39.3	34	27.9
Single	16	13.1	8	6.6
Widowed	2	1.6	11	9.0
Living together	1	0.8	1	0.8
Separated	1	0.8	0	0.0
Total	68	55.6	54	44.3

Table 4.7 Marital status of head of household in Umthunzini

Marital Status	Male		Female	
	N	%	N	%
Married	38	25.3	41	27.3
Single	13	8.7	20	13.3
Widowed	10	6.7	24	16.0
Living together	3	2.0	1	0.7
Total	64	42.7	86	57.3

Educational level

Most remote rural areas in KZN are more disadvantaged than those situated near urban areas regarding educational facilities. They tend to have a high level of illiteracy. The educational level of the heads of household is important for this research because decision-making and authority are vested in them. Adegboyega et al. (1997) state that improving economic conditions plays a part in reducing illiteracy. They also suggest that an educated woman, in particular, is better able to perform her reproductive role than of an uneducated one. This is often reflected by good nutritional status of her children. According to FGDs, rural households tend to give male children opportunities to attain formal education in the study area. This is done in preparation for young men to enter the labour force. Men are considered permanent members of the household whereas women are expected to leave the homestead when they get married. Therefore more of the available assets and household resources are invested in the education of the boys than girls.

This survey finds that the trend of giving men better access to education is changing. Teenagers who interrupt their formal education to give birth to children are now allowed to return to school to continue with their education. Table 4.8 shows that there is not much difference between educational level of male and female heads of households.

Table 4.8 Educational level of head of household in percentages

Educational Level	Ubombo		Umthunzini	
	Male	Female	Male	Female
	(N=68)	(N=54)	(N=59)	(N=91)
No education	33.8	40.7	25.4	26.3
Grade 1-7	38.2	29.6	28.8	28.6
Grade 8-12	26.5	29.6	40.7	42.9
Post-school	1.5	0	5.1	2.2
Total	100	100	100	100

In the past era, access to education was not equally available to all the people of South Africa. Educational attainment varied by population group and also by gender. According to Ngwane and Hirschowitz (1998) 21 percent of African women in KZN have received no education at all. Furthermore only 13 percent of African women have gone as far as Grade 12. Generally, the educational level is low in the study area. There are more women who have attained school education in Umthunzini than Ubombo. The reason for this could be the effect of urbanisation and industrialisation resulting in better socio-economic status in Umthunzini. Improved socio-economic status leads to better access to education. There is a high level of illiteracy in the study area and this has an impact on the socio-economic status of numerous households.

4.2.2 Gender and generation division of labour

FGDs and case studies were used to collect qualitative data on tasks, activities and responsibilities assigned to household members according to sex and age. All types of work performed by members of the households are classified into reproductive, productive and community work as explained in Chapter 2.

Reproductive role

In both districts, the role of women is to bear children and bring them up. Therefore all tasks associated with childcare are women's responsibility. These include household tasks such as food storage and processing, cooking, washing, cleaning, collecting of water, wild food and wood, caring for all sick members of the household and looking after the elderly. Both women and men participate in building traditional huts and dwellings. For example, in Ubombo, men collect sticks for building a hut or *iqhugwane*. Women are responsible for binding and thatching the structure using braided split reeds and grass. They also use cow dung and termite mound to make its floor. They use a polishing stone to flatten the floor. It is the responsibility of women to brew traditional beer made of course from sorghum, maize and water.

In both districts, it is the duty of women to bring up children and to teach them from an early age to respect elders in the household and community. They are taught never to speak to them unless spoken to. Children are not allowed to look at adults' eyes when spoken to. Girls are required to help their mothers with domestic duties, such as housework, fetching water and collecting wood. In both districts, women and their children gather wild vegetables and fruits. However, there are a wider variety of wild plants gathered for household consumption in Ubombo than in Umthunzini. Girls are also taught by their mothers to look after their brothers in preparation for their future roles in marriage. Boys are expected to look after the household's herds of cattle or goats. They leave home each morning to take cattle to the pastures. Then they return the cattle for milking and breakfast before taking the herd out again for the afternoon. Boys also help with cutting down of trees for collection by women and girls. They also help men fence homestead premises and gardens. Although most rural boys and girls attend schools, they are still expected to perform their household duties. Consequently, they have long days of walking to and from schools, schooling and performance of household tasks.

Men's tasks differ from those of women. In both districts, men emphasise that it is not culturally acceptable for them to do traditional household chores of women. Men are responsible for making important decisions. They protect the family from danger and ensure that discipline is maintained. In both districts, men assist women with building of dwellings. They supervise those who take care of livestock, in particular cattle and goats. It is the men's task to entertain men visitors to the homestead. Very few men assist with gardening and cleaning of premises. According to the participants in the FGDs, in both districts men spend their abundant spare time drinking alcoholic beverages and attending tribal meetings.

Both elderly men and women are highly respected by household members. They exert considerable influence. Their main role is to advise the younger generation on how to manage the household effectively. Daughters-in-law are expected to take care of the needs of the elderly. Elderly women often assist the household with child caring, tending of crops and offering any relevant advice. Sometimes rural households demand elderly women to make a contribution to reproductive work even when they are no longer fit to work. In some cases this demand may exacerbate their declining health. It is the elderly man's responsibility to communicate with the ancestors on behalf of the household. In the absence of men, elderly women play their role of decision-making and authority without any restrictions. The grandmother often lives in the homestead hut of the ancestors. Consequently, she is treated with profound respect.

Productive work

Productive work includes the production of goods and services for income or subsistence. Although both men and women do this work, not all of it is valued in the same way, especially in national economic statistics (March et al., 1999). Women are involved in agricultural activities related to the production of crops and vegetables for subsistence and, in very few cases, for marketing. Some women are employed to earn an income.

It emanated from FGDs that, as a result of social change including men migration and education of children, women have to take more activities and tasks. For instance, women who want their children to go to school have to look after the small and large livestock until they return to take over their responsibility. In the absence of men to clear the land before planting, women have to do the work themselves. This phenomenon is described as feminisation of agriculture. It is prevalent in many parts of the world, including Sub-Saharan Africa.

Women in Ubombo are involved in making handicrafts to generate an income. They make baskets and mats from a variety of grasses. Most baskets are made of split leaves of the palm or *ilala*. Natural colourants are used to create traditional designs of triangles, diamonds and zigzag. Some women make beadwork for household use and sale. Other women make symmetrical clay pots that are used as water carriers and brewing containers. These pots are also sold for an income.

Men usually find jobs to earn income. However, the unemployment rate is high in KZN and there are many men unemployed. Some men own cattle as a sign of status, wealth, power and for bride wealth or *ilobolo*. Livestock is considered to be a source of income in emergency situation of financial pressure, such as payment for education, treatment for ill health and death. In Ubombo men do a lot of woodcarving for household use and marketing. Before the advent of tourism in the area, carving was traditionally a male pursuit limited to functional products, such as milk pails and eating utensils.

Community work

Community work activities include the collective organisation of social events and services. Such activities often include ceremonies, celebrations, activities to improve the communities, participation in community social groups, and local political activities. Some women in Umthunzini are involved in community development groups, such as sewing and poultry projects. During kinship and community ceremonies and celebrations, women are responsible for food preparation, cleaning of the venue and washing of the dishes. Inter-household cooperation is often demonstrated when there are weddings and funerals.

Rural men are reported to be responsible for attending meetings at the tribal court of the *inkosi* and headman. They assist tribal authorities with local conflict management and resolution, preparations for traditional ceremonies, such as customary weddings, funerals and so forth. Both grown up boys and girls are expected to assist adults with their activities in preparation of community ceremonies.

The division of labour at the household level shows that women, men and children play an important role for the understanding of rural livelihood. Gender inequality with respect to access to productive resources by women and their insufficient purchasing power to buy goods and services for the well being of the household is well documented. Thus the next section examines assets and resources at the household level.

4.3 Household assets and resources at the household level

The concepts of assets and resources were examined in chapter two. This section explores assets and resources available to, owned, controlled and claimed by households. Ellis (2000) describes these as stocks of capital that can be used by households to generate livelihoods. They are building blocks upon which households are able to undertake production and reciprocal exchanges with other households. Thus assets and resources are categorised into natural capital, physical capital, financial capital, social capital and human capital.

Natural capital

According to FGDs, key informants and individual interviewees, all households live on communal tribal land. Environmental resources are essential for providing food, raw materials for shelters, handicrafts, medicinal remedies, fuel wood and water. The majority of households depend on natural capital for survival and food provision. Women and children gather wild vegetables to supplement diets. In Ubombo, numerous types of wild vegetables and fruits are gathered for household consumption. About 86.1 percent and 44.7 percent of households use wood as a source of fuel in Ubombo and Umthunzini, respectively. Rivers, dams and streams are the main sources of water in the area. Forests and grasses are significant for providing food for people and livestock. In addition they are the source of materials for building houses and craft making, mainly for marketing in the tourist industry.

Access to and control of communal land-use rights are in the hands of tribal authorities comprising *inkosi*, headmen and councillors. Allocation of land is done through married men, who could be husband, father, brother or male relative. Thus, in this land allocation system, women lack or have limited access to this important productive resource. Thus discriminatory types of tribal policies, traditions and attitudes hamper women's agricultural activities. Therefore women do not have any decision-making powers regarding how much land they need for productive activities. They either lack or have insufficient land. However, secure tenure or access to land through ownership is a constraint to both men and women in the area because land belongs to the whole community. As a result of this situation, farming households lack an essential incentive to improve their production. Without secure land rights, it is not possible to access resources of agricultural production, such as credit, agricultural inputs, financial capital, appropriate technologies and the benefits of membership in agricultural cooperatives and organisations. Ownership of land is often indispensable for access to credit because it is often required as collateral.

Focus group discussion participants reported that there was an acute shortage of land required for productive agricultural activities. As a result of population growth, agricultural and grazing land is converted for residential purposes. Thus it is not possible for many households to make profits from agricultural activities, including commercial farming of sugar cane and cotton in Umthunzini and Ubombo, respectively. The amount of land available for usage may influence how much a household can benefit from agricultural production. About 40 percent and 63 percent of households have access to one hectare or less of land in Ubombo and Umthunzini, respectively. In Ubombo, interviewees complained of declining yield on large area cropland because of over usage of the land.

The colonisation process in South Africa was instrumental in creating communal areas to further the policies of that time. Later, the apartheid regime reinforced the dispossession of land by African citizens. The customary land tenure system was convenient in creating communal areas that provided cheap migratory labour. The land-use rights in these areas are embedded within wider socio-political and cultural relationships. Rural households' access to capital assets, including land, natural resources, finance, physical and social capital, determines how far livelihoods can be enhanced and secured. Land tenure insecurity is most acute among women who use land to generate food and income. After the first democratic government elections in April 1994, the Restitution of Land Rights Act was passed. As a result of the land redistribution programme, in 1999 some 35 000 households had acquired rural land in the former white areas by means of government subsidies. However, land tenure reform in the communal rural areas has lagged behind. Land tenure reform need to deal with overcrowding in the communal areas. Tenure reform is considered a complex and uncertain undertaking. It invariably threatens the vested interests of the powerful, such as traditional leaders or other structures in the communal areas. The need to resolve land tenure problems in the communal areas has been overshadowed by a debate about the restitution of ancestral lands and the redistribution of white-owned ranches (Adams *et al.*, 1999). Land reform as socio-political transformation has taken a new form. According to new laws in South Africa, provision has been made not only for individuals but also for two or more persons, groups, associations and communities, to hold land in a legal and registrable way (Wily, 2000). The issue of transformation in customary land rights and new land tenure laws were not discussed with the research project participants. The key informants considered the matter to be too sensitive for discussions just before the local government elections, which were to be held in December 2000.

Physical capital

Physical assets were examined in chapter two. Ellis (2000) describes them as comprising capital that is created by economic production processes. Further, physical capital is described in economic terms as a producer good as contrasted to a consumer good. Unproductive physical assets, such as housing and environmental conditions of the homestead are essential sources of livelihood. The survey collected data on the type of housing unit occupied by households, number of units and rooms available for use, sources of water supply and fuel for cooking and lighting, and type and availability of latrine facilities. These data are of tremendous importance for human capital development. Inadequacy of these physical assets can constrain health and affect people's ability to perform essential tasks.

As the service provision is poor in both districts, FGD participants reported that many livelihood activities are hampered by lack of access to physical resources. These include roads, water supplies for household consumption and irrigation for agricultural crops. In Umthunzini, 65 percent of households have access to piped water whereas only 1.6 percent have piped water in Ubombo. Key informants stated that the provision of piped water for homesteads would reduce labour time spent on fetching water. It would also prevent loss of resources caused by illnesses and diseases resulting from drinking unclean water. The majority of households in Ubombo do not have access to potable water. Physical assets and resources that are explored here are housing, sources of water and sanitation and household assets.

Housing

The rural areas have the largest number of informally constructed dwellings without services in KZN. These are traditional and shack dwellings in areas that previously comprised KwaZulu (Harrison, 1996). The type of housing used by households is examined in the survey because it is also a livelihood indicator. Data is available on the type of housing units, sources of water supply, fuel for cooking and lighting and type and availability of toilet facilities. These data provide a quantitative profile of households' housing and environmental conditions. Table 4.9 illustrates the number of housing units per household in the study area. Data on consumable durable goods, such as household and agricultural equipment was collected.

Table 4.9 Number of housing units per household

Housing Units	Ubombo		Umthunzini	
	N	%	N	%
1	10	8.2	47	31.3
2	21	17.2	33	22.0
3	28	23.0	34	22.7
4	27	22.1	19	12.7
5	16	13.1	7	4.7
6	10	8.2	8	5.3
≥7	10	8.1	2	8.1
Total	122	100	150	100

The concept of homestead was examined in Chapter 2. In rural KZN traditional housing units are round in shape and are built around the homestead. They usually form a circle or semi-circle facing the main entrance into the homestead. A traditional housing unit has one room. Remote rural homesteads tend to have many housing units because each unit is not subdivided into many rooms. However, some rural areas situated nearer the urban and industrial centres, often have homesteads with a combination of traditional and modern multi-roomed housing units. Table 4.9 shows that Ubombo homesteads have more housing units than Umthunzini. Very few households have one housing unit in Ubombo as compared to Umthunzini. Only 8,2 percent and 31,3 percent households owned one multi-roomed housing unit. Homesteads with polygamous families have more housing units than monogamous families. In polygyny, each wife resides with her children and a man has his own hut.

Materials used to build housing units were examined and the number of rooms per unit. The quality of materials for building houses is important because the house is an asset. In remote rural areas, households depend on the natural environment for building materials. These include grass, wood and mud. Rural households situated in industrial districts have more durable housing units. They are built with purchased materials, such as cement, bricks, tiles and asbestos.

Table 4.10 illustrates that Umthunzini has better quality housing units than Ubombo. This indicates that Umthunzini households have more access to livelihood assets and they are in a better socio-economic situation than those in Ubombo.

Table 4.10 Type of housing as an asset

Type of housing	Ubombo		Umthunzi	
	N	%	N	%
Mud/metal sheeting, plastic, card board walls, rustic roofing	17	13.9	13	8.7
Mud and wood, thatch roofing 2-3 roomed housing	46	37.7	29	19.3
Mud blocks/mud and wood, rustic roofing, 5 roomed housing	20	16.4	22	14.7
Concrete blocks, asbestos roofing 3-4 roomed housing	28	23.0	42	28.0
Concrete blocks/brick tile roofing 5 roomed housing	11	9.0	44	29.3
Total	122	100	150	100

Sources of water and sanitation

Access to a clean water supply is a basic need that is difficult for rural households to meet. Poor water supply and inadequate sanitation facilities is a major problem in Ubombo and Umthunzi. Table 4.11 illustrates sources of water for households. Ubombo households have no access to piped water whereas 47% of Umthunzi households have piped water and taps in the homesteads. Only 4% of Umthunzi households have piped water inside the housing units. Access to clean water is also a problem for the Umthunzi households as 26.7% of them collect water from unprotected rivers, streams, dams and wells.

Table 4.11 Water source for the household

Source of water	Ubombo		Umthunzi	
	N	%	N	%
Piped (internal)	0	0	6	4.0
Piped (yard)	0	0	71	47.3
Piped (public tap-free)	1	0,8	17	11,3
Piped (public tap-paid)	1	0,8	4	2,7
Borehole	48	39,3	5	3,3
River/stream/dam/well	66	54,2	40	26,7
Protected stream	6	4,9	2	1,3
Neighbour's tap	0	0	3	2,0
Rainwater tank	0	0	2	1,3
Total	122	100	150	100

In Ubombo, 54,1 percent of the households collect water from unclean sources. Boreholes provide 48 percent of households with water. Ubombo respondents complain about the general lack of clean water sources and long queues at the boreholes. This lack of access to clean water has health implications for the households. The incidence of diarrhoea among children is high. The key informants reported that cholera and typhoid fever were prevalent diseases in both districts,

particularly during drought periods. Some households have to buy water, particularly if clean water is not in adequate supplies. According to FGDs, women and girls spend a minimum of three hours daily to collect water. An improvement of access to clean water could have a substantial contribution to the quality of life in the study area.

Access to sanitary disposal of wastes is an important aspect of health and is tied to livelihood security. Rural households in the study area do not have access to adequate sanitation facilities. Households without access to any latrine facilities are common in rural areas. Table 4.12 shows types of sanitation in the study area.

Table 4.12 Type of sanitation

Type of sanitation	Ubombo		Umthunzini	
	N	%	N	%
Flushed latrine	0	0	12	8,0
Improved pit latrine (VIP/chemical)	6	4,9	8	5,3
Unimproved pit latrine	47	38,5	86	57,3
No latrine facility	69	56,6	44	29,4
Total	122	100	150	100

Ubombo is worse off regarding access to sanitation facilities than Umthunzini. Thirty eight and a half percent and 57,3 percent of households use unimproved pit latrines in Ubombo and Umthunzini, respectively. There is also disparity between Ubombo and Umthunzini households without toilet facilities. Table 4.12 shows that 56,6 percent and 29,4 percent households have no latrine facilities in Ubombo and Umthunzini, respectively. According to key informants, contamination of unprotected water sources by human and animal excreta, particularly rivers and dams are a problem in both districts. This situation implies that households are exposed to waterborne, water-washed¹² and water-based¹³ diseases.

Source of energy

The rural areas of the former KZN ‘homeland’ are the worst off in terms of access to electricity in the province. Within rural areas, relatively few formal houses are found. The random placement of homesteads has influenced the ability of energy agencies to provide electricity owing to the associated costs per unit and inaccessibility. Rugged terrain and lack of road infrastructure also contribute to areas not having been identified for the provision of electricity (Schwabe et al., 1996). Ubombo and some parts of Umthunzini are extremely hilly and this terrain feature makes it difficult to provide electricity to them. Table 4.13 illustrates sources of energy for the households in the area of the study. The majority of households of 86,1 percent in Ubombo use fuel wood as a source of energy whereas 44,7 percent use the same in Umthunzini, and 3,3 and 40 percent of households use electricity in Ubombo and Umthunzini, respectively. Poor socio-economic circumstances result in the inability of Ubombo households to pay for the installation of electricity.

¹² Water-washed disease is dependent on the quantity of water used for personal hygiene.

¹³ Water-based disease is caused by direct contact with infected water source.

Table 4.13 Source of energy for the household

Source of Energy	Ubombo		Umthunzini	
	N	%	N	%
Wood	105	86,1	67	44,7
Paraffin	3	2,5	15	10,0
Gas	10	8,2	8	5,3
Electricity	4	3,3	60	40,0
Total	122	100	150	100

Ownership of fungible household assets

Physical assets owned by households are shown in Table 4.14. The investment in the quantity and quality of household assets is an important indicator of livelihood prospects. Assets also indicate the socio-economic situation of the household. In addition to these physical assets, households own a limited number of agricultural equipment, such as hoes, ox ploughs, garden forks, spades and rakes.

Table 4.14 Ownership of fungible household assets

Asset	Ubombo		Umthunzini	
	N	%	N	%
Fridge/freezer	38	31,1	88	58,7
Stove	41	33,6	96	64,0
Sewing machine	24	19,7	41	27,3
Television set	37	30,3	83	55,3
Radio	56	45,9	96	64,0
Car	12	9,8	27	18,8
Telephone/mobile phone	14	11,5	33	22,0
Polisher/vacuum cleaner	0	0	10	6,7

Table 4.14 illustrates that Ubombo households have limited access to ownership of household assets. This situation has implications for time and energy spent on household tasks that are mainly performed by women and girls. Ownership of assets that can be converted to cash in times of need is very limited. Some households in both districts do not have any fungible assets. Therefore they are in an extremely vulnerable situation to loss of income or any unforeseen situation requiring money.

Financial capital

From the surveys, FGDs and interviews with key informants it was found that households in the study area have limited access to stocks of money. The important financial capital for households is their sources of income. They include wage employment, remittances, subsistence and commercial farming, income generating activities and state pensions. Umthunzini households have better access to financial capital compared to remote Ubombo. However, both districts are disadvantaged. Yearly incomes are generally low as depicted in Figure 4.4a and 4.4b for Ubombo and

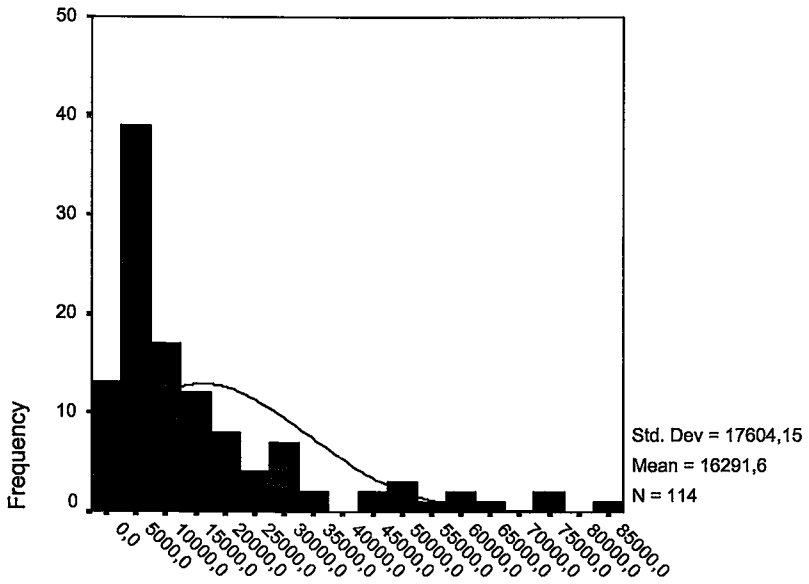


Figure 4.4a Yearly income in Ubombo

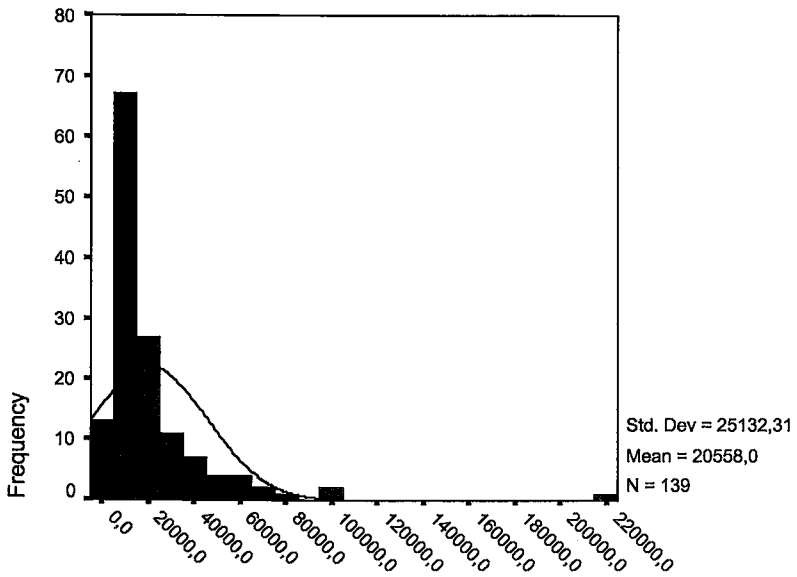


Figure 4.4b Yearly income in Umthunzini

Umthunzini, respectively. The average yearly household income received from all sources is R16 291.60 and R20 558.00 in Ubombo and Umthunzini, respectively.

In both districts women engage in informal income generating activities, such as making handcrafted items and selling food. The income generated from these activities was reported to be lower and less stable than that generated by activities in the formal workplace. However, these informal activities were reported to be convenient because women are able to stay at home and combine these with their other responsibilities and domestic work. It was difficult for the researcher to find out the exact amounts of income per household. One of the reasons stated by interviewees was that they live from hand to mouth hence do not calculate the small amount of income when available.

Both men and women in the area have difficulty in accessing credit in the forms of loans because they often lack the required collateral. Because of the land tenure system, they cannot use their housing or fields for this purpose. Cattle and goats are sometimes used as a resource when they are converted into cash in times of crisis, such as when used to pay for school fees, illnesses and death expenses. It is very difficult for heads of households to know each member's personal income because the head accepts the amount given to him or her at a given time. Male heads are able to monitor and control women's income, particularly wages, because they are stable, and women are required by men to declare their income but men are not. It was reported that cash income is always required for household food and non-food items. Often men decide how money is allocated and they control their cash income from cash cropping. The person in position of authority has the most power to decide how resources are to be utilised. Various ways are used to distribute money and financial resources within the household. Cooperation of the members in economising available resources is of utmost importance to the household.

Social capital

At the household level social capital is provided by family, kin relations, neighbourhood and community networks in the form of organised structures. Members are entitled to claim tangible and intangible support from the household. The migrant workers send money to the household as their obligatory membership duty. If they fail to send it they feel guilty about their action. In the study area members cooperate to perform their tasks according to expectations of the households. There is always conflict with those who deviate. Moral obligations are very strong among the young and the old members. Women take care of their daughter's children, whether financial support is provided or not. Working members or those who have access to important assets of livelihood support unemployed members of the household. Even the elderly members share their old age pension with the household. Kin relations are of particular importance as they are also obliged to help their relatives by making a contribution in cash or in kind if there is a need. In both districts the kin networks and neighbours provide their labour for agricultural work for reciprocal assistance, *ilima*. Some households participate in faith-based religious organisations and get support from members when they need it.

Human capital

Labour available to the household is essential human capital that is strengthened by good education, skills and health. Jaffry (2000) states that poor people are locked into low productivity occupations. Even when they diversify their activities, they rarely have assets, such as skills, knowledge, information, command over labour and technology or credit, to allow them to switch into occupations offering higher returns on effort. Human capital in the study area is examined in view of the educational level, skills and health status of household members. The educational level of the heads of households is very low. Thirty seven percent and 26 percent of household heads have no education in Ubombo and Umthunzini, respectively. For that reason those who are employed earn a low income. According to FGD participants those individuals who are involved in small enterprises do not have the necessary basic skills to conduct business. This allows middlemen to exploit women who make handicrafts for the tourism industry because they do not have skills to advertise and price their finished articles to gain profit. These women are always on the losing end.

Most women in the area perform moderate and heavy physical work in their multiple roles. Where there are always food shortages, women's health is at risk. In Ubombo, cholera, typhoid, malaria and Mseleni Joint Disease (MJD) are prevalent and these diseases have a negative impact on the household's human capital. Agricultural production and other income-generating activities suffer if such diseases affect household members. In Umthunzini, outbreaks of cholera and typhoid are common when there is a drought period. Like in the whole province of KwaZulu-Natal (KZN), the impact of HIV/AIDS-related mortality on rural and agricultural production systems is loss of labour resulting in a decline in crop yields and decreased food security. Health impairment or illness affects the ability of the household to perform essential tasks. Despite all the constraints to human capital, in both districts, men and women possess important indigenous knowledge that is embedded within a wider socio-cultural and economic and political context. Indigenous knowledge is essential for livelihood generation and will be explored in chapter 6.

4.4 Household livelihood strategies

Livelihoods are constructed from assets and activities and differential access to these based on social and institutional considerations (Ellis, 2000) help to shape the strategy adopted by the household. At the micro-level, livelihood strategies depend largely on the objectives and priorities of rural households. Households pursue several goals at the same time and outcomes of their strategies evolve over time. Often livelihood strategies differ between men and women. Any given livelihood strategy is part of a specific context. Different types of strategies result from a combination of factors. Therefore access to assets is fundamental to generating livelihoods in the study area. The main income generating livelihood strategies identified in both Ubombo and Umthunzini as sources of income, are the following: wage employment, migration, agricultural activities, small and micro enterprise, claiming against the state.

The analysis of household income is approached from an entitlement perspective. Household income consists of the pooled cash income of individual households' members. Using Sen's concept of 'entitlements', Bryceson (1995) states that acquisition of entitlements through one's inherited birthright and the rights of one's

sex, age and marital status affords the individual member to make a contribution to the collective household endowment. Furthermore, individual household members' entitlements over financial assets and resources are defined by the norms of the wider cultural community. Often individual members of the household contribute part of their income to the household. They can also retain partial or exclusive decision-making power over collectively pooled entitlement. However, income is one of the indicators used to measure livelihood security. Thus livelihood strategies used by households to generate income will be discussed. These are employment, migration, agriculture, small enterprises and claims against the state.

Employment

The 1995 October Household Survey (OHS) found that there were approximately 5,4 million people in KZN aged 15 years and older. Of these, approximately 2,6 million were not economically active, while 2,7 said they were. The term 'economically active' refers to all those who are available for work. It includes both the employed and the unemployed. Globally, people who are generally regarded as being outside the labour market are those who are not available for work. Such people include those who are under the age of 15 years, scholars, students, disabled people, housewives, retired people, pensioners, disabled people and others who are permanently unable to work (Ngwane and Hirschowitz, 1998).

Two definitions of unemployment are used in South Africa. They are the strict and the expanded definition. First, the strict unemployment definition includes people who are aged 15 years or older, who are not employed, but who are available for work. It requires that an individual has taken specific steps to seek employment in the four weeks prior to a given point in time. Second, the expanded definition focuses on the desire to work, irrespective of whether or not the person has taken active steps to find work (Ngwane and Hirschowitz, 1998).

In Ubombo, many unemployed people have stopped actively looking for work because of the high costs involved. Participants in FGDs expressed that the unemployed people experienced great stress and strain in trying to find employment. Since jobs are hard to get in the rural areas, job seekers need to have money for transport and living expenses when they go out to look for work in urban areas. Often an unemployed person has to live with the extended family, relatives or friends in urban areas. They complained of appalling conditions in peri-urban areas where they are usually housed in slums and crowded rooms at an extreme cost. Employment or income-generating activities are scarce and transport is expensive in Ubombo. In Umthunzini, unemployed people also experience difficulties when they seek employment. They can travel to the industrial centres to look for jobs but it is extremely expensive because of transport costs and shortage of job vacancies in Richards Bay, Empangeni and Isithebe. Thus many people are also discouraged from going out to look for work.

Migration

As a result of the political history of South African rural areas, migration is one of the important livelihood strategies in the study area. Ellis (2000) states that migration means that one or more members of the family leave the resident household for

varying periods of time. In so doing they are able to earn cash income to make a contribution to the rural household. He identifies four types of migration:

- *Seasonal migration* refers to temporary migration that occurs in correspondence to the agricultural seasons. Migrants move to other areas to find work in the slack season but they return for the peak periods of labour input in the agricultural calendar, mainly for land preparation and harvesting;
- *Circular migration* implies temporary migration for varying duration in non-agricultural labour markets. The migrants do not set up permanent living arrangements in the location of temporary work;
- *Permanent migration (rural-urban)* refers to a situation where the family member makes a move to a different location, usually an urban area, and establishes a long-term residence. This person contributes regular or intermittent remittances back to the rural home;
- *International migration* refers to a family member who moves either temporarily or permanently abroad. Some international migration is a cross-border extension of circulatory migration. In this case temporary movement occurs to take advantage of opportunities in an adjacent country.

The most common type of migration in the study area is permanent rural-urban migration. Rural areas of KZN are characterised by high population densities and low productivity agriculture. Consequently, jobseekers move to urban areas to find wage employment. Circular migration is another type that was identified through FGDs and key informants. However, circular migration is prevalent to a lesser extent in the study area. People who work in the building industry and road constructions would live away from their homesteads while undertaking the project and when it is finished they return home and wait to get another job.

Ubombo migrant workers return home infrequently because of the transport costs and the long distance of their place of employment from their rural homesteads. Most of them returned home four times per year. Due to the relatively low level of education attained by the population of the Ubombo district, these people are not competitive with the residents of the urban sector. Therefore most of Ubombo migrant workers are concentrated in the occupations with the lowest skill levels and pay. Umthunzini migrants also have an educational disadvantage and they also end in the lowest paid jobs. The low pay income results in rural households getting low-level remittances. Consequently, the basic livelihood strategies of survival for the rural household left behind have to change and diversify.

Agriculture

In June 1997 about 12.7 million people (31,4 percent of the population) lived in rural areas in the former 'homelands' of South Africa. Households in these areas either depend entirely on farming activities for their survival and income generation or they depend on these activities to supplement other sources of income. Although access to farming land is important for rural households, the results of the Rural Survey 1997 indicate that access to land alone is not sufficient to ensure livelihood security. It is also reported that the insufficient amount of arable land and lack of availability of assistance in agricultural activity also affect the ability to improve the land, produce more crops and increase income. The overwhelming majority of households (93 percent) are engaged in subsistence farming. Very little income is generated from the

sale of a variety of crops, livestock and animal products. About 3 percent of the 2.4 million households in the sample rely on farming activities for their source of income. Households receive wages, salaries, remittances and cash income from small and micro-enterprises (<http://www.statssa.gov.za>).

Agriculture is primarily subsistence-based cultivation in the study area. However, subsistence production is not a source of income in either district. This can be explained by the fact that households have inadequate access to resources of production, such as land, inputs, capital, credit facilities, markets and irrigation schemes. In Ubombo, 82.6 percent of the households report to produce for own consumption only, whereas 17.4 percent are (also) engaged in production for the market. The main crops for subsistence in Ubombo are maize, pumpkin, sweet potatoes and to a lesser extent vegetables, such as potatoes, tomatoes and cabbage. Cotton is the cash crop grown in Ubombo.

In Umthunzini, 59.5 percent of the households report to produce for own consumption only and 40.5 percent are (also) engaged in cash cropping. The main subsistence crops grown in Umthunzini are maize, sweet potatoes and vegetables such as beans and tomatoes. Sugar cane is grown as a cash crop, but not much income is derived from it because of the shortage of land and other resources for production. Table 4.15 indicates crops grown in Ubombo and Umthunzini. Households have little land available for agriculture in the study area. In both districts households engage in agriculture for consumption purposes. Excess produce is sold or given away to relatives and neighbours.

According to FGDs households in both districts practice multi-cropping. Maize is the main staple crop. Maize is inter-cropped with pumpkin, melon, sugar beans and juko beans. The process of planting in between the maize occurs during weeding when it has gained height. A creeper crop like pumpkin covers the soil to suppress weeds and to protect the soil from extreme heat. It was also stated that inter-cropping is used as a measure of pest control. Mono-cropping is mainly used for sugar cane and cotton. Table 4.15 shows that in Umthunzini a greater variety of crops is grown, which is consistent with the fact that production for the market plays a greater role in Umthunzini than in Ubombo. Among the households that grow vegetables in Umthunzini, 46 households report to grow parsley.

Table 4.15 Crops grown by the households in the study area

Ubombo		Umthunzini	
Crops	N	Crops	N
Maize	102	Maize	48
(Sweet) potatoes	15	(Sweet) potatoes	42
Pumpkin	52	Pumpkin	12
Various vegetables	31	Various vegetables	91
Cotton	8	Sugarcane	42
		Fruit	17

About forty percent of households have access to the use of one hectare or less land whereas 59.8 percent have access to two or more hectares of land in Umthunzini.

Comparatively speaking households in Ubombo have access to limited amounts of land for agricultural activities. This is shown by the fact that 62.7 percent have one hectare and less land. Only 37.3 percent have access to two hectares or more land in Ubombo. Table 4.16 indicates amount of land in each district.

Table 4.16 Amount of land available to individual households

Land Size	Ubombo		Umthunzini	
	N	%	N	%
< 1ha	34	27.9	67	44.7
1 ha	15	12.3	27	18.0
2-2,5 ha	40	32.8	24	16.0
≥ 3 ha	33	27.0	32	21.3
Total	122	100	150	100

Farming systems depend on a complex inter-relationship between the labour of men and women. Within the household, gender and generation interests, duties, obligations and contributions are important. According to FGDs, it is important to determine the extent to which farming activities and joint decision-making are undertaken, either jointly or separately. Four gender patterns of managing agricultural activities were identified in the study area:

- *Separate fields.* Men and women in the same homestead have separate fields. When field tasks are performed, the household works separate fields in order of importance and authority of the owner. Men's fields are attended first and women's fields last;
- *Separate tasks.* Men, if available assist with land clearing, herding of livestock and ploughing using oxen and plough or tractor. Cash cropping is men's domain. Women do most of the work in the fields whereas men oversee how work is done, take decisions and supervise activities pertaining to cash crops of cotton and sugar cane. Food production for subsistence is the sphere of women. When men are not available to assist in the field, women are responsible for all agricultural production tasks. Children assist women with their tasks;
- *Shared tasks.* Both men and women herd livestock. Women take over boys' tasks when they want them to go to school. A few men assist women with weeding;
- *Women owned or managed farms.* As a result the rural-urban migration of men, desertion, death and other factors, *de facto* and *de jure* women-headed households are common in the study area. Female heads are responsible for managing all activities on the farm.

Although there is a wide diversity in household production patterns, women in all regions play a predominant role in household food security through agricultural and food production. The direct responsibility for household food provision largely falls on women, and with that the improvement of household food is associated with women's access to assets and resources.

Land, the main agricultural productive resource, is in the control of male kin and tribal authorities. The land is communally owned in the study area. Thus tribal authorities determine who has access to land for crop cultivation and grazing. Men have land-use rights but women's access to land depends upon their marital status. Widowed women can access land through their adult sons whereas single women with minor children have access to land through their brothers or male relatives. According to FGDs in both districts, land and what is on it belongs to the people, and they vest their authority, to apportion the land correctly, in the elders, the tribal authorities and ultimately in the Zulu King. The people do not consider the king to own the land because it belongs to them as a nation.

Table 4.17 Ownership of livestock

Livestock	Ubombo		Umthunzini	
	N	%	N	%
No livestock	10	8.2	78	52.0
Cattle	57	46.7	33	22.0
Goats	13	10.7	10	6.7
Chicken	41	33.6	29	19.3
Ducks	1	0.8	0	0
Total	122	100	150	100

Key informants reported a slow decline in agricultural production activities due to numerous reasons. Households often lack cash to buy resources for food production, such as seeds, fertiliser, and pesticides to name a few. Resources were also used to treat ill members of the households as a result of non-communicable diseases, such as high blood pressure and diabetes mellitus. AIDS-related illnesses are also becoming a burden to the households. Labour shortage is having a negative effect on agricultural activities. Women and girls spend more time caring for their ill family members instead of working in the fields. This led to reduction in the range of crops produced per household. Decline in livestock production is another constraint to the household. Households tend to sell their livestock to get money to pay for traditional healing and medical services. The death of household members drains assets and resources, as high costs are incurred for burial and ritual ceremonies that follow.

Small enterprises

Carter and May (1997) describe small and micro enterprise as activities based on the extension of distribution networks such as hawking, petty commodity production for example, the making of clothes and handicrafts. These also include markets in the service sector, such as child minding, money lending and contract agricultural services. Most of these activities take place in the informal sector that is a growing source of employment in South Africa. Women tend to do street vending while men are found in more diverse occupations, for example building, house painting, fencing, carpentry and hawking.

In Ubombo informal trading involved selling of vegetables, fruit, second-hand clothing, homemade clothes and crafts and money lending. Small enterprises are a source of income that is often combined with other income generating activities. Men are also involved in hawking, building houses and fencing of kraals and homesteads.

In Umthunzini informal trading includes, selling of fruit, vegetables, homemade clothing, household goods and excess crops produced in the fields. Men undertake building and repairing of houses, shoe repairing and making of cement blocks for building houses.

Claiming against the State

South Africa has a well functioning social pension system that has a high coverage of the elderly in rural areas. Claiming these rights from the state in the form of pensions and disability grants has been shown to be of critical importance to household incomes (Carter and May, 1997). Each person who qualifies for this benefit received R520.00 per month. Some households depend on this source of income. Other households combine it with other sources of income. In addition to the pension and disability grants, a few households receive a child benefit of R100.00 per child under the age of seven years. The child benefit applies to children who do not have parental support. Social pensions, particularly for the elderly are an important source of income and a household livelihood strategy. Consequently, having an elderly household person who earns a state pension is an asset in the study area.

4.5 Conclusions

This chapter has focussed on the profile of the rural households and their livelihoods in an effort to answer the descriptive objectives of the research project and to gain a picture of the micro-level unit of society. The livelihoods at the study area level show that Ubombo is deprived in terms of assets and resources available for livelihood generation as compared to Umthunzini. At the household level, the structure and livelihood strategies were explored in order to understand how important the household is in achieving rural livelihood security. It was important to gain an insight into the well-being of households and the quality of their environment in view of available assets, transforming structures and processes within a context of vulnerability.

We found that use of quantitative and qualitative methods provided unique and complementary data for describing the functioning of the rural household. The two types of data validated each other. Qualitative data were particularly useful in understanding people's perspectives, meanings, attitudes, beliefs, goals and processes for interpreting quantitative data. They also helped to explain the indigenous reality. In both districts household boundaries are fluid as they often have members who come and go for various reasons and relatives who come and stay for periods of time. The households also receive goods and services for payment in kind. Sometimes money is received from members, extended families, neighbours and the community. Since both districts belonged to the former KwaZulu 'homeland', they both have the greatest backlog in service provision. However, there are similarities and differences between the two districts. Generally Ubombo households are more disadvantaged than Umthunzini ones. Thus this chapter will conclude with the profile of the average households in each district.

4.5.1 The profile of the average Ubombo household

Physical accessibility to the area plays a major role in determining whether services are provided in the district. However, Ubombo has the poorest provision of the road infrastructure in KZN. This contributes to it having some of the lowest levels of service provision, such as electricity, telephones, water supplies, health and education facilities and police security. The natural capital provides land for residence, cropping and grazing, forests, wild animals and plants and grass for food, firewood, building materials and handicrafts for household consumption. Although physical capital is essential for livelihood generation, the area is characterised by poor infrastructure in terms of water supplies, sanitation, education, health and telecommunication facilities. Because of the remoteness of the area and high unemployment rate, households have very limited financial capital. Social networks of family, kinship, neighbours, religious organisations and the community often cooperate with the household. They provide labour for agricultural work, ceremonies and celebrations.

Members of the household are the main source of human capital. They provide labour to the household for domestic work, agricultural and income-generating activities and employment. It is evident from the survey that the majority of the population is disadvantaged pertaining to literacy skills and education. Only a small minority has reading and writing skills. There are a high proportion of illiterate adults. Furthermore, women are less educated than men as compared to Umthunzini. In this case the low educational levels of adults have implications for the general quality and well-being of household livelihoods. Access to better employment opportunities with high wages is limited for these adults. Illiteracy and low educational attainment prevent individuals from accessing valuable information to their livelihoods. This has a negative impact on the health status of the household and health education initiatives, where particular diseases, such as Mseleni Joint Disease, cholera, malaria and typhoid are prevalent.

Women and men in Ubombo are endowed with indigenous knowledge that supports their household livelihood strategies, which is of particular importance to food security. They have developed different expertise and knowledge about the local environment, pertaining to agricultural activities, plant and animal species. Women are skilled and knowledgeable in gathering edible wild plants that are cooked as accompaniment to maize-meal dishes. Wild plants provide ingredients for illness remedies. Together with their children, women collect wild fruit and vegetables for household consumption. Often it is women who make decisions pertaining to what food crops to produce. They are skilled in multicropping practices as well. Women are also responsible for post-harvest processes and systems. Indigenous knowledge is an important human capital for household survival in the area.

On average the household size is large but smaller than in Umthunzini. Households have a high number of dependents that are children and potentially economically active unemployed people. As a result of this situation, available assets and resources are spread too thinly among household members. There are very few work opportunities in Ubombo. Many households live from hand to mouth. The shortcomings in household income are marginally improved by old age pension and disability grants, subsistence food production, irregular remittances, hawking and wild food plant gathering. Food security is the basic constraint of these households.

The majority of household members are less than 60 years of age, unemployed and without any regular source of income. This has a negative effect on household livelihoods. In the area there are more male-headed than female-headed households. However, most of the heads of households are unemployed, irrespective of gender. Some men live in the area because they cannot find work elsewhere in urban areas or they were retrenched from employment. The majority of the heads of households are married but a few are widowed, single or separated. Marital status is a major determinant of one's access to communal land and social networks important for livelihood generation.

Gender and generational division of labour is essential for household livelihood strategies. Men heads of households are the main decision-makers whereas women are responsible for all decisions pertaining to food production, wild food gathering, food storage, processing, cooking, fetching water and fuel wood, caring of children and the elderly and many other domestic tasks. Men and boys are responsible for livestock, land clearing and cutting of forest trees. Both men and women do productive work but it differs significantly. Women do most of the agricultural work. They make handicrafts for sale. Children help women with hawking activities when they are not at school. If there is casual or permanent employment, men work. They also supervise caring of livestock and woodcarving is a man's pursuit. At the community level, women and men cooperate in social events and services. Men play a significant role in community politics.

The household livelihood strategies are a combination of employment, migration, remittances, subsistence food production and to a lesser extent commercial farming of cotton, gathering of edible wild plants, tending of animals, small enterprises and claims against the state. The accumulation of physical assets is very poor. This is evident in the types of housing and the fungible assets households possess. The households' environmental health status is characterised by lack of access to potable water and inadequate sanitation facilities and energy. Only a very few households use electricity as a source of energy compared to Umthunzini. Women do a lot of tedious tasks that might have negative health outcomes. Jafry (2000) asserts that women have multiple roles and their long periods of repetitive work can be a source of fatigue and poor occupational health. The burden of work and work-related health problems has profound effect on productivity, economic and social well-being. Members of households, particularly women are often engaged in moderate and heavy physical work that impacts on human capital development. Ubombo households are characterised by lack of or inadequate access to assets that support livelihood generation. The remoteness of the district makes it worse off than Umthunzini.

4.5.2 The profile of the average Umthunzini household

Umthunzini's rural communities are situated on the periphery of urban centres, such as Empangeni, Richards Bay and Isithebe. Although Umthunzini is one of the former KwaZulu districts, it has a better backlog in service provision compared to the remote Ubombo district. Provision of services is not up to a satisfactory level in Umthunzini but rural households have more accessible physical capital. Households have better access to potable water, sanitation, health, educational, police service and communication facilities.

The households have access to natural capital, such as communal land, piped water, boreholes, springs and rivers. Water-borne diseases, such as cholera and typhoid are a problem to those households without access to piped domestic water. Forests are a source of fuel wood, wood for carving, food and building materials. Wild plants provide food, ill-health remedies, raw materials for handicrafts and building shelters. Physical capital is inadequate but some households can access main roads, power lines for household electricity, potable water supplies and telecommunication facilities. Social capital is provided by the family, kinship networks, neighbours, community development and religious organisations. Human capital consists of illiterate and literate household heads. More heads of households in Umthunzini can read and write compared to Ubombo. Women heads of households are more literate than men in Umthunzini. This indicates the influence of urbanisation and better access to education in a less conservative and remote area.

The average household size and the dependency ratio are higher in Ubombo than Umthunzini. It is common for households to have additional members who are relatives from remote areas that have come to make use of the better facilities in the area. Such facilities are schools, institutions of higher learning and employment centres. Often teenage mothers who attended school in other areas leave their children behind with parents. It is common to find that daughters who seek employment in other areas also leave children in their parents' homesteads. Consequently the size of the household and the number of dependents is higher in Umthunzini than Ubombo. There are more women-headed households in Umthunzini compared to Ubombo. The difference in headship according to gender is highly significant. A larger portion of women heads is single or widowed in Umthunzini than in Ubombo. It seems there is less pressure on women to be in marriages in Umthunzini because they have better access to a diverse portfolio of livelihood strategies and income-generating activities than in Ubombo.

Division of labour is mainly by gender and generation. Women and girls are responsible for domestic activities and caring tasks. Children of both sexes help their mothers to market excess produce in the community and towns. Women and girls gather edible wild plants for cooking. They are involved in agricultural activities of the food and cash crop, sugarcane. They also take care of small livestock, such as chickens. Women make handicrafts for household usage and sale for income. Men are responsible for wage employment and large livestock. They do wood carving as well. Women's community activities are linked to their productive roles and men participate in community politics.

Livelihood strategies are employment, migration, remittances, food and cash crop production, livestock, small enterprises and claiming against the state for old age pensions and disability grants. Households in Umthunzini have less access to land than Ubombo ones. There are more people who are in need of land for the cash crop than in Ubombo. In general, households have more durable physical capital such as better quality housing and household equipment. Access to piped water and sanitation facilities is better than in Ubombo but is still inadequate. Household yearly income is low in both districts. It is important to note that in-kind payments are difficult to measure and quantify.

CHAPTER 5 GENDER AND HOUSEHOLD LIVELIHOOD VULNERABILITY

This chapter focuses on household livelihood vulnerability, particularly in relation to the gender of the head of the household. The analysis will proceed along three tracks. First, in the introductory part of the chapter, we look at the literature. The studies consulted do not provide an unequivocal picture of the relationships between gender, household headship, livelihood vulnerability and poverty. Second, a quantitative analysis of the results of the household survey in the study area will be done. In this analysis, indicators of livelihood vulnerability are related to gender of household headship. Third, in the last part of this chapter, five case studies will be discussed. Four of these cases concern women-headed households. In the analysis of these cases we will look at livelihood vulnerability in more detail and in a holistic way. Finally, conclusions will be drawn concerning household livelihood vulnerability in the study area.

5.1 Introduction

Ellis (2000) describes the most vulnerable households as those that are both highly prone to adverse external events and lack assets that could carry them through periods of adversity. In the past vulnerability has often been viewed primarily in physiological terms. Therefore the term is often used to refer to those individuals within a population whose growth and health status are most likely to be impaired by a low or reduced food intake, such as pregnant women and children under the age of five. However, vulnerability goes beyond physiological terms. It takes into account food stocks, access to alternative income sources and household assets. Vulnerability is characterised by long-term factors that weaken people's ability to cope with the sudden onset of shocks and stresses, exposure to risks, insecurity and defencelessness (Chambers, 1989; March *et al.*, 1999). Case studies focus on how vulnerable households cope and adapt to their situation to generate livelihoods.

Numerous studies in developing countries have shown that there is a general tendency for female-headed households to be economically marginalised and socially excluded (Chester, 1995). Poverty characterises many female-headed households in both developed and most developing countries. Among the female-headed households, poverty stems from limited or lack of access to assets and resources. Female-headed households are usually poorer than two-parent households with male heads. Male-headed households have greater access to economic resources than female-headed ones (Firebaugh, 1995). It is common to find that women's earnings are usually less than those of men. Oppong (1997) asserts that the proportion of female-headed and maintained households is increasing. This status of female headship is often imposed upon women by male migration and abandonment. Migration is considered to have a potentially profound impact upon conjugal relations. It provides opportunities and incentives for men to have more than one wife located in urban and or rural areas. Consequently, there are growing numbers of mother-and-children household units visited by husbands living in urban areas. This type of arrangement is viewed as a modern adaptation of polygyny. In rural KwaZulu-Natal (KZN) there are many *de facto* heads of households resulting from rural-urban migration, desertion and polygamous marriages.

De jure female-headed households often result from widowhood, desertion and sometimes divorce. Some women are widowed when young but they are expected to keep the family household together. If they do not remarry within the family, they remain heads of their households. Female heads of rural households are in a particularly vulnerable position. The majority of them are largely uneducated and unskilled. Generally, female-headed households are a sub-group of resource-poor families in rural areas. In the area of study there are many unmarried mothers of young children who are the most economically vulnerable. The grandmother-headed households are also prevalent. They comprise the grandmother and her grandchildren without their parents. Sometimes relatives form part of these households. Grandchildren are generally married daughters' offsprings that are left with their parents. This is a common situation where a married daughter leaves behind in her homestead all her illegitimate children born before marriage. It is also common that unmarried daughters often leave their children with their mothers when they go out to seek work in urban areas.

According to Chant (1997) female household headship is constrained at every stage of the life cycle because of the society's values to uphold male household headship. Norms of female morality and sexuality are important to patriarchal societies. For instance, single women who live alone are viewed as having loose morality. Young unmarried women with children are often absorbed as units within their parents' households. However, some of these women establish their own independent households. Even older women who head their households may have to behave in an extremely conservative manner in order to win approval and respect. Married women sometimes treat female household heads as outcasts. On the other hand men may try to exploit the social and economic vulnerability of female household heads. In rural KZN, there is still a cultural custom that discourages female-household headship after the death of a woman's husband. According to this custom, a widow is expected to remarry one of her husband's brothers. Through this custom a woman can continue to have access to land and food security. In some rural families a widow has to succumb to this custom or leave the lineage on the death of her husband.

5.2 Gender-based vulnerability

The most vulnerable livelihood systems are characterised by low resilience and high sensitivity to stress and shocks. Livelihood risks and increased vulnerability are reinforced by social factors, such as insecure land tenure and insecurity of wage employment (Ellis, 2000). Some studies show that most of the female-headed households are found among the poorer strata of society. They often have lower income than male-headed households. Furthermore, the most vulnerable households are those headed by females where a male adult is totally and permanently absent. The increase of female-headed households attributed to rural-urban migration of men has a negative livelihood effect on women and their children. The economic situation of female-headed households is vulnerable because of problems, such as poverty, malnutrition, heavy workload, ill health and many others (Presvelou, 1995). The idea of regarding female-headed households as more vulnerable than male-headed households is disputed by some researchers. Others argue that female-headed households are overrepresented among the poor.

Quisumbing *et al.* (1995) provide new evidence on the association between gender and poverty based on empirical research on ten developing countries in Africa, Asia and Central America. They tested for differences in incidence of poverty between individuals in male- and female-headed households using stochastic dominance analysis. Their analysis reveals that differences between male- and female-headed households among the very poor are not sufficiently large that one can conclude that one is worse or better off. Therefore it is difficult to determine whether poverty is greater among males or females. Out of the ten countries where research was conducted, it is only in two of them, namely Bangladesh and Ghana, that data indicated higher levels of poverty among female-headed households. This disparity is linked to cultural and institutional factors. Quisumbing *et al.* (1995) emphasise that in most of the cases examined the difference between male and female poverty levels were not significant enough to conclude that one group was better off than the other. However, they note that women in developing countries generally have lower levels of education, assets and resources and social support than men. Therefore, these are related to gender inequalities. There is evidence that there are many more women living in poverty in male-headed households, whereas fewer men live in poverty in female-headed households. Thus it is concluded that female-headed households with high dependency ratios and without a steady income are likely to be vulnerable (Quisumbing *et al.*, 2001).

Another study was conducted in Southern Africa to find out if there was an association between rural poverty and a high incidence of women-headed households. In Botswana it was found that gender differences between male- and female-headed households are more significant for household income in rural areas for the rich than for the poor. Generally, women have restricted mobility because of their reproductive role, less access to wage employment, less job security and lower wages than men. The dependence of rural livelihoods on disposable cash income in rural areas for purchasing of basic subsistence of goods and services makes it imperative for households to access cash income. Therefore, the livelihoods of women-headed households without a regular wage income or other cash flow are particularly vulnerable. This vulnerable situation applies also to male-headed households where the male head is unemployed and looking for work (O'Laughlin, 1997).

IFPRI (1995) states that the category of female-headed households is extremely an heterogeneous one and not a particular useful category per se for analytical purposes. She points out that in Lesotho, female-headed households as a group were not poorer, as many of them were female-headed and recipients of migrant remittance, from spouses working in South Africa. In Tanzania, research by Marjorie Mbilinyi indicates that male claims on female labour may cause women to leave their husbands and children for the towns. The children in such male-headed households may be most vulnerable because the man does not spend female remittances are not spent effectively (IFPRI, 1995). Available evidence also shows that women usually buy food and goods for their children and for general household consumption as compared to men. Contrary to this, men tend to spend a higher portion of their income on goods for personal consumption.

Vulnerability of rural households in South Africa stems from the country's historical and cultural context. Women and men's claims to resources, power and authority have been largely influenced by race, class and gender. For most rural women in South

Africa, their more vulnerable situation stems from their lack of legitimate access to land (Meer, 1997). In rural areas where tribal land is communally owned, women are disadvantaged in their rights of access to land by socio-cultural norms and informal land distribution practices that are not controlled by the state law. Communal land tenure is subject to the *inkosi's* trusteeship. But land transfers are negotiated informally between households at neighbourhood level and approved by headman and *inkosi*. Inheritance of communal land-use rights by male heirs is automatic, but problematic by women. Women's access to land depends on women's link to a man, such as husband, father, brother or son (Cross and Friedman, 1997; Meer, 1997). It is acknowledged that not all female-headed households are equally vulnerable but that there are categories of advantaged and disadvantaged households, which are regarded as connected to poverty. Further, Cross and Friedman, (1997: 29-34) outline categories of disadvantaged rural women regarding access to land, power and authority:

- *Widows with grown up children:* These older widows are normally allowed to keep a usufruct right to the landholding of their deceased husbands. Under most rural tenure systems, this type of household is the best positioned. As this type of household is structured around a marriage, the family is regarded as acceptable and respectable according to values of local rural people. Older widows usually qualify to receive old age state pension hence they have a source of independent income. The results of a survey conducted in 1991 at Izingolweni in KZN showed that widow-headed households were better off in income terms than male-headed households in the area;
- *Younger widows with young children:* They rank second in relation to land access. If a widow with young preadolescent children have already settled on their own landholding before the death of her husband, she is often allowed to keep her land. However, poverty and lack of other resources is problematic for younger widows. The position of these widows is strengthened when they have sons rather than daughters. These categories of women heads of households usually have young children and they are unable to leave them and find work in urban areas. Their reproductive roles limit their mobility hence they have no reliable source of cash income. Thus they are vulnerable to impoverishment. Often they receive limited assistance and protection from their husband's relatives. Sometimes they are expected to remarry in the husband family to get livelihood security;
- *Single mothers with children:* This category of female-headed households is the most disadvantaged. These households are not considered to be eligible for land right. In rural areas these households remain attached in a subordinate relationship to landholding households belonging to parents, relatives or patrons. Consequently, in this position, these women heads can only access institutional and political processes in their community through their head of household. Whenever, these single mothers manage to set up households, they are often viewed as a social problem. They are treated with less respect and are often very poor;
- *Married women with absent husbands:* These are disadvantaged women who are *de facto* heads. Women are disadvantaged when absent husbands neglect them or contribute little or no remittance support. They usually have land to live on but they are severely restricted by lack of cash income to access resources of production. They have limited freedom of decision because they need to obtain their husbands' support and permission to make some decisions pertaining to livelihood strategies.

There is one category of vulnerable households that is not discussed by Cross and Friedman (1997), about which there is increasing evidence in the literature. It is the category of child-headed households. The socio-economic impact of HIV/AIDS epidemic on the household is yet still poorly explored, particularly in terms of the emerging category of child-headed households. Barnett and Blaikie (1992) describe the impact of AIDS upon the household through time as incremental death within it. The structure of the household changes when a husband dies of AIDS, followed by the wife who dies shortly thereafter. Often the couple leaves children as orphans. They are left with limited or no assets and resources because over a period of time, the household spends a lot of money and time on caring for the ill. Extra expense is incurred in funeral arrangements (Barnett and Blaikie, 1992; Ayieko, 1997).

Loewenson and Whiteside (1997) identified factors that make rural households vulnerable in southern Africa and state that coping capacity depends on household resources and community support structures. However, in communities with an increasing number of orphans, the long-established traditional system mechanisms of care centred around the extended family household becomes saturated (Pisani, 1997). According to Mokoena (2001), in January 2001, a study was commissioned by the Nelson Mandela Children's Fund to evaluate problems, needs and challenges faced by child-headed households made up of AIDS orphans. This study was conducted in KwaZulu-Natal, Gauteng, Northern Province and Mpumalanga. The children living in child-headed households are identified as the most vulnerable. Members of these households' basic needs of food, clothing, education and health are not often met. Parent death and loss of income leads to withdrawal of children from school to substitute for adult labour. Children also lack money to pay for school fees. In addition to challenges facing child-headed households regarding basic needs, children are also vulnerable to diseases, drug abuse and teenage pregnancy.

During the survey, it was found that there were a number of children who lived without adults in the study area. These children were found in households headed by children under 18 years of age. Most of them were in households where parents had died or in case of female single-parent households with a mother who worked in another area away from the village. Children in child-headed households had to earn their living. Young children sold their labour to get paid for performing tasks for their neighbours. They got paid for collection water from their sources, fetching wood from the forests, looking after cattle and goats and any other unskilled job available. Generally, children stated that they got paid very low wages or food. The emerging child-headed household need more focus in terms of children's rights and their access to assets and resources. Often girls head the households without parents and they shoulder most of the responsibilities of adults.

Numerous categories female-headed households were identified in the study area. Female heads were:

- *Widows with grown up children but living with grandchildren:* Most of these widows were above 60 years of age and they earned a state pension. Although there was a steady monthly income for these households, their members were vulnerable because the source of income would end should the grandmother dies;
- *Younger widows with young children:* Some of the younger widows were a result of the AIDS pandemic where the husband died because of AIDS-related illness. The households headed by these widows were vulnerable because their own health

was at stake. Important economic resources have already been spent on the dead husband;

- *De facto female-headed households with young children*: Often husbands of these women were migrant workers in urban areas or on commercial farms away from their villages. These households were vulnerable because husbands did not send remittances on regular basis. Most of the migrant labourers did not earn sufficient money to satisfy their basic needs in urban areas and those of the household members left behind in rural villages;
- *Single women with children and grandchildren*: Most women in this category are above the age of 35 and had children but were not married. These women found it difficult to access productive resources, such as land. They could obtain it through an adult male in the family, a father or brother. These households are vulnerable because their heads are placed in a dependent position;
- *De jure female-headed households*: These include widows and women who are permanently deserted by their husbands who were often migrant labourers;
- *Female-headed households in polygamous marriages*: The husbands of women in polygamous marriages did not provide for all the basic needs of their wives because resources were spread out too thinly. Hence these women had to devise strategies to generate livelihoods;
- *Child-headed households*: This is a new emerging type of vulnerable households as discussed above.

According to literature reviewed, gender is one of the main contributing factors to vulnerability of households. Although there is a tendency to consider female-headed households as more vulnerable than male-headed ones, some new empirical evidence seems to indicate an opposing point of view (IFPRI, 1995; O’Laughlin, 1997; Glewwe and Hall, 1998; Quisumbing *et al.*, 2001). As a result of uncertainty about gender-based vulnerability of households, a quantitative analysis was undertaken to determine vulnerability according to household headship in the study area.

5.3 A quantitative analysis of vulnerability

Some studies have shown that unequal access and distribution of resources emanate from existing gender relations of power in the household and community at large. In most developing countries, women play an important role in national agricultural production. They produce both food and cash crops and they are also responsible for processing, buying and preparing food for the household. For this reason their role is critical in food security. Some studies indicate that women are constrained in enhancing household livelihood security by unequal gender rights and obligations within the household. Often they have limited time and access to financial resources. The time constraint is particularly acute for women heads of households. Generally, women’s productive, reproductive and community management roles are time intensive compared to men (Brown *et al.*, 1995).

Some scholars argue that female-headed households are not more vulnerable to poverty than male-headed households. Women-headed households do seem more vulnerable to poverty than men-headed ones, but where comparative data are available the actual difference in poverty incidence is not very great (Marcoux, 1997). A case study conducted by Glewwe and Hall (1998) in Peru provides a good example for analysing vulnerability of households. This case study’s main objective was to

find out which socio-economic groups are most vulnerable to living standard declines during macroeconomic shocks. In their major findings, they indicate that households with many children are more vulnerable than those with a few, which is consistent with claims often made in literature. They also concluded that households headed by relatively well-educated persons appear less vulnerable which confirms that education allows one to adapt quickly to new economic circumstances. Another startling finding was that female-headed households appear less vulnerable to macroeconomic shocks than male-headed households. This is contrary to the common assertion that female-headed households and women are particularly vulnerable to economic shocks.

A study was conducted in South Africa to identify standards of living and poverty. The analysis of this study provided a practical tool to agricultural extension workers and other service providers, to identify and target poor households with interventions. Women-headed households were identified as households with worst living conditions where the head was illiterate and unemployed (Vichi, 1997). Further, an analysis of the World Bank data reveals that within all race groups in South Africa, the women-headed households are significantly poorer than the average households. This is indicated by the mean per capita income of R243 for women-headed household compared to R468 for all households.

A profile of the most vulnerable household in South Africa was compiled in an analysis prepared for the Office of the Reconstruction and Development Programme (RDP) by the World Bank. About 80 percent of the most vulnerable group live in rural areas that were formerly 'homelands'. Some 97 percent of them are Africans. The most vulnerable groups are large households, averaging 6.5 members. About half of the vulnerable households are headed by women. About 80 percent of household heads have less than a primary education, have no access to piped water, modern sanitation and electricity (SALDRU, 1995). According to Posel (1997) there is a perception among African women that households headed by women were likely to be more prosperous because they are not subjected to the drain on resources imposed by husbands who spend money on their own personal consumption, such as alcohol and leisure. She also asserts that households headed by women spend more income on the nutritional needs of household members than do other households. Generally, women have a higher tendency to spend on children than do men.

For the purposes of this study, a quantitative analysis of vulnerability was undertaken to find out if there was significant difference in vulnerability of households based on gender of headship. Therefore, empirical data on household size, wealth, demographic dependency ratio, economic dependency ratio and employment will be discussed.

Household size

Household size, vulnerability and poverty are closely related. Some studies indicate that large households with dependants are more likely to be poor than ones with a few. Glewwe and Halls (1998) state that households with many children are more vulnerable to economic shocks. Household size affects the pattern of consumption of goods and services, which could be shared among members. According to SALDRU (1995) the most vulnerable people live in large households averaging 6.5. In the study area the household size is 8.4 and 6.9 in Ubombo and Umthunzini, respectively. Thus the average household size in the study area is 7.6, which is higher than the average of

5.7 for the province of KwaZulu-Natal. The difference in household size between the two districts is not significant. In Chapter 4, Figures 4.1, 4.2 and 4.3 outline the household size in the study area.

Wealth

The main components of household wealth are difficult to understand. However, the ownership of assets and people's own perception of wealth and satisfaction with their living conditions. Rich people are predominantly satisfied with their quality of life, whereas poor people are dissatisfied. The wealth variable was constructed by taking into consideration, the educational level of the head of household and counting the number of luxury items that each household owned. These items included savings, a fridge or freezer, polisher, television set, radio, stove, sewing machine, car, telephone, access to pipe water in the homestead and having services of a domestic servant. A comparison of male and female household heads and districts according to wealth and subjective satisfaction with living situation was analysed. Table 5.1 shows average wealth analysis according to headship by gender.

Table 5.1 Wealth and gender according to headship in Ubombo and Umthunzini

Gender	N	Mean	Std deviation
Male	125	3,1	2,5
Female	137	3,5	2,2
Total	262	3,2	2,3

*Not significant at 5%

In Table 5.1 there is no significant difference in wealth between male and female-headed household in the study area.

Furthermore, a comparison of male and female-headed households and districts according to wealth and subjective satisfaction with living situation was undertaken. This was based on the degree to which the household could meet basic needs of food, shelter, clothing, health and education. The results revealed that there was no significant difference at 5 percent level between male and female-headed households in both districts. However, when Ubombo and Umthunzini districts were compared, the difference was significant at 1 percent level, with Umthunzini showing to be more advantaged than Ubombo. The scores on wealth are shown in Table 5.2.

Table 5.2 Wealth according to residence

District	N	Mean	Std. Deviation
Ubombo	115	2,4	2,2
Umthunzini	147	3,9	2,2
Total	262	3,3	2,3

From this analysis there is evidence that supports the socio-economic data presented in Chapter 3 showing that Umthunzini has a better economic status as a result of its location near the industrial areas. For this reason households are able to diversify their livelihood strategies.

Table 5.1 shows clearly that within both districts, the female-headed households are not significantly poorer than male-headed households. Glewwe and Hall (1998) have established that female-headed households are more likely to be poor, but not more vulnerable than male-headed households. Thus the findings in this study correlates strongly with their conclusion about vulnerability according to gender. Quisumbing *et al.* (2001) shows that the difference between male and female-headed households is insufficiently large to generalise that female-headed households are worse off. They conclude that differences between male and female-headed households may not be so acute if there is a general level of poverty. Therefore, there are no strong vulnerability differences between the two types of households.

Demographic dependency ratio

The dependency ratio (the number of children below 15 and people above 64 combined, divided by the number of people aged 15-64) is more than twice among the poor than the better off. In the study area there is a high number of household members who are less than 18 of age and dependent. According to our analysis the difference between male and female-headed households is not significant at 5 percent level. However, the result of the analysis is indicative of differences according to gender with p being 0.091. If the sample of this study were larger, results of this analysis could have been significant. There are also differences between districts. Umthunzini has a higher dependency ratio compared to Ubombo. Although the results showed p to be equal to 0,084 as not significant, this gives an indication of the difference between districts. As a result of rural-urban migration in Umthunzini, a high number of children under the age of 18 are left with one adult or none. In a few households, some children are forced to become heads of households after death of their parents due to AIDS related illnesses.

Economic dependency ratio

According to Krige (1996) the dependency ratio is a ratio of people who are employed and the rest of the population, which includes children, the elderly and the unemployed. Sometimes there is distortion of the employed sections of the community because small informal traders who live a hand-to-mouth existence regard themselves as unemployed. Furthermore, in South Africa the old age pension system is the largest source of support for the rural households through which the elderly can claim from the state. Old age pensions have been shown to be a critical source of rural household income (Carter and May, 1997). Some of the previously employed elderly draw on their pensions from former employers and still claim support from the state. The district economic dependency ratio according to data from the census of 1991 is 11.87 and 0.72 in Ubombo and Umthunzini. It is clear that because Ubombo is a remote rural area far from metropolitan employment opportunities, it has a higher economic dependency ratio than Umthunzini (Schwabe, *et al.*, 1996).

In this study, the economic dependency ratio was calculated to indicate the number of household members who are dependent on the income provided from all sources. This was done by creating a variable which contains the number of household members. To determine the economic dependency variables were created to determine all sources of household income. These include pension, welfare payments, remittances, and income from any other source than wage employment. There was also a variable

for household members without any source of income. Consequently, the economic dependency ratio expresses how many household members live of the income of all providers. Thus the economic dependency ratio was calculated according to gender and district. Table 5.3 indicates economic dependency ratio according to gender of household head in both districts, Ubombo and Umthunzini.

Table 5.3 Economic dependency ratio according to gender of household head in Ubombo and Umthunzini

Gender	N	Mean	Std. Deviation
Male	123	461,2	326,9
Female	135	400,6	314,1
Total	258	429,5	321,0

The economic dependency ratio is higher in male-headed households than in female-headed ones. Furthermore, Ubombo had a higher dependency ratio than Umthunzini. The difference between households according to gender headship was not significant as indicated by p equals 0,130. However, there is an indication that the differences would be significant if the sample of households were larger. The differences could be attributed to the fact that female-headed households often pursue more than one income-generating activity, simultaneously. Household members are encouraged to participate actively in diverse livelihood strategies. Therefore, it is acceptable for children to get involved in informal trading and to work for better-off households in the area. The situation is different in male-headed household because female household members are not allowed to move freely in pursuit of income-generating activities. Male-headed households tend to depend on one source of income, particularly wage employment, and less on non-agricultural income-generating activities.

Employment

In many countries, women are disproportionately affected by lack of employment because of various factors linked to their reproductive roles at household level and workplace. Regarding rural South African women, there are some specific factors that make their situation different. In the past they had more difficulty in obtaining jobs because their movement was restricted by government policies. Most of the women who worked in town did their jobs illegally. From the early 1990s women could access job opportunities but they have fewer marketable skills, limited training, experience and shorter working histories to secure employment. Therefore unemployment among women is still higher compared to men.

Since 1994, South Africa has changed its definition of unemployment rate to count as unemployed all those who are aged 15 to 64, currently not working but would like to work. Unemployed people are either actively seeking work or have given up looking for it. Unemployment in rural areas is high and women suffer from a 36 percent unemployment rate, compared to 26 percent among men (SALDRU, 1995). Thus the dependence on old age pensions and remittances is particularly strong in rural areas. Lack of employment opportunities makes rural households vulnerable.

In the study area 37,6 percent of the household heads reported themselves as unemployed whereas 31,8 percent were employed. However, some of the household heads have other sources of income. The working status of household heads for the study is presented in Table 5.4.

Table 5.4 Working status of all household heads in Ubombo and Umthunzini

Working status	N	Percent
No answer	12	4,7
Unemployed	97	37,6
Employed	82	31,8
Self employed	9	3,5
Scholar	6	2,3
Pensioner	48	18,6
Temporarily employed	3	1,2
Casual employment	1	0,3
Total	258	100,0

For the study area the working status of household heads according to gender was analysed as well. Table 5.5 indicates that 33.1 percent and 42 percent of men and women, respectively were unemployed.

Table 5.5 Working status of household heads according to gender

Working Status	Male		Female		Total	
	N	%	N	%	N	%
No answer	4	3,2	8	6,0	12	4,7
Unemployed	41	33,1	56	42,0	97	37,5
Employed	52	41,9	30	22,4	82	31,8
Self-employed	4	3,2	5	3,7	9	3,5
Scholar	2	1,6	4	3,0	6	2,3
Pensioner	20	16,1	28	21,0	48	18,6
Temporarily Employed	1	0,8	2	1,5	3	1,2
Casual Employment	0	0,0	1	0,7	1	0,4
Total	124	100,0	134	100,0	258	100,0

Discussion

At the beginning of this chapter it was pointed out that some studies indicate that female-headed households are more vulnerable than male-headed ones. Thus categories of disadvantaged rural women were described using literature sources and survey findings, particularly of those who were heads of households. Five indicators were used to analyse vulnerability in the study area. These included household size, wealth, demographic dependency ratio, economic dependency ratio and employment.

The average *household size* contributes to its vulnerability. It was apparent that women care for more persons below the age of 18 years of age. Male-headed

households tend to have more economic dependents, as they are less able to attract diverse sources of income. Thus, according to this criterion, male-headed households are more vulnerable than female-headed ones in the study area.

Ownership of household durables was used to analyse *household wealth*. Female-headed households did not prove to be poorer than male-headed ones. Actually, they are marginally wealthier because of their diversified income sources. Umthunzini households proved to have more wealth than Ubombo ones. This is the case because Umthunzini households have more access to jobs and income-generating opportunities. There are ample chances for income diversification.

The demographic dependency ratio did not show any significant difference between male and female-headed households. The demographic dependency ratio was slightly higher in Umthunzini. This classic measure of dependency, which focuses on age may underestimate the burden on household resources of sick and unproductive adults between 15 and 64 years. This aspect needs to be examined in view of the HIV/AIDS pandemic if realistic assessments are to be made.

Male-headed households have more *economic dependants* than female-headed ones. Male heads create a conservative and inflexible environment in their households that does not encourage women to participate in income-generating activities. The influence of male patriarchy is still strong in rural areas of KwaZulu-Natal. Consequently, women and children's movements are restricted in male-headed households whereas in female-headed households they are free to engage in a range of income-earning activities. Under these circumstances female-headed households have multiple earners of income.

The level of unemployment among previously disadvantaged population groups, such as Africans is high in South Africa. But the female unemployment rate is even higher than that for men. In 1997 the Convention for the Elimination of all forms of Discrimination Against Women (CEDAW) reported the unemployment rates for African men and women as 33,6 percent and 50,2 percent, respectively. The results regarding the working status according to gender in the study area proved to be in line with the national trend of employment rate. More women were unemployed than men but they contributed to the household income sources through other livelihood strategies, such as state pension and informal trading.

5.4 Case studies

Case 1: Pensioner female-headed household, Umthunzini

The head of this household is a woman, Zanele. She was born in Umthunzini district and is 62 years old. She has never been to school. In 1960 Zanele got married to a local man according to customary union. Her husband, Joseph worked in the gold mines in the city of Johannesburg, about 800 km from his home area. They had three children, two daughters and a son. Joseph visited home from Johannesburg twice a year. In 1981 he fell ill and died at the men's hostel in Johannesburg. Zanele does not know what the cause of his death was. From her explanation, I think he could have suffered from tuberculosis. She only got a report from men who worked with him in the mines that he coughed for a long time. They told her that before Joseph died he

coughed out a lot of blood. “When my husband died in 1981, he did not leave any money, cattle or property”.

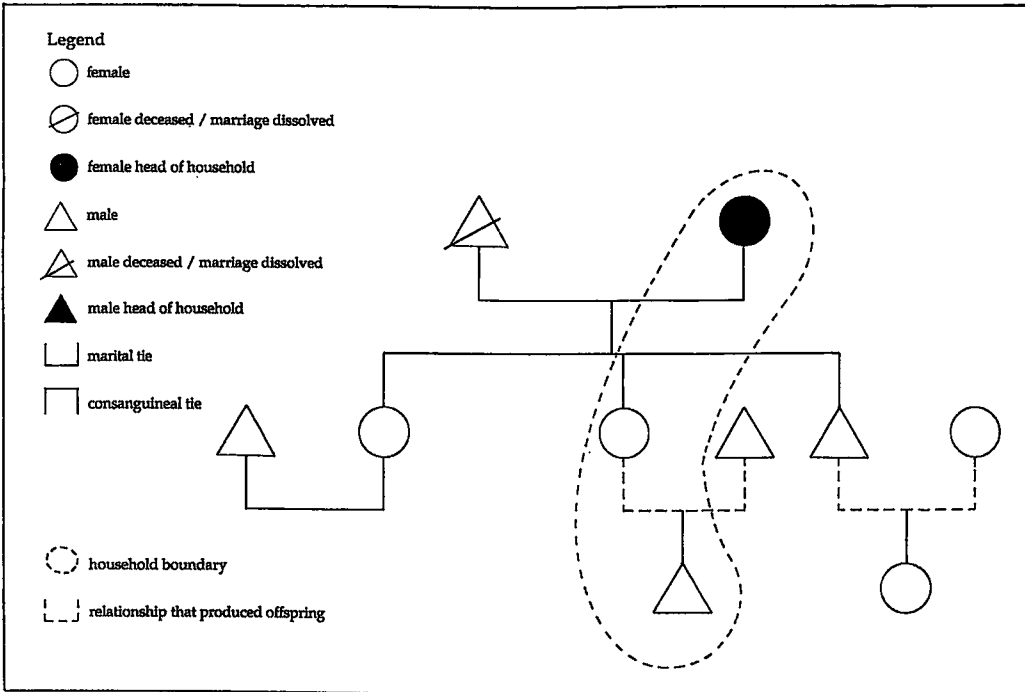


Figure 5.1 Genealogy of a pensioner female-headed household, Umthunzini

When Joseph was still alive, he used to send remittances very irregularly and her household could not depend on them. It was Joseph’s habit to ensure that he sent money to his household one month before he paid a visit to the homestead. He expected Zanele to buy ingredients to brew traditional beer for him. The balance of the money was used to buy groceries and basic household necessities. There was never enough money to pay for school fees. Zanele would have liked all her children to get a good education to secure good jobs. “Since we did not have money, Joseph with the support of the extended family, preferred to send our son to school for 12 years so that he could train to become a policeman”. The extended family believed that their son would support his parents if he earned enough money. Consequently, both their daughters were sent to school for only five years. The intention was to enable them to learn to read and write. It was important for them to be able to write letters for their future husbands in urban areas. Zanele has always been illiterate and she thinks that she would have been able to communicate directly with her husband if she wrote letters herself. Before her children could read and write, Zanele asked her neighbours to write and read letters for her.

Zanele’s only son works as a police officer in Johannesburg. Her eldest daughter is married and lives with her husband’s family. Zanele lives with her youngest unmarried daughter who is 32 years old and her grandson who is 15 years old. She is

unemployed but she does seasonal casual work for their neighbours during the planting and weeding periods. She earns very little money. Sometimes she is paid R2.00 per day for her work. "I say to her R2.00 that is better than nothing. My daughter also works our field because I do not have strength to do agricultural work anymore. I am sickly." Her son has not sent any remittances or contacted the household for more than two years. "I know where he works but he does not think of me. He takes after his father who did not support us when my children were still young". Zanele had heard from her neighbours who work in Johannesburg that her son was living with a girl friend and they also had a child of about three years.

"Earning a living has always been hard for my family", Zanele says. When her late husband was working in Johannesburg, she depended on subsistence agriculture for food to feed her children and relatives who lived with them. She planted maize, sugar beans, sweet potatoes or *ubhatata* and taro potatoes or *amadumbe*. Often the harvested produce lasted for about 4 months. The success of food production depends on the availability of money to buy seeds and to hire a tractor to plough the field. A good rainy season is also important. The household has access to the use of one hectare of communal land. Every year Zanele's household always experiences food shortages. There are also shortages of money to buy clothes, food and payment of transport and school fees. To cope with the situation, Zanele does casual work for better off households. She weeds neighbours maize fields for a minimal payment in cash or in kind. "I have worked for 12 hours in maize fields to earn one kilogram of maize meal" She also fetched wood fuel for payment in kind. She could not rely on her husband's remittances when he was still alive. His death did not have much negative economic impact on the household because he did not send regular remittances. Lack of money has always been a problem for Zanele's household.

The homestead has a one-roomed kitchen, a two-roomed house made of mud, wood and grass, and grandmother's traditional hut. Zanele explains that the grandmother's hut is her bedroom. It also serves a special function for the family. It is where she burns the incense and communicates with the ancestors who are viewed as the living dead. The household has dilapidated furniture and 13 traditional fowls. The main source of regular income is Zanele's old age state pension, casual agricultural work undertaken by her daughter and occasional sale of artwork by her grandson. The household has no bank savings but Zanele has an insurance life policy to cover funeral costs in case a household member dies. The pension is spent on food, medical care and unforeseen circumstances. During the planting season, the household experiences food and money shortages because pension money is mostly spent on hiring a tractor to plough and purchasing of seeds and fertilisers. Generally, the pension is spent on food, agriculture, health services, transport and education. The grandson who left school after finishing Grade 8 is gifted in carving wood. Thus he makes wooden spoons, meat dishes, small animals and brooms for sale. He left school because the household could not afford to pay for his daily transport to school and his lunches.

Zanele is dissatisfied with the poor infrastructure and provision of services to her village. She would like to see improvement to service provision pertaining to clean water supply, clinics, electricity and road networks. The homestead does not have access to the main road and problems are experienced when transport is needed, particularly for a sick member of the household. She points out that since the

establishment of the democratic government in 1994, the community can get free health care. However, health care is not readily accessible because of transport limitations. Even when transport is available, money for it is often insufficient and household members fail to seek medical attention. Zanele needs to take regular treatment for high blood pressure and diabetes mellitus. These non-communicable diseases could be due to the prolonged strenuous lifestyle that Zanele has led from her early adulthood to old age.

The household head is responsible for all decision-making and authority. For instance, she decided to give her married daughter R100 per month. Her daughter's husband is a migrant worker in Durban, about 200 kilometres from his rural home area. However, he does not send regular remittances to his household. Zanele sympathises very much with her daughter because she has seven children to support. Thus her contribution of R100 per month makes a difference to her daughter's household. She says she knows the experience of waiting for irregularly sent remittances.

Zanele does not participate fully in household chores because of her ill-health and age. Her daughter and grandson are responsible for most of the household chores. The household makes use of wild plants as vegetables, such as *Amaranthus* species or *imifino*, black-jack or *ucadolo*. Zanele uses indigenous medicinal plants to treat high blood pressure and diabetes mellitus. Wild wormwood or *umhlonyane* is used to treat diabetes and the African potato or *ilabatheka* is used as a tonic for high blood pressure. Her grandson uses palmetto tree or *isundu* to make brooms to sell at pension pay points, monthly.

She is aware that the women living in the study area do more work than the men. Some women in the area participate in community gardening and sewing projects. Her daughter could not participate in community projects because she lacks time to do so. She is afraid to forego opportunities to generate income from casual labour. Men in the area do not do work much but sometimes they assist with repairs and building of housing units. They spend their time taking alcoholic drinks. They also attend tribal meetings.

This case study shows how a vulnerable female-headed household integrates activities and wage labour to generate its livelihood. Assets are important for generating livelihoods. In this case human capital, social capital, natural capital, financial capital and physical capital are all significant for livelihood generation. Health, education and labour are important aspects of human capital that this household possesses. Realising that poverty is closely associated with low levels of education and lack of skills, Zanele wanted all her children to have access to a good education. However, financial resources were limited and only her son could finish schooling. Although her son does not send the household regular remittances, he can support himself and is not a burden to his household. The two daughters who only have five years of schooling cannot live without their mother's financial support. Thus they are dependent on her old age pension. Zanele's daughter and her son provide labour for household, agricultural and income-generating activities. Health is an important asset to the household. Ever since Zanele was diagnosed with high blood pressure and diabetes mellitus, she has not been able to perform some of the household and agricultural tasks anymore. Another important human capital possessed by the household is the indigenous knowledge of wild plants for food and medicines and trees for building and making handicrafts. A

household member of a pensionable age, like Zanele is an asset because she claims old age pension from the State and shares it with her household.

Social capital is an essential asset for Zanele's household. Informal social networks are important for her household. The extended family contributed to the decision-making process on which of the three siblings should get a good education. Consequently, it was agreed that the son should finish schooling. The neighbours used to help illiterate Zanele by reading and writing her husband's letters. Her married daughter still gets support from the household. If this household can afford the time and money, its members can participate in community development associations. Decision-making powers are vested in Zanele as the head of household. For example, she decided that her married daughter should be supported with 20 percent of her pension.

The household has access to utilisation of the natural resources, such as land, rain, rivers, forests and wild plants. Climatic conditions and seasonal fluctuations are important in food production. Umhlathuze River provides this household with unclean water for household use. When there is drought the household produces less food and their water source dries up. Consequently, women have to walk long distances to collect water. Therefore favourable climatic conditions are essential for rural livelihood security. Forests are a source of fuel wood for the household. Zanele's household has always gathered wild plants to provide food, medicine, building and craftmaking materials. *Imifino* or leafy green vegetables collected from uncultivated areas often supply important nutritional supplements and provide a fallback during drought periods. These wild vegetables are an accompaniment to the traditional maize dishes. Communal land-use right is important for the household in providing for residence and food production.

To secure financial capital, the household pursues multiple activities as they depend on subsistence food production, selling Zanele's daughter's labour locally, making crafts for marketing and on son's migration, although he has not sent any money for the past two years. The life insurance policy is a financial asset for the household. This household has limited physical assets. The housing units are built of cheap building materials and the household has dilapidated furniture. The household's physical assets do not have much value if they were to be sold to get cash.

This household is characterised by the long-term trend of vulnerability and insecurity of livelihood of a poor female-headed household. The household's sources of livelihoods have been changing over time but not for the better because of limited access to assets and resources. The impact of migration of young men on this household has not brought with it regular remittances. Rural-urban migration also impacts on gender roles and relations through adjustments in labour and other productive resources. Women who are left behind live difficult lives and develop livelihood strategies in the absence of men. They learn to manage on their own through trial and error. They are expected to provide for both the young and the elderly. Therefore rural women find it difficult to reduce their vulnerable situation with limited assets and resources. The vulnerable situation of the household is made worse by illiteracy of the household head. In this case study, the grandmother who is supposed to be cared for, is the main provider of a reliable income. Her two adult daughters and grandchildren are all living on her old age pension. This type of income

is very unstable for supporting young people as its availability depends on Zanele's health status and the length of time she is alive.

Case 2: De jure female-headed household, Umthunzini

This second case is of a female-headed household where the husband died of an HIV/AIDS related illness in Umthunzini. According to Mhura (1999) African women in Southern Africa are increasingly failing to cope with the heavy burden placed on them by HIV/AIDS. There is a number of social and cultural behaviours common in the area of study that support the spread of HIV/AIDS among household members; i.e. the practice of having multiple sexual partners. It is culturally acceptable for men to have more than one sexual partner. This is evident in polygynous marriages, concubines and acknowledged mistresses and girlfriends. Labour migration of men, and to a lesser extent of women, facilitates this type of behaviour, hence the spread of AIDS. Adepoju (1997) asserts that there is very high HIV/AIDS transmission among married women from their husbands because of the African male's unwillingness to use condoms. When a man falls ill, his female spouse should look after him and also become the household provider or breadwinner. After his death, the woman has to bring up children. As a result of widespread occurrence of HIV/AIDS, the number of households headed by women in the study area is increasing. This trend is an outcome of social and family disruption caused by apartheid and migrant labour and the HIV/AIDS pandemic. The lack of recorded statistics of HIV/AIDS in South Africa is a problem that leads to underestimation of the epidemic. According to available statistics there is considerable variation in provincial figures ranging from 32.5 percent prevalence in KZN to 0.7 percent in the Western Cape. However, nationally there is more than one in 10 people who are positive (AIDS Foundation of South Africa, 1999).

Jabulile is the head of household and 37 years old. The household comprises nine members. Jabulile has four sons, three daughters and one grandson. At the beginning of 1999, her husband's health deteriorated as a result of illness. In September 1999 Jabulile's husband died at the age of 40. Jabulile was born and brought up in the district. She went to school but dropped out after completing Grade 6. Her parents did not want her to be educated because she was expected to get married and stay at home. When she was still a teenager, she worked on a local commercial sugar cane farm for three years. Thereafter she got married to Martin who worked as a labourer in one of the firms in Richards Bay. She remained in their rural homestead with her in-laws and her children while Martin lived in a men's hostel near Richards Bay. In 1992 Martin took out a housing loan and bought a township house for R60,000. The repayments for the loan were deducted by Martin's employer from his monthly wages and paid to the bank. In 1997 Martin took out a retrenchment package from his firm but did not inform his wife how much he got paid. He bought a light delivery vehicle. As a result of this purchase, Martin could not afford to pay the monthly housing loan repayments. Consequently, the bank repossessed the township house to recover its money. After that episode, the household had to move back to their rural homestead. Martin had taken a retrenchment package because he was sickly. He suffered from tuberculosis but did not take his treatment regularly. His health deteriorated and he died at the beginning of the year 2000.

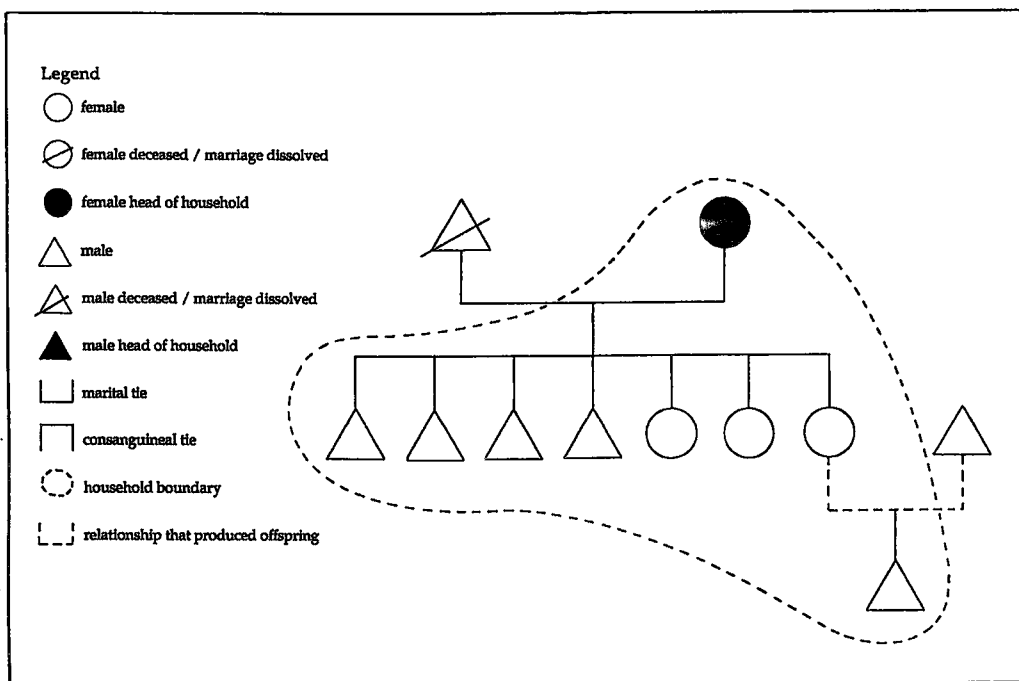


Figure 5.2 Genealogy of a *de jure* female-headed household, Umthunzini

After Martin's death, his brother-in-law took the vehicle away from Jabulile so that he could use it to deliver groceries for people who needed that type of service. He had promised to give Jabulile part of the payment but he did not. Instead he took the vehicle with him when left to find a job in Johannesburg. He has not contacted the household since he left in March 2000. Jabulile reported the matter to the extended family and the tribal authorities. She was told to wait until her brother-in-law returned to the homestead. Only then will her matter be addressed.

Jabulile's eldest daughter is Thandi. At the age of 17 Thandi became pregnant while she was doing Grade 11. Then she was forced to drop out of school and take care of her baby. She gave birth to a boy who is now three years old. Thandi's six siblings still go to school. The household has no person who earns an income or a pension. The household has a three-roomed house made of cement blocks and a corrugated iron roof and a separate one-roomed kitchen. The housing unit is not adequate for nine people. They have dilapidated furniture and a few household utensils. The light delivery vehicle is an asset that the household owns but it is not accessible hence no benefit is derived from it. Thandi helps her mother with household tasks and she also delegates activities to be done by her siblings. Boys and girls share the performance of all household tasks.

The household's livelihoods depend mainly on subsistence agriculture on the household's half a hectare crop field. She produces maize, sweet potatoes, *amadumbe*, and vegetables, such as spinach, onions, tomatoes, peppers, cabbage and carrots. The

household consumes all of the produce as they never have a surplus of food. Jabulile's children help her with agricultural activities when they are not at school. Jabulile gets a small income from weaving grass mats and selling them in the township's shopping centres. Sometimes she gets casual work to sell fruit and vegetables at her neighbour's stall along the main road to Durban. On old age pension payment days, she sells clothing for her neighbour and she gets paid some commission based on the number of items she sells. The household often experiences food shortages, particularly at the beginning of the year when Jabulile has to pay school fees, buy books and uniforms for her children. There is never enough food to feed children during winter and summer holidays. The household head is responsible for all decisions pertaining to food and distribution of money. She oversees all the matters of the household's well-being.

The infrastructure in the village is not well developed. The main roads are very poorly maintained. They are sandy and have lots of potholes. There are no roads leading to the homesteads. However, the household has access to clean water from the communal tap and has a pit latrine. The house is also electrified. The household uses the services of local schools and clinics. The ward has a few public telephones but there is no postal agency. Jabulile would like to learn more about food production but there are no agricultural extension services offered in her area. She is satisfied with half a hectare of land she has access to for food production. "We do not have money to manage more land than we have. There is no money to pay for the tractor, more seeds and fertiliser".

When there is no food the household gathers wild vegetables from uncultivated land. Jabulile also cuts grass to weave floor mats and sleeping mats for marketing. She uses fibrous leaves of *ikhwani*. Jabulile has been trying to find a job for the past two years without success. The household is in a constant state of money and food shortages. She also says that lack of food and money has affected her children's school performance. Four of her six school-going children do not perform well at school ever since their father died. Jabulile thinks their poor performance is caused by emotional stress and hunger at school because the household cannot afford to give them packed lunches.

This case illustrates a vulnerable context with which a female-headed household has to cope. It indicates the limited opportunities and constraints members face in social and economic conditions. The household adopts a number of livelihood strategies to generate livelihood. However, these strategies are conditioned by the vulnerability of the contexts in which the household operates and the availability and access to assets that would support these livelihood strategies.

Human capital is an important asset of the household. It is considered in terms of education, training and good health. Jabulile has seven dependants and the household has no regular source of income. She dropped out of school after six years of primary education. Consequently, she can never hope to get a well paying job as she has no skills and knowledge required in occupations that offer higher returns. Her daughter, Thandi also dropped out of school as a result of teenage pregnancy and now has a son who is an additional dependant on the head of household for livelihood. Although Thandi and her siblings help with domestic household tasks, they are not available when needed to perform food production activities. Often the household runs short of

food. This raises a question of the quality of human capital available in this case. Jafry (2000) asserts that nutritional inadequacy affects people's working capacity. Furthermore, the workload and work-related health problems have profound effects on productivity and on economic and social well being. It is also documented that many of the health problems faced by people, particularly women, relate to agricultural work and remain unrecognised and undiagnosed. Since Jabulile's husband died of an infectious disease, tuberculosis, she is more vulnerable to ill-health problems. According to Aids Foundation of South Africa (1999), the majority of AIDS patients are often diagnosed as suffering from tuberculosis. The focus group discussions (FGDs) revealed that people dying of AIDS was a weekly occurrence in the area of study but the community still fears to speak about it. Therefore Jabulile's household is vulnerable due to lack of adequate human capital and the possibility that she is already infected with HIV. The vulnerability of the household to ill health can have a negative impact on food production activities in a situation where there is already chronic food insecurity resulting from inadequate human capital potential.

Social relations are critical mediating factors for livelihoods as they encompass the agencies that inhibit or facilitate the exercise of capabilities and choices by individual or sources. In rural KZN members of the household are entitled to assistance by the extended family. This is often the case when the household is affected by a shock situation, such as drought, floods or death. The social interaction of the head of this household with her in-laws resulted in negative outcomes when her brother-in-law took away the light delivery vehicle to generate income for himself. This household has no other means of generating a steady income because its physical asset for this purpose was taken away. The agreement between Jabulile and her brother-in-law was based on nothing else but trust. The head of household no longer trusts the extended family because of what she encountered when her brother-in-law took away the vehicle. Her other claims to the extended family have been put on hold because of mistrust that has developed. In the patrilineal society of the area of study women are treated with less respect than men. Kinship relationship ties in this case are weakened because Jabulile's husband died. She is viewed as an outsider in the extended family. There is tension between her and the in-laws emanating from the conflict about the vehicle.

The natural resource base provides this household with communal land for food production, water, trees and plants. Wild plants provide essential raw materials for making crafts for sale to generate some income. The household does not have physical assets that can be sold to get cash. The vehicle that was taken away by Jabulile's brother-in-law is the most valuable asset that the household owns but is not accessible. The two housing units are physical assets that this household have on communal land but have a low value and cannot readily be sold without consulting the tribal authorities.

This household has limited access to services such as good roads, water, telephones and postal service. The household has no access to extension services that are crucial for improving food production practices and food security.

Case 3: Pensioner female-headed household, Ubombo

Rosa is the head of household aged 61. She was born in Ubombo. In 1958 Rosa married John who worked as a migrant in Boksburg. John was a labourer in one of the mines. As a result of ill health, in 1986 he went on sick pension before his retirement age. According to Rosa he suffered from high blood pressure, swollen feet and heart problems. John received an undisclosed amount of money for his pension package and he earned about R500 monthly sick pension. He did not inform Rosa of the amount of the lump sum payment he received from his employer. However, she suspects that John's mother had an idea of how much money was paid out because he discussed family financial expenditures with his parents. Rosa received her allocated money for household use from her mother-in-law. A large portion of John's money was used to pay for his treatment by traditional healers who insisted that John's illness could not be diagnosed according to the Western concept of illness. A number of ritual slaughtering of oxen and goats to appease the ancestors were performed. Traditional healers received cash payment for their advice and treatment. Hence the household's finances were heavily drained. In 1990 John became seriously ill and could not be cared for at home. He was admitted to Mseleni Hospital for further treatment. His condition did not improve and he died after six weeks of hospitalisation.

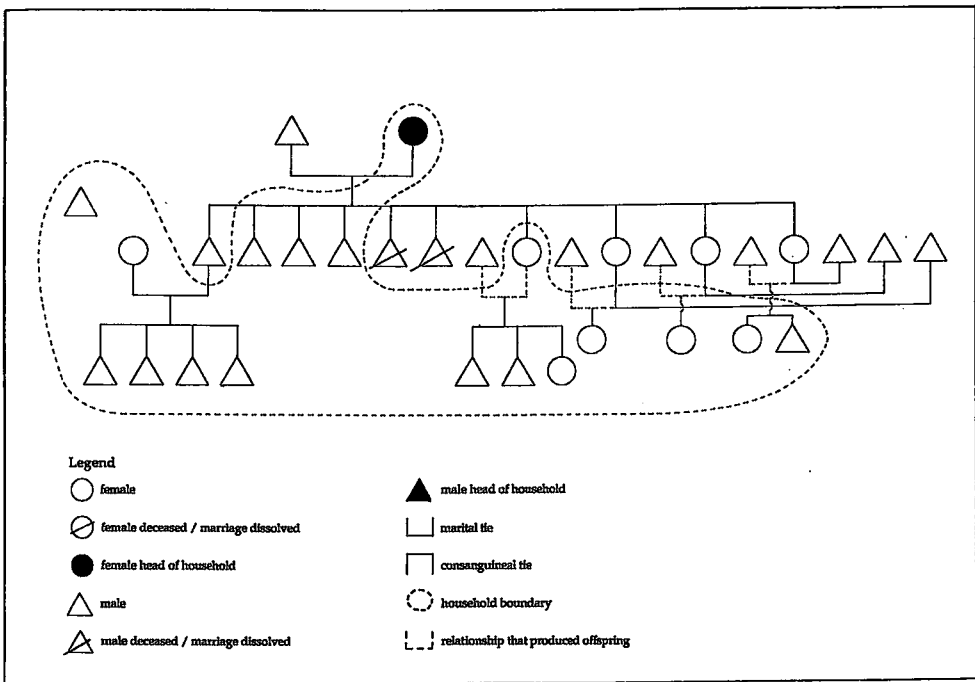


Figure 5.3 Genealogy of a pensioner female-headed household, Ubombo

Rosa and John had nine children, five sons and four daughters. Two of their sons died before they reached the age of two. Three of Rosa's daughters are married and have their own households. Her eldest son is married and is a migrant worker in Richards Bay. Three younger sons are still going to school in Ubombo. Rosa's youngest

daughter, Nomusa is not married as yet. Therefore she and her three children are members of Rosa's household. This household has a three-generation composition of 18 members. It comprises Rosa who is the head, three sons, one daughter, daughter-in-law, seven grandsons, four granddaughters and a shepherd. Rosa's three married daughters left behind four children they had before they got married. Her eldest son and daughter-in-law have four children and her youngest daughter, Nomusa has three children. The shepherd is a household's relative from one of John's extended families. He is an orphan who lost both his biological parents when their home was burnt down as a result of political violence in Empangeni where his family lived. The shepherd gets payment in kind as he is provided with accommodation, food and clothing. Rosa explains that the household needed a shepherd to look after their livestock so that her sons and grandsons can go to school. Furthermore she explains that herding is now a despised and menial task done by very poor people. Traditionally a bridegroom from a poor family would work as a herdsman in exchange for cattle to pay bridewealth.

All eighteen members of the household are unemployed. However, the household is involved in a number of diverse activities to generate its livelihood. These include reproductive, productive and community management activities. Rosa is an active full member of the Lutheran Church and has a leadership position in the Women's Union. She is also the chairperson of a local community gardening club. She has no education. Her household has three main sources of income. Rosa's son provides the household with monthly remittances of R400. In 1999 she started to claim from the state an old age pension of R520 a month. Nomusa dropped out of school at Grade 9 level because of illness. In 1997, she was diagnosed as suffering from Mseleni Joint Disease (MJD), which was described in Chapter 3. Since the beginning of 2000, Nomusa has been claiming a state sick pension of R520 for her crippling condition. In addition to these three sources of income, the household has access to two hectares of communal land for producing food for subsistence. Rosa has a small plot of land for vegetable production in the community garden. She emphasises that agricultural production is undertaken for household's own consumption. However, if there is excess perishable, she sells it to households in the community. The main field crops produced by the household are maize, beans, peanuts and pumpkins. The household produces cabbage, potatoes, spinach and tomatoes in the community garden. Rosa, her daughter-in-law and granddaughters are responsible for most of the agricultural activities. School children can only help during weekends and holidays. The shortage of labour is always a problem for Rosa's household. During peak periods of agricultural activities, such as planting, weeding and harvesting, the household often offers labour assistance to its extended family and neighbours. This offer is done to get a form of reciprocal help with agricultural activities called *ilima*. It is only in this manner that Rosa's household can use her land to its full potential. The household has no money to pay for labour. The household does not have adequate cash to access improved seeds and fertilisers. It does not receive extension services to improve agricultural production. Often the harvested food lasts for a maximum period of three months. Rosa expressed that her land does not produce good food because it is over utilised. There is not enough land to fallow. Traditionally, land is left uncultivated after being ploughed to gain fertility for future crops. Rosa's household is always facing food shortages and money to buy food is never enough.

In addition to agricultural activities, Rosa cuts grass and makes grass mats for sale on pension payment days. On average she earns R50 per month. Three of her

grandchildren sell sweets at school to generate some income. The household owns livestock, 15 cattle, six goats and 21 indigenous chickens. Livestock is only sold in cases of financial crises such as payment of school and medical fees. It is also slaughtered for family ceremonies and rituals.

The homestead has seven housing units of different sizes. The housing units are made up of stones and cement. Five of these units have corrugated iron roofing and two of them are thatched with grass. The homestead has one pit latrine for use by all household members. The household fetches water from a borehole but if its water is not available, its members fetch water from the river. They collect fuelwood from the forest. The household has limited physical household assets. It has a fridge, radio, television and old furniture. At the beginning of each year the household cannot afford to provide uniforms, school fees and to buy books for all school-going children. The head of the household makes most of the important decisions, such as how money should be allocated and distributed for household utilisation, when and what to plant. The household does not have sufficient money to satisfy household's basic needs of food, clothing, education and health. Rosa complains that she supports her grandchildren who were left behind by their married mothers. They are an extra burden to Rosa because their fathers do not pay for their maintenance.

The area's infrastructure is very poor. There are no roads, schools, clinic, shops, electricity and clean water supply is inadequate. The mobile clinic visits the area twice per year. The household relies on traditional healing methods of using indigenous plants. Rosa is responsible for gathering medicinal plants. Other women in the household gather wild fruit and vegetables for consumption. Medicinal plants that are often used by the household are: black stinkwood or *unukani* for headache and diarrhoea in children, African potato or *ilabatheka* for high blood pressure and Amaranthaceae or *unsukumbili* for fever and flu. Some wild fruit gathered for consumption are *umncaka*, *amaviyo*, *amahlala* and *amathunduluka*. Wild vegetables eaten by the household are black-jack or *uqadolo*, amaranthus species or *imbuya*, wild potatoes or *amatambane*.

Since Rosa's daughter is suffering from the crippling MJD, she cannot contribute her labour to the household. Rosa, her daughter-in-law and granddaughters are responsible for domestic tasks, such as cooking, fetching water and firewood, washing of clothes and dishes, ironing, cleaning and caring of children. Boys also help with fetching of water. They use a wheel burrow to carry containers of water whereas women carry them on their heads. Boys also milk cows and fence gardens and kraals.

This case study demonstrates the vulnerability of a woman-headed household at various stages of the head's life course. After her marriage Rosa became a *de facto* head of household while her husband was a migrant worker. She lived under close supervision of her mother-in-law who had authority over her although they did not eat together. Rosa's decision-making capabilities were limited, particularly regarding financial expenditure. Her mother-in-law had the authority to decide and control how her husband's remittances were to be utilised. Rosa had to ask for permission and to report all her movements to the mother-in-law. Thus Rosa was a disempowered head of household. For instance, she was not informed about how much money her husband received from his employers for sick pension. The household has never had enough food for subsistence and cash to buy food and other basic household items.

Rosa's household is highly susceptible to risks, shocks and stress. It is also prone to food insecurity and has limited assets to enhance livelihood security. Human capital is inadequate, considering the total household size, education of household head and members and their state of health. The household has 18 members and two of them claim a state pension. There are three adults who still go to school and not working to earn their living. Rosa's daughter-in-law receives monthly remittances that are shared with all members of the household. The household comprises too many dependants who rely on scarce resources. Rosa is illiterate and her household does not have an educated member who could earn a good income. As one of Rosa's daughters is crippled, the household is overburdened with a member who cannot contribute her labour to reproductive and productive activities. She is sickly and puts pressure on limited financial resources for health care. Should this household be confronted with a stressful situation or shock, it will not be able to cope. When asked what the most pressing problem is, Rosa says: "Hunger is the most pressing problem of our household. To improve our desperate situation the government should increase our pension payment". To illustrate the desperate situation of the household, Rosa emphasised that last year she failed to send some of her grandchildren to school because the household had no money to do so. The household cannot afford to have any financial savings. Sometimes livestock is sold to pay for school fees. However, if the local people have no money to buy, she sells it at a loss.

The physical capital is inadequate. The housing units do not provide sufficient accommodation for all household members. There is no piped water and when boreholes dry up, the household collects unclean water from the river. In an area where water-borne diseases are endemic, water fetched from the river makes the household susceptible to illnesses. Natural capital, such as land is already over-utilised and crop fields do not produce as much food as they used to. The household uses wild plants to cope with food insecurity and lack of health care in the area. This household also relies on social capital for agricultural labour in the form of a work party or *ilima*.

Case 4: De jure female-headed household, Ubombo

Lorna is 48 years old. She was born in Ndwedwe district near Durban. Lorna has never been to school. In 1969, Lorna married to Siphso at the age of 17. Siphso was a migrant labourer in Durban during that time. "We only got married in church. The customary marriage obligations were not completed. My husband did not finish making payments for the bridewealth or *ilobolo* to my family. For that reason I did not bring gifts or *umabo* to my in-laws. Therefore our marriage was incomplete", Lorna explains. After the marriage ceremony, Lorna moved to live with Siphso's family homestead in Ubombo district. The couple had two girls, now aged 29 and 31 years. They are both married and live in other areas away from Lorna's homestead. Lorna has been married twice. "The first marriage to Siphso failed because I was deserted by him", says Lorna. After her first marriage she lived with her parent-in-laws in Ubombo while Siphso continued to work and live in Durban. Siphso used to visit home four times a year. He sent remittances to his father who took his share and gave the balance of the money to his mother. "My mother-in-law would only inform me that my husband had sent money but would not tell me how much. She only accepted the amount of money given to her by my father-in-law." It was the

responsibility of Lorna's mother-in-law to decide how remittances were to be used to meet the demands of the household. Cash was mainly spent on buying food, paraffin, candles, clothing and for transport.

Lorna and her mother-in-law were not on good terms. She thinks that her first marriage was not successful because the customary marriage was never finalised. Her in-laws did not accept her fully as their daughter-in-law as some of the obligations were not fulfilled. Lorna says that there was always conflict between her and the mother-in-law. This conflict revolved around food allocation, division of agricultural activities and distribution of money from her husband. Whenever Lorna complained to her husband about the household problems, she was threatened with being sent back to her own family to learn to respect the in-laws. According to Lorna, a married woman is expected to be tolerant of all her experiences with the husband and his family. Some of the conflict situations were resolved in family meetings. "I was always blamed for most of the wrong doings. Nobody wanted to listen to my side of the story", Lorna explains.

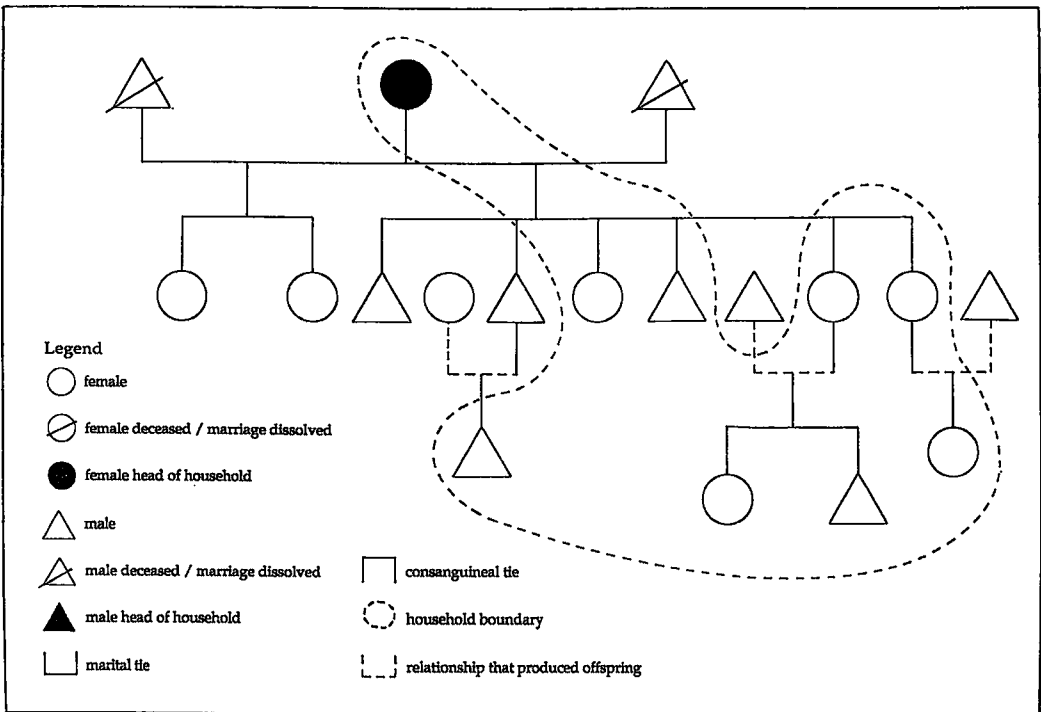


Figure 5.4 Genealogy of a *de jure* female-headed household, Ubombo

During the five years of Lorna's first marriage, her husband lived and worked in Durban about 350 kilometres from Ubombo. Her husband used to visit home for three week-ends per year and for three weeks when he was on annual leave. It was in 1976 that Lorna's husband stopped sending remittances to his parents. However, her mother-in-law suspected that Lorna received the money. He also stopped sending

letters. There was a lot of hardship and ill-feelings about the loss of money that had been received as remittances in the past. At the end of 1976, Lorna got information that her husband was no longer working in Durban. He had found a job in another province. "When life became too difficult, I did casual work in agriculture for my better-off neighbours to earn a small amount of money. After I had worked for enough money to pay for my public transport fare, I went back to my parents' homestead to inform them about my marital problems", Lorna explains. She stayed at her parents' homestead for three months. Thereafter her father and two uncles travelled to Ubombo to have a meeting with her in-laws to discuss the problem. Lorna's husband did not attend the meeting. His family did not have his contact details to let him know about the meeting. Both families agreed that Lorna's husband was in the wrong. Therefore Lorna was allowed by her in-laws to return to her homestead mainly because her husband had not fulfilled all the obligations of the customary marriage.

In 1977 Lorna left her two daughters at her parents' homestead to work in the commercial cotton fields in Ubombo. While employed as a labourer by a farmer, she met Zakhe and was married under customary rites in 1979. After her second marriage, Lorna stopped working and stayed at home to take care of their children. They had six children, three sons and three daughters. The eldest child is now 21 years old and the youngest is 11 years old. Lorna explains why she got married for the second time: "I have never been to school and I cannot get a good job to earn enough money to support myself and children. It is easy for a married woman to have land from our tribal authority to produce food than an unmarried one". Furthermore, Lorna does not regard the first marriage as a complete one because of unfulfilled obligations by her ex-husband. Her second husband was a farm truck driver who stayed on the farm compound. He visited home every fortnight to give Lorna money to buy food and household goods. "The money was not enough for my family needs. I worked the land to produce food. We also gathered wild vegetables from the veld."

In 1998 Lorna's husband became ill and was often absent from work. In July the same year, he lost his job because of illness and absenteeism. Lorna looked after her husband for eight months before he died in March 1999. "When my husband died, he did not leave any money for the household. He sold five cattle in order to pay for his medical and traditional treatment expenses", explains Lorna. The household had a hard time while her husband was ill and unemployed. Lorna could not go and get a casual job because of her responsibility for caring for her children and ill husband. She had to be at home all the time. Her children assisted her in the small garden but the maize crop field was left to fallow due to lack of time to co-ordinate and undertake agricultural activities. When asked what the cause of her husband's death was, Lorna replied that "his food was poisoned at the farm compound hence he died of food poisoning or *idliso*. This happened to him because other men envied him for his job as a truck driver." She stated that ever since her husband died, the household has encountered more financial problems than before he died. After Lorna's husband's death, his two brothers came along and removed the two remaining cattle from the kraal. They also took away the plough, which was an important means to earn a livelihood. The two brothers claimed that these items were taken to pay the money owed by the deceased. Lorna did not know about the money that her husband owed his brothers. "I cannot complain to the family about this matter because I am still mourning my husband's death. Once all his rituals have been performed, I shall be able to raise the matter with the family." Lorna explains.

Lorna's household comprises nine members. She has two sons, two daughters, two grandsons and two granddaughters. In addition to these children, Lorna has two sons working in the construction industry. At present they work and live in Mtubatuba. The household has five females and four males. Three and six members of this household are above and below the age of 15 years, respectively. Six of all the children in this household go to school. Two grandchildren are toddlers and they stay at home all the time. The household's source of income is the remittances from the two sons who work in the construction industry. The wages are not stable, they often depend on the type of work and its duration. Hence the remittances sent to their homestead are not reliable but on average both of them send a total amount of R150 per month. The household has access to two hectares of communal land to use for cultivating food crops. The land is used for producing maize, pumpkin, sweet potatoes and sometimes peanuts. The household owns two donkeys and thirteen indigenous chickens. The donkeys are used to plough fields for other households in the village. Thus they provide the household with a source of income. "Before the plough was taken away from us, I hired two men to plough fields for R100 per hectare. Now I cannot make use of donkeys without a plough", Lorna says. On average the household earns R600 from using donkeys for ploughing fields and for transportation of harvest, water containers and heavy loads. This is a service rendered in the village.

There are three housing units made of mud, wood and grass roofing in the homestead. Two units have only one room each and the third unit has three rooms. The household owns a portable radio, bicycle, four hand hoes and a hand plough that was taken away by Lorna's brothers-in-law. The household does not have adequate income to meet its basic needs of food, clothing, housing, education and health. The agricultural harvest of maize and pumpkin usually lasts for five months. Sometimes if there is excess produce of sweet potatoes, it is sold in the community in order to obtain cash income. Sweet potatoes cannot be kept for as long as they would become rotten. Lorna emphasises that food production activities do not give the household adequate produce for consumption and marketing. A number of problems contribute to this situation. Availability and access to water sources is a major problem thus crops can only be rainfed. If there is drought, more food shortages are experienced. Sometimes the household does not afford to have enough money to buy seeds and other inputs during the planting season. The household always has a shortage of labour because most of its members attend school. Paid labour is expensive for this household as a result some of the crop fields are left to fallow. This is done because of lack of resources of production. The household has no knowledge and access to extension services provided in the area. The community does not have a market where excess produce can readily be sold. The household does not have any knowledge on how to preserve food to last for as long as possible. Lorna can only access use of more communal land when her sons get married but not in her own right as a woman.

Lorna stresses that her household is suffering because she has additional illegitimate grandchildren who are not supported by their parents. In South Africa children who are below the age of seven without parental support can get a child support grant of R340 from the Department of Welfare. This household has not applied for child support because the children do not have birth certificates. The children were born at home with the help of traditional birth attendants. Thus their births have never been registered with the Department of Home Affairs. Lorna's own children do not have

birth certificates. They will apply for them when they reach the age of obtaining identity documents.

In this household, women and girls are responsible for all domestic activities. These include fetching water, fuel and gathering wild fruit and vegetables, cleaning, washing, ironing, cooking and child caring. They also work in the crop fields. Boys look after the goats and donkeys and also help with fetching water using a donkey wagon. Lorna does not have time to participate in community organisations because of her domestic and childcare responsibilities. The household often runs short of food and money to buy it. The household is also having problems with lack of community services, such as secondary schools, water supplies, telephones, roads and clinics. The mobile clinic only comes to the village fortnightly. As a result of this and lack of money the household relies on traditional healers in cases of illnesses. The household head is looking forward to getting a new husband to support her and children.

This case study indicates a series of events and circumstances that contribute to the household's vulnerability context. At different stages of her life course, the household head has the experience of being both a *de facto* and *de jure* female head of household. It also illustrates the powerlessness of women who are left in rural areas by their husbands in their parents' homesteads. The husband's parents take control of the wife's access to resources, such as land and remittances. In her first marriage, Lorna did not have the power to make important decisions regarding the allocation and utilisation of money sent by her husband. She got married for the second time in order to get support from a husband and to access land for food production.

The household has limited human capital. There are eight members who are economically dependent on the unemployed head of household. Adult members of this household are not educated and skilled enough to access well-paying jobs. Even the two migrants who send remittances to the household do not have good jobs to earn decent wages. This household does not have resources to invest in education and training of its members. Furthermore, the school-going members and toddlers do not provide needed labour towards food production activities. Thus the household has no single sustainable source of income. It relies on three sources, namely remittances, agricultural production if there is excess produce and use of donkeys for ploughing fields of the community.

This household does not have sufficient physical capital to facilitate livelihood generation. It has physical assets such as the housing units, portable radio, bicycle, household utensils and gardening implements. The portable radio and the bicycle belong to the migrant household members who live away from the area. Thus the female head of household does not have the power to sell these physical assets if there is a desperate situation for cash. Access to use household physical assets does not always mean that the head owns and has control over them.

This case household is endowed with social capital in the form of remittances claimed from migrants. The maternal and paternal families of the head of household are a resourceful social network. For example, when Lorna had marital problems, she informed both families and they held meetings to resolve the problem. Social networks from the paternal family exposed the female-head of household to exploitation without a husband to protect her. It was only after Lorna's husband's

death that his brothers approached her about a debt owed to them. For that reason, two cattle were easily claimed and taken away from this household. Another social claim that this household qualifies for is the Child Benefit paid by the State. However, the benefit is not accessible to the household because the head of household is ignorant of the significance of applying for legal documents for her children and grandchildren. Therefore lack of insight into proper institutional laws and procedures for accessing resources makes the household vulnerable to deprivation of assets.

The natural environment provides this household with water, forests for fuel and building materials, grass for roofing and land for food production and residence. The household collects wild plants for preparing their meals. Often they serve to supplement maize-meal dishes. The household depends on natural herbal remedies as there are no accessible primary health care services. The natural environment provides essential livelihood resources.

This household does not have any financial savings and access to credit in the form of loans because it cannot provide collateral for lending money. The household income is not adequate for members to live on hence there is no money that can be saved and no access to credit facilities. Livestock owned by the household is a resource that can be turned into cash in times of financial crisis. Such an undertaking has to be done in consultation with adult sons. This case is an example of a vulnerable household because it lacks assets that can help to offset the external threats to livelihood security. In a patrilineal system, gender is an important factor that contributes to limited access by women to education, training, employment and land.

Case 5: Male-headed household, Umthunzini

Sipho is 50 years old. He was born in Umthunzini and did not receive any formal education. At the age of 20, he went to work in the gold mines for four years in Johannesburg. He got married in 1975 to Nomusa and they had seven children. Two children died in infancy. After getting married, Sipho did not return to work in the mines because he feared mine accidents that he had survived and witnessed. He hoped, but was unable, to get a road construction job in Empangeni. For five years he tried to get a job without any luck. He says it has always been difficult for him to get a job because he has never been to school and has no skills required by prospective employers. While he was unemployed, he assisted his wife with land clearing before planting and chopping forest trees for fuelwood. Sipho also did casual work, such as fencing of crop fields, gardens and kraals for households that needed such services. "I did not make money from this work because people in this community do not have money. I took whatever was given to me, either cash or food", Sipho explains. He also had four cattle to take care of. His wife produced food and also made hand grass brooms for sale.

In 1980, his cousin who worked for a motor vehicle company found him a job as a labourer in Durban. He shared his cousin's accommodation in the men's hostels in one of the African townships. Sipho did not earn much money hence he visited his homestead only every two months. He did not send money home every month because it was not enough to satisfy his needs in Durban. In June 1986, his employer's company closed down as a result of economic sanctions and he lost his job. He stayed in Durban to seek a job but did not find one. At the end of 1986, Sipho

returned to his homestead in Umthunzini. Since then, he has been unemployed. As a result of unemployment, his children had to drop out of school because he could not afford to pay for school fees and uniforms. They helped their mother with agricultural activities, domestic work and taking care of livestock.

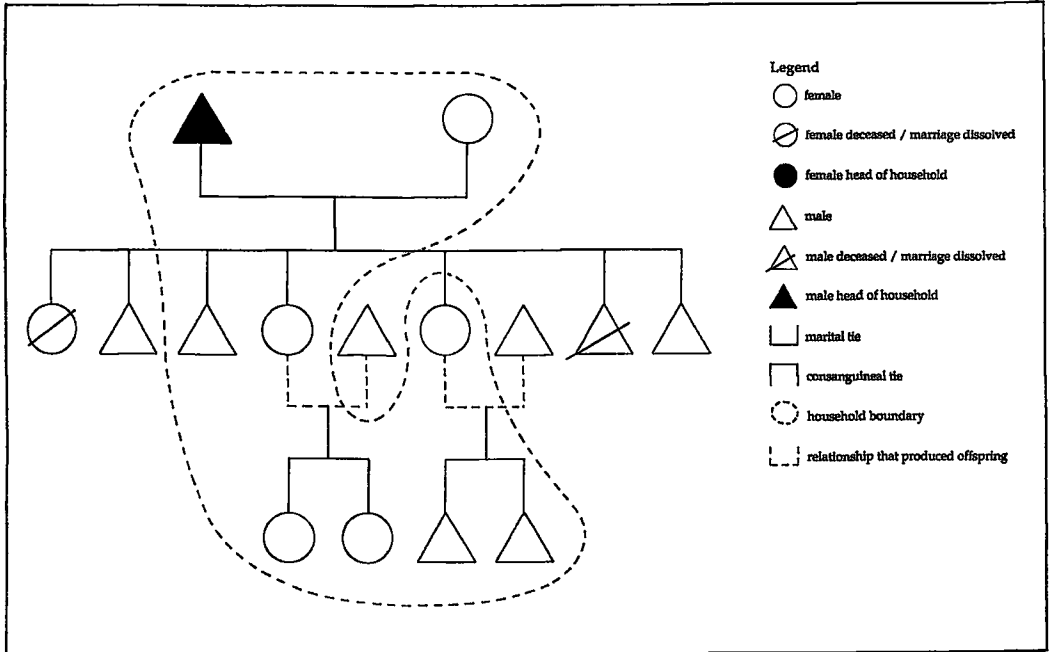


Figure 5.5 Genealogy of a male-headed household, Umthunzini

In 1987 there was an unusually high rainfall. The flood demolished the household's two mud houses. Consequently, Siphio and his family moved to live at his father's homestead in order to repair and rebuild their shelter. He sold two cows to get cash to buy wooden poles, grass for thatching and other building materials. It took nine months for Siphio and his family to rebuild their housing units and to return to their homestead. Siphio's elderly parents could help him because they were already getting their old age pension.

At present the household is composed of Siphio, his wife, two daughters, one son and four grandchildren. Each of his daughters has two children. Thus the household is composed of nine members. His other two sons do not live with the household. They live with their uncle in Mandeni because he promised to help them find jobs in one of the factories. "It is now more than a year since they left home to seek employment. They are still unemployed", Siphio explains. Siphio has been unemployed for more than 10 years. During this period of his unemployment, for four weeks he did casual road construction work of the Department of Public Works. Sometimes he does casual work of clearing land before planting for better off households and fencing of community gardens. He emphasises that he earns very little money from these

activities. Often all the money earned is spent on food. There is no other person who supports this household, financially.

The household has access to one hectare of land for crop production. Part of this land is used for vegetable production. The household produces maize, sugar beans, sweet potatoes and pumpkins in the crop field. Then spinach, cabbage, potatoes and tomatoes are produced in the vegetable garden. All the produce is for household consumption. The harvested food is never sufficient to last until the next season of harvesting. The household does not have enough money to buy seeds and enough water to irrigate the vegetable garden. As a result of financial limitations, the household has never had a surplus to sell. Siphio explains that the household "always experiences food and money shortages to pay for essential household goods and services, such as health and education." As far as Siphio is concerned, he has made several attempts to look for employment without any success. "Sometimes I leave my homestead for a period of three months to look for work in Durban, Stanger and Middelburg. I have not been successful and I do not have much hope for the future." Siphio complains that his unmarried daughters make earning a living by his household difficult because they have illegitimate children who are not maintained by their biological fathers. As the grandparent, Siphio would like to see his grandchildren obtaining good educations. However, he does not know how his wish will be fulfilled because his household has no income. Despite all the financial constraints the household experiences, Siphio feels that it is a blessing to have many children because they can help his wife with domestic chores, such as fetching water and fuelwood, cleaning, washing and cooking. Children are also helpful in performing food production activities.

Concerning access to assets and resources for food production, Siphio states that married men are allocated communal land by the tribal authority. Thus their wives can use this land to produce food. Unmarried women do not have direct access to land-use rights. They can get land through their eldest son, father or brother. Widows have access to their deceased husband's land. Siphio is satisfied with the land he has because he cannot manage more land than his one hectare. He explains that having more land would put pressure on him to buy more seeds and pay more for land preparation. When asked about availability of agricultural extension services, Siphio regards them as providing an essential service but they are not able to help their community due to lack of transport to reach members of the community.

As the head of the household, Siphio is responsible for almost all important decisions in the household, with the exception of food distribution which is a women's task. His wife is also responsible for taking care of children and gathering of wild food, such as *imbuya* (Amaranthus). Sometimes she goes out to cut grass for thatching houses. Then she ties the grass into bundles in preparation for selling them. Girls in the household assist Siphio's wife with most of her activities. Boys do some of the household chores but they are encouraged to perform duties of men by helping Siphio.

The infrastructure of the village is very poor. There is lack of clean water for consumption and water supplies for watering the vegetable garden. The household is dependent on rivers for their daily water requirements. The village has no electricity supply. The schools are too far away from many homesteads. The mobile clinic visits the village once a month. Siphio asserts that there are community development

projects in his village but his household members do not participate in them because the household cannot afford to pay a membership fee of R10.00 to join community development groups. He emphasises that participation in community projects takes a lot of the members' time, particularly women. It also costs money to buy required materials for activities. When we ask Siphso about his vision regarding his community and household, he thinks development projects will take a long time to reach their area because there is no joint community effort to bring about change under the leadership of the tribal authorities. He says he puts his trust in God regarding his household because earning a living gets tougher each day. Siphso is discouraged by his perpetual unemployment status and his failure to provide for his household as he would like to.

This case indicates a vulnerable male-headed household. This household is exposed to risks, shocks and stresses. This household has a high economic dependency ratio hence its potential to be at risk is high. It comprises nine members who are not employed. Low levels of education and training of the household adult members decrease available human capital. Thus they do not have a good chance of getting jobs because of their low levels of formal educational attainment and lack of skills. Eight members of the household are economically dependent on an unemployed male head who has no education. For this reason it is much more difficult for him to secure a good job. His children dropped out of school due to lack of money to pay for their education.

The household has little physical assets. The homestead has three small housing units made of mud, wood and grass. These housing units are built on communal land hence they are of little or no value. There is no furniture, such as beds, seats, cupboards and wardrobes. Household members sit and sleep on grass mats. Clothes are hung on nails pinned on the mud wall. The household uses an open fire for cooking and utensils and pots are kept on the floor. As a result of the poor infrastructure, the household collects unclean water from the river for consumption and gardening. The household is vulnerable to contracting water-borne diseases, such as cholera and typhoid.

This household is able to draw social claims on family network. Siphso's parents provided accommodation and support when his household experienced shock flowing devastating floods. His elderly parents were prepared to share their old age pension with their son's household. The kinship network is important for household survival, as demonstrated by Siphso's cousin when he helped him to find a job in Durban. In another instance, Siphso's cousins, provide them with accommodation while he helps them find work in Mandeni.

The natural environment provides wild food and medicines for the household. Shortages of food and poor harvests are supplemented with wild foods collected from uncultivated lands. If there are good rains, black jack and amaranthus are often abundant. Herbs for treating ailment of household members as the mobile clinic only visit the area once a month. The household also relies on traditional healers and midwives. This household has no financial capital. It has no regular income and savings. Access to loans is not possible because the household has no collateral. Two cows that were sold in times of need were used as a financial resource.

5.5 Discussion and conclusions

5.5.1 Discussion of cases

This chapter has examined four case studies of female-headed households and one case study of male-headed household. It explored the livelihood circumstances of these households and analysed how they cope in their chronic vulnerable context. Livelihood assets and resource are important aspects of generating livelihoods. These households undertake diverse activities and strategies to generate ways of survival and to improve the well-being of their members.

Livelihood assets and resources

As discussed, vulnerability is a situation where a household is exposed to risks, shocks, contingencies and stress and encounters difficulty in coping with them. It also explains the difficulty encountered in coping with them. Often the household's resources and assets are too limited to deal with the situation. The five households presented in the case studies seem to be undergoing chronic stress that impacts on their livelihood outcomes. All the cases are economically impoverished and they have limited means to cope with their situation. Furthermore, the important feature of livelihood security depends on the availability of assets and the capabilities of household to manage and utilise them. The discussion of all the five cases will be based on the types of assets that constitute livelihood building blocks. They are human capital, social capital, physical capital, financial capital and natural capital.

Human capital

Education, skills and health of the household members is an important human resource that contributes to livelihood outcomes. Therefore, the size and composition of the households in terms of sex and age, are critical to effectively contributing to household livelihood security. The heads of households for all cases are either illiterate or have a limited level of formal education. Thus they can never hope to earn a good income. Case 2, 3, 4 and 5 have a large proportion of dependent members, while the heads of these households do not have adequate assets and resources to support them. Case 1 comprises three household members but the head is elderly and cannot contribute her labour to household activities. In addition, she is suffering from chronic ailments, namely high blood pressure and diabetes mellitus. Her labour is not a resource to the household. A sickly person is a liability to the household because more financial assets are spent on treatment of illnesses. Case 2 illustrates how loss of household income adversely affects other household functions, such as provision of food and education. The primary impact of the husband's death in Case 2 is the loss of labour and an opportunity of earning an income for the household. The widow is now entrenched in a vicious cycle of poverty without means to escape it. Case 3's head of household is elderly and has a disabled daughter. These two members cannot contribute to productive and reproductive activities of the household. In case 5, the unemployed male-head has eight dependants. Sometimes he gets offers to do casual work for payment in cash or in kind. His children dropped out of primary school due to lack of financial resources. However, they lack skills to secure permanent off-farm employment.

Social capital

The members of the household can make claims by virtue of belonging to a social unit. Case 1 is entitled to claim pension from the State and remittances from a son who is a migrant. Even if he has not sent any remittances for the past two years, the household is still entitled to get them. The head of household understands from her personal experience why the remittances are not forthcoming. She emphasises that her husband too did not send them regularly. The neighbours are also a good source of social capital for Case 1. They were helpful to read and write letters for the illiterate head of household. Despite the significance of the family social network, the head of household in Case 2 was failed by her brother-in-law who took away the household's asset, the vehicle. This action deprived the household of a potential resource. It could be used to generate income and it could be sold for cash. From this case it is clear that the family social system allows exploitation of women without husbands. This woman is powerless to solve the problem on her own. The extended family and the tribal authorities provide support for conflict management and resolution but they are often not sensitive to women's problems. Case 3 claims remittances from a migrant family member, old age and sick pension from the state. The extended family and neighbours provides reciprocal assistance with agricultural activities. In Case 4 the head of household shared her husband's remittances with his family, but decision-making and allocation of essential household resources was the responsibility of the parents-in-law. Both the wife's and husband's families provided guidance and support in cases of conflict management. However they could not morally or legally force the migrant husband to send money home and to visit the homestead regularly. The process of conflict and resolution is well illustrated in this case and the powerlessness of the families to solve the core of the problem. Case 5 illustrates the importance of the social support that an extended family provides when a household faces shock, floods in this case. The household moved to the head's parents' homestead for an emergency shelter and support. Both parents were pensioners but they shared their money with their son's household. Thus kinship network can be an important source of social capital for the household.

Physical capital

Physical capital comprises valuable durable items that a household owns. Infrastructural assets, such as roads, power lines and water supply are essential in this category. According to Ellis (2000) these assets are important for facilitating livelihood diversification. All cases do not have valuable housing units that can be sold to obtain cash if the household is faced with shock. Some households do have limited durable consumable goods of value. However, the female-heads of households do not have the power to sell or exchange them for cash. Women stated that sometimes certain unemployed members of their households brought to the homestead some of the items that they acquire through illegitimate activities, such as petty crime and stealing.

In both Ubombo and Umthunzini districts, roads in rural areas are bad and sometimes not accessible. The situation of roads in Ubombo is noticeably worse than Umthunzini. Access to clean water supplies is a problem in both areas. In Ubombo, households fetch water from rivers and boreholes only if there it is available. Use of communal taps is accessible to a few households in Umthunzini. The implication of

the problem of accessing water is that a lot of time and energy is spent on walking to and from water sources. There are also health implications if the water supply is not clean. Only one household has access to electricity. Other households rely on firewood for energy. Other institutional resources that are not easily accessible to households are schools and health services. This lack of community resources and physical assets has a negative effect on household livelihood strategies. Households cannot reach markets to sell their produce. The potential of household to produce more food is reduced because there is no water supply or irrigation of the field and vegetable gardens.

Financial capital

Financial capital refers to stock of money and value (assets) to which the household has access. The five cases do not have savings and because they cannot make ends meet with the income they earn. They do not have access to loans because they have no sufficient collateral. Case 1 has a funeral cover insurance and no investment. This insurance policy will only make a payment to cover funeral costs, should a member of this household dies. Death, rituals and funeral ceremonies involve a lot of cost to the bereaved household. Often the bereaved family must feed a large numbers of mourners and almost all the insurance payment is used and finished within a week of the death of a household member. The negative economic impact of death upon a household is always extensive. It is interesting to note that this household is not prepared to deal with any other type of shock except death. Case 3 has 15 cattle and 21 indigenous chickens that can be used as a resource in case of severe financial crisis. The head of the household emphasises that livestock is mainly kept for ceremonies and rituals. Case 4 owns two donkeys that are used as a resource to generate income for the household. In Case 5, two cows provided a financial resource when they were sold to buy the building materials needed to replace the flooded housing units.

Natural capital

Rural men and women have indigenous knowledge about the natural environment. However, women interact with their environment more than men. They often spend their daily lives collecting fuelwood from forests and drinking water from rivers and streams. They are also responsible for raising plants and animals for their households' daily food. Thus in their daily contact with plants, animals, land and water, women are knowledgeable about local species and environment (Sachs, 1996). Natural capital comprises the land, water and biological resources that are utilised by people to generate means of survival (Ellis, 2000).

Land in the study area is communally-owned. The tribal authorities are responsible for allocating land to men who are entitled to use it. They are married men and their wives can access land through them. According to FGDs participants, an unmarried woman can access land through their fathers, brothers or male relatives. It is critical for women to have access to land because they are responsible for food production. All women heads of households in the case studies have access to land through marriage. Case 4's head of household had to get married for the second time so that she could access land. All cases use land for food production. Land is also important for animal grazing. Trees are important as a source of fuel wood but Case 1 also

depends on indigenous trees for materials for carving artefacts for sale. People also gather wild plants for food and medical care. Case 2 collects fibrous leaves and grass to make mats for marketing. Case 3 collects wild fruit and vegetables for food and medicinal plants for health care. Case 4 gathers wild plants for food and uses the services of the traditional birth attendants (TBAs) for maternal and childcare. TBAs use wild plants for medication and are very knowledgeable about these. Case 5 gathers wild plants to supplement the household's diet. The household also benefits by cutting and selling grass for thatching houses. Rivers provide water supply for household consumption and gardening. Forests are a good source of fuelwood. Key informants stated that hunting of wild animals is under strict control of nature conservation authorities. Therefore catching and slaughtering of wild animals for food has become severely restricted. Hunting is discouraged and both districts have game parks for wildlife preservation. Participants in FGDs reported that hunting for subsistence has been turned into a crime by authorities who use antipoaching laws to deprive rural people access to an important source of food for households. It is evident from the FGDs and case studies that women depend a lot on the natural capital.

5.5.2 Indicators of vulnerability

Rural household livelihood is dependent on five types of capital assets which people can draw upon, namely human, social, physical, financial and natural. Generally, low asset status in rural households is a good indicator of vulnerability. Therefore it is important to identify indicators that provide information on the capacity of household to withstand contingencies and stress. Selected indicators that contribute to low or high levels of vulnerability were identified in the five case studies as outlined in Table 5.6. Positive and negative symbols are used to illustrate vulnerability. A plus (+) means positive, a minus (-) indicates negative, whereas plus or minus (+/-) means that an indicator could go either way. In her study, du Preez (2000) followed a similar procedure.

Table 5.6 illustrates how vulnerable the five households are. They all scored a negative (-) on most indicators of vulnerability. In all five cases, human capital is inadequate due to lack of a satisfactory level of formal education and workplace skills of household members. Inability to access job opportunities decreases prospects for improved livelihood. Social capital has more positive (+) attributes than other types of assets. Claims on family, relatives and community for labour and other resources provide intangible stores of value, because of the access to assistance they represents, as shown in case 5. In addition, households that qualify for government pension and disability grants benefit from such claims. The poor level of infrastructure and service provision exacerbates vulnerability of rural households. If the community-held assets were good, households would have a better chance of withstanding shocks and contingencies.

The financial category includes reliable sources of income, savings and monetary assets that potentially through sale or exchange, provide an entitlement to resources, such as livestock and post-harvest stocks of food. All cases show a negative financial capital. Natural capital encompasses essential resources, such as land, trees, wild plants for food, medication and income generation. These are important for improved livelihood. All cases rely on wild plants for supplementing food shortages. This increased dependence on wild food for subsistence is an indicator of food stress. Most

of the households fail to produce enough food to last until the next harvest because they lack adequate resources of production.

Table 5.6 Selected indicators of vulnerability of households

Indicators of vulnerability	Case 1	Case 2	Case 3	Case 4	Case 5
<i>1. Human capital</i>					
Education	-	-	-	-	-
Skills level	+/-	-	-	-	-
Health	-	-	+/-	-	+
Job opportunities	-	-	-	-	-
Dependency ratio	-	-	-	-	-
<i>2. Social capital</i>					
Family and kin support	-	-	+/-	+/-	+
Inter-household network	+	+	+	+	+
Membership of social groups	-	-	+	-	-
Claims from the state	+	-	+	-	-
<i>3. Physical capital</i>					
Clean water supplies	-	+	-	-	-
Sanitation	-	+/-	-	-	-
Roads	-	+	-	-	-
Electricity	-	+	-	-	-
Schools	-	+	-	-	-
Health care services	-	+/-	-	-	-
<i>4. Financial capital</i>					
Reliable source of income	+/-	-	-	-	-
Savings	-	-	-	-	-
Housing	-	-	-	-	-
Household equipment	-	+/-	-	+	-
Livestock	-	-	+/-	+	-
Productive equipment	-	+/-	-	+	+/-
Post-harvest stocks	-	-	-	-	-
<i>5. Natural capital</i>					
Access to land	+	-	-	-	+
Size of land	+/-	-	-	-	-
Dependence on wild food	+/-	-	-	-	-
Dependence on trees for fuel	-	+	-	-	-
River as water source	-	+	-	-	-
Use of medicinal plants	-	+	-	-	-
Total	-	-	-	-	-

5.5.3 Conclusions on vulnerability

In the four of the cases presented, women became heads of households as a result of migration, male desertion and widowhood. Grandmother-headed households are common in the area of study. They usually comprise a grandmother, some of her children and grandchildren whose parents live in the homestead or away from it. Often daughters leave their children with their mothers when they need to migrate for

employment in urban areas. As a result of the HIV/AIDS epidemic in KZN, the number of female- and child-headed households is on the increase. Therefore vulnerability to livelihood insecurity is a reality for these households.

Female-headed households are more vulnerable to livelihood insecurity because of their limited access to assets and resources, particularly land. Their low educational status and reproductive roles make it difficult for them to look for employment outside the home. Ill-health of the head of household makes it more vulnerable to shocks and risks. These households lack financial and physical assets and resources to cope adequately with risks, stresses and shocks they are subjected to. Productive land and natural resources are essential for rural household livelihood security. They both enhance household food security. None of the cases benefit from the extension services as they are not reached. However, women know that they can benefit from agricultural extension services. One woman complained that fertility of the soil was declining as indicated by reduction of crop produce. The key informant pointed out that there were environmental problems in the area including soil erosion, soil fertility decline as a result of overuse and poor agricultural practices. Another problem was the destruction of forests by women who collect firewood. Women walk long distances to obtain water and firewood but they are not aware that they are destroying the environment. The male head of household in Case 5 lives in a vulnerable situation because of the implications of his household's human capital. He has no education and skills training to secure a good job and income. The high dependency rate put pressure on intra-household distribution of limited resources, particularly food. Unlike women, male heads of household have direct access to land-use right of communal land in KwaZulu-Natal. Thus the male head in Case 5 can acquire more land for food production. However, he stated that he would not attempt to get more land because his household could not afford the high cost of resources of production, such as improved seeds and fertiliser that would likely have increased yields.

In their study on the impact of macroeconomic shocks on vulnerable groups in Peru, Glewwe and Hall (1998) conclude that female-headed households are less vulnerable than male-headed households. However, in the rural Southern African context, female-headed households are more vulnerable than male-headed households for two reasons. First, rural women do not have equal access to essential resources of production, such as communal land-use rights. Women can access land through marriage to men who have access to it or their male relatives. Therefore, women are disadvantaged by the tribal land allocation system. Second, in the area of study, women are socialised to integrate their productive and reproductive work. They commonly integrate domestic work, childcare, agricultural work and income generating activities. Rural women are also responsible for community work that is linked to their reproductive role. As a result of women's socialisation, they feel more responsible than men for their reproductive work. Hence, they find themselves stuck in a vulnerable situation. In rural KZN, women who leave their children behind as a coping strategy are seriously stigmatised by their families and communities. They may be regarded as women of bad character and may even be ostracised by the whole community. Unlike women, men are not held responsible for reproductive work. Often men leave the vulnerable household to live elsewhere with relatives or women friends as a coping strategy. Sometimes they return to their households as occasional visitors and do not actively participate in working out daily livelihood strategies. It is the women who shift between different types of work to make ends meet.

Pensioners are vulnerable to exploitation of their pension by their offspring and grandchildren. The amount to support one person becomes spread too, thinly thus increasing vulnerability of the household to food shortages, starvation, under-nutrition and ill-health. Each of the five cases adopts a combination of household livelihood strategies, such as migration, food production, making handicrafts for marketing, hawking, casual employment and claiming of old age and disability pension from the state. This tendency of rural households to engage in multiple activities is identified by Ellis (1999) as rural livelihood diversity, which is an important feature of rural survival. He asserts that diverse livelihood systems are less vulnerable than undiversified ones.

The four case studies illustrate the vulnerability of female-headed households as reflected by negative livelihood outcomes. Furthermore, the fifth case study provides a evidence of a vulnerable male-headed household. These are food and nutrition insecurity, reduced income, decreased well being and unsustainable use of natural resources. Food insecurity is worsened by inadequate or lack of potable water, sanitation, personal hygiene and general medical care. As stated in Chapter 4 water-borne and water-based diseases, such as cholera and typhoid affect the health and nutritional status negatively. Women-headed households lack the means to cope with their vulnerability without becoming economically impoverished and socially dependent. However, vulnerable households with male-heads are more advantaged than women heads because it is easier for them to access land as an essential resource to livelihood security in rural KwaZulu-Natal.

After examining vulnerability in the study area, it was found that it has many social, economic, cultural and political dimensions. Some of the essential causes of vulnerability are lack of or inadequate assets and resource base, such as agricultural land and water. Furthermore, lack of employment opportunities and ill health of wage earners in the household perpetuated vulnerability. The high level of illiteracy and lack of education resulted in poor human capital of the household. Lack of adequate rural infrastructure to support livelihood strategies of households is another constraint that contributes to vulnerability.

The general assumption that female-headed households are more vulnerable than male-headed seems to have no firm foundation where the socio-economic status of both types of households is below the minimum household standard of living. Households with several income sources, such as female-headed ones are able to reduce their vulnerability to income shocks. Therefore there is not much vulnerability difference between male and female-headed households in a situation of shared poverty.

CHAPTER 6 INDIGENOUS KNOWLEDGE AS CONTRIBUTING TO LIVELIHOOD SECURITY

This chapter examines the utilisation of indigenous knowledge (IK) as an asset owned, accessed, claimed and controlled by the rural household in the study area. Both men and women often possess IK in rural areas of KwaZulu-Natal (KZN). IK provides livelihood strategies for indigenous communities. However, indigenous knowledge systems (IKS) are at risk of becoming extinct because for many centuries they have been an under-utilised resource and not recognised as important for livelihood security. Since the early days of colonialisation and introduction of Christianity, everything that was associated with traditional culture was undermined. The converted indigenous people were socialised to look down upon their cultural knowledge hence traditional knowledge gradually started to fade away, leaving the contemporary generation with less IK. The establishment of the democratic government in 1994 has resulted in recognition of the IKS through proposed legislation to protect them. This study aimed to increase awareness of the importance of IK and to improve the available information on IK in order to enhance livelihood security. As an asset, IK comprises five types of capital, namely human, natural, social, financial and physical. It is embedded in community practices, institutions, relationships and rituals.

Therefore, the point of departure of this chapter is that IK is an important asset in constructing livelihood security in rural areas of KZN. The data in this chapter are based on qualitative methods of data collection. They were collected from key informants who were identified through a snowballing method, focus group discussions (FGDs), home visits for observation, transect walks in the area and case studies. The role of IK in constructing and safeguarding livelihood security will be made visible in the case studies presented in this chapter. The introduction briefly discusses the relationship of IK to different aspects of livelihood.

6.1 Introduction

Indigenous knowledge (IK) and its usefulness was acknowledged by anthropologists and development workers in the 1980's and got recognition in the 1990's, especially since the Rio conference held in 1992 (Brookfield, 1996). IK is often passed informally by word of mouth from one generation to another and is unique to each cultural group. The knowledge of the indigenous people is practically invisible in the official history of South Africa. As it has been the case in many other countries that had been colonised, indigenous people were perceived as backward, uncivilised and unknowledgeable. Eurocentric practices, realities and criteria of living were adopted from Western countries without any attempt to connect or adapt to local practices. Instead, they were passed on as they were to the indigenous people (Matose and Makamuri, 1994).

Although anthropologists have been studying IKS for many years, it is only in the last forty years that several development organisations have started to question the value and appropriateness of the approaches of the dominant science systems (Appleton *et al.*, 1995). Such questions were asked because Western modern knowledge has its own epistemological limitations and biases. The IKS have been viewed as a hindrance to modernisation and development, and as such they have been under-perceived and

misunderstood. But indigenous people consider their knowledge as part of their overall culture and vital to their survival as people. IKS is a relatively new concept in South Africa because of her isolation from the international development processes prior to the end of apartheid regime in 1994. Since the establishment of the democratic government in 1994, IK has been made visible in South Africa along with socio-economic, cultural and political conditions of contemporary knowledge systems and the vision of the African Renaissance which is rooted in the potential of African peoples (Mbeki, 1998). The African Renaissance concept intends to encourage African unity for mutual advantage by analysing both material and spiritual resources for advancement. Furthermore, the concept aims to conscientise Africans to be proud of their culture and to derive inspiration from it for socio-economic development (Deliwe, 1998). The South African government acknowledges that IKS have the potential to form the basis of the nation's rebirth by introducing legislation aimed at protecting and promoting IK within the context of the African Renaissance concept (Serote, 1998). However, the intended outcome of the legislation is to transform IK into enterprises that will be of direct economic advantage for individuals and communities possessing the traditional knowledge.

The South African government has taken an initiative to promote IKS and to integrate indigenous technologies in the economy. These technologies would be used as an instrument for local development, particularly in rural areas. Realising that IKS in South Africa existed as an undercurrent without legal protection, the present government intends to promote and protect them in an equitable and sustainable way in order to develop the communities that possess this type of knowledge. Consequently, the government will announce an Act or a series of related Acts to promote and protect IKS and to safeguard the interests of indigenous communities. During the past two years, some of the South African universities in collaboration with research councils and the business sector have undertaken an audit of IKS in South Africa. This audit resulted in the establishment of the three structures of the IKS Programme of the Portfolio Committee on Arts, Culture, Science and Technology. It is therefore clear that the government has taken steps to provide an enabling policy and legislative framework with full participation of indigenous communities (Policy Discussion Document for Indigenous Knowledge in South Africa: Draft, 1998).

Household food security policy development process is also one of the important challenges and concerns of the South African government. Utilisation of available and accessible food by individuals is very important at household level. This includes all household food practices and activities, such as gathering, producing, storing, processing, preserving, cooking, purchasing and waste managing. Nutrition information and meeting needs of household members at different stages in the life cycle is important in meeting health requirements (Badir, 1996). In remote rural areas of KZN, wild food from plants and animals make an important contribution to household food and nutrition security. This research project considers IK as part of the rural indigenous people's overall culture and vital to their survival and well-being. IK is important in food security, nutrition, health and livelihood generation.

Despite limited documentation, people in rural areas of KZN have managed to transmit knowledge efficiently by word of mouth from one generation to another, conserving wisdom for centuries. There is no formal way of conserving indigenous

knowledge (IK) among rural people who are mostly illiterate. They often share social and technical skills in families, households and communities, and in that process IK is passed on to their children. Women and men often possess very different skills and different knowledge of local conditions and everyday life. This knowledge is based on people's experiences and those of their ancestors. As a result of the country's historical development, IK and lifestyles were suppressed in favour of modern western ways of life. This led to devaluation and lack of recognition of IK. Thus it is common to find that IK is neglected by researchers and not documented. As there is now a growing recognition of the value of IK to livelihood security, one of the objectives of this study, was to describe the indigenous knowledge systems (IKS) relevant to livelihood generation and food security in a rural setting. Therefore the next sections will examine IK as a valuable asset for livelihood generation, the significance of IK in household food security, traditional health care and income generation for the well-being of the household.

6.2 Indigenous knowledge as a valuable resource

What is IK?

Indigenous knowledge is the systematic body of knowledge acquired by local people through the accumulation of experiences and understanding of the environment in a given culture (Warren and Rajasekaran, 1993). It comprises ideas, experiences, practices and information that have been generated locally or produced elsewhere, but has been transformed by local people and incorporated into the local way of life. This knowledge is based on socio-economic and cultural aspects. It contains more information on local diversity and complexity than scientifically derived knowledge (Van den Ban and Hawkins, 1996). IK is not confined to rural people or tribal groups. Any community possesses IK, whether rural or urban, settled or nomadic, original inhabitants or migrants. Thus other names for IK are 'local knowledge', 'indigenous technical knowledge' and 'traditional knowledge'.

As IK changes over time, it is sometimes difficult to tell whether a practice is indigenous or adopted from outside, or a blend of local and introduced components. For example, maize is a staple food among the African people of KZN. Thus it is considered an indigenous plant. However, the maize plant originated in Central America. It was introduced to Africa by early explorers and traders. The maize plant has been cultivated in Southern Africa since 1500 AD (Van Wyk and Gericke, 2000). IK that is sometimes referred to as local, traditional or rural can be considered as science because it is generated and transformed through a systematic process of observation, experimentation and adoption. Hence IK is a part of socially constructed knowledge (Appleton *et al.*, 1995).

This study identified the influence of gender on IK, types of indigenous food crops grown and edible and medicinal wild plants gathered in the area, methods of food transportation, storage, processing and cooking. Wild animals eaten in the area and the materials used to make handicrafts were also identified. Certain indigenous foods and production systems have been found to contribute significantly to household food and nutritional security (Rajasekaran, n.d.). Ubombo households appeared to possess a more in-depth knowledge of traditional plants and wild animals that contribute to their household food security efforts than Umthunzini ones. The main reason for the

in-depth IK of Ubombo people is the remoteness of their district that is not highly influenced by industrialisation and education. For historical reasons, the transition from traditional indigenous lifestyles to western ways of living is slower in remote rural areas, such as Ubombo. However, women are considered to be more knowledgeable on and directly involved with matters of food production, storage, processing, preservation and preparation. Women also take charge of maternal, child care and handicraft making for marketing. Men tend to have in-depth knowledge pertaining to the use of plants and animal for preparing remedies for different illnesses. They also use trees to carve articles for household use and for sale.

Gender and indigenous knowledge

In the literature it is acknowledged that women and men often possess very different skills and different knowledge of local conditions and everyday life. The roles and tasks of men and women in society differ thus the knowledge they possess differs too. Women are acknowledged as users and processors of natural resources for human subsistence. In many societies women have the responsibility for growing and collecting food, fetching water, fuel, medicinal plants and providing cash income for food, education, health care and other household needs (Velasco, 2000). Gender relations between men and women are essential in influencing the access and utilisation of indigenous knowledge as a resource. In many rural societies, men still possess the socially accepted control over resources and a lot of decision-making powers. Gender differentiated indigenous knowledge systems play a major role in household food security. Thus gender biases pertaining to women's constraints when it comes to control over access to ownership and distribution of resources are critical in addressing household food security issues (Brown, *et al.*, 1995). Gender differentiated IK plays a major role in different types of stocks of capital and household food security.

Human capital

This study regards the indigenous knowledge that rural people pass from one generation to the other as human capital that contributes to livelihood generation. Using IK is one of the livelihood strategies conditioned by the vulnerability of the context in which rural people live. Gender is important pertaining to the type of knowledge women and men possess and of what necessity it is. Women in the area of study are knowledgeable about food sources and maternal and child care. Local people use forests, uncultivated land to gather materials to meet household requirements in terms of food, fuelwood, shelter, income, medicinal remedies. The knowledge of identifying the correct items is crucial to livelihood generation. Availability of food contributes to good nutrition and health. Good health is crucial to working potential and the ability of people to perform essential tasks. Men still remain more knowledgeable about hunting activities that provide a critical source of protein to the household. The value of human capital will be demonstrated by data analysis of a FGD with seven traditional birth attendants in Umthunzini and a case study of a traditional birth attendant (TBA) in Ubombo. The knowledge and skills of the TBA in an area where health service is poor, is the only accessible and readily available needed resource for pregnant women.

Indigenous or traditional maternal health care reflects the inherited values of the local women. TBAs are women who possess the skills of providing antenatal care and baby

delivery. They also have the knowledge of how to take care of the baby. Generally, the majority of TBAs are women. However, in some cultures male herbalists provide antenatal care. They also treat complications of pregnancy and delivery. TBAs are often older women in the community who acquired their skills from their family. They acquire their skills from their older kin members by doing. When the older TBA becomes weak and unable to do the work, a younger member of the family who has been assisting her takes over the role. TBAs are highly respected by their own community. They are trusted to do the work satisfactorily because women and their families know them. Their knowledge of the cultural beliefs and expectations of how birth has to be prepared and performed, is critical in their service provision. TBAs also know the local medicines and rituals that are used before, during and after delivery. They also give advice on the treatment of women's and children's diseases. They also inform women about methods of contraception and of promoting fertility. The payment for traditional maternal health care services depends on the kin relationship of the TBA to the mother. Sometimes the women's financial situation is poor to be able to contribute the amount they wish to give for services rendered by TBAs. In general payment is in kind rather than in cash (Lefeber-Mans, 1994 and Lefeber and Voorhoeve, 1998).

According to the participants of the FGD, TBA's have been in existence from time immemorial. Four of the seven FGD participants did not have any formal education whereas three of them had educational levels of two to three years. All of them had not undergone any training but they acquired birth attendance skills through helping other TBAs in their work. The participants were all experienced in their service. They have been practising for more than 20 years. The TBAs consider themselves as rendering an important service in an area where health services and the communication infrastructure are inadequate. The skills of TBAs include antenatal care, assistance during delivery, and advice on post-delivery care of the mother and baby.

From as early as three months of pregnancy, women consult TBAs for guidance on the type of treatment they should take to avoid illness and delivery complications. The TBAs give pregnant women herbal medicines prepared from different types of wild plants. These traditional herbal preparations are generally referred to as *izihlambezo* (plant mixtures given to pregnant women). Some examples of plants that are used to make these plant mixtures are blue lily (*Agapanthus africanus*), orange lily (*Clivia miniata*), baboon's ear (*Eriospermum abyssinicum*), *ugodide* (*Jatropha zeyheri*). According to van Wyk and Gericke (2000), some of *izihlambezo* (plant mixtures) generally include wild plants with oxytocic action. In the last trimester of pregnancy, low doses of these preparations are used to tone and strengthen the uterine muscle in preparation for an uneventful delivery. The participants stress that antenatal care is important for pregnant women to avoid abnormalities of the foetus and "to keep the uterus clean all the time". The TBAs know the type of plants that should be used in preparation of *izihlambezo* (plant mixtures). The most used ingredient in preparation of *izihlambezo* is the blue lily (*ubani*). It grows on the river banks or in water-logged areas. Its stalk and leaves are used. Roots are also used to prepare another type of *isihlambezo* that is recommended for pregnant women to take during the last month of their pregnancy. Two spoons of this preparation is taken twice daily. This preparation is known to ensure a healthy baby and successful expulsion of the placenta during delivery. The orange lily or *umayime* is usually used in cases of complications during

delivery. A preparation is made from the leaves, stem and roots of *umayime*. The participants emphasise that the preparation made of orange lily is helpful to initiate labour and to change the position of the baby to the correct direction. All participants state that if labour is prolonged, a pregnant woman is given a drop of mercury (*isigidi*) to facilitate the process. They believe that the mercury facilitates uterine contractions.

A TBA prepares the room in which the baby is to be delivered. Often she gets assistance from another TBA or a trainee. However, if no help is available she does all the work herself. She ensures that the floor is prepared by smearing it with cow dung or it is scrubbed with water. The floor is protected with grassmats and a clean sheet of cloth covers them. The TBAs claim they advise the woman in labour to either deliver the baby while kneeling down or lying on her back. These two positions are considered most suitable by the TBAs. Once the baby is delivered, it is held with its nose over steam. The steam stimulates the baby to cry. After birth the placenta is buried in a pit which is dug in the house or outside in the homestead. Before the pit is filled up with soil, ash is added into it to prevent a foul smell.

After delivery of the baby the mother is cleaned and allowed to sleep and rest. The baby is cleaned and smeared with *ibomvu*, a red powder preparation ointment made from the bark of the common onionwood. The baby is left naked but warm until the umbilical cord falls off. The mother is encouraged to express and throw away colostrum and start to feed the baby. The TBA advises the mother to eat good food. The participants also mentioned that they advise pregnant women with strict taboos. Pregnant women are not allowed to drink traditional beer. They should not eat when there is lightning because the baby will be struck by lightning and die in the womb. The pregnant woman is not allowed to peep through the doorway and move back because it is believed that there would be problems during delivery. The head of the baby might show and move back again. A pregnant woman is not supposed to be in conflict with the mother-in-law that would cause difficulties during delivery.

Women are advised to abstain from sexual intercourse for six to twelve months after delivery. This practice is encouraged in order to promote proper spacing of siblings. TBAs encourage pregnant women to attend ante-natal clinics in order that the health and the position of the baby may be checked. Some of the health professionals do not support TBAs practices, as these are considered as unhygienic and septic. The TBAs are convinced that they are resourceful in an area where money to pay for medical service is limited. In addition, very few people have access to telephones, and availability of public transport in the area is a problem. All TBAs do not receive cash remuneration from the women they help but they are paid in kind in various ways. Whatever, the family is able to give a TBA as a reward depends on its socio-economic status. Some families give them chickens, food from their fields, goats, and other household items, such as sleeping grassmats and claypots.

6.3 Case studies

Case 6: A traditional birth attendant, Ubombo

Sana was born at the end of the First World War during the influenza epidemic in South Africa. She is now 82 years old. Sana is the head of her household comprising one of her daughters, Maria, three grand-daughters one grandson, three great

granddaughters, two grandnephews. In 1935 she was married to Joseph who worked as a labourer in Johannesburg. Sana was the second of the four wives of Joseph. She had two daughters and two sons. Three of her children are married and live elsewhere. Sana's husband died in a bus accident more than thirty years ago.

Sana is well-known in her community as a midwife or *umbelethisi*. At the age of about 25 years, she learnt the skills of helping pregnant women through assisting her mother-in-law who was a TBA in her village. During that time there were no health services except the two hospitals that are more than 80 kilometres from Sana's village. Sana's father-in-law was a herbalist or *inyanga*. A herbalist is a person who has a good knowledge of many natural substances, such as trees and plants that have a remedial effect. Some of Sana's father-in-law knowledge of medicinal plants was passed to her through her mother-in-law with whom she worked closely on maternal and child health care. In turn, Sana has transmitted her knowledge and skills to her daughter, Maria who is also a TBA.

Women start to consult Sana when they are three or four months pregnant. She gives them *izihlambezo*. She also advises them on what they are not supposed to do or eat during pregnancy. Sana stresses that it is important for women to take herbal medicines or infusions in order to facilitate easy and successful delivery of the baby. Herbal medicines or *imithi* are prepared from roots, leaves or bark of local trees and wild plants. The isiZulu word *umuthi* has a triple meaning. It can mean tree, bark or medicine. Sana clarifies that herbal medicines prepared for pregnant women are called *isihlambezo* or *inembe* or *inongwana*. Sana gathers ingredients for *izihlambezo* from forests and river banks. These are the blue lily (*ubani*), wild grape, (*isinwazi*), *Callilepis laureola* (*impila*), *Jatropha zeyheri* (*ugodide*), African wormwood or *Artemisia afra* (*umhlonyane*) and river pumpkin or *Gunnera perpensa* (*ugobo*). *Izihlambezo* are prepared from one or a combination of these plants. She emphasises that *izihlambezo* should be taken throughout pregnancy "to ensure that childbirth takes place without problems.

Sana sells 750 millilitre and 1 litre bottles of *isihlambezo* for R5 and R6, respectively. She also sells wild plants for preparing *izihlambezo* to other TBAs who live in other parts of the districts and towns. Sometimes Sana gives *izihlambezo* on credit to women who do not have cash and they pay when they get money. She stresses that it is essential for women to take her medication throughout the pregnancy period. She says it is not necessary for pregnant women to attend the ante-natal clinic if they are going to deliver their babies at home. However, she does not discourage them from attending antenatal clinics if they want to. Pregnant women are advised not to eat chicken and fatty meat because they might have complications and obstruction during delivery. They are encouraged to eat soft maize-meal porridge, green leafy vegetables, such as *imbuya*, *umkothwane* and *uqadolo* and fruits.

During the last trimester of pregnancy, Sana massages the women's abdomen in order to ensure the proper positioning of the foetus. She advises them on what women should do to prepare for the day of delivery. The room should be clean and the floor prepared. The floor is covered with sand to protect it from bloodstains then grassmats are spread on top of it and a clean cloth is used to cover the mat. When Sana was still younger and physically fit, she used to answer calls for help from women in labour to help them deliver their babies in their homes. Her daughter, Maria goes out to help

women deliver their babies. During delivery, the TBA needs a bowl of warm water and a cloth to wipe the vagina so that the muscles can relax during the delivery process. A pair of scissors is provided for cutting the perineum to widen the outlet for the baby if necessary. If there is perineal tear, it is washed with a solution of salt. A sharp knife or piece of reed or fish line is used to cut the umbilical cord. A string of wool is provided to tie the umbilical cord. The umbilical cord is dressed with cow dung and *ibomvu* to chase away evil spirits. A bowl of warm water, a cloth and soap are prepared for washing the baby.

During delivery, Sana recommends the kneeling position. A family member buries the placenta in a secret spot in the homestead. Sana says this is done to make sure that a child remains attached to the family. It is believed that a child will not neglect his homestead as a living being and also as an ancestor, should she or he die. If a placenta comes forward before the baby during delivery, the herbal mixture called *izithongi* is given to the woman. Sana explains that the herbal mixture helps to push the placenta back so that the baby is delivered first. To prevent excessive bleeding after birth, the mother is given herbal medicine prepared from palm or *ilala* roots and other plants, such as aloe or *inhlaba*.

Sana emphasises that the knowledge and skills of TBAs in her village are still very important because there is no readily accessible health service available to pregnant women and their babies. The TBAs are consulted without making appointments and they can be called to help at any odd hour of the day and night. Her service is valued by the community and some nurses whereas other health workers are critical of the work of the TBAs. Sana says the health workers are worried that the TBAs might contract AIDS during delivery because they do not use gloves. However, they do not provide the gloves. Sana does not worry about getting infected with AIDS because she does not know what it is and how she can contract it.

Sana has never been paid in cash for her services for helping women deliver their babies. She says payment has always been in kind. The families of the women give her food from their harvests or sleeping mats. In addition “my family gets reciprocal help from these families” Sana clarifies. Sana obtains money from selling wild plants and bark of trees to TBAs who come and buy it from her. She gets a monthly old age pension payment of R520.00 and other members of the household produce food for subsistence. She sells *izihlambezo* to pregnant mothers. “Life has always been hard for me, even when my husband was alive he did not have enough money to share with his parents and three other wives and their children. Each wife had to make ends meet to survive with her children” says Sana. Her knowledge of maternal care has helped her to generate a “small income” from selling *izihlambezo*. Sana’s knowledge and skills are valuable human capital.

Natural capital

Natural capital comprises environmental resources. The knowledge of rural people about their environmental resources provides them with a number of livelihood strategies. Communal land, forests, wild plants and rivers provide the household with essential resources for diverse strategies needed to generate livelihoods. The FGDs focussed on available natural assets and resources that are important for household food security and health. Households in the study area use forests, trees and wild

plants to meet household needs in terms of food, fuelwood, shelter, medicine and income. Gathering of wild plants and other food contributes to diets of rural households. Consequently, the quantity and quality of food intake is improved because of gathered food supplements produced and purchased food. Ubombo households are more dependent on wild foods than Umthunzini ones. Wild vegetables, fruits and animals provide an essential source of food. Land, forests and trees provides materials for building shelters for households and animal kraals and sheds. Indigenous trees and plants are an important source of medicines. They are used for human and animal health and also applied in the area of pest management. The natural environment provides natural resources on which rural men and women have different needs and access to natural resources. In Ubombo and Umthunzini, men tend to use mainly forests to collect wood for carving articles adapted for the tourist market and medicinal plants. Women collect grass, for thatching shelters and making handicraft; trees and plants for food, medicinal remedies, dyes for crafts and fuelwood. Most handicrafts have been developed for household use, tourist and export markets. Natural capital is a critical resource for households' livelihood strategies in generating income to meet basic needs. Indigenous knowledge of utilising the natural capital rests with local people.

Social capital

Social capital is difficult to describe in other than broad qualitative terms. Uphoff (2000) describes social capital as an accumulation of various types of social, psychological, cultural, cognitive, institutional and related assets that increase the probability of mutually beneficial cooperative behaviour. This behaviour is productive for others as well as for one's self. Case study 6 illustrates the cooperative behaviour of the TBA in anticipation for reciprocal assistance and payment in kind. In the study area, households provide a familial structure for sharing IK. Often IK is passed from one generation to another within households. However, IK extends beyond specific households hence it is shared within local communities. Elders in the community play a major role in ensuring that IK is passed on to younger generations. According to FGD participants, different types of IK are shared among households in villages. However, in-depth knowledge of medicinal plants is familial based. Even within a family one individual can be chosen as the heir of the elder's knowledge of indigenous medicinal remedies. Kin groups and neighbours work in teams to gather their necessities for their livelihood generation. A household's livelihoods depend upon gender division of labour and access to assets and resources supported by indigenous knowledge systems. It is important to understand that livelihood strategies are designed and carried out in a context of social interdependence and support. Decision-making and allocation and management of assets and resources are the cornerstone of social capital.

Financial capital

Financial capital means stocks of money to which the household has access. However, most households in the study area have limited access to economic opportunities. They also have less access to social services, such as health, sanitation and education. In this vulnerable context, IK in some households provides a basis for financial capital. A case study of a female-headed household will be presented to show that IK

of the traditional healer is the source of financial capital in the form of money savings and fungible assets.

Case 7: Female traditional healer, Umthunzini

Khethiwe is a traditional healer whose household depends on her IK for livelihood generation. She is 56 years old and was born in the district. She left school after finishing Grade five. She was married but her husband deserted her fifteen years ago. Khethiwe lives with her unmarried daughter who is 30 years old, six grandchildren, one nephew and a woman helper. Khethiwe became a full-time traditional healer in 1986. Although she started to be a traditional healer at the age of 25, before that time she worked as a domestic worker in Empangeni. Traditional healing is her main source of income. The household has five good durable housing units, household equipment, furniture and a delivery vehicle. It has electricity, home telephone and access to a communal water tap.

For Khethiwe, traditional healing of people is her main source of livelihood. She explains that her indigenous knowledge of healing people is a gift from her ancestors. Both rural and urban people come to seek help if they have persistent problems in their lives. Through inspiration by her ancestral spirits, she is able to find out the source of the problem. Then she determines what sort of a remedy is needed. Khethiwe uses different methods for diagnosis. She provides treatment of a variety of diseases. She also gathers medicinal roots, tubers, bulbs, bark and leaves of plants and trees found in forests. These are sold to traders who supply the traditional medicine industry in towns and cities like Durban. She also supplies two mail order traditional medicine businesses in Durban. Often some people visit Khethiwe before they attempt Western medical treatment, whereas others first try clinics and hospitals and if they are not cured they consult her help.

Khethiwe's consultation fee is R10.00 and prices for treatment vary according to the illness and the type of treatment given. On average 80 clients consult Khethiwe per month. She finds it difficult to estimate the average cost of treatment per person because it varies according to the problem to be attended. She is also reluctant to tell what her average monthly income is. When people experience financial hardships, such as at the beginning of the year, her monthly income is reduced to about R6, 000.

The household has a quarter of a hectare field for production of maize, pumpkins and vegetables. The food produce is only for household consumption. Khethiwe hires labour to tend the field and do all the agricultural work as the household members do not have the time to do this type of work. Children go to school, her nephew, daughter and the domestic helper, assists her with housework and attendance of her clients. Khethiwe emphasises that her expertise is her source of cash income and is satisfied with her quality of life because she can afford to purchase what her household needs, pay for education of her grandchildren, save money in the bank. She thinks that she is successful because she performs all the ceremonial rituals according to ancestral requirements. These are essential for establishing a healthy relationship between the healer and clients with spiritual dimension that contributes to the healing process. Khethiwe feels very satisfied when her client is healed.

Khethiwe does not participate in community development organisations because she does not have the time to do so. She has too many clients who visit her at anytime without making appointments. Sometimes she has to travel to other areas to visit her clients or to search for specific trees and wild plants to prepare medicinal remedies. When we asked if she has a remedy to cure AIDS, she gives an explanation about patients who consult her at the early stage of the diseases. They get treatment until they feel better. Some of them are still alive after five years of receiving treatment but others who did not complete the course have died. Khethiwe teaches her daughter and nephew the type of medicinal trees and plants that are in demand in the traditional medicine industry.

This case indicates the significance of indigenous knowledge for acquiring assets, particularly financial capital. According to Khethiwe traditional medicine is the most commonly used medical system in rural KZN. It is a major form of health care that supplements and complements modern scientific health services. The household is able to accumulate financial and physical capital based on indigenous knowledge that is passed down from one generation to another.

Physical capital

Non-farm income sources are critical for households in the area of study, particularly in Ubombo because of its remoteness and lack of access to livelihood options, such as wage employment and enterprises. Ellis (2000) states that having alternatives for income generation can make the difference between minimally viable livelihoods and destitution. Durable household equipment owned by the household are important physical capital if they are used to generate income for its owner. The natural environment provides households with raw material to make handicrafts for sale. Some households used the income earned from the tourist industry to purchase physical household assets that facilitates livelihood diversification. Case study 8 is examined to illustrate how indigenous knowledge is used and developed to accumulate physical assets used in the production of goods for the market.

6.4 Income generating activities

According to the FGD participants, traditional handicrafts are an essential source of livelihoods for numerous households in rural KZN. The indigenous knowledge of making handicrafts is integrated with social organisation and socialisation of men and women, values, beliefs, communication and recreation. The division of labour in making handicrafts has been passed on from one generation to another and is still prevalent, even today. Except for beads, raw materials are available in the natural environment. These include trees, grass, wild animals and plants, horn, bone, leather, clay and stone. Beads are purchased from commercial shops. Fathers, brothers and male relatives are responsible for teaching boys woodcarving skills from an early age. Boys are also taught to make items of leather, bone and horn. Although leather work is traditionally done by men, women also do it contemporarily (Du Preez, 2000). Skins are used for making men's traditional clothes, such *amashoba* (cow tails worn on the upper arms and below the knees), *isinene* (the front apron), *ibheshu* (the rear apron made from calf skin) and *injobo* (long animal skins worn on the hips). Diverse skin materials are obtained from both domesticated and wild animals. Drums are also made from leather. For the tourist industry, adapted items are made to suit the taste of

tourists. Skins of animals are used to make shields, drums, key rings, seat covers, cushions and household ornaments. Men also carve wood to make household utensils and items for the tourist market. More men use a variety of trees to produce wood carved articles in Ubombo than Umthunzini. Men and boys sell wooden carved articles along the main road in Ubombo. Some craftsmen make special orders for curio shops that collect them from their village.

6.4.1 Umthunzini

With the growth of nearby industrial centres and towns of Richards Bay, Empangeni and Isithebe, more men and to a lesser extent women have been attracted by the opportunity of earning an income. Often women do not easily leave the homestead because of their reproductive responsibilities and care commitments. Therefore they remain and perform a variety of activities for the enhancement of the standard of living for the household. Most of their activities revolve around the homestead. Besides the usual household chores of cooking, child caring and cleaning the house, women work in the fields, look after small livestock, gather wild plants for food, medicines and make handicrafts. In addition to these tasks some women in Umthunzini use their IK to make beadwork as an income generating activity. Others make handicrafts for sale from wild plants and grasses.

According to the FGD participants and key informants, women in Umthunzini make handicrafts from grasses and wild plants to make sleeping mats for sale among households in the villages. Sleeping mats are traditionally used for sleeping and seating. They are still used by households, particularly for significant ceremonial functions, such as weddings. It is customary for a bride to give gifts to her close members of the bridegroom's family on the wedding day. These gifts include mats for sitting and sleeping, grinding mats (*izithebe*), hand brooms (*imishayelo*) and beer strainers (*amavovo*). A wide range of grasses is used to make handicrafts, such as *incema*, *umtshiki* and *ilala*. The knowledge to make these articles has been passed down from one generation to another. Concern was expressed by FGD participants that very few people in the area have the knowledge and skills of how to make the grass handicrafts because children spend most of their time in schools. Furthermore, the young generation is not interested in learning traditional skills because they are engaged in numerous activities and sports that are part of their formal education. These handicraft items are made and sold in the local community and neighbouring communities as well as the tourist market. To satisfy the tourist market the grass items are decorated according to the taste of the prospective handicraft collectors.

Beadwork is a traditional activity of the Zulu women. It is particularly significant as an art, craft, and a communicational system that is closely integrated into the social, religious, economic, educational tool for girls and recreational institutions of the Zulu society. According to FGD women participants, beadwork was an essential traditional educational means of teaching girls to express their ideas and feelings related to behaviour and relations between men and women. Beadwork helped to teach girls how to conduct themselves in their relationship with men. Beadwork is still important among women in the area for personal adornment and income-generation. The FGD participants expressed concern that IK about beadwork and customary practices associated with it are disappearing. Therefore women who have the knowledge of how to make beadwork and its symbolism encoded within colours and designs teach

other younger women so that the practice can be preserved. As beadwork has always been women's domain, it communicates a message from a woman to an unrelated man. Women were not allowed to give beaded gifts to their male family members. This was social control to avoid incestuous implications. Women present men with beadwork. Consequently, men wear beadwork to show that they are involved with women they may marry. Men might not know the meanings of colours and designs of beadwork thus they rely on their female relatives to give them explanation if there is something they do not understand. Different colours of beadwork have meanings according to the local district interpretation. The meaning of the design is well understood at the local level. It is believed that the tradition of giving beadwork in the form of love letters, encouraged young men to aspired to work and accumulate money for bridewealth. Once a man can pay bridewealth, he is ready to get married. Marriage is an incentive for men because they have the benefits of seniority over those who are not. For instance, they can access communal land-use rights in rural KZN.

In Umthuzini, women organise themselves into small groups of eight to ten and buy beads from local shops in Empangeni. Women who are involved in beadwork are illiterate or have a few years of schooling. Although beadwork is significant as a cultural practice, it is now used as a source of income. Women make a variety of articles for marketing, such as necklaces, bracelets, waistbelts and headbands. Nontraditional beadwork articles are made to meet the demands of the clients, such as South African flag brochures and red and white AIDS pins. In this way an income is generated to buy food and other household goods and services. To illustrate the importance of IK as a source of income, a case study of a household that makes handicrafts and sell them to get an income is presented.

Case 8: Handicrafts as a source of income, Umthunzini

The head of household is John who is 70 years old. His wife Zonke is 55. They live with four grandchildren, two nephews, John's sister and her daughter. John was born in this village and he is still living in his parent's homestead because he was the youngest son. Until 1991 John had two wives. However, at the end of 1990, John's first wife died of heart failure at the age of 58. All their eleven children are married and live elsewhere. Three married daughters left behind four grandchildren at the homestead. John's two nephews were left by his sister who used to work as a domestic worker in Durban, but she stopped contacting the household in 1982 when they were seven and five years old. Nobody knows whether she is still alive or not. Her whereabouts are not known. Both of John's nephews have finished school but they are not able to find work. They assist John with woodcarving of articles for sale. John's sister has never married but she used to work as a domestic worker in Empangeni. In 1995 she retired at the age of 60. All the four grandchildren go to school.

John completed Grade 3 at school. His wife has no school education. John has never been employed. He is skilled in making wood carved articles. He learnt the skill from his father and elder brothers. When he was still young he made household utensils, such as spoons, meat dishes and cups. In 1981 he attended an arts exhibition at the University of Zululand where he saw a variety of carved articles and sculptures. After that exhibition, he started to make a variety of ornaments for an urban market. He collected stinkwood (*unukani*) from the forest to make ornaments of bowls, teaspoons

and small animals and birds. John's work was collected and sold in an African art shop and open markets in Durban. His income helped him to support his family and to buy household goods and educate all his children. John is still doing wood carving with the help of his nephews. He sells his work in Richards Bay, Empangeni and Durban. Woodcarving skill is John's source of income that supplements his old age pension. John's sister and his wife, Zonke make beadwork as a source of income.

Zonke and her sisters were taught to make beadwork by their grandmother. They learnt to make beadwork for their traditional dress as young girls. After puberty, Zonke together with girls of her age learnt to make beadwork for expressing her love for a man. She learnt the meaning of colours and designs and shapes of patterns. She got married to a family that did a lot of handicrafts. She learnt to make grass brooms and small sleeping mats with designs from her husband's senior wife. For a living, both of them helped each other with food production activities. Among their domestic tasks, they fetched firewood, water and grass to make handicrafts for the household and for sale. They sold sleeping mats and hand brooms to the families of young brides. They also made beadwork to sell to those women who did not have time to make it themselves for their traditional dress. Since 1983, Zonke has been making beaded articles for clients in Durban and other urban areas around Empangeni. The articles include necklaces, bracelets, headbands, earrings, belts and household ornaments. Zonke's sister-in-law and her daughter share the cost of buying beads and divide the work among themselves. They share the income which John controls. All the money is given to him and he is responsible for giving them cash for their work. He gives them money to buy beads for new orders. John estimates that the household gets an income of R500 per month. He emphasises that the income fluctuates. Sometimes they get lots of urgent orders from which a good income is obtained. John says that he controls all the money because he is the head of household and he had more education than his wife. He does not allow his wife to join community women's associations because his household can manage to handle its own affairs.

The household has two hectares of land for food production. With hired labour, it produces maize, beans, pumpkins and sweet potatoes. These crops are rainfed because there is no irrigation. Spinach is produced in a small vegetable garden in the homestead. John complains that the household does not have access to water supplies for watering the garden. Sometimes the spinach dries out before they can eat it. The household gather wild vegetables from the uncultivated land and forest plants for medicinal remedies. John thinks that schooling has a negative influence on the younger generation's attitude towards learning to make traditional handicrafts. Girls are no longer willing to learn to do beadwork and grass handicrafts and boys are reluctant to make woodwork. The youth tend to aspire to leave the rural area and go to towns where there are no hardships of fetching water and agricultural activities. Since the establishment of the new government, six years ago John has noticed that there is an official attempt to revive the traditional crafts as more tourists visit the North East region. Tourist like to buy handicrafts but sometimes their taste of colours and design differ from what has already been made. Therefore, John and his wife receive orders with specifications of what clients need. John is satisfied with the income earned by his household. The household has two bank accounts with undisclosed balances, one life insurance policy and an endowment insurance policy.

This case shows the value and importance of IK in generating household livelihood mainly using natural capital as a source for raw materials. For this household, IK is a source of income. Human capital is essential for providing the knowledge and skills. In this household human capital is provided by members who do not have much formal education but their informal education has given them useful knowledge and skills to earn an income to generate a livelihood. Women perform multiple household activities and income-generating activities. Social capital is also important in this case. The IK and skills are shared within the household. Gender division of labour is essential. Men deal with wood carving and women do beadwork and grass work. Major decisions about the income and its distribution is centred around the male head of household. The household has fungible physical assets, such as a fridge, radio, durable furniture and agricultural implements. It has a house telephone. The three housing units are of good quality and if they were not built on communal land, they could be sold for cash.

6.4.2 Ubombo

According to the FGD participants in Ubombo, IK of wild plants is useful for income generation to those households that collect wild plants to sell in the traditional medicinal industry, uses it for treatment of human and animal diseases. Forests provide a source for fuelwood that is chopped and sold to tourists on road markets. Sometimes fuelwood is exchanged for food. Medicine traders collect wild roots, bark, tubers and bulbs for sale. Raw materials for making basketry and woven articles are collected by women. These are used to make articles from a variety of grasses and palm leaves. Women collect raw materials to make traditional articles to sell in the tourist industry. The district is patronised by tourists who are always looking for souvenirs and traditional articles to buy. Women use their IK to make articles that are in demand in the tourism market, such as *ilala* basketry, straw hats, mats, woven containers, tablemats, wall hangings and handbags. Men specialise in making wooden carved articles for household use, such as kitchen utensils and ornaments in the form of animals and birds found in the area. Some women work in groups to make handicrafts whereas others work individually. Men tend to work individually or with their families. The participants in FGDs and key informants viewed utilisation of IK as a source of income-generating activities. They stated that income generation helped households to improve their means of obtaining food.

6.5 Household food security

In both districts women and men are mainly responsible for specific pre-harvest activities. The pre-harvesting activities performed by women are land preparation, planting, weeding and harvesting whereas men sometimes help with land preparation activities. Almost all post-harvest activities are the responsibility of women. These include transportation, storage, processing, preservation and preparation and waste management. Men are responsible for cash crops, such as sugar cane and cotton produced in Umthunzini and Ubombo, respectively. In addition to their food production tasks, women help men in their cash crop fields. Besides food production activities, women gather wild plants for household food preparation. Men and boys hunt wild animals despite restrictions imposed by the nature conservation authorities.

6.5.1 Food gathering

Rural households use wild or non-domesticated plants to supplement their food needs. Women gather wild plants from uncultivated communal land. IK of women and men concerning wild animals differs. Hunting wild animals is a prototypical activity for men. Hence the anthropologists and archeologists viewed the early distinction between men and women as hunters and gatherers, respectively. This is considered the original basic division of labour between men and women (Sachs, 1996).

According to FGDs in both Ubombo and Umthunzini, women and their children are responsible for collecting wild leafy vegetables and fruits for consumption. Hunting for and slaughtering of wild animals for food is the responsibility of men. The key informants reported that wild animals are no longer available for meat to the local communities because of nature conservation regulations. The KZN Department of Agriculture and Environmental affairs (DAEA) is trying to preserve wildlife. The FGD participants expressed their concern that it has become a crime to hunt without permission in the state controlled areas set aside for game parks. Occasionally, men still go in small groups to hunt wild animals in Ubombo. Participants fail to understand why consumption of wild animals is restricted. Wild animals that are hunted in Ubombo are *iqhina* (steenbok), *inxala* (rhebok), *isinkwe* (bush baby), *inkawu* (monkey), *intibane* (can rat) and *insephe* (springbok). Boys and the young men catch wild birds for food. These include *ijuba* (dove), *impangele* (guinea fowl), *ithendele* (partridge), *indlanzi* (mouse bird), *intinginono* (secretary bird) and *isigwaca* (quail). FGD participants in Umthunzini stated that although hunting was one of the traditional men's activities, it is no longer performed because of restrictions by nature conservation authorities.

In Ubombo women gather vegetables and fruit from uncultivated lands and forests. Gathered vegetables include *umkothwane*, *umkaka*, *uqadolo*, *imbuya*, *iklabeklabe*, *imbilikicane*, *umgwabha*, *isankuntshane* and *umkaka*. Women and children collect a wide variety of wild fruit such as *umncaka*, *amadongwe*, *amaphindi*, *umkwakwa*, *amalotshane*, *amakhiwane*, *umphafa*, *umklele*, *amathunduluka*, *umvuthwamini*, *umdoni*, *amarula*, *izinywene*, *amaviyo* and *uphokwane*. In Umthunzini women and children gather fewer wild green leafy vegetables and fruit. Gathered vegetables are *uqadolo* (black jack) and *imbuya* (amaranthus). They also gather wild fruits such as *ugwava* (guava) and *umdoni* (water berry). Most fruits and seeds are consumed as snacks. It emanated from FGDs and individual interviews that Ubombo households are more dependent on forest foods than Umthunzini households.

6.5.2 Types of food crops produced

Cereals

In Ubombo the following cereals are produced: sorghum, finger millet, pearl millet, *udonca* and maize whereas in Umthunzini only maize is produced. Cereals are an important part of the staple diets of rural households in the area of study. The cereal grains are also converted to malt and used in brewing traditional beer. Sorghum or *amabele* is an indigenous staple food and now mostly used for making beer. Ground sorghum is used for cooking porridge. Sometimes whole sorghum grain is boiled, cooled and ground into a fine meal and mixed with soured milk or *amasi*. It was

reported that *amasi* was considered a delicacy and only family members can consume it. *Amasi* is milk that is allowed to curdle in a gourd or claypot, the whey is removed and given to boys to drink. Brewing of beer is the duty of women. Sorghum beer was considered a refreshing and nutritious drink for both men and women. It was reported that sorghum was more drought resistant than maize. Thus planting maize and sorghum gave rural women surerity that some grain would be harvested even in drought conditions.

Finger millet (*upoko*) was still produced by some households in Ubombo. The grain is ground on a big stone using a small one held in hands. Its meal is used to prepare porridge and beer. Sometimes finger millet meal can also be cooked with other ingredients, such as leafy plants and dried beans. It was reported that this cereal was resistant to drought, pests and diseases. Another cereal that is still produced by a very few households in Ubombo, is pearl millet (*unyawothi*). It is eaten as porridge and also cooked as a mixture with edible wild vegetables. Pearl millet is also used to brew traditional beer. FGDs reported that pearl millet was more drought resistant than finger millet. *Udonca* is another cereal that is produced by very few households in Ubombo. Like most of the indigenous ancient crops, to a large extent *udonca* has been replace by maize. Both districts produce maize. Maize is popular because it produced much larger yields than other traditional cereals. However, it is considered to be less drought resistant. Maize meal is used to cook porridge of different consistencies. Porridge is eaten with a variety of meat and vegetable dishes. Crumbly porridge is eaten with *amasi* (sour milk). Unripe cobs or green maize is boiled or roasted. During summer months, green maize is boiled or roasted and sold by women and children in towns for generating cash to buy other foodstuffs. In addition to cereals, tubers and roots are used as staple food and they are a source of starch.

Tubers and Roots

Tubers and roots were reported by FGDs to be important food items eaten as the main meal or as accompaniment of other food. Sweet potatoes (*ubhatata*) and taro potatoes (*amadumbe*) are produced in both districts. However, Zulu round potatoes (*amatabane*), cassava (*umdumbula*) are only produced in Ubombo. It was reported that the Zulu round potatoes had been grown for many generations in the area. They are the Zulu round potatoes that grow well in warm wet regions. The nutritional value of *amatabane* is quite outstanding and is superior to that of potatoes and sweet potatoes (Van Wyk and Gericke, 2000). *Amatabane* are boiled and eaten as such. Cassava roots are boiled or baked and pounded into meal for starchy food. It was reported to be drought resistant. The roots can be sliced, dried and kept for over a year. Thus cassava is a source of food security in times of drought. Sweetpotatoes and taro potatoes are harvested, boiled or baked or roasted and eaten as such. Legumes are also an important part of the rural households in the study area.

Legumes and Nuts

In Ubombo a variety of beans and indigenous nuts are produced. Legumes and nuts are a good source of protein in diets. These included jugo beans (*izindlubu*), split peas (*umgomeni*), *izindumba*, cowpeas (*imbumba*) ground nuts (*amantongomane*) and cashew nuts. Legumes and nuts are an important source of protein in the study area. However, Ubombo households use much more indigenous nuts than those in

Umthunzini. Jugo beans are mainly cultivated in Ubombo and to a lesser extent in Umthunzini.

Women have valuable knowledge and still practice traditional intercropping of plants that complement each other. For example, jugo beans are intercropped with maize plants so that they give protection against heavy winds. Sometimes peanuts, maize and cowpea seeds are intercropped with the aim of protecting each other against pest manifestation. Legumes are also intercropped with maize and pumpkin. Participants in FGDs and key informants stated that intercropping is a measure against pest attacks on cultivated plants. It is also believed that inter-cropping increases yields. Jugo beans are harvested when dry. They are boiled and served as an accompaniment to maize meal porridge. Sometimes dried jugo beans are cooked together and mixed with maize or maize-meal. Split peas is one of the edible dry seeds of legumes that are still cultivated in Ubombo. It is boiled and served with maize meal porridge. Peanuts are cooked together with vegetables as an accompaniment to a starchy main dish. According to Van Wyk and Gericke (2000), cashew nut infusions and tinctures of the bark are used to treat diabetes in Mozambique. Bark infusions have been used to treat dysentery. Leaf infusions are used for cough and are applied topically for burns and to treat skin conditions.

Vegetables

Vegetables grown in the area were presented in Chapter 4. The main traditional vegetables that are grown in the area of study are pumpkins and melons used for a variety of purposes. The leaves of the pumpkin are cooked as spinach and served with a maize-meal porridge. The pumpkin is harvested and can be stored for many months. Pumpkin is washed and boiled with the skin and eaten as such. It is also peeled, boiled and mixed with maize-meal to make a traditional porridge called *isijingi*. The seeds are dried, selected and stored for planting in the following season. Sometimes the seeds are dried and roasted in a dry iron cast pot and eaten as a snack. The roots of the plant are boiled to prepare oral medication for joint pains. The melon is planted and intercropped with maize, sorghum and pumpkin: It is prepared in the same way as pumpkin to make *isijingi*. Another plant that is grown in Ubombo produces calabashes or *amaselwa*. This plant is similar to pumpkin and melon. It is used for multiple-purposes. The leaves are boiled and eaten with maize-meal porridge. The green young fruit or calabash is boiled and eaten as such. Dry fruits are used for storing sour milk or *amasi* and for making ladles. For income generation, dried calabashes of various sizes are decorated with beadwork or African design for marketing to the curio shops or tourist along the main road markets.

Leaves of wild plants are traditionally cooked and eaten with porridge as relish or spinach. These leaves are not cultivated but are gathered from the fields, pastures and forests. In both districts, women and girls gathered popular spinach plant of *imbuya* (*Amaranthus*). More traditional vegetables were gathered and eaten in Ubombo. These were *ikhokhwane* (*Alepidea*), *uqadolo* (black-jack), *imbilikincane* (*Chenopodium album*). Edible wild plants, particularly *Amaranthus* is an example of a highly nutritious wild vegetable that provide an important source of micro-nutrients such as minerals and vitamins.

6.5.3 Food production activities

Both men and women prepare land before planting. Traditionally, the field was left fallow for one year or more to allow soil to become fertile. However, due to land shortages this practice has been abandoned. Instead, cattle manure is used to fertilise crop fields. Households that cannot afford to pay for the services of a tractor, use hand hoes and animal traction for ploughing and planting. During the planting season, women make traditional sorghum beer for the *ilima* (a group of people who helps with the owner of the field). Intercropping is commonly practiced in both districts. Jugo beans is often intercropped with maize and pumpkin. During weeding of maize, planting of beans and pumpkin takes place. This is done when the maize crop has gained height and strength. It is believed that maize plants give protection to beans and pumpkin against heavy winds. Intercropping of maize, melon, pumpkin and sorghum is common in Ubombo. FGD participants and key informants stated that intercropping is a measure against pest manifestation on cultivated plants. It is also believed that intercropping increases yields. Women and children are responsible for weeding. Harvesting and transportation of food is the duty of women and children. They carry the harvested food in woven baskets on their heads to be stored in the homestead. There is interhousehold cooperation in undertaking tasks pertaining to harvesting and transportation of food products. Whenever, men and boys help with these tasks, they use cattle and donkeys to transport food products from their fields. Women use their IK to determine the harvesting time. For instance, when the leaves of crops such as maize and sorghum are dry, they know that the produce is ready to be harvested. Another indication of food products that are ready to be harvested is when the cob with dry maize starts to drop on the ground. Harvested food products are prepared before storage to counteract problems that might arise during storage.

The traditional methods of storage take into consideration common storage problems, such as crop harvested with high moisture content, rats, insect infestation and mould on crops. Drying of harvested produce such maize, beans and nuts is done on a flat and dry area smeared with cow dung. Sunshine is important for drying. Food products are hung on tops of trees or put on roof tops to ensure that crops are dried before storage. The reason for drying before storage is to prevent food from rotting as a result of high moisture content.

Storage

Good food storage facilities are essential to ensure household food security for a long time. Great losses can be experienced if the conditions of storage are not good enough to protect the food product from spoilage. If conditions are not good the quality and quantity of food is negatively affected. According to FGDs, a number of traditional methods are used in the area to prevent loss of food, particularly the staple food, maize. Adequate and effective storage facilities protect food from being eaten by mice, insects and birds. Traditional methods of storage are more used in Ubombo than in Umthunzini. There are different types of storage facilities depending on the type of food stored.

To protect stored produce against unfavourable weather conditions, such as rain, dried crops are stored in a storage hut made of grass or granary (*inqolobane*), basket silos, roofs of kitchens and underground pits. In both districts, granaries are still used for

storage. A granary is a small storehouse built on top of strong large pillars of wooden poles that allow ventilation from underneath. The roof of the granary is thatched with grass and the sides are made from closely arranged reeds or palm stalks. Maize, sorghum, pumpkins, melons, nuts and beans are stored in the granary for up to one year. Basket silos of different sizes are used to store cereals, such as maize, millet and sorghum for up to one year. Tightly closed silos are placed on an elevated platform for improved air circulation. Silos are made of palm leaves and reeds. Crops like maize, millet and sorghum are hanged on a string in a kitchen where an open fire is made. Smoke helps to deter insects and heat keeps the crop dry. Stored crops using this method can last up to one year. The underground pit method of storage is no longer used in Umthunzini. This method is used by a very few households in Ubombo. A pit of sufficient depth is dug in the centre of a cattle kraal. The pit is smeared with cow dung and fire is made in it to make sure that it could be kept dry to protect food against spoilage. This pit is covered with a stone slab to restrict the supply of air and moisture. Maize is stored for up to six months in the underground pits. Pumpkins, melons, sweet potatoes and taro potatoes are stores on the top of the house roofs and in ventilated huts. The traditional methods of storage help households to preserve food products for a long time before the next harvest. Food is protected from spoilage and insect infestation. Wood ash is also added to dried beans to keep away insects. In Umthunzini, improved methods of storage are widely used. These include plastic bags, metal tanks and drums. Women participants in FGDs stated that some traditional methods, such as the underground pit can be problematic because of termites. Another problem that they experienced with granaries was theft. Thieves find it easy to break into them.

Food processing preservation, and preparation

Women are responsible for food storage, preservation, processing and preparation. The IK to process and preserve food is essential in ensuring that it is available at all times, especially during the wet season when it is scarce. Equipment for food processing is made of wood, iron, clay, stone and metal. Green maize is removed from the cob and ground on a stone slab with a small round crushing stone to prepare a dough to make steamed maize bread. The same method of processing is used for dry maize used to prepare maize meal. This method of food processing applies to other cereals, such as millet and sorghum. Dried pumpkin pips and peanuts are processed into powder and stored away in iron cast pots or calabashes. A wood carved mortar and an iron pestle are used to process cereals. Maize is ground with a pestle to make samp and maize rice. Green leafy wild plants are cut into small pieces and dried in sunshine then stored in airtight basket silos and metal containers. Sweetpotatoes are peeled, cut into pieces, dried in the sun and ground on a grinding stone with a crushing stone into a meal that can be stored for about three months.

Traditional methods of food preparation are used to a lesser extent in Umthunzini than in Ubombo. The main method of food preparation is boiling food in water. This method is used for cereals, green leafy vegetables, pumpkin, melon, beans, sweet potatoes and taro potatoes. Another method is grilling food using open fire. Fresh maize, sweetpotatoes, peanuts and meat are grilled. Examples of traditional dishes and beverages that are still prepared and eaten in the area are:

- *Isihiya*, a mixture of pumpkin or mashed Zulu round potatoes (*amatabane*) or sweet potatoes with crushed maize or sorghum. It is cooked like soft maize-meal porridge;
- *Umshwala*, very thick porridge made with maize-meal or crushed millet;
- *Umbhuqwa*, a food dish prepared by mixing crushed pumpkin pips and eaten dry;
- *Amaqebelengwane* (sliced maize or sorghum cakes). Maize or sorghum grains are crushed to a fine meal that is mixed with cold water to make a dough. These are grilled or baked in an iron or clay pot;
- *Amahewu*, a fermented drink made of cooked thinned fermented maize or sorghum porridge;
- *Umqombothi*, a fermented drink made of sorghum and maize meal;
- *Injemane* (palm wine), a fermented drink made from palm trees juice. Beer is also made from ripe fruit of amarula trees;
- *Incumbe*, a food for weaning babies is a thin gruel of milk and fine maize or bulrush (*unyawothi*) meal. Babies and children are mostly fed with fresh cows milk and sour milk (*amasi*).

FGDs participants emphasised that gathered wild foods supplement their food needs as most households did not have adequate land and other resources to produce enough food to last them until they have the next harvest. Often households that do not have cash to buy food depend on their indigenous knowledge and gather food from uncultivated lands and forests. These foods are particularly important for the resource-poor households and for women who are expected to provide food at all times. Wild foods provide diversity and variation to the diets of households in the area. They may improve the quality and quantity of their intake. Thus IK and natural capital contributes to household food security. Appleton *et al.* (1995) states that cultural or community knowledge is open to exploitation and something should be done to protect it.

6.6 Discussions and conclusions

6.6.1 Discussions

To illustrate how IK contributes to livelihood security, this discussion will be based on data of case studies presented in this chapter, FGDs and key informant interviews within the framework for rural livelihood system analysis. According to FGD participants and key informants, social changes influenced by rapid westernisation and development of technology have put the survival of IKS under increasing pressure. However, they were relieved to know that the South African government is working out legislation aimed at protecting and promoting IK. At the beginning of FGDs, participants in both Ubombo and Umthunzini asserted that their exposure to Christianity and modern ways of life influenced them to think that modern knowledge based on western civilisation was superior to IK, practices and general traditional lifestyle. It was also found that the older people, of more than 60 years of age, were more knowledgeable than the younger ones. Participants who were over 80 years of age demonstrated possession of immense knowledge of their culture and environment. For instance, the elders were more proficient and knowledgeable about the important properties of plants, trees and animals in their usefulness.

The older participants emphasised that rural Africans in the area of study belong to a patriarchal society based on basic principles of traditional knowledge and deep respect for individual's family ancestral spirits and the tribal authority system of governance under the leadership of *inkosi* (chief of the tribe). FGD participants made it clear that both men and women have equivalent levels of knowledge and understanding in their respective areas. Therefore the importance of gender differences in the knowledge of specific content was noted. For example, women are responsible for reproductive tasks, such as childbearing, childcaring, food producing, gathering, harvesting, storage, processing, preserving and cooking. They also make certain types of handicrafts that are different from men's. Women use mostly grass and beads to make crafts, whereas men utilise wood. It was noted that all the IK is still transmitted through oral tradition, observation and learning by doing. Although the levels of IK were not equivalent in both districts, it was found that all people hold at least some IK. Generally the youth was reported to have far less knowledge than their parents because of modern social changes. In addition they spend a lot of time at school hence their values are more influenced and changed by teachers than older household members. A deep understanding of IK requires lots of time to practice and observe traditional ways of doing things. As a result of rapid urbanisation influence in Umthunzini, few people find themselves having to use IK in their daily lifestyles. However, in times of food shortages, households in Umthunzini gather wild plants to supplement their diets. In both districts, IK was considered to be a valuable resource contributing to livelihoods of households.

IK is an asset comprising human capital, social capital, natural capital, financial capital and physical capital. Household composition is essential human capital for providing labour to perform all livelihood activities. The household and community is provided with valuable human capital when members learn to perform skills and practices from older people and observing how to do tasks. However, ill-health of household members has an impact on rural people's livelihoods in many ways. It can lead to loss of labour power thus having a detrimental effect on the effectiveness of various other productive activities of the household. Therefore the knowledge that the TBAs and traditional healers possess is essential human capital. This type of knowledge is dependent on kinship-based groups, neighbours and communities for it to thrive. Communal knowledge about medicinal and food plants provides a pool of human resource to provide health care services, particularly in Ubombo and Umthunzini where service provision is poor. Case 6 illustrates the contribution of the TBA to maternal and child health care. The TBA uses her knowledge from years of observation and practice under supervision. The TBA gives advice and prepare medicines for pregnant women. In this role, she does the work of the antenatal clinic. The TBA has a high level of skills in traditional ways hence she earns respect for her knowledge and contribution in the community.

IK in traditional healing is a livelihood strategy to generate an income. Case 7 shows that the traditional healer generates an income from selling medicinal plants and services rendered to those households who have deep-rooted beliefs in traditional remedies. Bishop (1997) states that researchers at the Institute for Natural Resources (INR) at the University of Natal in KZN estimate that at any one time, there are some 20, 000 people gathering plants or animals for use in traditional medicine industry in the province. They also calculate that approximately 1 500 tons of plant material is

sold in the medicine markets on the streets of Durban every year. Furthermore, the INR consultant, Myles Mander estimates that plant collectors who supply traditional practitioners sell plants worth R60 million per year in KZN. Thus the dispensed value of the medicines made from these plants is about R500 million per year for KZN. Therefore it is clear that IK contributes to income earning activities. The use of traditional medicinal plants and traditional healers is in demand in both rural and urban areas of the province. Research by Myles Mander estimates that about 80% of African population in KZN use traditional medicine which is a good indication of the demand in the rest of the country. This consumer good has no alternatives and is used by young, old, well- and poorly-educated (Mander, 1998; Kirk, 2000). Gathering of plants for the traditional medicine industry is an important source of non-income for rural households. These plants are trading commodity that is available free of charge from communal rural areas. Rural households use the natural capital to generate an income to buy goods and services to meet their basic needs.

Another important livelihood strategy in both districts is IK of making handicrafts for sale in the community and tourist industry. Umthunzini is located near the industrial centres hence it is much easier for people to sell their products in towns of Richards Bay and Empangeni. Both in Ubombo and Umthunzini, there are markets along the main road where handicrafts are sold. The tourist industry is thriving in both districts because of the government's initiatives to promote tourism and participation of local communities in it. Case 8 clearly indicates the significance of IK as a source of income. Gender roles in this household are distinct as men make wooden products whereas women make grass and bead items. The knowledge and skills to make handicrafts is essential human capital. This knowledge is also shared among members of the household. Natural capital provides raw materials and the household is able to generate cash to buy beads and other household goods. Income is used for livelihood activities, such as hiring labour for food production activities. Case 8 is also able to save money in the bank hence the household has financial capital and accumulated household fungible assets, such as agricultural implements, household equipment and durable housing units.

IK makes a remarkable contribution to household food security. It is an essential livelihood strategy to ensure availability of food. Traditional food crops are produced and people know how to deal with their problem. In times of food scarcity food is gathered from uncultivated areas of communal land and forests. Sustainable methods of food storing, processing, preserving and preparing are vital to household food security. In a vulnerable rural context where shocks and risks are prevalent, IK makes a difference to reduce vulnerability and enhance livelihood security. Both Ubombo and Umthunzini have a high incidence of HIV/AIDS-related diseases. Water-borne diseases, such as cholera and typhoid are also problematic. Malaria increases the vulnerability of Ubombo households. These diseases present shock and risks among the poor households in the area. The vulnerability context is reinforced by long-term trends in both districts. These are poor service provision, particularly clean water supplies and health care services, shortage of farm land, poor roads and lack of appropriate extension services. Seasonality also contributes to the vulnerable context as households always experience food shortages before harvest and during natural disasters, such as drought and floods. During lean seasons, wild foods provide a safety net. The FGD participants stressed that wild foods are mostly eaten in times of scarcity to supplement staple foods.

The nature of the IK and the way it is stored makes it difficult to assemble it into a traditional scientific format therefore it is not used by educational and extension services. Lack of awareness among government officials and educators is a major constraint in promoting IK as essential in livelihood security. Initiatives to legislate IKS would lead to its institutionalisation and recognition by the different levels of government, non-governmental organisation, private sector and communities.

6.6.2 Conclusions

Livelihood features that emerged from qualitative data indicate that IKS contribute to rural livelihood security. Rural households' capabilities to cope with their vulnerable context is determined by their ownership of assets that could carry them through periods of proneness to shocks, stress and risks. As vulnerability is influenced by human social, economic and natural factors, IK is a valuable asset for livelihood generation in the area of study. IK has shown to be a valuable asset that contributes to secure ownership of or access to resources and income-generating activities to offset risks, ease shocks and meeting contingencies. It enhances household food security and well-being. However, the survival of IK is at risk because the younger generation is not encouraged to value it and to build on its strengths. Tapping the valuable IK of both women and men, can help ensure the sustainability of development effort to enhance livelihood security. Children and the youth play different roles in society and economy and they are also the future of the country. Therefore recording and documenting the IK is indeed crucial in keeping it within reach of households and future generations. The interest of the government and development agencies' structures and processes can enhance awareness and the usefulness of IK as a household livelihood asset in rural areas. It is essential to safeguard threatened IK to ensure that existing assets and resources are properly used. This needs cooperation between the IK and modern knowledge for the mutual benefit of the two systems.

CHAPTER 7 THE ROLE OF AGRICULTURAL AND RURAL DEVELOPMENT EXTENSION SERVICES IN LIVELIHOOD SECURITY

This chapter examines the contribution of agricultural and rural development extension delivery services in enhancing rural livelihood security. The main aim is to analyse the significance of information and communication methods, their appropriateness to the needs and opportunities of rural households and the approach of the extension service staff regarding gender issues and indigenous knowledge (IK) of rural households. The point of departure will be the historical background of gender differentiation in extension service delivery system and its impact on the livelihood security of rural households. Furthermore, the content and methods of extension are examined and how appropriate they are in addressing needs of households in view of their livelihood strategies and resources. Identification and the relationship between the extension delivery services and other transforming structures and processes will be explored.

7.1 Introduction

The South African (SA) agricultural and rural development extension delivery service system is largely based upon the agricultural extension service of the United States Department of Agriculture (USDA). The US Co-operative Extension System (CES) is a publicly funded, non-formal educational system that links the education and research resources of the USDA, land-grant universities and county administrative units. This CES was established as an effort of the USDA and the land-grant universities to make scientific knowledge available to the public, particularly adults and the youth out-of-school. The mission of extension in the United States of America (USA) was set forth clearly in the Smith-Lever Act of 1914. Thus the extension system was guided by the mission to help educate the rural population to improve their quality of life. As a result of the complexities of modern living, new problems and challenges have arisen. For this reason, extension has been changing, more in methodology than philosophy throughout its history.

In the USA, extension is based on four programme areas, namely agriculture, home economics, 4-H¹⁴ youth development programme and community development. Three conceptual models are used to achieve the mission of extension. First, the technology-transfer model, where an extension agent serves as the link between the researcher and the client. Second, the problem-solving approach in which the agent acts as a facilitator for groups to identify problems and alternative solutions. Third, the imparting of knowledge model where the agents provide instruction for knowledge and skills. To a greater extent, in the 1990s technological development and changes have altered extension delivery methods. After the traditional primary delivery methods of face-to-face contact, now new electronic methods of communication have come to the fore. However, these new methods are not replacing

¹⁴ The 4 Hs stand for head (thinking critically and solving problems); heart (respect for self, others and the environment and communicating); hands (preparing for a career and serving others) and health (choosing healthy lifestyles, managing change and challenges). The youth development programme enables all youth to reach their fullest potential through developing life-skills, learning by doing, utilising the knowledge and resources and to have fun, learn responsibility, build self-confidence and set and achieve goals.

the to proven existing methods, but they are supplementing them. Although the need to deliver agricultural production information directly to farmers is decreasing in the USA, there are other societal issues in need of non-formal educational effort for which extension caters (Seevers *et al.*, 1997).

The USA and European extension delivery systems had a remarkable influence on the South African agricultural extension delivery system. Before the establishment of the democratic government in 1994, the extension delivery system was characterised by sectional boundaries based on gender roles. Consequently, agricultural extension services were directed to male farmers in the commercial and subsistence sectors. Home economics extension services were offered to rural women. Since 1994, the national and provincial policies on extension have shifted. The policies promote holistic systems that are more interactive, involving all the concerned stakeholders, particularly the community members, extension agents and researchers. They take into consideration gender and generation roles of stakeholders. Community consultation is essential for the extension services to provide relevant information and technologies that are in line with the individual farmer's conditions and needs. The funding of research, extension services and training is the responsibility of government. In an effort to address the imbalances of the past governance system, previously disadvantaged communities are given equitable access to extension delivery services. The policies also aimed at recognising the local knowledge of farmers and to develop new appropriate technologies to meet the needs of resource-poor farmers. It is envisaged that through appropriate training, extension and research, the contribution of resource-poor farmers to livelihoods in rural areas would be recognised and supported. Furthermore, the agricultural policies emphasise the mainstreaming of gender in agriculture and rural development to ensure that both women and men are equally integrated into all organisational structures (NDA, 1995).

According to March *et al.* (1999) mainstreaming gender is described as both a technical and political process which requires shifts in organisational cultures and ways of thinking, as well as in goals, structures and resource allocation of international agencies, government and non-governmental organisations (NGOs). In agriculture and rural development, mainstreaming gender is an acknowledgement of women's low representation in core agricultural training programmes and the importance of gender in project identification, planning, implementation and evaluation. Although the mainstreaming gender policies are in place, they fall short of a methodology to place women in the centre of the extension delivery process.

Another essential initiative of the national department of agriculture (NDA) is to encourage the youth to take an interest in agricultural activities through awareness campaigns. Many of the young people, particularly those who drop out of school for various reasons are under-served or not catered to by the public agricultural extension. Therefore the youth should be made aware that agriculture and rural development sector is essential for economic growth and social development in rural areas. A number of youth programmes have been initiated in the national and provincial departments of agriculture in South Africa (Agricultural Youth Development Initiative, 1998). The government is taking into consideration that formal and informal education is essential for improving food security, rural employment and reducing poverty. Therefore extension is needed for training of farmers, rural households, workers and for capacity building in a number of rural organisations and

groups involved in rural development. Appropriate extension delivery systems will not solve all of the African rural problems but they are a prerequisite for addressing rural livelihood needs and challenges in a sustainable manner (Lindley, *et al.*, 1996).

In order to understand the role of extension delivery services in rural livelihood security, the extension approaches and their appropriateness in view of the government policies and the needs of rural households will be explored.

7.2 Extension services in the study area

The mission of the KwaZulu-Natal Department of Agriculture and Environmental Affairs (KZNDAEA) is to foster an improvement in the quality of life and promote the development of a progressive and prosperous agricultural community. By this mission the KZNDAEA envisage to promote and implement appropriate, economically viable and environmentally responsible production systems (KZNDA,1997). The main aim of extension delivery services as stated in the KZNDA White Paper 1996, is to provide relevant information and training to small-scale and commercial farmers and rural people involved in agriculture and non-agricultural activities. The relevance and impact of extension can be judged by the appropriateness of extension approaches, the way in which information is generated and communicated to and from rural areas and how agents play their role as facilitators of non-formal education.

The directorate of Agricultural Development Support Services (ADSS) under the chief directorate of Agricultural and Rural Development is responsible for providing professional support services to other Directorate within the Department of Agriculture and Environmental Affairs (DAEA) and the administration of state agricultural land. The ADSS comprise four sub-directorates and divisions: Project Support and Extension; Project Finance and Land Management; Agricultural Economics and Marketing; Home Economics and Youth in Agriculture. The main extension service delivery approach is via projects implemented in the four regions of the DAEA and the directorate (DAEA, 2000).

According to DAEA (2000) the Project Support and Extension Division (PSED) is responsible for extension training of staff and agricultural college students, extension strategy, extension research, project support, surveys and introduction of new ideas in extension thinking in KZNDAEA. In the North-East Region where the area of study is, extension delivery services are based on the concept of technology transfer, the adoption and diffusion of innovations, communication and adult learning process. The PSED facilitates and promotes extension programmes based on the farmers' and community's needs.

7.2.1 Approaches to extension

Extension is a service for providing information and communication support to rural households and communities. The service is educational and it includes giving advice on a wide range of issues. It helps households to examine their needs and problems in order to find ways of using available opportunities to generate livelihoods. Extension enables the providers and users to share information, supports group formation and facilitates collective action. In KZN, extension service is grounded in agriculture,

home economics and related areas. Since the introduction of new government policies after 1994, issues of concern have been added to the functions of the extension services, such as household food security, environmental resource management, gender equity, indigenous knowledge and poverty alleviation.

Many extension services that use traditional extension approaches and methods of providing information and communication technologies to rural households in developing countries have failed. They are considered to have failed to meet their objectives and expectations of the rural communities (DFID and NEDA, 1999). In the focus group discussions (FGDs) with extension staff and key informants, two approaches to extension were identified as being used by the PSDE. These are the Farming Systems Research and Extension (FSR/E) and Project approaches.

Farming Systems Research and Extension (FSR/E)

The FSR/E approach uses on-farm research. In this approach farmers test, evaluate and diffuse information informally. The FSR/E approach enables social, ecological and technical scientists to work together to learn from but not with farmers (SeEVERS *et al.*, 1997). The main aim of FSR/E is to provide applied research and practical information in a form that is of direct benefit to extension agents and farmers. In KZNSA, the directorate of Technology Development and Training is responsible for the Farming Systems Research Unit (FSU). This unit aims to assess the traditional farming systems of rural small-scale farmers and constraints they experience in order to improve them. It is envisaged that improved farming systems can be used to enhance household food security, overall productivity and profitability of farmers' undertakings. In co-operation with the Extension personnel the FSU uses community land for conducting research and demonstrations. Examples of research experiments conducted are on maize, dry beans, indigenous chickens, soil fertility and water quality (KZNSA, 2000a).

In the area of study, traditional farming systems are still being utilised but the FGD participants stated that there were serious constraints caused by shortage of communal land for farming. Therefore there is a breakdown of the traditional farming systems caused by population pressure on land with resulting decline in soil fertility and environmental degradation. It also emanated that some households in Ubombo use part of their most fertile land for agriculture for a few years and when fertility and crop yield declined, they move to an unused land that was left to fallow. The farmers in the area still use their indigenous knowledge (IK) in land use, cropping patterns and pest management as examined in Chapter 6. Traditional farming systems were identified as entailing three main components, namely crop and livestock farming, off-farm activities and household activities. According to the extension staff in Ubombo, the Makhathini Research Station in the district undertakes research that takes into consideration the indigenous knowledge systems pertaining to livestock and crop farming. Some examples of research projects are those of crossbreeding the Jersey and indigenous Nguni cow. Nguni oxen were also trained to provide animal traction for ploughing. Others are on crops such as sugarcane, sweet potatoes and vegetables. The South African Sugar Association Experiment Station conducts research and in collaboration with the KZNSA. The FSR/E unit works in co-operation with the colleges of agriculture in KZN, namely Cedara and Owen Sitele. It also works with parastatal councils, such as the Agricultural Research Council (ARC)

and other relevant resourceful marketing companies and institutions of higher learning. Another extension approach that is used in the area is the project model.

Project approach

The project approach uses technology-transfer within the broader concept of integrated rural development. The central government controls programme planning and foreign funding is a characteristic of this approach (Seevers *et al.*, 1997). The KZNDAEA has a number of projects under the Xoshindlala (Chase Away Hunger) Programme. This programme was launched in May 1998 in order to attract outside funding to implement projects for the upliftment of the rural people of the province. The poverty Relief Programme also allocated funds to the KZNDAEA to enable it to implement the Xoshindlala Programme. The KZNDAEA also provides extension services on the following projects: pig and poultry; cooking, baking and sewing; community gardens; crop; sugar cane intercropping; nursery; marketing; youth and many others. With the use of the project development model, the KZNDAEA is able to promote a holistic approach to livelihood generation. The main four outcomes of the Xoshindlala programme are food security, unlocking of the economically viable development of under-utilised agricultural potential, sustainable utilisation and protection of the environment and control of animal diseases to safeguard human health (KZNDAEA, 2000b). The types of projects determine how the extension staff communicate and share information with rural households.

7.2.2 Methods of extension

As stated above, many extension services in developing countries that use traditional extension approaches and methods of delivering information and technologies to rural populations have failed to meet their objectives and expectations of the rural communities and to determine whether they have had any impact. Therefore, there is new thinking about extension emphasises on two main aspects. First, *pluralism* acknowledges that rural people require many types of information that they access from a number of different sources. This approach views extension as an interlocking network of information sources that takes into consideration many transforming structures and processes. According to the pluralism concept, extension covers many subject areas and require diverse types of support. Transforming structures and processes comprise institutions that include national and provincial government departments, local government authorities, non-governmental organisations (NGOs), community-based organisations (CBOs), private sector and educational institutions. These institutions have a potential to ensure efficiency and sustainability of the extension programmes and projects. Second, *participation and empowerment* of the users of extension services. It is essential for the extension services to understand how people learn and to support learning and negotiation processes. New thinking about extension suggests that it is important to take into consideration what information is available and required, how it is generated and accessed by rural people. It also takes into consideration the transforming structures and processes that are essential in encouraging innovation and provision of appropriate information to facilitate learning (Garforth and Lawrence, 1997; DFID and NEDA, 1999). Despite government policies that support new thinking about extension delivery systems, the KZNDAEA still uses traditional approaches and methods of communicating information and technologies.

According to key informants in the extension service in the area of study, delivery methods of advising and helping farmers and households are based on needs and preferences. The educational objectives and available resources determine how information is communicated. Thus the DAEA employs multiple methods to assist users of extension services. As a result of limited human resources and transport in the extension services, collective action is encouraged through community group formation. Extension agents use the following delivery methods:

- *Visits:* An extension agent visits one or more people, usually at the location of the service user. The users of extension also visit extension agents at their offices. The purpose of visits is to exchange information. It is common for an extension agent visits a group(s) of people. This is encouraged to economise scarce human and financial resources and to promote collective action among rural communities;
- *Demonstrations:* These are undertaken to show groups how to implement a practice or accomplish a task by demonstrating a practical application or guiding them in carrying out tasks. Sometimes a demonstration is done to show the effects of a practice change task by means of practical application. Demonstrations cover vegetable production practices, quality maize production, cotton and groundnut production. The minimum tillage demonstrations are one of the Xoshindlala projects focusing on food security and sustainable land-use;
- *On-farm test:* This entails a process in which an innovative practice or solution to a problem is tested on a farm to demonstrate its viability or test of applicability. Often the tribal authorities or well-to-do farmers provide land for on-farm experiments;
- *Field day:* This is a planned activity of one-day duration for demonstrations; observation of programmes, practices, activities or objects; presentations; or practical experiences. On a field day, relevant companies and other government departments are invited to participate;
- *Workshop:* A meeting in which a small group of people with common interests, meet to study a specific topic or to practice a specific skill to enhance their individual knowledge and proficiency;
- *Networking:* The sharing or exchanging of information through deliberate action on part of the extension agent by means of collaborative linkages with other resourceful individuals, groups and institutions;
- *Meeting:* Regular assembly of people at which information on issues of common interests are presented and discussed in the presence or absence of an extension agent;
- *Radio:* A means of providing information to mass audiences via sound messages communicated through a central transmitting station and receivers in rural areas. A number of radio programmes play a significant role in providing information in the area of study where the level of illiteracy is high. Pre-recorded programmes are broadcast on the Radio *Ukhozi*, in the local language. These programmes cover a variety of topics in agriculture;
- *Tours:* Travel by groups of rural adult learners to places of defined interest to study innovations, systems, objects, demonstrations, and other items that may be unfamiliar to participants. Some of the places that are visited include agricultural shows at district, regional and provincial levels; poultry farms, crop production farms, experimental stations, sugarcane mills, vegetable production farms and seed companies;

- *Agricultural shows*: These shows are held at the ward and district level. Shows are used as an extension tool to promote agriculture, home industries and rural development. The main purpose is exhibiting, observing, buying, selling, entertaining, educating and informing about local community products;
- *Poster*: A large, printed sheet intended for display and containing words, illustrations, or both to provide general or specific information for broad or targeted audiences. It is a powerful tool for extension as the illiteracy level is high;
- *Leaflet or flyer*: This is a brief, concise printed information focused on a specific programme, objective, current event, or other activity and designed to create or enhance awareness. Leaflets on the Xoshindlala programme are used to promote food security initiatives. Other leaflets provide information on agriculture.

The extension agents use a variety of methods to help the rural population with their needs. They support and facilitate group formation based on gender, generation and activities. Individual visits are not encouraged because they are expensive and time consuming. In the area of study a combination of individual, group and mass methods are utilised to enable service users to achieve their goal to generate rural livelihoods.

Studies on agricultural extension in developing countries, such as South Africa have highlighted that traditionally, most extension delivery services have been more directed to men than women. Despite the increased awareness of the crucial roles played by women in agricultural production and the need for gender-sensitive policies, gender bias remains widespread in the KZNDAEA extension delivery services.

7.3 Gender perspective in extension

Before the establishment of the democratic government in 1994, the main objective of extension in rural areas was to help small-scale male farmers to produce cash crops for the market. Thus extension tended to be oriented towards alleviating men's tasks of cash crop production. Male extension officers helped women with the production of vegetables in community gardens for household consumption and sale of the surplus. Furthermore, extension with women focussed on home economics to improve the quality of life of individuals, households and communities. The home economics extension agents also advised women on subsistence food production. According to the new agricultural policies, the main objective of extension is to provide services to improve productivity and economic growth. They also encourage a holistic approach to tackling rural development issues. Women and men are considered essential users of the extension services but they have different needs and constraints. Gender boundaries in the extension service of KZNDAEA are prevalent. For instance, there are extension services directed to men who are mostly small-scale commercial farmers, women and the youth. During this transitory period of a shift in government policies, there are but a few women who are qualified as agricultural extension agents.

The Home Economics Division promotes projects that are aimed at empowering women to participate in small home industries. It is interesting to note that all staff in this division are female. This division assists women in learning to bake wedding cakes, muffins, scones and pies. Women are also trained in sewing to produce school uniforms, duvets, and pinafores for toddlers in crèches. They also produce a wide

variety of handicrafts, such as traditional grass baskets, beadwork and pottery. The youth is also trained in some of these projects. The Youth in Agriculture Section encourages the youth to participate in agricultural activities. The youth is offered training courses on flower arrangement, de coupage and papier mache, fabric painting and weaving (KZNDAEA, 2000a).

According to focus group discussions (FGDs) participants, women extension agents often teach them sewing, cooking and give advice on family related issues, such as family planning and hygiene. Male extension agents help women with technical advice on community gardening and livestock. In Ubombo and Umthunzini there are female extension agents who are agriculturists but no male home economists. Many households are not reached by extension agents in both districts, mainly because of lack of transport.

7.4 Constraints in the extension delivery services

Focus group discussions with the extension staff of the DAEA in the area of study identified numerous constraints that impede progress in agricultural extension services to men and women.

7.4.1 Constraints of men

The following constraints experienced by men can be identified:

- *Insufficient land:* In rural KZN land is communally owned and allocated to male heads of households by the tribal authorities of the district ward. Men cannot get all the land they need for agricultural production because it is limited. As indicated in Chapter 4, men access more land in Ubombo than Umthunzini. It is a common practice to use land for building housing units for accommodating household members and to rent them out to migrant workers in Umthunzini. Land disputes were reported to be common if the tribal authorities allocate more land to some individuals than others. Since land belongs to the whole tribe, men cannot do as they please with the land allocated to them;
- *Lack of capital:* Men often lack capital and access to credit to buy inputs and services, such as fertilisers, seeds, labor, tractor. They lack collateral to obtain credit. Sometimes they even lack money for transport to attend meetings or to travel to the offices of extension agents for advice;
- *Socio-cultural practices:* The tribe has a custom to fallow land in winter. Cattle in the area are set free to graze on communal land. During winter months in May, June and July, households are not expected to do agricultural work because it is the only periods during which cleansing ceremonies of widows can take place. This custom is a problem to farmers who want to do agricultural activities on the land allocated to them. When there is a bereaved household in the village, all agricultural activities have to stop until the deceased person is buried. This practice has become a stressful barrier to extension as meetings and other activities pertaining to agriculture are halted. The situation is worsened by the increasing number of people who die as a result of the HIV/AIDS pandemic in the area. Men do not approve of male extension agents who work with women in the community;

- *Lack of time:* Men are expected to participate in all clan and tribal court meetings. As a result of this expected men's role, they take time off their agricultural tasks. Their work schedule is disrupted;
- *Lack of information:* Men lack information regarding new government policies, laws and general concepts relevant to agricultural activities. They lack information on land reform, credit facilities of the Land Bank, technological innovations, co-operatives, agricultural and livestock production. They do not know how to access opportunities and relevant information. Many new concepts such as gender equality, food security, human rights and justice are not understood and they find it difficult to grasp the new policies pertaining to agriculture and rural development.

7.4.2 Constraints of women

The following constraints experienced by women can be identified:

- *Time:* women are responsible for reproductive, productive and community management tasks. However, most of women's time is taken by household chores. Their household domestic tasks are time-consuming. Thus they have limited or no time to spend on productive and community activities;
- *Socio-cultural barriers:* Some rural women still live under strict surveillance of the mother-in-law and the extended family. It is common to find that young married women do not obtain permission from the husband or family to participate in action groups related to extension services. Women's decision-making powers are limited as they cannot make their own choices without approval of their mother-in-law or extended family. Men are the main decision-makers even when they work in cities and live away from the homestead. They are often consulted by women for permission to take action in their households. Unequal gender relations result in women losing their confidence. Consequently they experience emotional problems with family abuses caused by gender inequality. After the death of a husband, a woman who is still mourning his death is not allowed to mix freely with young unmarried women because a widow would pass on her misfortune to them. This becomes a barrier when active women in the community have to withdraw from activities for one to two years. The extension agents end up working with older women in the community. Some of them are sickly with chronic diseases that are associated with ageing, such as high blood pressure, diabetes mellitus and arthritis;
- *Illness in the household:* Women's heavy workload has increased with the growing number of HIV/AIDS victims in households. A lot of time and skills are needed by women to do homenuising of ill household members. Once a household has a chronically ill member, agricultural activities slow down or come to an end. Many resources are spent on the ill person. The extension agents find that the number of participants in community development groups decline as women take time off extension service related activities to care for the ill and dying household members. In cases where men farmers participate in agricultural extension services, it becomes a problem when they become ill and die. Their wives are stigmatised by the community and they lose access to extension services, particularly during the mourning period. The household loses income, labour and access to farmers' organisations and extension advice;

- *Water supplies:* Lack of clean water supply is a constraint to agricultural food production and food security initiatives of extension services. Most households do not have access to water for domestic consumption and irrigation. This constraint affects both men and women. Crops and vegetables are rainfed due to poor service provisions in the study area;
- *High birth rate:* Some women give birth every year and this interferes with agricultural activities. Most men do not allow women to use contraceptives for fear that they would misbehave themselves;
- *Lack of information:* The majority of women are not reached by the extension service mainly because there are too few agents to help large rural communities. Women lack information on how to add value to their multiple activities to enhance their livelihoods. They lack information on how to farm productively to satisfy household food consumption requirements and to generate income. Even the few women involved in community vegetable gardening and food crop production, do not have information on food storage, processing, preservation and preparation to prevent food and nutrient losses after harvesting. For women who produce a surplus of vegetables in community gardens, there are no markets for their produce. They also do not have information on appropriate technologies on how to preserve food to ensure that it is available for the household at all times. Women do not have information on business management skills and relevant laws, such as those pertaining to payment of income tax as well as about government policies pertaining to their human rights, agriculture, food security, poverty alleviation and so on;
- *Lack of access to resources of production:* In the study area, women do not have equal access to tribal land as men. This is a constraint to them. They also do not have access to capital, loans and credit facilities because they often lack collateral to get these resources. Due to lack of cash to buy, women do not easily access inputs, labour and services for ploughing. There are no markets for their produce;
- *Lack of non-governmental organisations:* There are no active non-governmental organisations (NGOs) in the study area. NGOs would help reach some of the households that are not provided with extension service;
- *Attitudes of rural women towards female agricultural extension agents:* Women in Umthunzini resent having female extension agents who provide services to groups of male farmers.

Constraints that affect both men and women relate to the physical infrastructure. Poor service provisions in both districts were discussed in chapter 3. They are poor road networks, water supplies, telecommunication and electricity. The re-demarcation of local authorities boundaries caused a lot of insecurity and uncertainty which stalled some of the extension activities. The households felt threatened that they might lose some of their allocated land. They feared that they would be expected to pay for service provided to the community, such as communal water supplies. Sometimes inter-household conflict, violence and faction fighting in the study area affect activities of extension agents. The project approach used by the extension service delivery system in KZN, is considered to be top-down and counter productive. For instance, the Xoshindlala programme only supports organised groups and not individuals, hence many motivated rural household members are discriminated against when they need advice and support outside community groups. The extension agents reported that the agricultural policy is not in line with the realities of agricultural and rural development in the study area. The pre-service and in-service

training of extension agents did not prepare them to work under the new government changes. Issues of concern relate to gender equality, food security, land reform laws, human rights and the youth programme.

7.4.3 Constraints of the extension service staff

The constraints experienced by men and women in the area depict the barriers at household level. Key informants and FGDs participants identified limitations faced by the extension staff in fulfilling their role in the extension service delivery system:

- *Human resources:* The extension staff in the study area had their pre-service training at colleges of agriculture, technikons and universities. Traditionally, at colleges men were trained in agriculture so that they could advise small-scale farmers on horticulture, cropping and animal husbandry. Women were trained in agricultural home economics to enable them to advise women on household issues, such as cooking, nutrition, sewing, knitting and other related aspects. Since 1994, a few women have qualifications in agriculture but there are no men who have qualifications in home economics. Agricultural education did not emphasise interdisciplinary perspective. The focus was not on a rural household but on the farmer as the head of the household and on women involved in subsistence food production, domestic work and child rearing. In light of socio-political changes in South Africa, new policies that promote integrated rural development approaches are now in place but extension agents' training has not prepared them for the changing environment with new challenges. The extension staff lacks relevant knowledge and communication skills to exchange information with rural households. In-service training appropriate for the needs of rural households was inadequate. The staff is familiar with a one-way flow of information, such as in lectures and demonstrations. Most extension agents had no training in issues of gender equity and mainstreaming in agriculture, planning, implementing and evaluating of projects, handling of youth programmes, environmental issues and sustainability;
- *Shortage of staff:* The ratio of extension agents to the population they need to service is too low. Employment of more extension agents is limited by lack of departmental funds. Therefore group extension and distribution of information brochures is one of the coping strategies. These methods still fail to reach the majority of households. The extension services lose staff due to death from illness and accidents without replacements;
- *Top-down approach:* Senior officials spend a lot of time and effort planning top-down programmes, such as Xoshindlala that do not take into consideration the skills, knowledge and interests of individuals and households. Central planning presents inappropriate programmes for the needs of households. Sometimes individuals in the community require support from the extension service but they are not helped because they are not affiliated with a group;
- *Transport:* Extension agents' activities are constrained by the poor transport network in the study area hence they cannot reach the community when they do not have official transportation means. Since 1994 there has been a dire shortage of transport that restricts the movement of the extension agents. The poor transport network limit rural households' access to input suppliers, markets, credit facilities and many other services in support of extension;

- *Participatory methodologies*: These are mentioned and spoken about but not practised. Extension training is carried out in formal classroom lectures with limited opportunities for practice in the community.

The extension agents identified their in-service training needs as: project management; participatory methodologies; research methods and data analysis; gender equality; communication; leadership; public speaking; computer applications; problem solving and decision-making; budgeting; food preservation; catering and floral arrangements.

7.5 Household livelihood security as a basis for extension

The extension delivery services often classify rural households according to commodity or agro-ecosystems, for example sugarcane or cotton farming households. But it is common to find that these households engage in diversified farming and different kinds of non-farm activities. Therefore it is considered appropriate to view strategies of rural people in earning a living as household livelihood systems rather than farming systems. For rural households, it is not only agriculture that is important for livelihood security but many other activities are essential components of the livelihood system (Castillo, 1998; Ellis, 2000). The livelihood systems in rural areas are complex and embedded in social organisations in which gender and indigenous knowledge is essential. A different approach is needed to support these complex systems (Castillo, 1998). A livelihoods approach puts people at the centre of extension and rural development. Therefore, the appropriateness of extension delivery services to rural households is essential. Hence the following discussion will focus on the relationship of extension services on transforming structures and processes household assets, resources and strategies in a vulnerable context.

7.6 Discussions

The role of extension in rural livelihood security is noticeable in examining the interrelationship between household assets, transforming structures and processes (institutions), livelihood strategies and outcomes.

7.6.1 Assets

Human capital

Human capital of households in the study area is negatively affected by low educational level among adults. They also have limited skills to enable them to generate livelihoods in a sustainable manner. This situation is a barrier to household members who want to earn a living through agricultural production, wage employment and entrepreneurship. For all these livelihood activities, basic levels of literacy, numeracy and reading are fundamental. Therefore access to appropriate information and communication is a problem for the rural household, particularly women involved in subsistence food production.

Healthy members of the household provide labour to earn a living. However, the growing number of HIV/AIDS victims in households is reported to have a negative impact on extension services. Illnesses and deaths of household members disrupt

extension services by taking away time to provide nursing care. Financial resources are spent on medical treatment or traditional remedies instead on resources for productive activities. The HIV/AIDS pandemic leads to loss of knowledge and skills gained from the extension service. Reduction in productive activities result in household income decreases, food insecurity and vulnerability.

High birth rates in Umthunzini district interfere with planned extension service programmes caused by time taken off by child-care tasks. Women often take time off their household livelihood activities to attend antenatal clinics and traditional birth attendants. When the baby is born, they spend most of the time caring for it.

Women are often preoccupied with multiple tasks of their reproductive role. Therefore they are not readily available to enhance their human capital from extension services. The youth possess valuable labour and skills to generate livelihoods in rural areas. However, young rural adults are not interested in agriculture and rural life in general. According to FGDs participants, the youth prefer to find employment in urban areas. They spend years waiting and hoping to find work without success in most cases. The youth policy gives guidelines on how to motivate the youth to support agricultural and rural development initiatives. The main problem is that the extension staff lack training on planning, implementing and evaluating youth programmes. Few men are small-scale farmers but the majority does not participate in agricultural activities which they considered to be women's domain. Thus their labour is wasted because they are not able to find work as a result of high unemployment rate in the study area.

Extension agents contribute to human capital in the extension delivery system. They are not able to provide appropriate extension service because their training does not equip them to communicate information and technologies that are in line with the new government policies, needs and strengths of the users. Since 1994 extension agents are required to focus on new approaches and methodologies of communicating information and technologies. Yet they do not have the capacity to address issues on household food security, land reform, sustainable natural resource management, indigenous knowledge systems, mainstreaming gender in agriculture, youth programmes, HIV/AIDS in livelihood systems, information and communication technologies.

The KZNDAEA is still using traditional approaches to and methods of extension. However, these need to change to fit in with the current demands and opportunities of rural households. Interdisciplinary approaches of extension should provide a service to a household livelihood system rather than to men farmers and women housewives as it is still the case with the focus of home economics programmes. Closer attention needs to be paid to household resource management. The households in the study area use natural environmental resources that can become depleted if extension services do not address this issue of assets, resources, livelihood strategies and outcomes from a holistic perspective.

Physical capital

Lack of or limited physical assets that facilitate rural livelihood generation and extension services is problematic in the study area. These infrastructure assets, such as

good road networks, water supplies, power lines and telecommunication. Bad road conditions and lack of them inhibit movement of extension agents in the area. The households too have difficulties in accessing their extension services, input supplies, markets and other resources of production. Most farming households do not have access to water supply for irrigation and piped water for consumption. The crops and vegetables in the fields are often rainfed. Consequently, this situation results in low harvest yields. Clean water provision to the household supports rural livelihoods. It is a measure to avoid diseases, such as cholera that affect human capital in a negative way. Provision of water for household consumption saves their time and energy spent on fetching it. Lack of electricity is a constrain diversification of activities for income generation. Small and medium enterprises cannot prosper in an area without electricity. Thus services of the extension agents are inhibited and it is difficult to integrate rural economic activities into the national economy because of poor physical capital to develop them. New policies on integrated rural development should accommodate and encourage novel method of extension delivery through provision of accessible telecommunication facilities in the study area.

Like many other developing countries, South Africa is grappling with the challenge of harnessing information and communication technologies (ICTs) effectively to accelerate rural development. However, ICTs rely on physical infrastructures, including electricity and telecommunications. Although there is still lack of empirical evidence of effects of ICTs upon rural people's livelihoods, it has been proved that access to telephone and radio is essential in changing the lives of the poor. The telephone is the most common communication technology to effect tangible positive change on rural livelihoods, such as strengthening kinship relations and providing marketing and trading information. It is the backbone of ICTs. Therefore poor physical infrastructures in the study area are a constraint to the extension service provision as they inhibit introduction of innovative ICTs (O'Farrell *et al.*, 1999).

Social capital

The extension service delivery system in KZN tends to teach household members in groups rather than as individuals. The groups are usually formed around an activity, such as community vegetable gardening, sugarcane growing, sewing and others. These groups are formally planned with the assistance of an extension agent. According to key informants in the extension service, some groups do not last for the expected period while others are maintained for a long time. Reinforcement of existing community groups should be more beneficial to the extension service than to start new ones.

The creation of social organisation in terms of roles, rules, procedures, precedents and relationships is unplanned and purposive only in small ways. The various elements of social organisation aggregate into networks and associations that establish patterns for people to act together in mutually beneficial ways. The values, norms, attitudes and beliefs that qualify as social capital are built up over time. However, they can be diminished and even destroyed in a fairly short time. Thus without roles and rules for decision-making and resource mobilisation, collective action becomes more difficult and thus less likely. Facilitation of communication among persons and conflict resolution is needed for getting and keeping people together to accomplish things that are beyond the capability of individuals. Creating social capital requires the

acceptance of roles so that there are shared and mutual expectations about what any person in a certain role should and will do under various conditions. Social organisation is regarded to be less costly and often more effective where co-operation is motivated by norms, values, beliefs and attitudes that create reinforcing expectations, rather than having to gain co-operation through material incentives or coercive action (Uphoff, 2000). Therefore extension services would be more effective if they support existing social networks in communities.

Financial capital

Generally, the users of extension services in the study area lack cash to buy resources of production such as agricultural inputs, technologies and services to facilitate their diverse activities. Extension services become ineffective as a result of limited or lack of access to credit facilities and in an area where land cannot be used as collateral. This situation inhibits information flows between the extension service and rural households. Limited financial capital in the extension delivery service of KZN is a barrier to building institutional capacity in order to facilitate implementation of new approaches to extension.

Natural capital

The study area, particularly Ubombo, is endowed with environmental resources that are essential to the household livelihoods as indicated in Chapter 6. As a result of limited access to assets, households depend more on gathering activities in Ubombo than Umthunzini. The natural environment provides firewood, building materials, medicinal remedies and food. The traditional approach to extension does not equip extension agents with appropriate skills to inform rural households about how to manage environmental resources for the present and the future. In the past, a separate KZN Nature Conservation Unit worked independently of the agricultural extension activities. Thus extension services in the area do not meet the household needs to prevent environmental degradation, such as soil erosion and over-grazed pastures evident in the study area.

7.6.2 Transforming structures and processes

Livelihoods and livelihood strategies take place within the context of various structures and processes or institutions. Inter-institutional co-operation often provides the source of capital upon which households draw in order to pursue their livelihood strategies (Bingen, 2000). In view of the government policy on integrated rural development, the extension delivery system should reinforce its diversity of service provision by having institutional co-operation in planning, implementing and evaluating projects. Extension needs inter-institutional relationships with other government departments at national and provincial level; local government authorities; NGOs; public sector; academic and research institutions and community-based organisations. Despite cooperation of extension services with other institutions, there is no clear co-ordination of inter-departmental activities at district level. A change in traditional approaches to extension would facilitate development of a more integrated approach to rural livelihood strategies and household resource management. In that way extension would be able to provide relevant and useful information to households.

7.6.3 Information and communication technologies (ICTs)

Communication of relevant and appropriate information to rural households is a key for enhancing rural livelihood security. Improvements in channels of communication between households, extension agents, policy-makers and related institutions would facilitate sharing of knowledge, information and collaboration in undertakings to support rural livelihoods. The extension services need to move away from top-down approaches to more interactive ways of understanding how information is generated and transmitted in rural areas and how extension can help to facilitate learning through the use of mass media and electronic communications technologies. Education and training approaches for extension agents must change so that they are able to facilitate learning using new knowledge, educational, communication and information technologies among rural households.

The extension service can adopt ICTs because they offer new ways of communicating and exchanging information and knowledge. They can be used to strengthen existing information systems and networks. Telecommunications are recommended tools for rural development but their introduction in rural areas should be undertaken as part of a concerted effort by all government departments to develop a rural community or a region (Ernberg, 1994). Although the infrastructure is poor in rural areas of KZN, the government policy on Rural Development Strategy is commitment to infrastructure development to alleviate poverty and to enable rural people to make a productive contribution to national economic growth (Rural Development Strategy of the GNU, 1995). Modern telecommunication systems in rural communities are the key element in making rural areas competitive with urban areas in obtaining global information and knowledge. In the emerging paradigm for international co-operation for sustainable development, ICTs are considered a needed service in rural and remote areas to compensate them for geographical and cultural isolation. Effective international and regional co-operation for sustainable development needs tools, such as electronic mail (e-mail) and computer mediated conferences to share experience and discuss issues of common interest. The introduction of computers and advanced telecommunication services in rural communities should be able to compete in attractiveness for business and social and cultural activities with the cities. Telecommunications can have an impact by supporting and diversifying local economic activities, improving social conditions and improving access to education and training. Provision of telecommunication services need investments and a concerted effort of concerned governments, international development and financing agencies and the private sector (Ernberg, 1994).

Access to ICTs in rural areas

Over the last decade, the development of the capacity to use computers for communication has been revolutionary. Their use as a communications tool makes it easier, cheaper and quicker to communicate with people. Computers run programmes that enable them to be used for a wide variety of purposes. They can be linked to other computers via the internet. Electronic mail can be used to send information to a computer on which an arrangement is made to store it. Huge savings on postage, fax services, couriers are remarkable for organisations that use e-mail. Computers are also used to send information to newsgroups concerning particular subjects. Information for the public can be placed on an Internet-accessible computer as an HTML page on

the world-wide web. Computers can transmit information in various forms. Files may consist of text, data, sound, still pictures or video. Databases and HTML pages are tools for information storage. ICTs are useful in supporting collaborative work, for example video-conferencing enables collaborators to have a telephone meeting at which the faces appear on a computer screen. There are also computer programmes that enable collaborators to share files while simultaneously talking to someone or a group of people. The computer has the capacity to make it feasible for people with transport or mobility problems to participate in official activities without being physically present (Powell, 1999).

South Africa faces a challenge of harnessing ICTs to implement and accelerate the integrated rural development programmes and projects. New policies required to accommodate and promote novel delivery methods are already in place. The government promotes the concept of Multipurpose Communication Telecentres (MCTs) in rural areas of KZN. These MCTs provide access to public telephone, fax, Internet for e-mail, electronic databases with government and community information. Other community services are located in the MCT, such as banking facilities and postal services (Yaka, 2000). ICTs are already used in business, educational institutions of higher learning, research institutes and government offices at national, provincial and regional level. However, there are still no computers in district offices of KZNDAEA.

O'Farrel *et al.* (1999) state that extension delivery systems in most developing countries have had mixed effects. Much of extension information has been found to be out of date, irrelevant and not applicable to users' needs. Consequently, communication for development is shifting away from technology transfer, adoption and diffusion processes. Participatory development communication and information technologies are becoming important tools in extension. Moetsabi (1999) suggests a number of ways that electronic communication networks (ECNs) can be utilised to promote participatory exchange of information, knowledge and experience in rural areas. In order for the local communities to understand the network systems their involvement is important. They should be empowered to design communication programmes and communication media and activities. For illiterate people, programmes can be designed so that they understand interaction in written word with regards to specific functions. This means teaching literacy using relevant extension activities, such as written words about harvesting and food storage when it is time to deal with these activities.

The utilisation of ICTs in developing countries is constrained by a wide range of problems, such as inadequate infrastructure, limited human resource capacity, absence of national policies and low or lack of computer literacy. In South Africa it is estimated that 45 percent of the population cannot read and write. Cultural resistance to high technology has been noted in Mexico when a telecentre presented a shift from traditional knowledge practices of the elders as information providers in the community. However, ICTs have a role to play in rural development if technologies are combined with extension services which focus on participatory communication and training methodologies (O'Farrel *et al.*, 1999; Anderson *et al.*, 1999).

Making ICTs accessible to users

The use of ICTs is a relatively new phenomena in developing countries. The notion of telecentre development has been already implemented in some urban and rural areas of KZN. Telecentres can be an alternative or supplementary method of passing information in rural areas. Anderson *et al.* (1999) warn of the risks of alienating the local community in telecentre development. They suggest that involving the local community in all stages of development of the project and by capacity building which develops the skills of local people to take responsibility for the organisation, maintenance and operation of the telecentre.

Sustainability of the ICTs is possible if they are linked and integrated through the existing communication channels, such as extension agents, NGO workers, teachers, health professionals and small and medium enterprises (SMEs) in rural areas. Strategies for improving access to the Internet and use for rural development will involve full participation of extension delivery system and other institutions. The implementation of a livelihoods approach will help to bring together different perspectives on rural livelihood needs and opportunities. In that way ICTs can help to integrate the contributions and skills of all stakeholders to facilitate livelihood security (Anderson *et al.*, 1999; Farrington *et al.*, 1999).

New ICTs, especially the Internet, offer a potential tool for rural development and enhancement of rural livelihoods. To accommodate these new ICTs, there has to be a major change in extension approaches and use of different sources of information. Retraining of extension agents and other professionals in relevant institutions should be considered as an urgent issue to be addressed at policy level. Effective training can be undertaken with co-operation of international educational institutions, NGOs, national, provincial and local government authorities, parastatal research organisations, private sector, CBOs, universities, technikons and colleges of agriculture education and health. In-service training of extension staff and other professionals will not need a huge investment because they would all already have higher education and/or vocational qualifications to perform their tasks. They will only need training on information and computer technologies.

Access to ICTs in rural Kwazulu-Natal

A community telecentre equipped with information technology facilities has been introduced in a remote rural area north of Ubombo district close to the Mozambique border. This telecentre is part of a community-based organisation, namely Maputaland Development and Information Centre (MDIC). A diverse range of projects, including palm (*ilala* wine) brewing, cashew nut juice making, a small industries park, a satellite-based distance education, craft centre and a tourist information centre are undertaken by MDIC.

The telecentre is supported by the Council for Scientific and Industrial Research (CSIR). It has four personal computers, five telephone lines, a scanner, a printer and a photocopier. Services provided by the telecentre are for sending information by fax, telephoning, scanning, word processing, photocopying and printing. The public uses computers for word processing and spreadsheets. Not much of the Internet is used because the community does not know what information can be accessed. Market

information is also not available through the Internet. As a result of lack of relevant information, the Nguni cattle farmers and vegetable producers cannot use the telecentre to find out the current prices before taking their animals and produce to the market, 300 km away (Jensen, 2000).

MDIC has a huge potential for development as it is strategically positioned within the Ubombo Spatial Development Programme (USDP). The telecentre is mainly used by school teachers in the area. They use services to prepare examination schedules, school reports, minutes of meetings and presentations. A database is being compiled on the local area using the computer (Tembe, 2000b). Although the telecentre has a potential, its facilities are not yet known by the community. As a result they are not used. Schools cannot afford to pay for Internet connection calls. MDIC envisage inviting more institutions to be involved in the project to prevent the centre from becoming a "white elephant". These institutions are government departments, parastatal research organisations and the University of Zululand. Sustainability of MDIC will be possible if its services are advertised to all government departments, at national and provincial level. A holistic approach is needed to ensure the sustainability of MDIC (Tembe, 2000a).

Information and communication technologies for rural livelihoods

Globalisation and internationalisation of higher education have become an essential vehicle of transformation in institutions, such as universities. There is now a challenge to provide agriculture and rural development graduates who have global competencies, skills and values. These include computer literacy and the ability to use information technology. The entire world is now the source of information through the Internet. Consequently, the role of the educator has changed from being a source of information for learners. Instead, the new educator's role is to help learners to learn to access information sources, to analyse information and use it in creative thinking and problem-solving. For this purpose the Internet is an effective way of applying computer and communications technologies to help people to work, organise, acquire and disseminate information. The fast rate of social change and increasing volume of information knowledge require life-long learning. Globalisation may entail competition but it can mean co-operation among nations, institutions and people in utilising ICTs (Umaly, 2000).

Pre-service and in-service training in agriculture and rural development faces challenges to combat poverty and food insecurity and to ensure sustainability to improve livelihoods in rural areas. Thus this training should give learners a holistic understanding of sustainable livelihoods approaches. To accomplish this goal the content and methodology of teaching agriculture and rural development has to change to be in line with innovative strategies needed for agricultural training (Igodan, 2000). Studies have shown that a common problem of extension services in African countries is inadequate and inappropriate training of extension staff at all levels. Generally, there is a lack of long-term and comprehensive planning for training in extension. Often linkages among institutions concerning training, research, marketing, credit, health and nutrition and environmental sustainability are poor.

The relationship between information and rural livelihood is still not clear in empirical studies but initiatives of promoting ICTs at South African universities is

evident in a four-year pilot project initiated to generate and present information for teaching and learning on rural development. The Rural Development Information in the Republic of South Africa through Telematics (RDISAT) is another example of the emerging paradigm for international co-operation and creation of global networks to support ICTs for rural livelihood enhancement. RDISAT entails co-operation between two Dutch and three South African universities. The Dutch universities are Wageningen University and Research Centre and the Enschede International Institute for Aerospace Survey and Earth Sciences. The South African universities include University of Fort Hare, University of Zululand and University of Natal. The RDISAT project develops electronically accessible teaching and learning packages for training graduates who will work in rural development, including extension services. The project also develops learning materials for extension agents at an appropriate practical level. One of the main aims of the project is to build up institutional capacity by training South African university staff to develop electronically accessible and flexible learning packages to improve the training of trainers and extension workers in three thematic areas. These areas are rural enterprise development; household resource management and food security; sustainable land-use systems. This project addresses important issues of the policy on integrated rural development strategy, such as gender awareness, environmental issues, poverty alleviation and co-operation of national universities with international institutions of higher learning and research. RDISAT has a potential to enhance livelihood security by increasing access to information to extension agents and other professionals who work with rural households. The project can collaborate with other institutions in support of rural livelihood security. Essential institutions for collaborative work are government departments (national, provincial and local), parastatal research organisations, private sector, NGOs, CBOs, such as MDIC and traditional authority structures.

7.7 Conclusions

The preceding discussion of the role of extension services in enhancing livelihood security in rural areas of KZN presents a challenge to the extension service delivery as a whole. The extension services in the study area are still based on traditional approaches. The gender bias of extension for men and women based on small-scale commercial agriculture and home economics, respectively is still prevalent. Although rural households have enormous indigenous knowledge (IK) as shown in Chapter 6, the extension services do not take full advantage of this livelihood asset. The top-down approach and methods of extension based on transfer of technology are no longer appropriate in the face of new government policies and changing nature of agricultural and rural development information and communication technologies for reaching rural households. The transfer of technology approach does not accommodate mainstreaming of gender in agriculture and rural development and empowerment of the household.

Agricultural extension services in the KZNDAEA as elsewhere in South Africa confronts a challenge to transform its traditional approaches and methods for livelihood adaptation. Like in many developing countries extension needs to be reoriented to ensure that services are relevant to local conditions and policies. To address livelihood security issues, extension services should link up with other institutional structures and processes in service provision. These structures should

operate within a set of laws, policies and procedures. Therefore extension services can adopt a holistic approach in order to understand the causes of vulnerability, availability or of assets at household level, household multiple livelihood strategies and resource management and livelihood outcomes. It is therefore essential to examine the division of labour according to gender and generation in the study area. This would ensure that appropriate responses and services are in line with the strengths and opportunities of men, women and the youth in the study area.

Capacity building of the extension staff should be given priority at pre-service and in-service level. The policies that respond to the pressing needs of KZN rural households are in place but their implementation is constrained by the limited number of extension agents, lack of transport to reach communities, uncoordinated institutional service provision and training on participatory communication for technology transfer. Multi-institutions are challenged with providing an adequate telecommunication infrastructure to facilitate and speed up availability and access to telematics services in rural areas. The extension services should take advantage of the government's integrated and sustainable rural development strategy to be coordinated by the Ministry of Provincial and Local government. The rural development plan includes telecentres and technology centres. Therefore extension staff training in the use of telematic tools for improved extension delivery will enhance livelihood security of rural households.

CHAPTER 8 THE ROLE OF THE HOUSEHOLD IN RURAL LIVELIHOOD SECURITY

This chapter recapitulates the role of the household as a micro-level unit in enhancing rural livelihood security. This will be achieved by examining the household as an active agent of rural livelihood security. Furthermore, it examines the household livelihood security in view of constraints and opportunities faced by rural households. Thus this chapter presents an introduction, household types and headship, the agency of the household, the household livelihood security concept, household strategies and resource management, institutional support for rural livelihood security and conclusions.

8.1 Introduction

For the purposes of this study, the livelihoods approach provides a direction and foundation in examining the complex rural life in a vulnerable context. As high levels of poverty prevail in rural areas of South Africa, this approach builds upon the lessons of past rural development efforts. Food insecurity, decreased cash income, vulnerability and environmental resource degradation remain a problem in rural areas of KwaZulu-Natal (KZN). The household provides the smallest unit for examining how individuals and communities achieve rural livelihood outcomes because every person belongs to it. The household has been demonstrated to be a flexible component of human cultural organisation though exhibiting a wide variety of forms. It provides a framework for many types of activities and responds to different pressures from larger external societal, economic and political factors (Barlett, 1989; Wolf, 1991). Although there are numerous definitions of the household, this study chose Rudie's (1995) definition described earlier in Chapter 2, as a point of departure to examine the household concept in the rural livelihood security analysis. Rudie (1995: 228) states that "A household is a co-residential unit, usually family-based in some way, which takes care of resource management and primary needs of its members."

In literature there is a lack of conceptual clarity of the household in Third World countries. However, the anthropologists have restarted an intellectual debate regarding the structure of the household in developing countries (Wallerstein and Smith, 1992). They use emic analysis to understand the concept of "household" as it is understood by local subjects of the research to complement researchers' theoretical notions about it. Traditionally, the household was less talked about than family. It was perceived as a family household in which individuals were socialised and interacted with each other. Therefore it was viewed as the micro-unit of a population. As a socio-demographic unit, a household can be described according to its composition, reflecting the mutual relationship among its members. The family has always been the basis for classifying households. Thus there are family households and non-family households (Van Diepen, 1998). This study is mainly based on family households.

Historically, a household was an important social unit in pre-industrial European society for social, economic, educational and political purposes. However, it has evolved from a "primitive, large relatively undifferentiated, extended kin group into the small, specialised, nuclear groups familiar in the modern West." (Netting *et al.*, 1984: xiv). Previously the family household was large and extended. It primarily engaged in subsistence production. Thus it was indistinguishable from economic

activities. Nowadays a household is an autonomous institutional sphere drawing its income mainly from wage employment of adult members. The conventional image of the family household presents an idea that all families are moving in a given direction (Wallerstein and Smith, 1992). The household is often selected as an essential unit of social analysis for social scientific research and analysis because it has both practical and theoretical justifications. According to Noorman and Schoot Uiterkamp (1998) the traditional family household based on marriage has lost its dominant position because of family dissolution by divorce and formation of a variety of living arrangements. Therefore the family life cycle is not as clear-cut and predictable as it used to be.

The household is essentially often a familial structure. It is also a socio-economic unit upon which people draw or claim to give meaning and identity in their lives and relationships (Bingen, 2000). For researchers and statisticians, the concept of household simply means a unit consisting of one or more persons who are related or not related by blood or marriage sharing a common residence, eating together and sharing their income and activities. On the other hand, the term family is not strictly tied to one location or time, or as in some African societies and cultures to blood relationship (Adegboyega *et al.*, 1997; Van Diepen, 1998). It is well documented that households in different parts of the world may take different forms and are not always based on family or kinship relations. Crehan (1992) states that the perception of the concept "household" is different between cultural ideals and actual households.

In the West, the ideal of the monogamous, life-long married couple with children from the same biological parentage is dominant but the reality of divorce rates, remarriage rates and the incidence of single parenting disputes the cultural ideal of a family. Another deviation from reality is the ideal of a male-headed household with a man as the breadwinner whereas in real life the number of female-headed households is higher than it is recognised, particularly in sub-Saharan Africa. Furthermore as a result of the spread of HIV/AIDS epidemic, observation indicates that when a husband dies of AIDS in a household, the wife and mother who often lives with HIV/AIDS dies shortly thereafter. She leaves behind children as orphans. Under such circumstances the child-headed households are becoming more frequent in rural areas Ayieko (1997). In order to clarify the role of the household in rural livelihood security, the following sections of this chapter examines the role of the household in rural livelihood security. Therefore, the next sections will present household types and headship, the agency of the household, household livelihood security concept, household strategies and resource management, institutional support for rural livelihood security and conclusions.

8.2 Household types and headship

A household is a fundamental social unit in which almost everyone grows up and continues to live in as an adult. A deeper understanding of the household is essential for policy and commercial purposes. The information on the variety of households and their structure and processes is needed for adopting policies and provision of institutional support for household livelihood strategies. It is important to note that there is a lack of conceptual clarity about the household. This stems from the overlap of the interchangeable concept of 'family' and 'household'. Traditionally, a household is perceived as a family household. Often the family is used to categorise households,

such as family households, one-person and non-family households (Van Diepen, 1998). Although there is an overlap between the two terms, there has been a realisation of the differences between these terms. Both concepts have been described in Chapter 2.

Most Western countries use the United Nations definition of a household. This definition regards a household as a socio-economic unit consisting of individuals who live together in a dwelling. According to this definition two concepts emerge. First, households are considered as 'housekeeping' units for sharing resources to provide their members with food and other basic needs. Second, households are 'housing' units for sharing a residence. This definition does not take into consideration the household structure (Van Diepen, 1998). The idea of the nuclear family is the basic element in defining family households along with the conceptualisation of the male head of household who is the breadwinner.

The distinction is made between households and families. The household refers to one or more persons that assure some level of pooling income and sharing resources over time so as to reproduce the unit. Often the members of the household are biologically related and/or share a common residence, but sometimes not (Wallerstein and Smith, 1992). The concept of a household is closely related to demographic factors as rooted in family life. However, kinship and social coherence are not included in the definition of a household. Basically a household is an economic unit (Adegboyega *et al.*, 1997; Van Diepen, 1998). Wallerstein and Smith (1992) maintain that the household is an income-pooling basic unit of analysis. Its boundaries and composition are subject to continuing change.

In developed countries the household is normally a unit of consumption and it is not a unit of production of goods and services for sale as well. However, in rural areas of the developing countries, households are units of both production and consumption. A range of different activities is organised using human and physical resources to generate and secure household livelihoods. Dasgupta (1993) describes the rural household as a group of people who cultivate at least a plot of land and share a common store of food and domestic activities. For a number of important services, they depend on common property resources. Rural households engage in agricultural production, tend livestock, and cottage industries. They buy agricultural and other productive inputs and consumer goods from the market. The rural household obtains its income from on-farm and off-farm activities. Diversification of household livelihood strategies is essential for accumulation of assets to improve the standard of living in rural areas (Ellis, 2000). Empirical studies have shown that poor rural landless and near landless households often fail to obtain resources of production such as capital, land, credit, technology and extension services to generate their livelihoods.

There are many definitions of the term 'household'. However, for the purposes of this study a definition by Rudie (1995) was considered suitable for describing the unit of analysing rural livelihood security in rural KZN. The definition emphasises co-residence of members, livelihood strategies and resource management and interaction between household members. During operationalisation of the definition, it was found that in the area of study the co-residential unit is the homestead. Therefore forming boundaries between the household and homestead was problematic as there is an

overlap between the two terms. Also in a study conducted in Swaziland by Russell (1993) it was found that the standard concept 'household' cannot be applied universally in Southern Africa because of fluid boundaries between households within a homestead in rural areas.

As a result of the migrant prevalent migrant labour system in South Africa, it is common to have rural-urban migration and village to commercial farm migration by mostly men and their grown up sons. In these cases women become *de facto* head of rural households. In order to understand the important role the household plays in rural livelihood security, it is essential to first examine the household types and headships.

Household Types

In many African societies, households are based on kinship of the head of household (Adegboyega *et al.*, 1997). Generally, household types are defined in terms of the number of nuclear families in a household, their completeness based on whether they contain widowed or divorced persons and the manner in which one nuclear family is connected to another. Distinction among extended family households of the same stem is made according to the generational position of the head. Most classifications of households fail to take into consideration changes in composition, size and sex ratio (Carter, 1993). Some members of the household do not continually live in a common residence as the definition states. Often in rural African societies, households break up and reformation is determined by seasonal and other livelihood activities that household members engage in. Some members of the household can leave the homestead to work on commercial farm for several weeks or months while others remain behind to perform productive, reproductive and community managing activities (Adegboyega *et al.*, 1997).

Another type of the household that prevailed in the study area was that of a man who has more than one wife. In such circumstances, each wife lives independently with her children and the husband pays all wives a visit as none stay with him on permanent basis. All the same the husband is viewed as the head of all his wives' households. He controls economic and social household decisions of each wife. Therefore it is essential to examine the issue of household headship as it is traditionally understood and what forms are common in African societies.

Household Headship

Traditionally, one person is identified as the head within the household. The head of household is the person in whose name accommodation is owned, leased or rented. According to South African government surveys, a married man is regarded as the head of household irrespective of whether he is employed or not. In official surveys, the concept of household head takes into consideration the structure and processes within the household, such as composition, gender, age, property and other factors. The concept of household headship is significant for two reasons. First, the head is an indicator person on whose income and occupation have routinely been used to indicate the socio-economic position of the household. Second, the concept of a household head is used to identify relationships between household members. Although there are well-recognised problems associated with using this concept of

household headship for relational information, it is still used as a relational reference point because of its operational ease. The method of using the household head in surveys tends to conceal secondary family units within the household (Marsh and Arber, 1992).

According to Hedman *et al.* (1996) the concept of household headship regards the head as the main economic provider, decision-maker and as the person who is designated by other members as the head. This definition often considers the man as the breadwinner and possessing authority in the household. Sometimes it happens that members of the same household may have different socio-economic characteristics and may not equally share resources and responsibilities. However, this is not taken into consideration when the concept of the household headship is used to categorise households. The concept of household head carries assumptions with it. It assumes that a hierarchical relationship exists between the household members. The head is portrayed as the most important member who is often present in the home, having overriding authority in household decision matters and providing economic support (Budlender, n.d.).

Households headed by women are a growing phenomenon in both developed and developing countries though the reasons for this trend differ. In developing countries, women-headed households are mainly caused by a significant increase in marital breakdown leading to divorce and women who get pregnant outside marriage and opt to keep their babies (Byrne, 1995). In developing countries, particularly in sub-Saharan Africa there has been much interest in studying the differences between men- and women-headed households.

Globally, women-headed households are perceived as a vulnerable group. But O'Laughlin (1997) has shown that not all women-headed households are vulnerable. Studies conducted in Southern Africa show that average female-headed households are better off than the average male-headed household. Even this study found that women-headed households are not more vulnerable than men-headed households in the study area. Bruce and Lloyd (1995) state that households in developing countries are structurally complex. They tend to be larger, usually include three generations and or extended kin, a woman with dependants and lacking support of a spouse and she is getting security from other family members within a larger household. The incidence of *de facto* women-headed households is higher in Umthunzini than Ubombo. The reason for this trend is the pattern of rural-urban migration of men to find employment in industrial centres. It was also found there were more polygamous households in Ubombo than Umthunzini. In these types of households, one man is the householder in several households. The householder is the person in whose name the homestead is registered. In case of a migrant labour worker, the male householder is not a member of the rural household because he is absent much of the time. He might be away from the homestead for a prolonged period of time, such as three up to eleven months.

The definition of household headship is often assumed to imply economic dominance, usually by men. It excludes the contribution by other members. And can exclude members who bring income through other means, for example a pension or remittances. The concept of household headship causes more confusion in situations where children live and manage their own household activities without supervision of an adult. As the socio-economic consequences of the HIV/AIDS epidemic are felt in a

growing number of African countries, child-headed households are emerging as an important type of household headship. Often AIDS orphans are left with some minimum resources such as land and housing. Therefore the prevailing poor economic conditions have caused many child-headed households to live in severe poverty (Ayieko, 1997). Once the types of households and headships prevalent in rural areas are examined, the agency of the household in enhancing rural livelihood security will be looked at.

8.3 The agency of the household

One of the critical issues in examining rural livelihood security is the question of the actual agency role of the household. Agency is used as a concept to denote the ability of people to mold and construct social structure, not just be passive agents of it. Household members are seen as having the ability to define and socially construct family household decisions, processes and livelihood strategies, collectively (Allan and Crow, 2001; Winton, 1995). Sen (1990) considers the agency aspect of the household as the most influenced by a person's sense of obligation and perception of legitimate behaviour. To enhance the agency of the household, focus should be put on the capabilities of its members because it is based on human agency.

Conventional economic theories tend to treat the household as though it were an almost wholly co-operative, altruistic unit. However, empirical evidence shows that often within the household there is a problem of economic conflict and inequality. Almost always household members are differentiated according to gender and age. Gender-based differences in the allocation of household assets and resources are indicated in the continuing differentials in female and male access to education. Some studies have shown that intra-household gender and age differentiation has a significant impact on household food security (Folbre, 1989). This study views the household as the agency of enhancing livelihood security. As the household is essential as an agent, more attention should be paid to increasing investments in its human capital in order to ensure sustainable social and economic development in any society (Schuh, 2000a).

According to Pennartz and Niehof (1999) households should be viewed as active agents that are able to influence changes within broad structural constraints. Therefore they act as mediating agencies between individuals and society. The significance of the mediating role of households increases with the processes of social change. In order for the household to survive, it has to search continuously for compromises, and has to co-ordinate changing beliefs, ambitions and behaviours of its members. Households are also viewed as creative agents. For instance, severe constraints can force people to invent new ways of action. As a result of necessity, a marginalised group can produce innovations. Sometimes rules are bent by the household for the sake of individual member for the benefit of the household as a group (Pennartz and Niehof, 1999). Considering numerous constraints faced by rural households, more attention should be focused on the household as an active agent in achieving livelihood security.

Greenhalgh (1995) describes human agency as a reflective monitoring and rationalisation of a continuous flow of conduct, in which practice is constituted in dialectical relation between persons acting and the settings of their activities. The

values assigned to different behaviours and political economy becomes part of the action where the human agent is placed at the centre. In the study area households face many problems in their environment so that livelihood security becomes threatened. Households are large with many dependants, hence their vulnerability. The average household size in the study area is 7.59. Furthermore, the unemployment rate in the study is very high. Thirty three percent of the potentially economically active people in KZN are unemployed. Rural households in the study area engage in multiple income-generating activities, but the proceeds of their main source of income remained low. In Ubombo and Umthunzini, 17.4 and 40.5 percent of the households respectively are (also) engaged in production for the market. Both men and women in the study area engage in diverse informal trading. Another major source of income for households is dependence on old age pension, disability grants and-mostly irregular-remittances. Despite all the constraints faced by the household, members' capabilities are enhanced through socialisation to utilise indigenous knowledge as one of the strategies to support livelihood security as discussed in Chapter 6. Livelihood strategies and household resource management activities are identified and co-ordinated by the household. The household also plays a major agency role in promoting viable social networks between households in the study area. The household uses its labour in work parties or *ilima* as a means of providing social capital in the community.

The agency of the household is also influenced by broader social and economic contexts in which they live. Generally, access to basic services is a problem in both districts where the study was conducted. Households have limited access to clean water, sanitation and electricity. They use wood as the source of fuel for cooking. Another major constraint experienced by households that wanted to improve agricultural productivity was very limited access to land and water for crops and livestock. All households depend on rain or river water for their crop fields and community gardens. Rural households also lacked access to physical capital, such as health and educational facilities and telecommunication. Food insecurity and poor nutrition was reported as a major problem in the study area. In the midst of all constraints in rural areas of KwaZulu-Natal (KZN) the household remains an important agent of livelihood security through its livelihood strategies and resource management. Consequently, socio-economic development at the micro-level is mainly based on investments in human capital of the household.

8.4 The household livelihood security concept

The household livelihood security concept evolved after realisation that household food security needed to be reviewed in a broader perspective. The concept of food security is defined in Chapter 2. Household livelihood security is achieved by adequate and sustainable access to income and resources to meet basic needs. Livelihoods in rural areas depend on a diverse range of on-farm and off-farm activities. Rural livelihoods are generated through a variety of strategies at household level. According to Frankenberger and Mc Caston (1998) the risk of livelihood failure determines the level of vulnerability of a household to income, food health and nutritional insecurity. They consider that livelihood promotion involves improving the resilience of household livelihood and protecting household livelihood systems in order to prevent erosion of assets and resources.

Often the importance of the household as the place where a significant share of a society's human capital is found is neglected. Human capital includes cognitive skills, values, vocational skills, nutrition and health. Schuh (2000b) stresses that the household as an important part of society should receive more attention as the focal point of poverty alleviation efforts. From a household perspective human capital includes education of both children and adults in the household, nutrition, health care and the level of technology. The most human capital in an economy is produced in the household. For example the household may purchase food from the market and combine it with labour in the household and convert it into meals and adequate nutrition. Generally, health care may be acquired from public health service providers and private doctors but sound health comes from the daily care provided by the members of the household as one of their reproductive functions. Also Berman *et al.* (1994) state that households should be used as an institutional focus. Events and conditions internal and external to the household should be examined. In their study of the household production of health (HHPH) they put households at the centre of the health improvement process. The HHPH concept emphasises that focus of health programmes should focus on the presence and maintenance of health rather than the prevalence of disease. Consequently, the household is significant for producing and maintaining human capital. Even education and training takes place in the household. Both health and education are critical to raising the productivity in farming and to gain productive non-farm employment and to improving the productivity of the household. Adult members of the household are almost always in the process of teaching skills to their children (Schuh, 2000b; Schuh, 2000c).

Creating the right economic environment is an important condition for enhancing rural livelihood security. Public investments in physical infrastructure, science and technology, agriculture, education and health are important for promoting development. However, human capital produced in the household is the source of increases in per capita incomes and economic growth. It is documented in literature that when policy makers and the international development community design policies they tend to think about firms as the basis of their policies. However, the new household economics perspective considers the household as a firm that acquires inputs from the market and combines them with the labour available in the household to produce final goods and services. Somehow the economists tend to neglect the importance of the household as the producer of the important capital in an economy (Schuh, 2000b). In rural areas of developing countries the policies can enhance livelihood security if constraints in the household are eradicated to support accumulation and access to assets and resources. To develop human capital emphasis should be put on the importance of literacy, formal schooling, vocational training of both girls and boys.

The main aim in analysing household livelihood security is to answer questions about availability, access, quality and utilisation of assets and resources to meet basic needs. Rural livelihood strategies are influenced by various interrelated factors. To enhance rural livelihood security, households often pursue more than one, sometimes several different non-agricultural activities simultaneously or at different points throughout the year. In addition to farming, the majority of households earn income from trading, service provision, remittances and transfer payment in the form of a state pension or welfare grant (Bryceson, 2000). In Chapter 4, this study provides data on agricultural and non-agricultural income sources for rural household in the study area. Ellis (1999)

considers the diversity of livelihoods as an important feature of rural survival as it is allied to flexibility, resilience and stability. Consequently the more diverse the income portfolio, the better-off the rural household. Hence, livelihood security is enhanced.

In addition to important assets, such as human capital discussed above, livelihood success or security is enhanced if investments are made on physical capital, social capital, financial capital and natural capital. Improved infrastructure in rural areas would help to remove risks and uncertainty of access to assets and resources by households. This includes proper planning for maintenance and management of natural capital stocks. Access to good quality housing was used as an indicator for better livelihood security. The housing structure and quality in the study area is in general unsatisfactory as evidenced by small size for the number of household members occupying it and poor quality materials for walls and roofing.

Poor water supplies and sanitation pose a major constraint for rural households. A lot of time is spent on fetching water mainly from rivers, springs, boreholes and taps. The sources of water are not clean in most cases. Some households use pit latrines while others had none. The latter use bushes as latrines. Lack of piped water and sanitation facilities have a negative effect on health and nutrition, and, hence on livelihood security. Households in the study area do not have much access to energy and telecommunication facilities. The main source of energy for cooking is firewood. Women and girls are responsible for fetching firewood from the forests. This practice is a constraint on the household's time and has a detrimental effect on the natural resources in the environment. The general infrastructure, in terms of roads, markets, health and educational facilities and telecommunication constrain households from achieving positive livelihood outcomes. The households in the study area depended heavily on natural capital, namely water, trees for firewood, housing and medicine, plants for food and health. Financial capital is not readily accessible to rural households, as there are no financial institutions for savings or obtaining loans. Social networks and associations to which people belong are important for household members to gain access to networks of influence within the community and with external institutions, such as the agricultural extension services. It is however, important to identify poor households and strengthen their participation in community-based resource management systems.

In the context of limited assets and resources constraining livelihood security, households engage in multiple income-generating activities in order to diversify income portfolios. In this way they improve their standard of living or livelihood outcomes (Ellis, 1999).

8.5 Household strategies and resource management

Despite the economic, social, political and environmental constraints that rural households face, household members as a group generally adopt a comprehensive view of their situation. They take account of the actions of others with whom they interact and share common interests and objectives in the long run. Therefore household strategies provide a broad and coherent prescriptions for action. These are always reviewed in light of unforeseen events (Pennartz and Niehof 1999). In the study area household livelihood strategies and resource management were identified

as essential in directing on how households could overcome constraints in order to contribute to rural livelihood security.

Rural households often pursued various agricultural and non-agricultural activities. The household livelihood strategies that were identified to be important are wage employment, migration, agricultural activities, small enterprises and state old age pensions and grants. As a result of migration of men to urban areas, women become responsible for the household and homestead. Both men and women are managers of the homesteads. However, they face several limitations in enhancing household livelihood security. The main issues of concern to rural households that are involved in agricultural production at subsistence and commercial levels is lack of access to and control over land, labour, financial resources, cash income, extension services and appropriate technologies. Thus the household has to devise strategies to overcome these constraints. A common strategy used by households is to deal with problems of assets and resources for farming is to get household members involved in non-agricultural activities as income sources. A common rural household livelihood strategy is to promote non-agricultural activities that are economically dominant. Another livelihood strategy used in the study area is the building up of social capital. Common rules and norms pertaining to reciprocity and exchange are expected to build trust, connectedness and networking of social institutions such community development associations and cotton or sugarcane producers' groups. The building of human capital is also taking place as more children and the youth are encouraged to complete their schooling before they started to seek work.

Rural households in the area of study manage their physical, financial, human, social assets and natural resources such as water, land, plants and forests in their immediate environment. Therefore, rural households are important natural resource users and managers. The natural environment provides a wider range of materials used by households in Ubombo than Umthunzini. Consequently, environmental degradation is a constraint affecting all households in some way. The households have indigenous knowledge (IK) and potential to be key agents in promoting and conserving natural resources and in this way promoting rural livelihood security. This knowledge and potential should be supported with appropriate information and extension services. Improving the household human capital for coping with environmental sustainability would have a positive impact on the socio-economic sustainability of rural households. Thus, different institutions and development organisations can play a major role in promoting sustainability and rural livelihood security.

8.6 Institutional support for rural livelihood security

The household is an essential micro-level unit for analysing rural livelihood security. Thus linking micro and macro levels in the livelihood framework requires that institutional and policy analysis must take place at all levels. The institutions and policies mediate between the vulnerability context and the livelihood assets of the household. Both formal and informal institutions are important, particularly at community and district level (Nicol, 2000). Increased investments in human capital and gainful farm activities and non-farm employment are a key to sustainable rural livelihood security. Therefore public and private resources should be directed to developing the institutions that provide improved rural livelihoods, such as health, food, nutrition, education, infrastructure, financial facilities and natural resources.

Throughout sub-Saharan Africa, institutions determine who can have access to and mobilise or control different types of capital. Strong norms and customs determine control and access. Familial institutions, such as the rural household exert a powerful influence on the opportunities for, as well as the organisation and assurance of livelihood activities (Bingen, 2000). Institutions are described by Appendini *et al.* (1999) as cognitive, normative and regulative structures that shape social behaviour and attribute meaning to it. The local institutional context refers to the specific manifestation of institutions in the geographical area under study. It comprises those institutions that play a role for the households in the area.

The relations between rural households and local institutions are essential, as households operate in multiple institutions at the same time. The combination of different institutions determines the claims and access to resources and the possibility of certain productive activities. Institutions often fulfil different functions at the same time, such as providing inputs for productive activities, providing forms of social security, providing elements which are central to people's identity and meaning in life. Therefore it is critical to strengthen those existing institutions which play an important role for the rural household (Appendini *et al.*, 1999). Bingen (2000) categorises institutions on the basis of relations and practices into five categories:

- *Familial institutions* include the household as an important familial structure. They cover a range of descent or kin-based relations and practices. Households comprise differing interests that influence decisions concerning the options to pursue as well as the outcomes of livelihood strategies. It is important to understand livelihood strategies as being designed and carried out in a context of social interdependence and support that is also fluid and contested;
- *Communal institutions* are grounded on principles of trust and reciprocity that are commonly tied to shared physical or natural resources and their establishment draws upon existing sources of social capital;
- *Social institutions* draw upon principles of trust and reciprocity, but rely more on broader societal interests that arise from concerns to promote their socio-economic development;
- *Collective institutions* are those in which the relations and practices are defined as contractual. In addition to the widely studied common property resource institutions, these include a range of practices and relations concerning various types of production, marketing and distribution activities;
- *Policy/Governance institutions* consist of constitutional or judicial conditions and stipulations, policies and specific legislation and/or regulations, as well as the norms that guide public action and conduct, including those guiding the programs of government technical services. Constitutional, legislative, regulatory and administrative norms and procedures both set the stage and influence the way in which other people may use other institutions to pursue livelihood strategies.

Institutional inter-relationships are significant for capital regeneration. Thus inter-institutional relationships provide the sources of capital upon which people draw in order to craft and pursue their livelihood strategies. Through different government departments at national, provincial and local levels, the household is able to utilise services provided to strengthen livelihood strategies. In collaboration with governance institutions, the private sector, non-governmental organisations (NGOs), and

community-based organisations (CBOs), the household benefits from inter-relationships and service delivery.

In the context of rural livelihoods in South Africa, effective governance can only take place if public institutions are functioning properly and are responsive to the needs of individuals in society, particularly the poor and marginalised. The institutions are meant to provide services based on the needs of households. Public institutions and their officials at national, provincial and local government level should be held responsible for their actions in attempting to address poverty and equality. In collaboration with the public institutions, NGOs and CBOs fulfil an important social service delivery function in the absence of adequate state provision to the disadvantaged majority in rural areas. Together with the private sector, the public and private institutions have a potential to enhance rural livelihood security (May, 1998).

All these institutions can be effective if they strive to strengthen human capital in rural households in such a way that sustainable livelihoods can be generated. Institutional interventions can address poverty problems by strengthening the asset base of the rural households with respect to human capital, social capital, financial capital, physical capital and natural capital. Institutions can deal with a wide range of issues in support of livelihood strategies, such as agriculture, land reform and distribution, technology, health and nutrition, education, housing, water supplies and sanitation, public works, social welfare, environmental matters and other socio-economic issues. Co-ordination at central level is often complex and difficult. It is much easier to achieve co-ordination at micro-level. Thus a better understanding of the household is essential. Inter-institutional relationships, is critical to the success of efforts to improve the livelihood strategies of rural households. They enable households to come to terms with change. Institutions can also help empower households to draw upon them as they seek to design new livelihood strategies (Bingen, 2000). Responsibility for programmes and projects affecting the household may cut across a number of government agencies and institutions, binational commissions, international organisations, parastatal organisations, NGOs, the private sector and CBOs.

8.7 Conclusions

In this chapter the household is discussed as an important context of human capital in rural society. The household plays a significant role in enhancing rural livelihood security. The chapter examined the household types and headships. The type of household is considered important because it clarifies its definition as it is the unit of analysis. In Chapter 4 it was pointed out that there was sometimes a problem of membership where a husband in polygamous situation eats in more than one household on different days. Household headship according to gender was found to be different in the study area. For example there were more women-headed households in Umfuzini than Ubombo. This situation is the consequence of rural-urban migration. The important point about the household is that it is where much of the human capital is produced. It is where food and nutrition security of each member is provided for. The household provides socialisation and informal education and develops cognitive skills and general care. In addition the household contributes toward formal education and training of its members. To examine headship by gender is significant as rural women face limitations due to their gender-specific roles and

responsibilities. Women lack opportunities for participation at all levels of decision-making processes in rural areas of KZN.

The household plays a significant role in promoting livelihood security. It is an active agent of facilitating national socio-economic development as the household supplies productive activities in agriculture and in the non-agricultural sector. In order to promote social and economic development the household should be the focal point for extension programmes to ensure that the knowledge required to make more efficient use of the assets and resources is available. Therefore investing in the household will enhance its agency in promoting rural livelihood security.

The capacity of the household should be built in order to strengthen the household's livelihood strategies and resource management skills. The household as an agent of rural livelihood security has a role in enhancing both agricultural and non-agricultural income-diversifying activities, while emphasising the human, social and environmental dimension of rural life. However, effective institutions to deal with utilisation of assets and resources are critical if rural livelihood security is to be achieved. Therefore the household should be the focal point in institutional partnerships and economic development.

The preceding chapters explored the significance of the household to the rural livelihood security in the study area. This chapter addresses two main aspects. First, it concludes the study by summarising the main findings of the research as guided by the research questions formulated in Chapter 1. The conclusions will describe what the results mean for the field of rural livelihood security. Second, recommendations based on the results of this study and experiences of the researcher will be made.

9.1 Conclusions

The discussion of conclusions emanates from the three categories of the research objectives of the study from which six research questions were posed earlier.

9.1.1 The household structures and processes

Question 1: How do household structures and processes relate to rural livelihood security?

This study considers the household as the unit of analysis. Therefore it is essential to reach conclusions about the relationship between its structure and processes to rural livelihood security. For the purposes of this study the operational definition of the concept of the household as defined by Rudie (1995) took into consideration three important aspects of the household. These aspects are the residence, family and resource management. The household is considered to have flexible boundaries as members enter and leave for various reasons, such as birth, death, marriage and any other reasons. Therefore the structure and processes of the household are subject to continuing change. The results pertaining to the household structures and its processes found that they are diverse depending on specific situations. Thus conclusions about how they relate to livelihood security are very much determined by the uniqueness of these situations.

At the inception of the study, it was assumed that a rural homestead consisted of one or more households. However, the survey revealed that the homestead provides a permanent residence for all family members who are rural dwellers and migrants working and residing away from the rural area. All members of the homestead are expected to take part in family customs and rituals. The homestead might have many housing units for different nuclear families within it. In this setting the residence is shared. Often members of the homestead share food and eat together. They share assets and resources, such as household equipment, labour, livestock and its products and so on. It was apparent that social organisation of the homestead was mainly based on members' biological linkage to the head of household who is often a man or woman who is related to him by blood or marriage. Boundaries between homesteads of the same kinship group overlap as explained in Chapter 4. Some related members of different homesteads share food, accommodation and household activities.

The household structure in its broadest interpretation includes composition, gender and generation, division of labour, life cycle, patterns of power and authority, kinship linkages, resource availability, access and allocation, intra-household co-operation

and community resources. The relationships between the household structure and its processes and rural livelihood security are not easy to define because the structural boundaries are not clear. For instance, in developed countries a traditional family household has always been associated with the concept of the nuclear family where the male adult who is a husband is identified as the head and breadwinner. In this context the breadwinner is expected to seek work outside the home to support his wife and children. He also shares residence and eats together with them. In the area of the study, the homestead is a more appropriate social organisation unit than the household concept. The composition of the rural household has flexible boundaries. At the early stage, the study defined the boundaries for the household composition. According to those boundaries, the members were defined as people who have lived in the household for a continuous period of six months. However, rural dwellers consider migrant workers as members of the rural household, despite their absence for a much longer time than six months. The financial contribution of migrant workers makes it difficult to define boundaries between the urban and rural households. Another problematic aspect of the rural household structure is posed by situations of polygamous marriages. One man can belong to more than one household when he pays regular visits to his wives' residential units. In this setting, occasionally he shares meals in more than one household. Although the husband of many wives is not the sole economic provider, he is considered the head of all households.

In the study area it was concluded that household headship does not depend on the individual who is the economic provider. But headship is determined by the person's authority and power guided by the patrilineal system of social organisation. Thus men have more authority than women. The household composition is mainly based on kinship and membership is formed by multiple generations. The average household size in the study area is far above the average for the province of KwaZulu-Natal (KZN). Furthermore, the dependency ratio is high as discussed in Chapter 4. As a result of large household membership and high dependency ratio, a conclusion is made that the majority of households are poor or vulnerable to poverty. It is also evident that if a large number of people are dependent on one person who is the economic provider, there is a problem of limited assets and resources to meet the basic needs. Poor and vulnerable households contribute to rural livelihood insecurity as evidenced by food insecurity, low cash income and environmental degradation. The results showed that households in Ubombo with higher economic dependency ratio were more disadvantaged in terms of wealth than ones in Umthunzini.

Gender and generation are essential factors in the structure and processes of the household. Headship by gender was statistically compared between the two districts and the difference between the two was significant. There are more male-headed households in Ubombo compared to Umthunzini as discussed in Chapter 4. Many households in Umthunzini have female-household heads. This high number of female-headed households in Umthunzini has a positive impact on rural livelihood security because female-headed households were proved to be wealthier than male-headed one. The results of this analysis are outlined in Chapter 5. Women and their children in female-headed households have diverse sources of income to enhance their livelihood security. In literature female heads of household are known to spend available resources on the welfare of children, the elderly and other members of their households. Sometimes women deprive themselves of food to the detriment of their own food and nutrition security. Thus it is concluded that households with women

heads are likely to be taken good care of in terms of meeting basic needs of food, shelter, clothing, education and health. The importance of giving men authority and power is still dominant in the study area. Although some women are heads of household, the majority of heads are married and linked to a male for better access to resources, such as land.

Generation is another important aspect of the household structure and processes. Households in Ubombo have many dependent children compared to Umthunzini. Such households are even more vulnerable and poorer and have a negative influence on rural livelihood security. The general level of education in the study area is low but women heads have attained higher levels of education in Umthunzini than Ubombo. Consequently, a conclusion is reached that the educational level of female household heads has a positive impact on rural livelihood security of households in Umthunzini. It is also notable in the analysis of vulnerability in Chapter 5 that household members who are over 60 years old receive a state pension of R520,00 per month. They provide an important regular source of income for the household. Therefore household membership of a pensioner, particularly women, has a positive impact on rural livelihood security. Elderly male pensioners were reported to have a tendency of spending their money on their own personal luxury items, such as purchasing of alcohol and cigarettes. Income from state pension is not a sustainable source because its availability depends on whether the pensioner is alive or not.

Furthermore, this study concluded that sexual division of labour has an impact on rural livelihood security. Women and children play a major role in reproductive and productive activities. From an early age, girls are expected to help their mothers with domestic tasks, when they are not attending school. They also assist the household with agricultural activities, handicraft production and informal trading. Women play a major role in voluntary community work. As discussed in Chapter 4, women have more activities to do in the homestead and outside it than men. Consequently, girls learn to do all multiple reproductive and productive tasks in preparation for their adulthood roles and responsibilities. The study revealed that boys do less work than girls in the household. In both districts men are expected to find wage employment in the workplace. As a result of the high rate of employment in the study area, unemployed men are reluctant to make a meaningful contribution in household reproductive activities and food production. This unequal gender division of labour threatens household food security and rural livelihoods. Despite men's minimal roles in the household activities, they have the power and authority to make important decisions for the household. This study also indicates that a new type of household is emerging in the rural province of KwaZulu-Natal (KZN) because of the HIV/AIDS pandemic. This type of household is discussed in Chapter 5 and 8. Therefore an appropriate examination of the child-headed household structure and processes still needs to be researched as no guidelines were found on how to classify these households.

Regarding the operational definition of this study, it was found that kinship linkages are essential in determining the boundaries of the household and distribution of power and authority. The idea of the household members residing and eating together and sharing activities is important but rural-urban migration makes these boundaries flexible. Even members who fail to contribute their income or remittances to the household are still considered as members of the group as shown by case studies in

Chapter 5. Thus kinship ties are more important in defining the structures and processes of the household than issues of residence and eating together. Gender and age play an important role in determining some responsibilities and obligations of members. These include socio-economic obligations pertaining to decision-making. For example, elderly women without husbands are given the same respect and authority as male heads. Thus access and allocation of resources is still based on unequal gender and generation relationships.

9.1.2. The appropriateness of the concept of household in examining rural livelihood security

Question 2: How appropriate is the concept of household in examining rural livelihood security and household food security in an African context?

Generally, the household in developed or industrial countries is viewed from a perspective of a nuclear family with a mother, father and their biological or adopted children, as discussed earlier in this chapter. However, contemporarily this situation has changed for many family households. In many of the households, both the husband and the wife are economic providers as they earn an income for generating household livelihood security. The concept of household based on this type of a unit has some boundaries around it. These pertain to family, residence and sharing of resources and activities. The family household in a developed country's context is usually the centre for reproductive and consumptive activities and the productive activities take place in the workplace domain, outside the home. Furthermore, most of the community management activities take place in the public sphere.

Contrary to the developed countries' household concept, the situation in the area of study differs in that both reproductive and productive activities take place in the household or homestead. In the study area the provision of community services is generally inadequate and particularly, very poor in Ubombo district. Therefore as a result of limited public facilities, such as primary health clinics, hospitals, creches and pre-schools, markets, factories and so on, some of the activities that would normally take place in the public sphere in developed countries, are performed at home. Examples of child and maternal care services rendered by traditional birth attendants are discussed and illustrated with case studies in Chapter 6. Also production and marketing of handicrafts take place in the home. Actually a homestead is a productive unit for subsistence and cash crops, handicrafts and livestock. The rural-urban migrant labour patterns, polygamous marriages and the kinship ties make it difficult to explicitly define the concept of household in an African setting. The migrants have households to which they belong in an urban area. Meanwhile they consider the rural homestead as their permanent home, other family members and the spiritual beings. In the study area the dead are also buried inside the homestead and not in a cemetery. Rural migrant workers living in urban areas, also send remittances to their rural households as a contribution towards reproductive and productive activities.

Polygamous marriages are problematic in examining the household concept. The boundaries are not clear where one man has authority and power over more than one wife. Wives reside with their children and take care of the reproductive and productive activities on a daily basis. The man cannot be permanent in one residence. This situation complicates the definition of the concept of household in examining

livelihood security and household food security. It is also concluded that the patrilineal system does not allow single women to establish independent households if they are unmarried. Even those who have children cannot easily access land and resources to stand on their own without a male relative in charge of them. This also poses difficulties in examining rural livelihood security if the household is the unit of analysis,

The study found that although the household can be an important unit for facilitating extension services, it is neglected in that aspect. Instead, the extension services focus on individual farmers or groups, of farmers and community members. The fact that farmers belong to a household before they can be categorised at community level is overlooked. The extension services have a narrow view of appropriate programmes that enhance household food security and rural livelihoods. The KZN extension services still direct agriculture and home economics programmes to men and women, respectively. The study found that the extension services do not take the rural homestead as essential in promoting economic growth and social development. As indicated in Chapter 7 the extension service uses a linear rather than systems approach to extension. The extension services therefore have shortcomings in looking at rural livelihood security in a holistic manner.

For the concept of household to be appropriate in examining rural livelihood security and household food security in an African context, three main issues are important in answering the second research question. First, the local context of the area should be taken into consideration in determining an operational definition of the household and its boundaries. Second, the prevalent household types and headship should be clearly understood as discussed in Chapter 8. Third, the household should be viewed as an important micro-level unit of analysis and agency of enhancing socio-economic development and rural livelihood security. If these issues are addressed the household would be an appropriate unit of analysis for rural livelihood security, particularly in situations of vulnerability and poverty. The problems that are common in rural settings are lack of assets and resources and lack of institutional co-ordination to deal effectively with causes of rural livelihood security. The household is an essential micro-level institution with which extension services and other institutions could collaborate to support livelihood security.

9.1.3. Gender and indigenous knowledge systems in rural livelihood security

Question 3: What is the significance of gender in rural livelihoods and indigenous knowledge systems to the agricultural extension services in supporting rural livelihood security?

Gender plays an important role in the structure and processes that relate to rural livelihood security as discussed in Chapter 4 and 5. The household headship, composition, division of labour, decision-making, authority, power and livelihood strategies are mainly centred around gender roles in the household and community. The results indicate that unequal gender relations are evident in rural households. Women are disadvantaged in reaching their potential to eke out livelihoods, particularly where they were dependent on male heads of households as explained in Chapter 5. Gender is thus important in enhancing household food security and rural livelihood security. Women take heavy responsibilities of reproductive, productive

and community management tasks. Men often find wage employment in order to make a financial contribution to the household but they do not ensure that the household is food secure. The satisfaction of the household needs mainly depends on how women allocate and use assets and resources. Gender proves to be an essential factor in using indigenous knowledge (IK) in enhancing livelihood security.

Both men and women possess IK. However, the study revealed that women's IK is much richer and highly valued in remote rural areas and is used as a livelihood strategy for reproductive and productive activities of rural households. Households in Ubombo depend more on IK in constructing rural livelihood security than those in Umthunzini. IK is differentiated according to gender. Women's IK is related to their reproductive, productive and community management roles. They gather wild foods and produce indigenous crops for household consumption. Once food is harvested, it is women's responsibility to select and store seeds. Their IK is crucial in identifying appropriate storage methods to ensure food security. In addition to food storage, women also process, preserve and prepare food for the household. The case studies in Chapter 6 indicate that women's IK is significant for maternal and childcare, particularly in remote rural areas where health facilities are hard to come by.

Women and men utilise their knowledge in identifying suitable materials for making handicrafts. Forests provide wood for fuel and carving of traditional artefacts. Trees are also used for medicines and sold to herbalists for income-generation. The extension services focus on technology transfer to mostly male farmers of cash crops, such as cotton and sugarcane in Ubombo and Umthunzini, respectively. Women are encouraged to participate in community gardening and subsistence crop production. Indigenous knowledge of women in food production, particularly in land usage, intercropping, pest control and management and small livestock husbandry is not taken into consideration in extension services. Environmental issues and sustainable resource management are not adequately addressed by the extension services in the study area. It is clear in Chapters 6 and 7 that issues of gender and indigenous knowledge systems are important in rural livelihoods and the agricultural extension should examine how these issues can be given attention in order to support rural livelihood security.

9.1.4. The role of agricultural extension in enhancing rural livelihood security

Question 4: What is the role of agricultural extension in enhancing rural livelihood security?

In order to enhance rural livelihood security, the agricultural extension services have a responsibility to enhance rural livelihood security through institutional transformation. Extension services have a major role to play in the food systems chain, from production to consumption and waste management. One of the government policies is to alleviate and eradicate poverty. Thus household food and nutrition security is important for the well being of individuals. Healthy individuals are capable of making an effective contribution to socio-economic growth at local and national levels.

In the study area, the extension services do not reach the majority of households as indicated by the survey. Due to infrastructure limitations and lack of transport, the extension staff does not reach community groups and individual farmers on a regular

basis. Although these end-users of extension are members of households, the importance of the household in enhancing rural livelihood security is neglected by the extension services. The extension services have a responsibility to implement policies that support livelihood security with the goal of reducing poverty and vulnerability. This can take place if the traditional extension approaches are changed to be in line with the policies. However, it is important for the extension to use a pluralistic approach through building partnership with other public sector institutions, private sector, non-governmental organisation (NGOs) and community-based organisations (CBOs) to strengthen its effectiveness. Well co-ordinated institutional collaboration of institutions that provide agricultural and rural development activities is lacking in the study area.

The extension service delivery system does not have strong and effective linkages with research institutions and other extension agencies and educational institutions. Therefore this study concludes that institutional transformation in the extension services is required. A joint institutional effort by relevant stakeholders should be undertaken to work out methodologies to implement policies, such as mainstreaming gender in agriculture. A collaborative extension service should promote food and agricultural production, provide water supply for household usage and irrigation, appropriate infrastructure, such as roads, telecommunication facilities, markets, input suppliers, educational and health facilities, nutrition education programmes, business management skills and capacity building of individuals and organisations. Extension services in the study area do not pay attention to supporting usage of appropriate technology for productive work as well as reproductive work in the household. The extension staff does not have the capacity to facilitate implementation of policies because they lack training to do so. The extension services have the potential to be effective in enhancing rural livelihood security if they could adopt a more holistic approach to agriculture and rural development. The traditional boundaries between the field of agriculture and home economics are a barrier to effective enhancement of rural livelihood security.

The training of home economics extension officers and their extension programmes is not in line with most of the needs, constraints and potentials of rural households and policies on agriculture and rural development. The home economics extension officers are not equipped to use participatory approaches, gender analysis techniques and skills necessary to analyse the rural situation and context. Male extension officers are not trained in these skills as well. They are not trained to work with rural households and to communicate information that would be relevant for their gender roles. There are some crucial aspects of rural livelihoods in which both male and female extension officers were to make an impact if they had appropriate training to enhance rural livelihood security. For instance, the male agricultural extension officers are not ready to conduct socio-economic surveys in order to implement relevant projects. The extension staff is not trained to address numerous food insecurity problems arising as a sequel to the HIV/AIDS pandemic. Although women play a major role in ensuring household food security, it is essential that both male and female extension staff take joint responsibility for food and nutrition education of the household. In view of the shortcomings in the training of extension staff for their role, a conclusion is reached that the extension services under-utilise their human resources.

This study concludes that the limitation or lack of resources and poorly maintained physical infrastructures, particularly telecommunication and electricity make it difficult for the extension services to progress and adopt and use information and communication technologies (ICTs) which offer new ways of communicating and exchanging information and knowledge. The extension service offices did not have computer hardware and software and the staff was computer illiterate. ICTs as discussed in Chapter 7 could be a useful resource of information and knowledge for supporting rural livelihood security. They enable information and knowledge about agriculture and rural development to reach end users. However, rural areas, such as Ubombo and Umthunzini experience infrastructure constraints. Furthermore, issues of illiteracy and local languages for which there is no software, such as isiZulu are problematic. Therefore the ICTs are ideal for enhancing rural livelihood security by the extension services. The ICTs could play a major role in facilitating communication, co-operation and interaction among extension staff at district, regional, provincial and national levels. This type of communication would save money on telephones and transport costs for attending regular meetings. Considering that the majority of the households in the study area do not have access to telephones and electricity as discussed in Chapter 4, radio is a better alternative for reaching rural households with information and knowledge through the extension services. O'Farrell and Norrish (2000) support the view that the radio reaches people who are illiterate and very poor as it is relatively inexpensive to run. Munyua (2000) also reveals that illiteracy and lack of the basic foundation of education is a fundamental barrier to harness the benefits of ICTs.

9.1.5. The significance of indigenous knowledge systems (IKS) to agricultural extension services

Question 5: *What is the significance of IKS to agricultural extension services in support of rural livelihood security?*

Indigenous knowledge systems play an important role in rural livelihood security. Agricultural production is one of the household livelihood strategies in the study area. However, the majority of the households in Ubombo and Umthunzini depends on a diverse number of activities to eke out their livelihoods. Indigenous knowledge is an important asset owned and controlled by the rural household. Chapter 6 examines the contribution of IK to livelihood security. The IK is part of human capital the household possesses uses to accumulate assets and resources for the household's reproductive, productive and community management activities. Rural households, particularly in Ubombo show to be very dependent on IK and the natural resources in the environment.

The IK of rural households supports food security when it is used to identify useful resources required to meet their needs and solve problems. This knowledge gives households access to food, fuel, medicines, income-generating opportunities and other resources. The study revealed that IK is an appropriate asset to own where the basic provision of services is inadequate or not available, such as clinics in Ubombo. For example traditional birth attendants use their IK to provide a vital service to the community. Food gathering and production is mainly based on IK of women. Households still use traditional methods of food production and post-harvesting technologies for food storage, processing, preparation and waste disposal and

management. Although there was some control on hunting, it was found that there was no control measure on the use of forests and wild plants. Therefore sustainability of natural capital is at stake whereas IK need to be supported because they enhance rural livelihood security.

The traditional approach to extension services is top-down and based on transfer of technology. The extension officers are supposed to bring new information to the farmer without much bothering to know about the socio-economic context. Policy discussions on promotion of IKS have not filtered down to the district extension level. As stated earlier the agricultural extension services are not in line with some aspects of the national policies. Therefore their implementation does not take place because the extension staff fall short of in-service training to keep up with systems thinking and changes. In the study area there are no planned programmes to encourage the use of IKS. It can thus be concluded that the IKS are not considered by the extension services to be important because the staff lacks awareness of their potential in enhancing rural livelihood security.

9.1.6. The extension service staff's approach of gender and indigenous knowledge

Question 6: *How does the agricultural extension service staff approach issues of gender and indigenous knowledge?*

The agricultural extension services are characterised by a top-down technology transfer approach. Despite the national and provincial policies that promote the need for more participatory methods in extension, a large portion of the extension workers lack appropriate training to address gender and indigenous knowledge issues. Extension services have broadened their scope of end-users to include farmers, women and rural youths. However, the traditional methods of extension are used to reach rural communities. The general approach to agricultural extension and rural development is still based on directing cash cropping information to men. For instance, cotton and sugarcane farmers in Ubombo and Umthunzini get this type of information knowledge and skills. Women are organised into community gardening groups to produce vegetables for household consumption and marketing of the excess produce. Home economics extension workers direct their programmes to rural women. They offer inappropriate programmes for women's reproductive roles and overlook women's reproductive roles in agriculture as discussed in Chapter 7. Women involved in community gardening groups are not trained on how to deal with excess produce to prevent loss of nutrients and vegetables per se. Neither men nor women extension workers have the capacity to train rural women in food storage, preservation, preparation nutrition and business management skills to handle excess produce in vegetable gardens.

The natural resource base was shown to be essential for generating rural household livelihood security in the study area. Ubombo households are more dependent on natural resource goods and products than Umthunzini ones. As a result of poverty and vulnerability, there is an increased demand on limited natural resources, such as water, land, wood for fuel and shelter, wild plants, forests for food, medicines and handicrafts. The high demands on the natural resource base results in a shortage of natural resources on which households depend for their livelihood security. Hence

environmental degradation and damage set in as too many people try to make a living on limited natural resources. Food insecurity becomes a problem affecting human capital of the household, such as labour and health.

At provincial level the Directorate of Technology Development and Training conducts some trials based on indigenous knowledge systems, such as intercropping, medicinal plant cultivation and indigenous poultry production at experiment stations. However, the extension service officers in the study area lack training and appropriate methods to make use of rural household's indigenous knowledge in strengthening their capacity to use natural resources in a sustainable manner. The extension service staff is powerless to address interlinked problems of poverty, gender issues and environmental depletion. This study concludes that without re-training of the extension staff on participatory approaches to extension and gender analysis, integrating women into the mainstream of agricultural and rural development cannot take place.

9.2 Some theoretical considerations

One of the three categories of the research objectives was based on the theoretical aspect of the research project. Thus this section concludes with some theoretical implications based on the research. These theoretical considerations concern indicators for livelihood security and food security, the relationship between the household and homestead and gender theory pertaining to female-headed households and vulnerability.

9.2.1 Indicators for food security and livelihood security

This study analysed the household structure and processes that affect the utilisation of assets and resources and how these contribute to food security and livelihood security. Qualitative and quantitative indicators were used to measure the situation. Some of these were derived from livelihood security literature while others were developed in consultation with key informants and members of the focus group discussions. Indicators are very important in monitoring and evaluation of household situation or change brought about by changes in the environment. Actually they are standards against which to measure progress over a period of time.

In the literature there are numerous indicators of household livelihood security. Some of these indicators are relevant while others are not. Literature tends to put emphasis on regular household cash income as one of the most important indicators. However, cash income should be interpreted within the socio-cultural context within which it is being measured. In the study area we found that social bonds and social norms are an important part of the basis for generating livelihood security. Rural households tend to invest a lot of resources in collective activities, such as *ilima* (work parties) because they know that others will also do the same. Therefore, a household that does not have cash to pay for agricultural labour benefits from social capital rather than financial capital. Some households are engaged in a range of income-generating activities in order to secure their livelihoods. For this reason diversification of activities is regarded as an indicator of livelihood security. We found that some households in the study area depend more than others on natural capital for their food security that is embedded in livelihood security. However, activities of using natural resources

without ensuring their sustainability are detrimental to the future access by the whole community to natural capital. This means that the indicator of diversifying productive activities should be considered from a broader contextual point of view.

Another important indicator of household livelihood security emphasised in the literature, is dependency ratio based on age. This study found that such an indicator was not appropriate for rural households in KZN for various reasons because there is a high unemployment rate in the study area; adults are not necessarily economically productive. Second, some women and their children under the age of 16 participate in a wide range of income-generation activities. In some cases income is earned in kind rather than in cash. Child-headed household members often, generate their livelihoods by providing their labour to neighbours for payment in kind. In some households children earn income to support adult members and who should be earning their own income. Third, we found that all pensioners above the age of 60 years receive a State pension. The amount of money they receive is an important source of income for the household. Most of them are breadwinners who support their sons, daughters, grandchildren and other relatives. In this case the dependency ratio based on age is not relevant as an indicator of livelihood security because theoretically a person above 64 years is not regarded as a breadwinner with dependants. Consequently, for the purposes of this study, an economic dependency ratio was constructed to make up for the limitations of the age dependency ratio in the context of rural KZN. The economic dependency ratio was considered important for determining livelihood security.

The concept of indicators should be determined in consultation with the household in a specific context. As the livelihoods approach is people-centred, a participatory process should be undertaken to get appropriate indicators in the local context or situation. Therefore suitable indicators should be those that are developed by researchers and households in order to contribute to local understanding and empowerment. The household remains an important micro-level of analysis because of the critical intra-household processes that are influenced by gender and generation dynamics pertaining to asset portfolios and livelihood strategies. An understanding of the household processes would facilitate effective implementation of community development projects by a combination of institutions, namely the public sector, private sector, non-governmental organisations (NGOs) and community-based organisations (CBOs).

9.2.2 The relationship between household and homestead

The census description of the South African household in the manual for October Household Survey (OHS) (1996) defines the household as a person or a group of persons who eat together and share resources and normally resides at least four nights a week at the specific visiting point. A live-in domestic worker is regarded as belonging to a separate household (Budlender, n.d.). Within a functionalistic point of view, the household performs important functions as defined by Rudie. But it is essential to use a comparative perspective between the situation in developed countries and in an African context. Sociologists see the application of the concept of the household as problematic in African societies. Burch *et al.*, (1987: 20) express concerns about this problem by stating "We assume that census concepts of household are generally comparable from one time and place to another. This assumption is valid

for the vast majority of population censuses, although problems arise for particular cases [...]; the assumption may be most problematic for Tropical Africa”.

Another sociologist, Goody (1989: 130) states, “household size [...] forms a constant of most census records. But the results are frequently difficult to use since they are usually based on the concept of the hearth (cooking unit), which may be embedded in wider groupings, namely the farming group, and on the concept of the houseful or dwelling group. Indeed the activities of consumption and production may well extend beyond any boundary-maintaining units through the exchange of food and labour.” Furthermore, Guyer and Peter (1987: 205) question the appropriateness of using the household as the unit of analysis, hence they conclude by stating “far from the household being a discrete entity, its boundaries are often very ‘permeable’, since the unit is embedded within wider structures. While this may be fairly stated for many regions in the world, it holds particularly for African cases.”

Within a comparative perspective, the universal definition of the concept of household has a Western bias that makes it difficult to take it as a unit of analysis in the Southern African rural context. Russell (1993) critically questions the appropriateness of taking the household as a unit of analysis for socio-economic research and census in Swaziland as the homestead is the domestic organisation of rural-urban relations. In the study area it is the homestead that is responsible for all the functions of the household. Although within some homesteads which consist of more than one household, there are too many boundary overlaps and sharing of assets and resources for those households to be regarded as separate entities. This is complicated by different types of marriages and the importance that is attached to descent from a male head of the homestead. It is common to find one person who belongs to more than one household. This situation often happens where a man is in a polygamous marriage. The boundaries between the households of migrants living in urban areas and the homesteads in rural areas are permeable and overlap. In view of all types of households discussed in Chapter 8, a universal definition of the household seems an illusion. To us, the functions of the household as a unit of analysis are more important than its form. For comparative purposes in the Southern African rural context, the homestead rather than the household is a more appropriate unit of analysis when studying livelihood generation and domestic production.

9.2.3 The vulnerability of female-headed households

Most theories on female-headed households in the literature regard them as more vulnerable than male-headed households. Irrespective of gender, vulnerability of rural households in KZN is due to lack of or a weak assets-and-resource base. Illiteracy and lack of education compound the situation. Therefore, the assumption that female-headed-households are always more vulnerable than male-headed ones, was inappropriate in the study area (see Chapter 5). Contrary to expectation, under conditions of shared community poverty and in the absence of a reliable resource base, male-headed households tend to be more vulnerable.

As stated earlier on the empirical study conducted in Botswana showed that female-headed households “without a regular cash income or other cash flow are particularly vulnerable, but so are those households where the male household head is unemployed and seeking work” (O’Laughlin, 1997: 28). In the study area, women-

headed households tend to diversify their income-generating activities more than male-headed ones. Female-headed households have authority over assets and resources, while women in male-headed households have not. It is also proven in the literature that if women control cash income, the care and nutritious status of children improve (Ellis, 1999). It was also found that in the absence of men's control in female-headed households, women together with their children have freedom of movement to eke out a living. Therefore it is an advantage to female-headed households not to have male authority. Women in male-headed households are disadvantaged because their movements are restricted and controlled by the male heads. It is therefore not possible for them to get involved in diverse income-generating activities. Men are also perceived not to spend money effectively. This notion on why some women prefer to raise children on their own in KZN is expressed in some studies on female-headed households. Posel (1997:55) states that "In Preston-Whyte and Zondi's study (1989) of teenage mothers in KwaMashu and the greater Durban area, for example, they note perceptions among some African women that households headed by women were likely to be more prosperous because they would not be subject to the drain on resources imposed by 'husbands who go about drinking your money and spending it on other women'". In male-headed households, men tend to spend money on personal luxury items and unproductive goods and services, such as too much alcoholic drinks at the expense of household welfare. Therefore there is a challenge to refine the conceptualisation of vulnerability in relation to gender of household headship.

9.3. Recommendations

It is appropriate at this stage to sum up the thesis with recommendations based on this research project. In accordance with the conclusions on the significance of the household to rural livelihood security, recommendations are made on further research and policy considerations. These concern the topics of the household, gender issues, extension services, institutional transformation and information and communication technologies.

9.3.1 The household

The household should be made the main focus of socio-economic development policies. In the context of poverty and vulnerability, the household is the smallest institution on which research and intervention programmes should be focused to improve the situation. Different categories of individuals and groups in society belong to households. The household is important because human capital, consisting of knowledge and skills is reproduced in it. The household provides for basic needs of food, clothing, shelter, health and education. Although rural households play an essential role in ensuring that their members are food secure, they have not been adequately studied. They produce and purchase food to ensure good health and provision of labour for both rural and urban areas. Households are important in determining opportunities in the labour market as well. Furthermore, the household is responsible for socialisation of its members and provision of basic education and training. The human capital produced in the household is important for economic growth and social development at local, national and global levels. As socio-economic data on rural households are not available at district level, qualitative and quantitative research is recommended in order to understand the local situation before extension

programmes are planned and implemented. The household structure, processes and relationships should be examined within the framework of sustainable rural livelihoods. New types of households are emerging as a result of HIV/AIDS pandemic, such as the child-headed households. As data is still lacking on these types of households, their constraints, opportunities and social policies on them, research studies are recommended.

9.3.2 Gender issues

National gender policies are binding on institutions to create an enabling environment for women to participate in farm and non-farm activities. However, there is a vacuum between policies and their implementation at local level. These policies are good and appropriate for enhancing livelihood security. The problem arises when they have to be applied. They are not adequate because the extension staff lack methodologies on how to put the gender policies into practice. Research should be conducted on appropriate and effective methods of implementing these policies. Further studies should monitor and evaluate processes of the transformation in agricultural extension services. Mainstreaming of gender issues in formal and non-formal education curricula is recommended and in-service training of staff involved in agricultural extension and rural development. Another important gender issue that needs to be investigated is the appropriateness of home economics training and programmes in agriculture and rural development.

9.3.3 Extension services

As a result of gendered nature of society in its approach to agricultural education and rural development, the extension services are still oriented towards men and women in agriculture and home economics, respectively. The divisions are based on traditional Western approaches to extension services and training. This approach to extension in rural areas of KwaZulu-Natal is not appropriate for enhancing livelihood security. It is therefore recommended that relevant agricultural education and home economics should be mainstreamed in the curricula at school level and in tertiary institutions. Training of extension professionals should be relevant to the needs, constraints, demands and opportunities of rural households.

Gender equity can be achieved by training more women extension agents to improve their knowledge in agriculture and rural development. Male extension agents need to be retrained on how to work with rural women. Both male and female extension agents require training in facilitating on-farm and non-farm activities of rural households. They should have competencies in facilitating many more programmes that enhance rural livelihood security. These include nutrition education programmes, clean water supplies and sanitation, capacity building of community-based organisations, entrepreneurship and so on. Research should be conducted into the in-service training needs of extension staff and those of rural households.

It is recommended that there is a need for reorientation of extension delivery services and research. These should include sustainable livelihood approaches to agriculture and rural development. For planning effective extension programmes participatory approaches should be adopted and more attention is required on supporting and promoting indigenous knowledge systems, and also improving the management of

natural resource base, household food security and income through diversification of livelihood strategies. Extension services would be more effective if they were monitored and evaluated to measure their impact on rural livelihoods.

9.3.4 Institutional transformation

The institutional arrangements determine inclusion and access to assets and resources. They are therefore important as they allow rural households to achieve livelihood security but institutional transformation is crucial for this role. It is recommended that institutions should collaborate to form partnerships to support the implementation of government policies through participatory approaches and methodologies. These partnerships should be strengthened at local, regional, provincial and national levels. Transformation of institutions that form partnership with extension services could be useful in increasing extension effectiveness provides partners fulfil their obligations. Institutional partnerships could be strengthened through workshops, joint meetings and electronic telecommunication where available. It is hoped that a collaborative effort of institutions could help strengthen the access of rural households to assets and resources, such as land, credit, technology, training and extension, inputs, markets and capital. Furthermore, provision of community services, such as health, education, telecommunication, could be improved for better household livelihood security. For example, institutional linkages can finance rural infrastructure facility provision and maintenance. Institutional collaboration would enhance innovative approaches to agriculture and rural livelihood security. Positive outcomes of effective institutional transformation and collaboration could reduce gender inequities, improve food security, income, natural resource management and general well being of rural households.

9.3.5 Information and communication technologies (ICTs)

Lack of adequate and reliable information to improve livelihood security is a major problem in rural KZN. Both men and women have very little access to information, as most of them are poor and illiterate. They require information for a wide range of livelihood strategies. In addition to traditional ICTs, such as meetings, group discussions, dance, drama, demonstrations, visits, radio, television, video and print media, new modern ICTs are now in use for global communication networks. These include telephones, facsimile and computers. Telecentres are recommended as the way forward to accessing appropriate information using electronic mail, World Wide Web and various electronic networks as distance learning tools.

Strategies should be developed for ICTs that target rural households and communities. Such ICTs should be well developed and understood in relation to rural livelihood security. There are challenges that have to be met in providing appropriate ICTs in rural settings as they rely mostly on physical infrastructures, like electricity and telecommunications. It is also important that these are properly maintained. The use of ICTs in poverty alleviation requires investment in human capacity building. Rural households need the skills to use the ICTs and to access their usage. There is a lot of emphasis put on promoting telecentres in rural areas but there is no clear conception of how ICTs should be implemented in view of the limitations of rural livelihoods. It is therefore recommended that a livelihood approach should be utilised to formulate projects on ICTs in order to alleviate poverty and vulnerability in rural households.

Institutions should play a critical role in mediating a wide range of rural livelihood processes with the support of the ICTs. Educational institutions should collaborate with the government departments, NGOs, CBOs and the private sector in enhancing the potential of the ICTs in livelihood generation.

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GLOSSARY

<i>Amabele:</i>	grain sorghum
<i>Amadongwe:</i>	type of wild fruit
<i>Amadumbe:</i>	taro potatoes
<i>Amahlala:</i>	fruit of the monkey - orange tree
<i>Amakhiwane:</i>	type of a wild fruit figs
<i>Amakhosi:</i>	the spirits of the departed
<i>Amalotshane:</i>	type of a wild fruit
<i>Amantongomane:</i>	ground nuts
<i>Amaphindi:</i>	type of a wild fruit
<i>Amarula:</i>	type of wild fruit
<i>Amaselwa:</i>	vegetable used for making calabashes
<i>Amashoba:</i>	cow tails worn on the upper arms or below the knees
<i>Amasi:</i>	soured milk
<i>Amatabane:</i>	indigenous round potatoes
<i>Amathunduluka:</i>	fruit of wild plum
<i>Amaviyo:</i>	fruit of wild medlar tree
<i>Amavovo:</i>	beer strainers
<i>Ibheshu:</i>	men's rear apron made from calf skin
<i>Ibomvu:</i>	red powder preparation ointment made from the bark of the common onionwood
<i>Ijuba:</i>	dove
<i>Ikhokhwane:</i>	<i>Alepidea</i> -the young leaves are used as a popular spinach
<i>Ikhwani:</i>	a grass variety - used for weaving sleeping mats
<i>Iklabeklabbe:</i>	lettuce
<i>Ilabatheka:</i>	African potato - medicine for causing madness or excitement
<i>Ilala:</i>	palm variety suitable for making brooms
<i>Ilima:</i>	a group of people who provide labour for the owner of the field for payment in kind with traditional beer and food
<i>Ilobolo:</i>	bridewealth
<i>Imbumba:</i>	cowpeas
<i>Imbuya:</i>	<i>Amaranthus</i>
<i>Imbilikicane:</i>	a common garden weed with a very bad smell
<i>Imifino:</i>	vegetables
<i>Imishayelo:</i>	hand brooms
<i>Imithi:</i>	medicines
<i>Impangele:</i>	a type of wild vegetable
<i>Impila:</i>	a medication of crust roots used for open wounds and for infested wounds in animals (e.g. cows)
<i>Incema:</i>	type of wild grass used to make handicrafts like sleeping mats
<i>Incongwana:</i>	herbal medicine prepared for pregnant women
<i>Incumbe:</i>	food for weaning babies which is a thin gruel of milk and fine maize meal or bulrush/ <i>unyawoti</i> meal
<i>Indlanzi:</i>	mousebird
<i>Inembe:</i>	herbal medicine prepared for pregnant women
<i>Inhlaba:</i>	aloe
<i>Injemane:</i>	palm wine
<i>Injobo:</i>	long animal skins worn on the hips by men
<i>Inkawu:</i>	monkey
<i>Inkosi:</i>	chief of a tribe
<i>Inqolobane:</i>	granary
<i>Insephe:</i>	springbok

<i>Intinginono:</i>	secretary bird
<i>Inxala:</i>	rhebok
<i>Intibane:</i>	can rat
<i>Inyanga:</i>	herbalist
<i>Iqhina:</i>	steenbok
<i>Isankutshane:</i>	wild vegetables, species of fern
<i>Isigwaca:</i>	common quail
<i>Isigidi:</i>	mercury
<i>Isihya:</i>	a traditional dish prepared with a mixture of mashed pumpkin/ <i>amatabane</i> /sweetpotatoes and crushed maize or sorghum
<i>Isijingi:</i>	traditional porridge made with boiled pumpkin and maize-meal
<i>Isinene:</i>	men's leather front apron
<i>Isinkwe:</i>	bush baby
<i>Isinwazi:</i>	wild grape
<i>Isundu:</i>	fruit of the palm tree
<i>Ihendele:</i>	partridge
<i>Izindumba:</i>	legume, cow peas
<i>Izihlambezo:</i>	plant mixtures given to pregnant women
<i>Izintongi:</i>	herbal mixture given to treat placenta praeva
<i>Izinywene:</i>	wild fruit, species of shrub used as a charm to bring a man into disfavour
<i>Izithebe:</i>	grinding mats
<i>Ubani:</i>	blue lily, the young men use the roots as a love charm
<i>Ubhatata:</i>	sweet potatoes
<i>Ucadolo:</i>	blackjack
<i>Udonca:</i>	indigenous cereal crop
<i>Ugobo:</i>	<i>Gunnera perpensa</i>
<i>Ugodide:</i>	<i>Jatropha zeyheri</i> - its bulbous roots are used against lightning
<i>Ugwava:</i>	type of a wild fruit
<i>Umabo:</i>	gifts given by the bride to her in-laws on the wedding day
<i>Umayime:</i>	orange lily, bush lily - its roots are used for snake bite
<i>Umbelethisi:</i>	midwife
<i>Umcumbula</i>	cassava
<i>Umdoni:</i>	wild fruit
<i>Umgomeni:</i>	split peas, species of small bean grown mostly in Swaziland
<i>Umgwagwa:</i>	wild vegetable (monkey orange tree)
<i>Umlonyane:</i>	<i>Artemisia afra</i> - is used for aromas
<i>Umkaka:</i>	wild vegetable - it's a wild climbing cucumber eaten by the Thongas
<i>Umkhokhwane:</i>	wild vegetable - edible wild plant of carrot family
<i>Umklele:</i>	wild fruit - tree with red berries
<i>Umkwakwa:</i>	wild fruit (monkey orange tree)
<i>Umcaka:</i>	wild fruit - red ivory tree with dark red edible berries
<i>Umphafu:</i>	wild fruit - bush with short hooked thorns - twigs are used to translocate the spirits of beloved dead family members
<i>Umqombothi:</i>	a fermented drink made of cooked thinned fermented maize or sorghum meal porridge
<i>Umtshiki:</i>	type of grass for making handicrafts, such as door mats
<i>Umswala:</i>	very thick porridge made with maize-meal or crushed millet
<i>Umuti:</i>	homestead in isiSwati
<i>Umuzi:</i>	homestead in isiZulu
<i>Unsukumbili:</i>	two species of medical plants used as a remedy for specific diseases such as back-ache and stomach pains
<i>Unukani:</i>	black stinkwood
<i>Unyawothi:</i>	pearl millet - species of brown bulrush millet
<i>Uphokwane:</i>	wild fruit, Cape pepper shrubs
<i>Upoko:</i>	finger millet roasted and prepared as soldiers provision

ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ADSS	Agricultural Development Support Services
ARC	Agricultural Research Council
CBOs	Community-based Organisations
CDCs	Community Development Committees
CES	Co-operative Extension System
CGE	Commission on Gender Equity
CSIR	Council for Scientific and Industrial Research
DAEA	Department of Agriculture and Environmental Affairs
DFID	Department for International Development
DOA	Department of Agriculture
ECNs	Electronic communication networks
FAO	Food and Agriculture Organisation of the United Nations
FGDs	Focus Group Discussions
FIVIMS	Food Insecurity and Vulnerability Information and Mapping systems
FSR/E	Farming Systems Research and Extension
FSU	Farming Systems Research Unit
FSWG	Food Security Working Group
GCIC	Government Communications Infonautics Corporation
GDP	Gross Domestic Product
GNU	Government of National Unity
HA	Hectare
HBU	Historically Black University
HDI	Human Development Index
HIV	Human Immuno Deficiency Virus
HRMFS	Household and Resource Management and Food Security
HSRC	Human Sciences Research Council
ICTs	Information and communication technologies
IDEAA	Initiative for the Development and Equity in African Agriculture
IDS	Institute of Development Studies
IFAD	International Fund for Agricultural Development
IK	Indigenous knowledge
IKS	Indigenous knowledge systems
ITWG	International Technical Working Group
KZN	KwaZulu-Natal
KZNDA	KwaZulu-Natal Department of Agriculture
MCTs	Multipurpose Communication Telecentres
MDIC	Maputaland Development and Information Centre
MJD	Mseleni Joint Disease
MLL	Minimum Living Level
Mm	Millimetre
NDA	National Department of Agriculture
NEDA	Netherlands Development Assistance
NGOs	Non-governmental Organisations
NPA	Natal Provincial Administration
ODI	Overseas Development Institute
OHS	October Household Survey

PGN	Practical Gender Needs
PPA	Poverty Participatory Assessment
PSED	Project Support and Extension Division
PSLSD	Project for Statistics on Living Standard Development
RDISAT	Rural Development Information in the Republic of South Africa through Telematics
RDP	Reconstruction and Development
SA	South Africa
SAIL	Stichting samenwerkingsverband instituten van internationaal onderwijs Landbouwniversiteit Wageningen
SADC	Southern African Development Community
SALDRU	Southern African Labour and Development Research Unit
SAHR	South African Labour Review
SMEs	Small and medium enterprises
SPSS	Statistical Package for Social Sciences
SSA	Statistics South Africa
SGN	Strategic gender needs
TBAs	Traditional birth attendants
USA	United States of America
UZ	University of Zululand
UNDP	United Nations Development Program
USDA	United States Department of Agriculture
USDP	Ubombo Spatial Development Programme
WAU	Wageningen Agricultural University

SUMMARY

The majority of the poor South Africans are to be found in rural areas. Their location is characterised by combinations of difficult situations that contribute to their vulnerability and poverty. Some of the common problems are hilly topography, poor soils, low and erratic rainfall, poor infrastructure to name a few. Often the rural poor lack financial and physical assets and resources to generate their livelihoods. Vulnerability and poverty among households is endemic in rural KwaZulu-Natal. Therefore the livelihood approach was used to provide an explicit focus on what matters to rural households. Research was conducted into the significance of the household in rural livelihood security. The livelihood approach was appropriate for generating knowledge and practical recommendations to enhance the design and implementation of programmes and projects that support rural livelihood security.

Since the establishment of the democratic government in 1994, the national agricultural and rural development policies for addressing the problems of poverty and vulnerability have been put in place. However, their implementation is problematic mainly due to lack of adequate assets and resources. In addition the context of historical deprivation mainly caused by the apartheid regime and now the epidemic of HIV/AIDS aggravates the situation of rural people. Theoretically, socio-economic policies and extension should focus on reducing vulnerability and eradicating poverty in order to maintain rural livelihood security. But this does not happen because the extension delivery services still use traditional top-down and gender-bias methods of technology transfer of agricultural and rural development knowledge. Consequently, extension services fail to reach the majority of the rural households with relevant information to enhance rural livelihoods.

Out of nine South African provinces, KwaZulu-Natal is one of the three with the lowest human development index. Rural households in KwaZulu-Natal have been reported as very poor, particularly the female-headed households. The main problems in rural areas of this province are illiteracy, unemployment, poor infrastructure, lack of resources of agricultural production, such as land, capital, credit, appropriate technology, inputs, training, extension and markets. As a result, food insecurity is one of the major problems because households do not produce enough food to last until the next harvest. They also lack adequate cash income to buy food to enhance nutritional security. In rural areas of KwaZulu-Natal, very few dwellers produce agricultural commodities for sale. Generally, women are involved in food production for subsistence and sale of excess produce because they lack appropriate storage facilities and skills to preserve food. Because of difficulties associated with farming, households often pursue more than one different non-agricultural activities to earn cash income. Sources of income often include agriculture, rural migrant remittances, wage employment, informal trading, state old age pension and welfare grants.

Lack of data on household livelihood security at district level was identified as a problem in implementing agricultural and rural development policies. Thus this study used the household as a unit of analysis in exploring rural livelihoods because it was found to be a neglected basic institution with which the extension services, the private sector, non-governmental organisations, community-based organisations could collaborate to implement agricultural and rural development policies to reduce

vulnerability and eradicate poverty. The household was regarded as important because it has the main function to develop and reproduce human capital for economic growth and development at macro level. A focus on livelihoods was considered appropriate in understanding households in their environment, the importance of assets and resources, diversified portfolios of activities, institutions, extension services and the outcomes they pursued.

The main problem of the study was to determine the role of the rural household in achieving livelihood security and the appropriateness of extension services in supporting and enhancing that role. Based on the objectives of the study, the study aimed at answering six research questions. The first question was on how the rural household structure and processes related to rural livelihood security. Second, the appropriateness of the concept of household in examining rural livelihood security was explored. Third, the importance of gender and indigenous knowledge systems to the agricultural extension services in support of rural livelihood security was investigated. Fourth, the research examined the role of agricultural extension in enhancing rural livelihood security. Fifth, the importance of indigenous knowledge systems to agricultural extension services in support of rural livelihood security was explored. Lastly, the study investigated how agricultural extension services staff approached issues of gender and indigenous knowledge.

This study used a combination of quantitative and qualitative research methods because they complement each other. The descriptive survey was undertaken to quantify data, whereas qualitative methods were used to collect data from key informants, focus group discussions and case studies. For comparative purposes, field research was carried out in two districts, Ubombo and Umthunzini, in the North East Region of the KwaZulu-Natal Department of Agriculture and Environmental Affairs. Ubombo is situated in a remote rural area where the general service provision for basic needs such as clean water supplies, sanitation, education, health, roads and telecommunication is very poor. Unemployment and illiteracy rates are very high. Umthunzini is also a rural area with poor socio-economic indicators but it is situated near the industrial centres that have an influence on the economy of the district through provision of employment opportunities.

The socio-economic data of the study area indicate a high level of livelihood insecurity in the study area. Ubombo district was found to be more disadvantaged than Umthunzini, particularly regarding the literacy levels, employment opportunities and service provision. The context for generating household assets and resources was found to present different opportunities and challenges for the two districts. Households in Ubombo do not have adequate access to job opportunities hence the unemployment rate was high. There are also fewer opportunities to diversify income sources in Ubombo. Consequently, households depend very much on the natural resource base for food, health remedies and materials for making handicrafts for income-generation without much attention to sustainability issues.

Households in the study area have a high number of dependants, particularly children and potentially economically active unemployed people. However, the average household size and dependency ratio is higher in Ubombo than Umthunzini. Limited household income is improved by old age pension and disability grants. Gender and generational division of labour is important for livelihood strategies of households.

Marital status and gender were found to be major determinants of one's access to communal land and freedom of movement to engage in diverse livelihood income-generating activities. Furthermore, social networks are essential for livelihood generation. Women play a major role in reproductive, productive and community managing activities. Children often help women with accomplishing some of their responsibilities. Men have more authority than women. Some men are engaged in wage employment. It is the men who have control over the large livestock and who are involved in local community politics at tribal authority level. Livelihood strategies include employment, migration, remittances, food and cash crop production, animal husbandry, small enterprises, claiming against the state for old age pension and welfare grants and natural resource materials gathering for food and income-generation. Although access to service provision is better in Umthunzini than Ubombo, it is inadequate in both areas.

We found that the concept of household in examining rural livelihood security in the study area was problematic due to flexible boundaries between households of related members. This situation is made complex by rural-urban migration patterns, polygamous marriages and kinship ties. The household was found to be an important agency of enhancing socio-economic development. Although the household was a useful operational definition for the study, we discovered that the homestead is more appropriate as a unit of analysis in exploring rural livelihood security and household food security. Therefore the household or the homestead should be regarded as a critical micro-level institution with which extension services and other rural development institutions could collaborate to improve livelihood security.

Gender was found to be critical in the household structure and processes that relate to rural livelihood security. Our results indicate unequal gender relations at household level. To a large extent, household headship determines the access of the household to assets and resources, division of labour, decision-making, authority, power and livelihood strategies. Female-headed households tend to diversify their activities to earn income in cash and in kind. Gender was identified as an important factor in using indigenous knowledge in enhancing livelihood security. Both men and women were found to possess indigenous knowledge. However, women's knowledge is utilised more than men's in enhancing rural livelihood security. Women's indigenous knowledge is essential for ensuring household food security, maternal health and child-care and income-generation through production of handicrafts. Their knowledge is also valuable in food production and post-harvest processes. Men utilise their indigenous knowledge in hunting game, large animal husbandry, woodcarving and traditional medicines. The extension services does not give adequate attention to sustainable use of natural resources by rural household. The people's indigenous knowledge is not taken into consideration in planning and implementation of agriculture and rural development programmes. Because the context of the rural households is not analysed by the extension services and the value of local knowledge not appreciated, the introduction of the new technologies fails. The end-users of the extension services are regarded as passive beneficiaries of the service, and in turn they tend to accept the traditional approaches.

The role of agricultural extension in enhancing rural livelihood security was found to be important for rural households. However, the extension services do not reach the majority of rural households because of a number of limitations. These include poor

infrastructure, lack of transport, staff shortage and limited capacity to implement relevant policies. It was also found that there was a severe shortage of women trained in agriculture. The male extension agents do not have training that equips them to work with rural women. Meanwhile the home economics agents are not trained to approach rural development from a holistic perspective rather than the traditional approaches to support women's reproductive roles. The extension services do not have effective linkages with other institutions involved in rural livelihood security. One of the most essential challenges for the extension services is to develop alternative and flexible extension approaches that are in line with the promotion of participatory processes as outlined in the policies. Due to the poor infrastructure and lack of human capacity, the extension services are unable to adopt the use of those information and communication technologies that offer new ways of communicating and exchanging information and knowledge.

Indigenous knowledge is important to agricultural extension services because it encompasses the skills, experiences and insights of local people applied to maintain their livelihood security. This study found that indigenous knowledge plays an important role in decision-making pertaining to food and nutrition security, agriculture, health care, income-generation and natural resource management. Rural households, particularly in Ubombo, showed to be very dependent on indigenous knowledge for their livelihood. However, the conventional agricultural extension approaches tend to overlook the potential and the significance of indigenous knowledge in improving rural livelihood security. Thus the extension agents do not fully recognise and appreciate indigenous knowledge in their interaction with the rural communities.

We found that the extension staff is aware of policies to mainstream gender in agriculture and rural development but does not have the methodology on how to integrate gender into extension services. Therefore extension services do not address many priority needs of rural women and men in the study area. Both male and female extension agents need training in gender roles, natural resource conservation, HIV/AIDS impact on agriculture and rural development and other emerging issues that need to be addressed.

In conclusion the thesis considers that some of the indicators of household livelihood security that are found in the literature, such as income, have limited applicability for the context of rural households in KwaZulu-Natal. Hence, relevant indicators should be determined in consultation with the rural households in a given location. Furthermore, we found that the concept of household has a Western bias that makes it problematic as a unit of analysis in rural Southern Africa. Here, the concept of homestead rather than household seems to be the appropriate research unit for exploring rural livelihood security at micro level. The general assumption that female-headed households are more vulnerable than male-headed households was proven to be of limited validity in a context of shared community poverty and vulnerability. In view of the findings of this thesis, the household, whether or not in the form of the homestead, is the significant entry point for enhancing rural livelihood security. It should be given more attention in promoting economic growth, social development and eradication of vulnerability and poverty.

SAMENVATTING

De meerderheid van de arme Zuid-Afrikanen woont op het platteland. Hun woonomgeving wordt gekenmerkt door combinaties van problemen die leiden tot kwetsbaarheid en armoede. Problemen zijn bijvoorbeeld de heuvelachtige topografie, de geringe of onregelmatige regenval en de slechte infrastructuur. Vaak ontberen de rurale armen bezit en de nodige hulpbronnen om in hun bestaan te kunnen voorzien. Kwetsbaarheid en armoede zijn endemisch in ruraal KwaZulu-Natal. In dit onderzoek werd een *livelihood* benadering gebruikt, waarin de factoren die van directe invloed zijn op de bestaanszekerheid van rurale huishoudens centraal staan. Er werd gekeken naar de betekenis en de rol van rurale huishoudens in het realiseren van bestaanszekerheid. Een dergelijke benadering is van belang voor het ontwerpen en implementeren van programma's gericht op het versterken van de bestaanszekerheid van rurale huishoudens.

Sinds de installatie van de democratische regering in 1994 is er nationaal beleid ontwikkeld op het gebied van landbouw en rurale ontwikkeling. Implementatie is echter problematisch vanwege gebrek aan middelen. De erfenis van deprivatie van het apartheidsregime en de slag die de HIV/AIDS epidemie nu toebrengt, maken de situatie van de rurale bevolking er niet beter op. Theoretisch zouden goed sociaal-economisch beleid en goede voorlichting gericht moeten zijn op bestrijding van rurale armoede en versterking van de bestaanszekerheid. Hier komt echter nog weinig van terecht, omdat de overdracht van relevante kennis en technologie nog zeer *top-down* en met weinig gevoel voor de belangrijke rol van vrouwen gebeurt. Gevolg is dat de voorlichtingsdienst er niet in slaagt de meerderheid van de rurale huishoudens te bereiken met relevante informatie.

Van de negen provincies in Zuid Afrika behoort KwaZulu-Natal tot de drie provincies met de laagste *human development index*. Rural huishoudens in KwaZulu-Natal zijn in het algemeen arm tot zeer arm, met name die met een vrouw aan het hoofd. In deze provincie zijn de belangrijkste problemen ongeletterdheid, werkloosheid, slechte infrastructuur, en gebrek aan voor de landbouw belangrijke hulpbronnen zoals land, kapitaal, krediet, aangepaste technologie, training, goede voorlichting en markten. Als gevolg daarvan is er gebrek aan voedselzekerheid. Huishoudens produceren vaak niet genoeg voedsel om de volgende oogst te halen. Er is ook gebrek aan geld om voedsel te kunnen kopen. In ruraal KwaZulu-Natal zijn er maar weinigen die voor de markt produceren. Vrouwen spelen een actieve rol in de voedselproductie voor eigen consumptie en de verkoop van overproductie. Ze gaan tot verkoop over omdat ze niet in staat zijn voedsel zodanig te bewerken dat het kan worden bewaard. Vanwege het gebrek aan inkomsten uit agrarische productie probeert men additioneel inkomen uit andere bronnen te verwerven, zoals arbeidsmigratie, het maken van vlechtwerk e.d., kleine handel, en uitkeringen van de staat.

Een probleem bij het implementeren van agrarisch- en ontwikkelingsbeleid is het gebrek aan gegevens over de middelen van bestaan van rurale huishoudens. Daarom werd in deze studie het rurale huishouden als eenheid van analyse gekozen. Het is deze institutie waar voorlichtingsdiensten en ontwikkelingsorganisaties - zowel in de overheidssector als in de particuliere sector - zich op moeten richten in een gezamenlijke poging om armoede uit te bannen. Het huishouden is belangrijk omdat

het de context vormt waarbinnen menselijk kapitaal, nodig voor economische groei en ontwikkeling op macro niveau, wordt ontwikkeld en gereproduceerd. Hierbij lag de nadruk op *livelihood*, middelen van bestaan, en de hulpbronnen die huishoudens gebruiken en de activiteiten die ze ondernemen om in hun levensonderhoud te voorzien.

De probleemstelling van dit onderzoek was het bepalen van de betekenis van rurale huishoudens in het streven naar en het bereiken van bestaanszekerheid, en de ondersteunende rol hierbij van de voorlichtingsdienst. Op basis van deze probleemstelling werden een aantal onderzoeksvragen geformuleerd. Deze betroffen: beschrijving en analyse van de huishoudstructuur en de huishoudelijke processen in relatie tot bestaanszekerheid, de toepasbaarheid van het concept huishouden, het belang van de verschillende rollen en posities van mannen en vrouwen (*gender*) en inheemse kennis, de rol van de voorlichtingsdienst in het versterken van rurale bestaanszekerheid, de relevantie van inheemse kennis voor de voorlichtingspraktijk en de manier waarop voorlichtingsambtenaren omgaan met *gender* en inheemse kennis.

In de studie werd een combinatie van kwantitatieve en kwalitatieve onderzoeksmethoden gebruikt, omdat deze geacht worden complementair te zijn. De *survey* had een beschrijvend karakter en was gericht op het genereren van kwantitatieve data. Voor het verzamelen van kwalitatieve gegevens werden methoden zoals groepsdiscussie, *case study*, en het raadplegen van sleutelinformanten gebruikt. Het onderzoek werd in twee verschillende districten gedaan: Ubombo en Umthunzini. Ubombo ligt in een afgelegen gebied waar vrijwel alle voorzieningen ontbreken. Er is veel werkloosheid en laag niveau van geletterdheid. Umthunzini is ook een arm ruraal gebied, maar het ligt in de buurt van industriële centra die voor enige werkgelegenheid in het district zorgen.

De sociaal-economische onderzoeksgegevens laten zien dat er gebrek aan bestaanszekerheid is in de onderzoeksgebieden. Afgaande op verschillende indicatoren bleek Ubombo in een ongunstiger positie te verkeren dan Umthunzini. Gezien vanuit een huishoudperspectief zijn de mogelijkheden voor en de problemen met het genereren van productief bezit en hulpbronnen verschillend voor de twee locaties. In Ubombo is er niet alleen minder werkgelegenheid maar zijn de mogelijkheden voor inkomensdiversificatie in het algemeen beperkter dan in Umthunzini. Daarom zijn in Ubombo huishoudens veel afhankelijker van natuurlijke hulpbronnen, die bovendien op een weinig duurzame wijze worden aangewend.

De huishoudens in het onderzoeksgebied hebben in het algemeen een hoge proportie economisch afhankelijke leden, zoals kinderen en werkloze volwassenen. De gemiddelde huishoudgrootte en de afhankelijkheidsratio op huishoudniveau liggen hoger in Ubombo dan in Umthunzini. Het beperkte huishoudinkomen wordt aangevuld met inkomsten uit pensioen of andere uitkeringen van de staat. De verdeling van arbeid naar sekse (*gender*) en leeftijd (*generatie*) spelen een belangrijke rol in de *livelihood* strategieën van huishoudens. Huwelijkse staat en *gender* bleken belangrijke determinanten van de toegang tot land en de mogelijkheden voor mobiliteit te zijn. Sociale netwerken zijn essentieel bij het voorzien in het levensonderhoud. Vrouwen spelen een cruciale rol niet alleen in het grootbrengen van kinderen en zorg (hun reproductieve rol), maar ook in productieve- en gemeenschapsactiviteiten. Hierbij worden zij vaak door kinderen geholpen. Mannen

hebben meer autoriteit dan vrouwen. Mannen verrichten soms betaalde arbeid, houden zich bezig met vee, of zijn actief in lokale politiek. Om in het levensonderhoud te voorzien worden, naast landbouw, de volgende activiteiten ondernomen: betaalde arbeid, arbeidsmigratie, veeteelt, het opzetten van kleine bedrijfjes, handnijverheid, het claimen van pensioenen en uitkeringen van de staat, het verzamelen van natuurlijke materialen die dienen als voedsel of als grondstof voor ambachtelijke producten. Ofschoon het voorzieningenniveau in Umthunzini beter is dan in Ubombo, is het in beide onderzoekslocaties slecht.

Als gevolg van de trek naar de stad bestaan er sterke banden, gebaseerd op verwantschap, tussen stad en platteland. Omdat de arbeidsmigranten nog steeds als lid van het rurale huishouden worden beschouwd, is het moeilijk de grenzen van het rurale huishouden duidelijk te trekken. In het onderzoek naar de toepasbaarheid van het concept huishouden bleken de grenzen van het rurale huishouden dan ook flexibel en doorlaatbaar. Dit niet alleen vanwege migratie, maar ook als gevolg van polygame huwelijken en de sterkte van verwantschapsbanden. Het huishouden is echter wel de relevante context voor het bevorderen van sociaal-economische ontwikkeling. We zijn in het onderzoek uitgegaan van een werkdefinitie van huishouden waarin het beheren van hulpbronnen om te voorzien in dagelijkse behoeften centraal staat. De passende fysieke eenheid als context voor de vervulling van deze huishoudelijke functies bleek de *homestead*, het erf waarop een aantal verwanten wonen die de meeste hulpbronnen en voedsel delen. Daarom moeten huishouden en *homestead* beschouwd worden als de kritieke instituties op micro-niveau waar voorlichtingsdiensten en ontwikkelingsorganisaties mee moeten samenwerken om de rurale bestaanszekerheid te vergroten.

Gender bleek een kritieke variabele in de huishoudstructuur en in huishoudelijke processen die van belang zijn voor bestaanszekerheid. Het onderzoek laat zien dat er in belangrijke mate sprake is van *gender* ongelijkheid in het huishouden. Het hoofd van het huishouden heeft veel gezag en speelt een beslissende rol in de toegang tot noodzakelijke hulpbronnen, interne verdeling van arbeid, besluitvorming, en bepaling van de *livelihood* strategieën. Vrouwelijke huishoudhoofden hebben meer speelruimte dan vrouwen in huishoudens met een mannelijk hoofd en slagen er in meer diverse bronnen van inkomsten, in geld zowel als in natura, aan te boren.

Gender is ook een belangrijke factor in het bezit van inheemse kennis die gebruikt kan worden in het levensonderhoud. Hoewel zowel mannen als vrouwen beschikken over relevante inheemse kennis, bleek die van vrouwen meer direct van belang voor het versterken van voedsel- en bestaanszekerheid. De inheemse kennis van vrouwen wordt gebruikt in voedselproductie, voedselverwerking, moeder-en-kind zorg en handnijverheid. Mannen gebruiken inheemse kennis vooral in de jacht op wild, veeteelt, houtsnijwerk, en traditionele geneeskunde. De voorlichtingsdienst schenkt geen aandacht aan dit stukje menselijk kapitaal en ook niet aan het probleem van de weinig duurzame wijze waarop natuurlijke hulpbronnen door de bevolking worden gebruikt. Omdat de voorlichtingsdienst niet kijkt naar wat er gebeurt op het niveau van het huishouden en geen aandacht en waardering heeft voor relevante inheemse kennis, zijn hun pogingen om nieuwe technologie in te voeren niet succesvol. Voorlichtingsambtenaren beschouwen hun cliënten als passieve begunstigden, die zelf deze situatie accepteren omdat het altijd zo is geweest.

Het potentieel van de voorlichtingsdienst om bij te dragen aan het versterken van rurale bestaanszekerheid is zeker aanwezig, maar wordt niet gerealiseerd vanwege gebrek aan capaciteit en middelen, zoals transportmiddelen. Er zijn bovendien veel te weinig vrouwelijke voorlichtingsambtenaren en mannen worden niet getraind in het werken met vrouwen. Voorlichtingsambtenaren getraind in *home economics* (huishoudkunde) dragen een traditionele visie op het huishouden en op de rol van vrouwen uit, waarin een holistisch perspectief ontbreekt. Samenwerking van de voorlichtingsdienst met andere organisaties op het gebied van rurale ontwikkeling ontbreekt. Een van de belangrijkste uitdagingen voor de voorlichtingsdienst is het ontwikkelen van flexibele en participatieve benaderingen die door beleidsmakers bepleit worden. Als gevolg van de slechte infrastructuur en de beperkte menselijke capaciteit is men niet in staat om in de voorlichtingspraktijk gebruik te maken van moderne informatie- en communicatietechnologie.

Inheemse kennis is belangrijk voor landbouwvoorlichting omdat het de vaardigheden, ervaring en inzichten omvat van de lokale bevolking die worden toegepast in het streven naar bestaanszekerheid. Het onderzoek wees uit dat inheemse kennis een belangrijke rol vervult op de terreinen van voedselzekerheid, voeding, landbouw, gezondheidszorg, het genereren van inkomen en het beheer van natuurlijke hulpbronnen. Dit geldt met name voor de huishoudens in Ubombo. De conventionele landbouw voorlichting gaat hier echter aan voorbij en ziet het potentieel en de betekenis niet van inheemse kennis voor de bestaanszekerheid op het platteland.

Uit het onderzoek blijkt dat men zich bij de voorlichtingsdienst wel bewust is van het belang van de variabele *gender* voor de voorlichtingspraktijk, maar dat men niet weet hoe men deze variabele in het werk moet integreren. Men kan daarom niet gericht aansluiten bij de verschillende behoeften en prioriteiten van mannen en vrouwen met betrekking tot vraagstukken zoals duurzaam gebruik van natuurlijke hulpbronnen, rurale ontwikkeling en de gevolgen van de HIV/AIDS epidemie voor de landbouw.

Het onderzoek leidt tot een aantal conclusies. Sommige van de in de literatuur genoemde indicatoren voor bestaanszekerheid, zoals inkomen, zijn van beperkt belang zijn voor rurale huishoudens in KwaZulu-Natal. Dit betekent dat relevante indicatoren altijd bepaald moeten worden in relatie tot de context. We vonden ook dat het huishouden vanwege zijn Westerse connotaties een voor Zuid Afrika een moeilijk te hanteren eenheid is. De passende eenheid voor onderzoek naar bestaanszekerheid in de Zuid-Afrikaanse rurale context is de *homestead*. De op de literatuur gebaseerde aanname dat huishoudens met een vrouwelijk hoofd kwetsbaarder zijn dan die met een man aan het hoofd bleek genuanceerd te moeten worden. In een situatie van gedeelde armoede en gebrek aan middelen creëren huishoudens met een vrouw aan het hoofd vaak meer opties en compenseren ze daarmee hun gebrek aan toegang tot belangrijke hulpbronnen zoals land. De algemene conclusie is die van het belang van rurale huishoudens, respectievelijk *homesteads*, voor rurale bestaanszekerheid en ontwikkeling.

		Homestead N ^o			
		Household N ^o			
Code N ^o					

INTERVIEW SCHEDULE

The Significance of the Household to Rural Livelihood Security in KwaZulu-Natal, South Africa.

Name of the interviewer :

Sex

Male		Female	
------	--	--------	--

Day and date of interview :

Time started.....Time finished.....

Name of respondent : Name of substitute :

Sex

Male		Female	
------	--	--------	--

Male		Female	
------	--	--------	--

Address :

Address :

.....

.....

.....

.....

Telephone N^o:

Tel. N^o:

Fax N^o:

Fax N^o:

This interview schedule deals with the rural household and its livelihood security in this district and some important issues of support services. The ward in which you live, as well as this household have been selected randomly for the purpose of this survey. Thus the fact that you have been chosen is quite coincidental. The information you provide will be treated as confidential. It will be processed by computer in such a way that no personal identification will be possible. To obtain reliable, scientific information it is necessary that you answer the questions as honestly as you can in this research.

	Reason for substitution	Nº
	Nobody home after 3 visits	
Substitutions	Empty premises	
	Refusal	
	Nobody qualifies	
	Other	

District :

Ward :

Inkosi:

Sub-ward:

Headman:

Councillor:

1. Interview with Head of Homestead

Male		Female	
------	--	--------	--

1.1 Who lives in this homestead?

.....

1.2 How many household units are there in this homestead?

.....

1.3 Who is the head of each household unit?

1.3.1 Name :

Male		Female	
------	--	--------	--

1.3.2 Name :

Male		Female	
------	--	--------	--

1.3.3 Name:

Male		Female	
------	--	--------	--

1.3.4 Name:

Male		Female	
------	--	--------	--

2. Household Structure

Nº (1)	Name of household members (2)	Sex (3)	Age (4)	Marital Status (5)	Relation to household head (6)	Educational level (7)	Working status (8)	Profession (9)
1								

3. Religious Affiliation

To which church do you belong or to what faith religion do you subscribe?

FAITH/RELIGION	HEAD	SPOUSE
Anglican (Church of the Province of South Africa)	01	01
Apostolic Faith Mission of SA (AFM)	02	02

Baptist Church	03	03
Full Gospel Church of God in SA	04	04
Reformed Churches of SA	05	05
Hindu	06	06
Jehovah's Witness	07	07
Lutheran Church & Evangelical Lutheran Church in SA	08	08
Methodist of SA/Wesleyan	09	09
Nederduitse Gereformeerde/Hervormde Kerk	10	10
Presbyterian of SA	11	11
Rhema Bible Church	12	12
Roman Catholic	13	13
Seventh Day Adventist Church	14	14
Shembe	15	15
Traditional African Belief	16	16
Zion Christian Church (ZCC)	17	17
Other Independent Black Churches	18	18
None	19	19
Refuse to Answer	20	20
Uncertain/Don't know	21	21
Other (Specify)	22	22

4. Participation in Community Organisations

4.1 Are you a traditional leader or community leader in your community organisation?

Leadership	Position Held	Head	Spouse
Traditional leader			
Community leader			
Religious leader			
Professional leader			
Not Applicable			

4.2 Are you a member of a community development group(e.g. savings, sewing poultry, etc.)?

Name of Group	Activities/Functions	Head	Spouse

5. Household Livelihood Indicators

5.1 What are sources of cash income for your household per month?

5.1.1 Employment

Amount

5.1.2 How many people are employed?

5.2 How many people get a monthly pension payment in this household?

5.2.1 Who gets a monthly pension payment and why?

5.2.2 How much monthly pension payment does each person get?

5.3.1 Welfare payments (Specify) []

5.3.2 Who gets welfare payment in this household?

- 5.3.3 Why do household members get welfare payments?
-
- 5.3.4 How much does each person obtain from welfare payment?
-
- 5.4 Income generating activities
- 5.4.1 In what income-generating activities are members of this household involved?
-
- 5.4.2 How much cash income is obtained from income-generating activities?
-
- 5.5 Agricultural production
- 5.5.1 What crops do you grow?
- 5.5.2 Are these crops for own consumption or market?
- 5.5.3 If crops are for selling could you estimate the amount of cash income obtained from marketing of crops per year?
-
- 5.7.1 Does your household make money from owning livestock?
- | | |
|-----|--|
| Yes | |
| No | |
- 5.7.2 If yes, how much cash income does the household make from owning livestock per year?
-
- 5.8 What is the average household income from all the sources of income per month?
-
- 5.8.1 How much income does the household obtain from remittances per month?
- 5.8.2 Who sends remittances to the household?
- 5.8.3 From where are remittances sent?
-
- 5.9 What food is stored for consumption or sale during the course of the year?
-
- 5.9.1 Consumption:
- 5.9.2 Sale:

- 5.9.3 For how many months do you store adequate food for consumption?
- 5.9.4 For how many months do you store food for marketing?
- 5.10 How many hectares of land is your household entitled to use?

Less than 1 ha	
1 ha	
2 ha	
More than 2 ha (Specify)	

- 5.10.1 How much of your land is fertile and suitable for agricultural production?
- 5.10.2 Do women have equal access to land-use rights as men in this area?
- 5.10.3 How do women access land-use rights in this area?

Access through marriage	
Access through inheritance	
Other (Specify)	

- 5.11 What type of livestock does this household own and how many of each?

TYPE	Number
Cattle	
Goats	
Sheep	
Figs	
Chicken	

Other (Specify)	
-----------------	--

- 5.11 What agricultural crops does this household produce?
- 5.12 What agricultural equipments does this household own?
- 5.13.1 What means of transportation does this household use for travelling?
- 5.13.2 What type of transport does this household own?
- 5.13.3 What is the current value of transport you own?
- 5.13.4 What other productive equipment do you own?
- 5.14 What other fungible property do you own?
- 5.15.1 Does this household have savings for future use?

Yes	
No	

- 5.15.2 If yes, what type of savings does the household have?
- 5.15.3 If no, are there reasons for not having savings?
- 5.16.1 How many housing units do you have?
- 5.16.2 Type of housing as an asset

Description of Housing Units	Ranking
Concrete blocks/Bricks tile roofing 5 roomed housing	5

Concrete blocks, asbestos roofing 3-4 roomed housing	4
Mud blocks/mud and wood, rustic roofing, 5 roomed housing	3
Mud and wood, thatch roofing 2-3 roomed housing	2
Mud/metal sheeting, plastic, cardboard walls, rustic roofing	1

5.17 What is the water source for your household?

Piped (internal)	
Piped (yard)	
Piped (public tap-free)	
Piped (public tap-paid)	
Borehole	
River/stream/dam/well	
Protected spring	
Other (Specify)	

5.18 Why type of toilet does your household have?

Flushed	
Improved pit latrine (VIP/Chemical)	
Other unimproved pit latrine	
No facility	

5.19.1 What is the source of energy for your household?

Wood	
------	--

Paraffin	
Gas	
Electricity	
Other (Specify)	

Yes	
No	

5.20 Does your household owns/have any of the following?

ASSET	YES	NO
A fridge or freezer	1	2
A polisher or vacuum cleaner	1	2
A TV set	1	2
A radio	1	2
A hi-fi or music centre	1	2
A stove	1	2
A sewing machine	1	2
Running water in your home (Piped water)	1	2
A domestic servant living in	1	2
A domestic servant not living in	1	2
One car	1	2
Telephone in the home or cellular phone	1	2

5.21 Health Indicators

5.21.1 Are there permanently ill members of this household?

5.21.2 If yes, how many are ill and what health problems do they have?

5.21.3 Was somebody ill during the past month?

5.21.4 What medical expenses were paid?

5.21.5 What are your usual monthly health expenditures?

5.21.6 Did any member of your household pass away during the past year?

Yes	
No	

5.21.7 If yes, who passed away?

5.21.8 What costs did the household incur as a result of the death in the household?

6. Perceptions of Needs

6.1 What in your opinion is the most pressing problem (issue) that needs to be addressed in this household?

6.2 What are you doing to solve this most pressing problem?

6.3 What would help this household most to secure its livelihood or living conditions? Name up to three things in order of priority?

7. Perceived Quality of Livelihood

7.1 Taking all things together, how satisfied are you with your living conditions on the whole these days? Generally speaking would you say you are very satisfied, dissatisfied or very dissatisfied?

Very satisfied	5
Satisfied	4
Neither satisfied nor dissatisfied	3
Dissatisfied	2
Very dissatisfied	1
Uncertain/Do not know	0

7.2 To what degree can your household meet basic needs of food, shelter, clothing, health and education?

Very satisfied	5
Satisfied	4
Neither satisfied nor dissatisfied	3
Dissatisfied	2
Very dissatisfied	1
Uncertain/Do not know	

7.3 In the past year has there ever been a time when this household could not feed all its members?

Yes	
No	

7.3.1 If yes, give an explanation.

7.3.2 What did you do about the problematic situation?

7.4 Taking everything into account, how satisfied are you and members of this household with the way you live these days?

Very satisfied	5
Satisfied	4
Neither satisfied nor dissatisfied	3
Dissatisfied	2
Very dissatisfied	1
Uncertain/Do not know	0

7.5 Can you describe what your life is like at present:

Rewarding or	1
Frustrating	2
Between the two	3
Uncertain/Do not know	4

7.6 Compared to one year ago, how would you say things are for you and members of this household? Are things better, the same or worse?

Much better	5
Better	4

Same	3
Worse	2
Much worse	1
Uncertain/Do not know	0

7.7 How do you think things will be for you and members of this household in five year's time? Do you expect things to get better, stay the same, or get worse?

Much better	5
Better	4
Same	3
Worse	2
Much worse	1
Uncertain/Do not know	0

8. Community Level of Livelihood

8.1 How satisfied are you and members of this household with the following aspects of living in this area? Are you very satisfied, satisfied, neither satisfied nor dissatisfied, dissatisfied or very dissatisfied.

	Very Satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied	Unsure/Don't know	N/A
Economic Aspects							
Cost of living	5	4	3	2	1	0	6
Savings	5	4	3	2	1	0	6

Access to affordable credit	5	4	3	2	1	0	6
Pensions	5	4	3	2	1	0	6
Job opportunities	5	4	3	2	1	0	6
Remittances	5	4	3	2	1	0	6
Welfare payments	5	4	3	2	1	0	6
Government grants and subsidies (e.g. housing)	5	4	3	2	1	0	6

Physical Aspects/Services							
Communications	5	4	3	2	1	0	6
Markets	5	4	3	2	1	0	6
Roads	5	4	3	2	1	0	6
Bridges	5	4	3	2	1	0	6
Energy supplies (specify)	5	4	3	2	1	0	6
Electricity supply to the dwelling	5	4	3	2	1	0	6
Housing and other buildings	5	4	3	2	1	0	6
School facilities	5	4	3	2	1	0	6
Health services	5	4	3	2	1	0	6
Community halls	5	4	3	2	1	0	6
The size of the dwelling units	5	4	3	2	1	0	6
The quality of the dwelling units	5	4	3	2	1	0	6
Safe and clean water to drink	5	4	3	2	1	0	6
Sanitation (specify)	5	4	3	2	1	0	6

Access to Resources							
Access to medical services	5	4	3	2	1	0	6
Access to adult skills training	5	4	3	2	1	0	6
Access to agricultural extension	5	4	3	2	1	0	6
Services	5	4	3	2	1	0	6
Access to agricultural inputs	5	4	3	2	1	0	6
Access to appropriate technology	5	4	3	2	1	0	6
Access to capital for production	5	4	3	2	1	0	6
Access to markets	5	4	3	2	1	0	6
Access to household labour-saving technology	5	4	3	2	1	0	6
Social and Cultural Aspects							
Respects shown to the household by the local community	5	4	3	2	1	0	6
Common rules, norms and sections for behaviour	5	4	3	2	1	0	6
Indigenous health services	5	4	3	2	1	0	6
Traditional ceremonies	5	4	3	2	1	0	6
Recreation and leisure	5	4	3	2	1	0	6
Cooperation	5	4	3	2	1	0	6
Reciprocity and exchanges	5	4	3	2	1	0	6

Tribal authority governance	5	4	3	2	1	0	6
Security against crime and violence	5	4	3	2	1	0	6

Natural Resources							
Availability of indigenous farmed food	5	4	3	2	1	0	6
Availability of wild fruit/vegetable	5	4	3	2	1	0	6
Grazing area	5	4	3	2	1	0	6
Trees and forests	5	4	3	2	1	0	6
Water sources	5	4	3	2	1	0	6

8.2 What would help this household most to improve its livelihood security? Name up to three things in order of priority.

First:

Second:

Third:

9. Household Perceptions of Livelihood Security

9.1 What things happened in this area in the past year that have made living conditions and lifestyle better for households in this area?

.....

9.2 What things happened in the past year that have made living conditions and lifestyle worse for households in this area?

.....

9.3 Can you name the group/organisation that was most active in carrying out the changes for the better in this area?

Government national provincial local authority	01
NGO (Non Governmental Organisation)	02
CBO (Community Based Organisation)	03
Political organisation	04
Trade union	05
Teachers union	06
Youth organisation	07
Women's organisation/church organisations	08
Self help organisation	09
Professional body	10
Burial society	11
Stokvel, saving club	12
Disabled association	13
Sport club	14
Unemployed association	15
Other (Specify)	16

9.4 Was this group/organisation the best one to carry out these changes?

Yes	
No	

9.5 If not, why?

9.6 Do men and women have different ways of coping with living conditions in this area? Give an explanation.

10. Development Priorities for Household Livelihood Security

10.1 Which problem should the government attend to Last?

Education	1
Resources of agricultural production	2
Water	3
Electricity	4
Jobs	5
None of these	6
<i>UNCERTAIN/DO NOT KNOW</i>	0
Other (Specify)	

10.2 What in your opinion is the most pressing problem (issue) that needs to be addressed in this district at present?

APPENDIX 2 A GUIDELINE FOR THE COMMUNITY SURVEY

Interviewer : **Date :**

1. Respondent

- 1.1 Name :
- 1.2 Age :
- 1.3 Gender :
- 1.4 Education :
- 1.5 Occupation :
- 1.6 District: :
- 1.7 Ward :
- 1.8 Inkosi :
- 1.9 Headman :
- 1.10 Period in the Area :

2. Demographics

- 2.1 Name of Community :
- 2.2 Region :
- 2.3 District :
- 2.4 Religion Composition :
- 2.5 Ethnicity :
- 2.6 Population
 - 2.6.1 No. of people :
 - 2.6.2 No. of adults :
 - “ “ (Males) :
 - “ “ (Females) :
 - 2.6.3 No. of dwellings :
- 2.6 Migration patterns
 - 2.7.1 No. of outgoing adults :
 - 2.7.2 No. of outgoing males :
 - 2.7.3 No. of outgoing females :

- 2.8 Sources of Energy
- 2.8.1 No. of electricity users
- 2.8.2 No. of other type of fuel (wood, paraffin, etc.) users
- 2.9 Major occurrences during the last five years (flood, drought, epidemic, fire, government action)

3. Health

- 3.1 Facilities
 - 3.1.1 No. of hospitals
 - 3.1.2 No. of clinics
 - 3.1.3 No. of private medical practitioners
 - 3.1.4 Other
 - 3.1.5 Time for average resident to travel there
 - 3.1.6 Cost of travel to facilities by public transport
- 3.2 Prevalent diseases in the area (TB, cholera, typhoid, measles, AIDS, etc.)
- 3.3 Main causes of death in infancy (less than 1 year)
- 3.4 Main causes of death in early childhood (1 to 5 years)
- 3.5 Main causes of death in late childhood (6 to 15 years)
- 3.6 Diseases preventative programmes

4. Sanitary Facilities

- 4.1 Type of water to drink (rainwater, pool, lake, stream, public tap, boreholes, spring, well)
- 4.2 Proportion of users of water sources
- 4.3 Types of toilet facilities (pit toilet, field, water closet, bushes)
- 4.4 Proportion of toilet facilities users

5. Family Planning

- 5.1 Acceptance rate
- 5.2 No. of facilities
- 5.3 When started
- 5.4 Problems
- 5.5 Availability
- 5.6 Best methods
- 5.7.1 Incidence of back-street abortion.
.....
- 5.7.2 Incidence of legal abortion (since 1997)
.....

6. Agriculture

- 6.1 Land ownership
- 6.2 Seasons (peak and slack)
- 6.3 Rainy season
- 6.4 Payment for labour (cash payment, in-kind payment)
.....
- 6.5 Tasks usually performed
- 6.6 Sources of water
- 6.7 Marketing of crops
- 6.8 New crops
- 6.9 New seed varieties in past 10 years
- 6.10 Use of chemical fertiliser
- 6.11 Powered equipment (harvester, tractors, threshers)
.....
- 6.12 New animals (improved breed over 10 years)
.....
- 6.13 Crops grown
- 6.14 Intercropping
- 6.15 Division of labour (gender and generation)
.....
- 6.16 Animals for meat, milk

7. Education

- 7.1 No. of educational facilities
- 7.1.1 Pre-schools
- 7.1.2 Lower Primary
- 7.1.3 Higher Primary
- 7.1.4 Combined Lower and Higher Primary
- 7.1.5 High Schools
- 7.1.6 Tertiary Institutions and types
- 7.1.7 Other training facilities
- 7.1.8 Adult education centres
- 7.2 Average distance travelled to educational facilities Km.
- 7.3 Proportion of girls to boys attending primary and secondary schools girls,
..... boys.
- 7.4 Problem of absenteeism or repeating of grades
- 7.5 Estimation of the number of adults who have completed tertiary education at colleges or universities.
.....
- 7.6 Percentage of adults, men, women who are literate/ have completed primary and secondary school education.
- 7.6.1 Adults
- 7.6.2 Men
- 7.6.3 Women

8. Transport

- 8.1 Distance to the nearest town Km.
- 8.2 Time for travel to the nearest town Hours/ minutes.
- 8.3 Is the road motorable most of the year?

Yes	
No	
- 8.4 Capital
- 8.5 District
- 8.6 Estimated cost for average resident to travel by public transport to the nearest town.
.....
- 8.7 Type of road leading to the community (tar, gravel, no road).
.....

9. Communication Facilities

9.1 Facilities

- 9.1.1 Telephone
- 9.1.2 Post Office
- 9.1.3 TV set
- 9.1.4 Newspaper
- 9.1.5 Newsletter
- 9.1.6 Library
- 9.1.7 Other
- 9.2 Distance to the nearest communication facility. minutes

10. Industrial Development and Job Market

- 10.1 Business using mechanical power and employs at least ten people.
.....
- 10.2 Type of establishment (products made)
.....
- 10.3 Home Industries (products made)
.....
- 10.4 Household employment (laundry, cleaning house, fetching water and wood, child care, etc.)
.....

11. Community Organisations

- 11.1 Types (women, youth, gardening, co-operatives, sewing, savings, etc.)
.....
- 11.2 Membership gender
- 11.3 Activities
- 11.4 Positions held by women in community affairs (school governing body, tribal authority council, political structures, etc)
.....
- 11.5 Government development programmes and projects.
.....
- 11.6 Government ministries involved in development programmes and projects.
.....
- 11.7 Non-government development programmes and projects.
.....
- 11.8 Non-government organisations involved in development programmes and projects.
.....

12. Agricultural and Rural Development Extension

12.1 Activities

.....

12.2 Relevance of activities

.....

12.3 Staff/gender issues

.....

13. Problem areas for further discussion (health, nutrition, food security, child care, legal problems, transport, leisure/recreation, etc.)

.....

CURRICULUM VITAE

Sazile Margaret Mtshali was born on 19th July 1953 at Mpolweni Mission Station, New Hanover in KwaZulu-Natal, South Africa. She completed Matriculation at Pholela High School in Bulwer. In 1975 she completed a Diploma in General Nursing at Edendale College of Nursing in Pietermaritzburg. She obtained a BSc. Degree in Home Economics at the University of Natal in 1980. In 1981 she taught at Cwaka College of Agriculture (now Owen Sitole College of Agriculture).

From 1982 to 1984 she worked for the former Centre for Research and Documentation at the University of Zululand as a researcher into community nutrition. In 1985 she joined the Department of Home Economics at the same institution. In 1986/87 she obtained a British Council scholarship to study for a masters degree in Rural Social Development at the University of Reading in England, United Kingdom. From 1988 to 1994 she was a lecturer in Non-formal Education and Women's Studies in the Department of Home Economics. She was senior lecturer and acting head of the Home Economics Department from 1995 to 1996. While employed at the University of Zululand, in 1997 she obtained a PhD-sandwich fellowship from Wageningen University and Research Centre to start her PhD programme.

Since 1999 to date, Sazile Mtshali is a senior lecturer in the Department of Agriculture at the University of Zululand where she teaches rural development and extension. Besides teaching, she is actively involved in research and community development with various rural development institutions, such as National Department of Agriculture (NDA), KwaZulu-Natal Department of Agriculture and Environmental Affairs (KZNDAEA), South African Qualifications Authority (SAQA), Food and Agriculture Organisation (FAO), Heifer Project International (South Africa), Initiative for the Development and Equity in African Agriculture (IDEAA), and Change in the Tropics.

She is the mother of two sons and she lives at Esikhawini Township near Richards Bay in KwaZulu-Natal.

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