THE CONTRIBUTION OF COMMUNAL RANGELANDS TO RURAL PEOPLE'S LIVELIHOODS IN THE MALUTI DISTRICT

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Abstract

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MPhil Thesis, Faculty of Arts, University of the Western Cape.

The contribution of common property resources to rural people's livelihoods is enormous, yet policy makers overlook it. Wild resources, grazing resources and trees provide an important buffer for most rural households. This study investigates the contribution of common property resources, in particular communal rangeland resources, to rural people's livelihoods in the Maluti District of the Eastern Cape, South Africa. Looking at an array of livelihood strategies which people use, the study investigates the proportional contribution of different livelihood strategies with reference to common property resources, specifically wild resources, grazing resources and trees. The study uses several methods to capture these issues of interest. The methods used are surveys, wealth ranking, valuation methods, social mapping, and "aggregated" diaries. There are five important issues, which the study discovers, that are imperative in understanding the broader question of the contribution of common property resources to rural people's livelihoods. Firstly, the question of land tenure is imperative when addressing issues pertaining to natural resource contribution to livelihood. In the district as well as in the country at large, the question of rights to communal land is unclear. People in the villages are not sure about the rights they have to land and this unclear situation opens doors for others to exploit the situation by acquiring pieces of land for private use. This has serious implications concerning the livelihood outcome of others since this semi-legal privatisation of land is at the expense of long-term benefits that would accrue to the collective from natural resources. Secondly, the issue of management appears as important concerning the long-term exploitation of these resources. Resources, which once were used by people, are becoming extinct due to decaying natural

resource management institutions. Thirdly, the rich together with the poor enjoy a number of benefits from communal rangeland resources. Although the rich appear to exploit grazing resources more, the poor also benefit; but their benefit is likely to be threatened by the unclear tenure issue. Fourthly, most sources of livelihood especially for the lower middle and the poor households are linked to natural resources. It is this group of people who, unlike the rich, have limited options besides exploiting natural resources for survival. Fifthly, if these resources are significant in their contribution to people's livelihoods, why then are policy makers not intervening in the way they are managed? The investigation shows that the conventional economic methods used to calculate the value of these resources to rural people's livelihoods fail to consider the complexities and the dynamics of rural areas. The study therefore shows that, for a meaningful understanding of the value of common property resources, we should consider the complexities and dynamics of rural areas.

These five points are linked to a secure livelihood outcome. The study concludes that all these points (among other issues such as policy processes, assets that people have, employment, claims from the government etc.) should be considered as important constructs in the rural setting for a secure livelihood outcome. The expectation is that policy makers must create an enabling environment for all these constructs to be developed and their complexity understood for a secure livelihood outcome for the rural people.

September, 2001

DECLARATION

I declare that *The Contribution of Communal Rangelands to Rural People's Livelihoods in the Maluti District* is my own work, that is has not been submitted for any degree or examination in any other university, and that all sources I have used or quoted have been indicated and acknowledged by complete references.

Zolile Mninawa Ntshona September, 2001

Signed.....

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First of all I would like to thank the Lord Jesus Christ, my Lord and my personal Saviour, for granting me everything pertaining to what was needed to produce this thesis. I would like to thank Him for making my path to cross with that of Prof. Ben Cousins who has made it possible for me to continue working for the Programme for Land and Agrarian Studies (PLAAS). Working for PLAAS has provided me with the opportunity to work in the Maluti District, which resulted in the production of this thesis. There is a special person who has been behind all the work I did at PLAAS, including the work in Maluti District, and that person is Dr. Stephen D. Turner. Dr. Turner (my supervisor) did more than was expected of him in helping me to develop this thesis – HE IS VERY PATIENT. If I were in his shoes, I would have long given up.

I would also like to thank the people of Mkemane without whom this study would not have been possible. They provided the data and arguments I present in this study. Mkemane will always be my second home. I am also very grateful to the Environmental and Development Agency Trust (Matatiele) for their support during my stay in the area. The collaboration that PLAAS had with EDA Matatiele made it possible for me to have a speedy entry in the area of study (since they have been working in the area for more than 20 years), provided me with the best administrative support, more colleagues and an office space.

The Maluti Agricultural Extension Officers were also very helpful in providing me with some of the data used in the study. Many thanks once again go to Lungisile Ntsebeza, Thembela Kepe and Prof. Carl-Erik Schulz for their detailed comments in certain parts of the study. Thanks also goes to the Christian Michelsen Institute (CMI) for providing funding for the study and Johan Helland from CMI for assisting me with field work in the area of study and the development of the research proposal.

Last but not least, I would like to thank my wife Pumla who has been (still is) patient during my long absence from home whilst doing fieldwork.

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List of Abbreviations

CBNRM	Community Based Natural Resource Management
CBO	Community Based Organisation
CMI	Christian Michelsen Institute
DFID	Department for International Development
DWAF	Department of Water Affairs and Forestry
EDA	Environmental and Development Agency Trust
GDP	Gross Domestic Product
ha	Hectare
IFAD	International Fund for Agricultural Development
IIED	International Institute for Environment and Development
kg	kilogram
l	litre
LSU	Large Stock Unit
ml	millilitre
n.d.	Not Dated
NFAP	National Forestry Action Plan
NGO	Non Governmental Organisation
PLAAS	Programme for Land and Agrarian Studies
R	Rand
SLWGC	Small Location Wool Growers' Club
UIF	Unemployment Insurance Fund

Chapter 1 Introduction

This study emanates from the fact that the 'hidden' value of wild resources, trees and grazing resources on communal rangelands is often overlooked by conventional economic assessments although their contribution to people's lives is enormous. The study will often use the term 'common property resources' when referring in general to resources found in communal rangelands, although some of these resources are also found in home gardens and arable fields. The purpose of this study is to assess the value of the contribution that communal rangelands make to rural people's livelihoods. The intention is to present the contribution in monetary terms. In the multiple livelihood strategies that people have, what is the contribution of communal rangelands to rural people's livelihoods compared to the contribution derived from other livelihood sources? The contribution will not be calculated for all communal rangeland resources. Methodological and other constraints meant that it was only possible to make a detailed investigation of the contribution made by fuelwood resources in the study area. The goal is the improvement of management of communal rangelands, prompted by an understanding of the value of common property resources.

There is growing interest in the role which wild resources play in rural people's livelihoods. IIED (1997: 5) states that these wild resources are not only important to "hunter gatherers, but make substantial contributions to the livelihood strategies of settled farmers, pastoralists and traders. Yet many natural resource management policies which affect wild resources and their habitats fail to consider their full economic benefits". This thesis is an attempt to account for the importance of these natural resources, especially resources found in communal rangelands, to rural people's livelihoods in the area under study.

For the purposes of this study, the resources that will be dealt with are wild resources, grazing resources and trees. Wild resources, for the purposes of this study, are understood to constitute medicinal plants, wild fruits and wild vegetables. Trees constitute trees for fuel, droppers, poles and building material. Grazing resources constitute the grass and few

tree species grazed and browsed by animals, thatch grass used for building and other grass species used to make brooms, mats and platters.

1.1 Operational Links and Arrangements

In carrying out this study, I collaborated with the Environmental and Development Agency Trust (EDA), which has been working in the Maluti District for many years. EDA is a non-governmental organisation (NGO) committed to redress the imbalances of poverty and inequality in South African society and working to improve the quality of life in the rural areas. EDA selected three sites for its Community Based Land Management (CBLM) programme in the Maluti District: Mvenyane, Madlangala and Mkemane. The purpose of the CBLM programme was to:

help land users increase their income;

- improve the sustainability of these gains, and the management and administration of land;
- help government fit local organisations into its own framework;
- make the lessons of the project available to a wider range of governmental agencies and;
- other development agencies/ land users by developing models for Community Based Land Management.

In order to carry out this study properly, make informed decisions about field sites and generally understand the area before the study started, I worked together with EDA. It was intended that we would have a reciprocal relationship for the purposes of sharing information, findings and ideas.

1.2 National Context

1.2.1 Background of Land Management Practices in South Africa

In order to understand the complexity of common property resource management, one has first to understand the history of land management and ownership in South Africa. In the early twentieth century, there were concerns in the South African government that land occupied by the African indigenous people was degraded. This culminated in the introduction of the 'betterment' scheme as an approach to address the problem of the spread of degradation. The scheme was loaded with a number of intervening strategies.

Efforts to 'rehabilitate' or 'stabilise' agricultural land in the communal areas took shape in the 1930s as the international concern with soil conservation spread into South African policy. The 1932 Native Economic Commission drew attention to the environmental problems in the 'native areas' which it described as severe, an obstacle to agricultural development and a threat to the direction of 'native policy'. It argued that soil erosion, the apparent destruction of grazing areas and the drying up of springs in the reserves needed to be combated. Legislation for the culling of excess stock in these areas had already been enacted by Proclamation 31 of 1939 (although it was widely resisted and not effectively implemented until after World War 2). Four years after the 1932 Commission, the Secretary for Native Affairs made a statement on land policy with plans for the rehabilitation of the reserves, including surveys of each 'location' (local area) before land reclamation began. Yawitch (1981: 10) has argued that the perceptions driving policy at this time were of Africans as inherently poor farmers "with an irrational desire to accumulate cattle and an unwillingness to accept crop rotation... It is because of this that the division of the land, the limitation of stock and anti-erosion measures were seen as the ultimate solution to the problem. Moreover, it is because such a solution did not take the political and economic factors that had forced reserve agriculture to deteriorate into consideration, that such solutions could not and did not work. It was not necessarily that these measures were a failure in their own terms, but because they were implemented

without sufficient consideration of the existing social conditions and the causes of those conditions, they served only to antagonise the local populations."

The strategy of 'betterment' first emerged from these concerns in the 1930s. It combined physical land reclamation measures (such as gully rehabilitation) with land use planning that reorganised and segregated the three principal elements in the communal areas landscape: settlement areas, arable land and grazing land. These measures were sometimes accompanied by other agricultural development measures such as the introduction of stock dipping tanks and the fencing of grazing areas into camps in which rotational grazing schemes were introduced.

The pre-'betterment' period was characterised by herding of livestock, use of beacons and stone packs to mark areas demarcated for grazing, strong leadership from the chiefs and effective collective action among resource users to ensure sound management of common property resources – especially land, rangelands and forest resources (Ntshona, 2000a).

During the 'betterment' scheme, most of these characteristics were substituted by fencing; strong policing from the chiefs (then used as government tools), the government and its rangers; culling of livestock; and a centralised form of management. De Wet and McAllister (1983) wrote that the plan during the 'betterment' scheme was to rehabilitate areas declared for 'betterment' and to make them economically viable. This was to be achieved by dividing rural areas into zones allocated for residential, arable and grazing purposes. Officials charged with monitoring the scheme were to assess the carrying capacity of the area and, if necessary, to order culling of stock. Planning of these areas was based on the idea of 'economic units'. These were designed in such a way that a family, in order to make the minimum of £60 per year that was perceived as being sufficient to make a living off the land, should have access to arable and grazing land. The units were expected to comprise three morgen (about 2.43 ha) of arable land and 17 head of cattle, each requiring three morgen of grazing land.

De Wet and McAllister (1983) stated that in practice, the economic units could not support the number of people that were on the land. 'Surplus' families were therefore expected to have to move off the land. In order for the proposals of the Tomlinson Commission[i] to be successfully implemented, the rural environment would have to be restructured because people would have to move to newly planned residential areas so that the rest of the area could be made available for cultivation and grazing. Industries would have to be expanded as well, to provide work for those that would have to move from their old rural homes to new villages and industrial areas. The 'betterment' envisaged by the Tomlinson Commission was in effect not implemented, because funding for establishing the new rural villages and industrial towns was not made available by government. Because the new settlements never got off the ground, there was nowhere to move the "surplus" population. The idea of 'economic units' was dropped because the Tomlinson Commission had reported that for a black family to make a living off agriculture they would need an income of £120 per year. That would mean that 80% of the rural families would have to move off the land. This was not practical because it would cause social problems, and the figure of £60 was decided upon instead.

The 'betterment' scheme, after it was implemented, could only survive under close supervision and policing. Chiefs and headmen in areas that were subjected to it were expected to monitor its success. In other areas where there was resistance, since the rural people hated that their areas be fenced, being relocated and land use being changed, the government called the police to ensure 'order and stability'. The 'betterment' scheme was resented by many because of the manner in which it was introduced. Because of the 'strong arm' of the government, the scheme was 'coated' with attractive agricultural production initiatives to entice the recipients. When the enticement did not seem to be effective, the authorities resorted to the enforcement of the scheme. As part of the scheme, boundaries were demarcated, fencing was introduced, and culling and dipping programmes were implemented.

In other areas the scheme was welcomed since, among other things, it gave children an opportunity to go to school because herding of livestock was no longer necessary after

fences were introduced. But in other areas the resistance grew stronger. This emanated from the fact that there was no proper consultation before the 'betterment' scheme was introduced. The expenses that were incurred to implement and maintain the 'betterment' scheme were exorbitant, which saw it collapsing as time went by.

The collapse of the 'betterment' scheme saw communal rangelands and fields in the rural areas being managed differently from the pre-'betterment' and the 'betterment' periods. There is a general sense among the common property resource users that the current situation has brought confusion to many people. The unclear land tenure situation, loss of livestock in big numbers because of absence of fencing causing livestock to be lost or stolen, loss of other plant species which are at the core of survival for many rural people and semi-legal occupation of communal land for private purposes have affected the livelihoods of many people.

1.2.2 Need for Land Tenure Reform

In Southern Africa, land tenure reform is needed to address problems emanating from colonial conquest and dispossession (Adams *et. al.*, 2000). As said above, the land users themselves are not clear as to who the owner of the land is (Turner, 1999). Land tenure reform in communal areas has lagged behind that of land held privately. 50,000 households, by late 1999, had acquired rural land in the former white areas through government subsidies. In 1996, the Interim Protection of Informal Land Rights Act was passed to protect people with informal land rights. This was to be followed by a more comprehensive land tenure legislation; the proposed Land Rights Bill (Turner, 1999).

The need for tenure reform in South Africa embraces the international debates on land tenure as briefly documented by Turner and Ntshona (1999: 168) around the question of conservation and benefits accrued from land. "Internationally, there has been extensive debate about the relationship between land tenure and incentives to produce from and conserve the land. The central concern of this debate has been whether land users' rights to land resources are secure enough to make agricultural investment – including investment in

often long term conservation benefits – worth while for them. The focus of this debate has moved from the outward forms of tenure security (such as freehold versus 'communal' tenure) to the actual practice and perceptions of land authorities and land users. Commonly it has been shown that users in non-freehold systems do feel secure enough to invest in production and conservation; but that the detailed design of such systems, and a range of locally variable factors affecting their performance, will determine whether this is so in any particular instance. Conversely, it has been recognised that private ownership is not a guarantee of environmentally responsible behaviour. Ignorance or external economic incentives may also lead freehold farmers into land degradation".

Although the quotation above is true for any country with problems like those of South Africa, at the time of the research the new Minister of the Department of Agriculture and Land Affairs had put a halt to the proposed Land Rights Bill which was at the core of plans for tenure reform.

This Bill came about because of the following problems:

- Overcrowding, conflicting and overlapping land rights;
- Unclear status of land rights e.g. where land is registered as state land whereas in some instances groups and tribes have strong rights to the land which are legal, almost equivalent to ownership;
- Abuse of human rights under traditional or communal systems and;
- Breakdown in the land administration system (Department of Land Affairs, 1998).

The draft proposals identified ten key functions: internal land use planning, land use zoning and development, land allocation, decision making, management and allocation of funds, investigations of entitlement to legally secure tenure or comparable redress, accreditation of Land Rights Holders Structures, registration of land rights, record keeping and enforcement. The new Minister was alleged to be moving ahead with a major policy shift without consulting key interested parties (Business Day, 2000, May 04). This major policy shift, after freezing the Land Rights Bill, was the Minister's suggestion that authority over communal land should be vested in tribes. This means that there would be support for the chiefs. This contradicts the Land Rights Bill, which provides for residents to choose their

tenure regime. These chiefs have always claimed to speak on behalf of their constituencies, but the truth of the matter is that many of them rule in an autocratic manner.

If this issue of tenure reform continues in the direction in which the Minister is taking it, livelihood outcomes would be affected. For example, people in the district are less keen to invest in livestock because there is no clarity or authority for a communal system of rangeland ownership. Because of the uncertainties that this policy shift has created, big livestock owners in some areas are using the opportunity for their benefit by semi-legally privatising portions of communally owned land through the permission of chiefs. This would affect the benefits for other land users in the long run.

1.2.3 Development challenges

The main development challenge identified in this study is the condition of institutions, from government departments to natural resource user groups. Building an understanding of what should be done in the area is hindered by the different 'schools of thought' about the complexity of livelihoods in rural areas. There is a general tendency to favour commercial farming approaches to livelihoods, as opposed to farming approaches practised in communal areas. People who are supposed to carry the vision of development, especially in the agricultural sector, were in many cases trained to believe that commercial farming practices yield greater benefits than farming practices in communal areas. If this is looked at with reference to what the 'commercial farmer' has to invest as means of production and the objectives of the different farming and management systems, then the belief that commercial farming practices yield more benefits can be challenged, at least in South Africa. This understanding among agricultural extension officers is carried down to communal areas and thus precludes any efforts that people were embarking upon. This institutional chain of understanding trickles down a particular school of thought backed by incentives at the birth of any project. Some local institutions also buy into the idea as if it is a 'golden rule' and have no confidence in ideas of their own making. Government institutions do not build on existing efforts and initiatives by local people to cope with shocks and stresses, but introduce new ideas based on their understanding of the situation.

The decaying local institutions, in their condition, take whatever comes and try to impose it on people without proper consultation. Projects, ideas, and systems of operation employed in this manner have failed. There needs to be proper consultation if there is any intervention by an outsider. People on the ground, if empowered, would be in a position to foster their own plans and carry them to relevant places for assistance with implementation.

The issues that are addressed in the national context and those that are addressed in the local context (below) all link to the research themes and questions of this study.

1.3 Local Context

1.3.1 Maluti District

Maluti district is in the north east of the Eastern Cape province. It is divided into 25 administrative areas, each of which is made up of wards – which people commonly refer to as villages (*iilali*). Mkemane, where the study was conducted, consists of four villages within the Ludidi area of the district.

1.3.1.1 Land Uses and Land Potential

As in most of the communal areas in South Africa, the land history of Maluti District has been oppressive and 'conducive to poor management' (Turner, 1999). The district population of 160,777, according to 1991 figures, was one of the highest of all the districts in the former homeland area of Transkei. According to these figures, the land area of the district is 221,891 hectares, with a population density of 72 people/ km^2. Data below, in Table 1, Table 2 and Table 3, show land use types, estimated potential land use by type and land use patterns respectively.

Table 1: Maluti District: Land Use Type, 1985

LAND USE TYPE	ha
Arable land	80,640
Grazing	89,318
Community Gardens	4,076
Home Gardens	217
Forestry	835
Woodlots	14,000
Nature conservation	183
Non Agricultural Land	32,622

Source: LAPC (1995)

Table 2: Maluti District: Estimated Land Use by Type, 1985

ESTIMATED POTENTIAL LAND USE BY TYPE	ha
Arable land	40,000
Forestry	1,000
Woodlots	2,000
Grazing	} 175,601
Conservation	
Non-agricultural	
Private Commercial Farming	3,290

Source: LAPC (1995)

Table 3: Maluti District: Land Use Patterns, 1989/90

LAND USE PATTERNS	%
Arable land	18
Grazing	75.2
Forestry	0.4
Other	6.4

Source: LAPC (1995)

The 1994 livestock figures reveal that the average area of grazing land per large stock unit (LSU) was 0.84 ha, the number of LSU per dip tank was 2,084 and the number of LSU per dam was 35,431. The LAPC report showed that there were 106,294 LSU in the district, but that the appropriate number based on the recommended carrying capacity was 66,819, which was only 63% of the actual livestock population in the area. In this report also there is no explanation of how the carrying capacity referred to above was calculated. The author is aware of the debates around the issue of carrying capacity, but the figures quoted show

the difference between conventional scientific recommendations and the actual use of rangeland by local stockowners. According to a study done by Cousins (1997) in the district, people keep livestock for multiple purposes. 63% keep them for ploughing, 25% slaughter for meat, 63% use them for milk, 100% for sales and 25% for savings and investment. Reasons for selling cattle in the area included urgent cash needs (12%), cash for household consumption (53%), disposing old and buying in young (30%), the pursuit of business goals (47%) and other reasons, e.g. disposing of livestock by selling to avoid losing them through stock theft (30%) (Ibid: 40). Goats were kept mostly for slaughtering and traditional ceremonies (Ibid: 44).

1.3.1.2 Selection of the Research Site

For guidance in choosing a research site, I used ranked sources of income from the EDA Community Based Land Management (CBLM) workshop report (EDA, 1998). This is a report based on several workshops in the CBLM pilot areas on continuing projects on the ground; mood survey; basic assessment of natural resource status; documentation of land use practices, nominal and actual management, administration at local level, institutional survey and policies of government. I also considered verbal information, in particular from the EDA staff members.

The small size of Mkemane and the fact that people have an interest in both commercial and communal ways of livestock production led me to choose it as a research site. It would have been expensive to work in Mvenyane because of its 12 sub-villages as opposed to Mkemane, which only has four sub-villages. The CBLM workshop report showed that Mkemane, as opposed to Madlangala and Mvenyane, has livestock sales rating the highest source of income. In the CBLM workshop report, it appeared that livestock in Mkemane is the people's greatest source of income and when I visited the place, my impression was that people's focus is on livestock production. The place was also highly favoured by EDA agriculturalists because politics in the area were thought to be minimal. The latter belief was later proved to be incorrect.

Below in Table 4 are the three Community Based Land Management pilot areas where EDA works. Shown in the table are the different land uses in the CBLM pilot areas. Compared to other CBLM pilot areas, Mkemane has more grazing land and less arable land.

Table 4: CBLM Pilot Areas

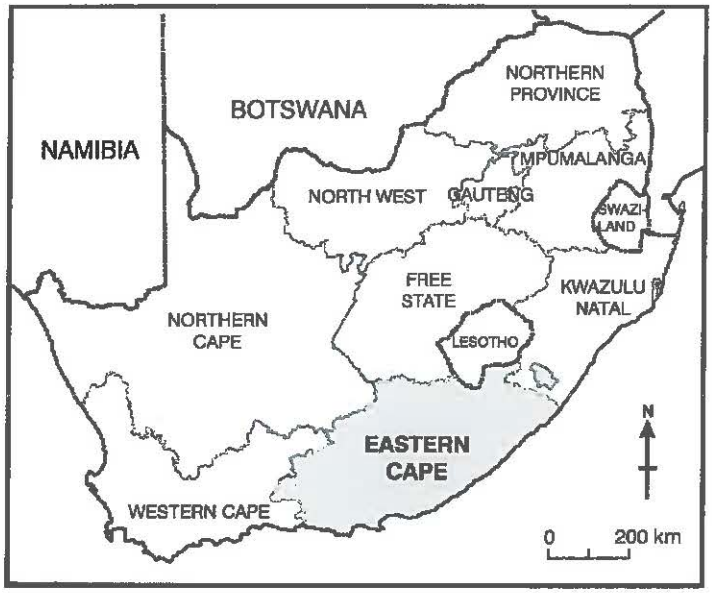
	Villages		
Land Use (ha)	**Madlangala**	**Mvenyane**	**Mkemane**
Grazing	1 221	2 109	12 270
Residential	233	864	629
Arable	184	542	93

Source: Department of Agriculture, Maluti District

1.3.2 Description of the Mkemane Research Area

Mkemane village is named after the Mkemane River, which passes through a number of villages. Locally, the four villages (Small Location, Mkemane, Mpofini and Zitapile) are called Mkemane, but Zitapile is in a different administrative area, Ludidi B. Each of the wards (villages) has its own sub-headman (*Unozithetyana*). There are two headmen (*Izibonda*) for the Ludidi area and each headman manages one of the two administrative areas (Ludidi A and Ludidi B). The two headmen report to the chief. Headmen in the area are nominated because of their relations to the chief. In this case, the two headmen have the same clan name as the chief. This used to be the case also for *Oonozithetyana* (sub-headmen) but members of the respective villages decided that it was not necessary. They agreed that anybody committed to the development of rural people and a resident of that particular village could be elected as *Unozithetyana*. The chief is in charge of the Ludidi area and other administrative areas such as Kaka, home of villages such as Mvenyane.

1.3.2.1 Location



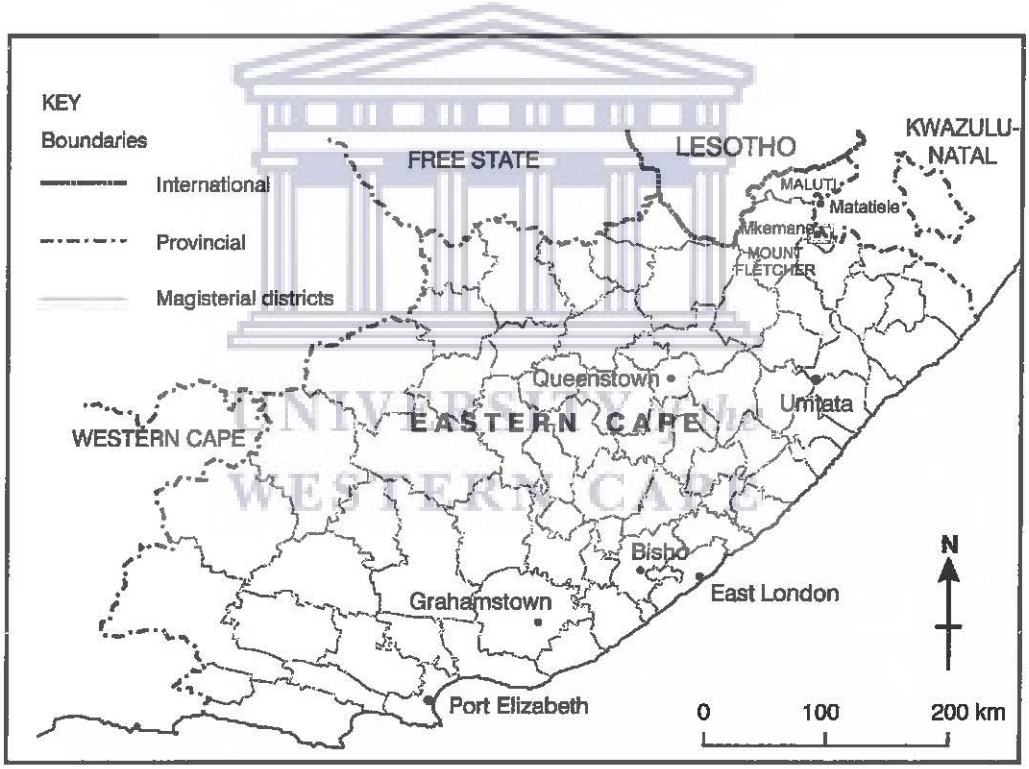


Figure 1: Map of South Africa and the Eastern Cape

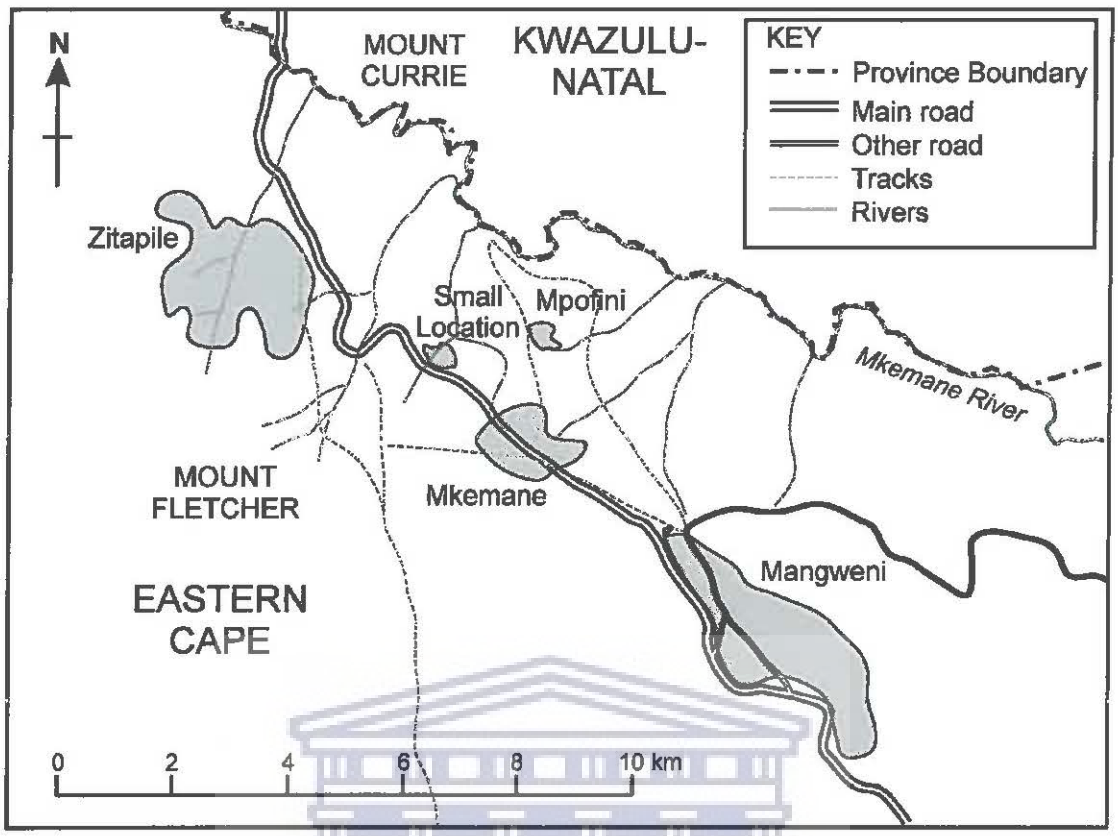


Figure 2: Map of the Case Study Villages

Mkemane is located in the north east of the Eastern Cape province, 70 km from Matatiele town, and 68km from Mount Frere.

1.3.2.2 Demography, settlements

The Maluti District has three main ethnic groups, the Basothos who are concentrated close to the border of Lesotho and South Africa, the Hlubis and the Xhosas who are represented across the district but concentrated in areas further from the border of Lesotho and South Africa at Qachasnek. The most dominant of the groups in the area are the Hlubis and the Basothos.

Locally available statistics proved unreliable, so the only information we have is the number of households in Small Location, which is 118; Mpofini, which is 105 households and Mkemane, which is about 300 households. Reports from the extension office give wrong information based on the formula they use. It was therefore necessary to collect some information from scratch.

Mkemane was planned under the 'betterment' scheme. This means that, in each village, land was divided for settlement, grazing and arable purposes. Because the area is mountainous, planning is unlike in other areas where rows of houses are clearly visible. What one can see approximates a scattered settlement since houses cannot be close together because of streams and slopes in the residential areas.

1.3.2.3 Land Administration

Land administration in the district, including Mkemane village, is complicated because of the unclear land tenure arrangements in the country at large. Greenberg (1999) argues that to have a plot in the district takes time and money because of the different personnel one has to go to before acquiring the land. At each stage, some money has to be paid. The stages range from the sub-headman in the ward to the headman and then the chief. Before and after the aforementioned stages a government official is contacted when applying for a plot.

1.3.2.4 Land Tenure

In the district land tenure is unclear because of the unclear policy at national level. Because the district is in a former homeland, it still uses the Permission to Occupy system. People in the district have shared their frustration concerning the issue of tenure. The present Ministry of Agriculture and Land Affairs has frozen the Land Rights Bill, which was supposed to be piloted in this area. The purpose of the bill was to address the tenure situation in the country.

In the district, because of the unclear land tenure situation, a Farmers' Association has managed to secure three camps through the approval of the headman and chief. This has serious implications for the livelihoods of other people who are not members of the Farmers' Association, and this semi-legal land acquisition has opened room for conflict. This unclear land tenure situation has negative implications for land administration (discussed in section 1.3.2.3).

1.3.2.5 Livelihoods in the Area

People combine different livelihood strategies to cope with shocks and stresses. The livelihood resource that is accessible all the households in the study area is natural capital. This cannot be said for other livelihood resources because of the high unemployment rate in the country, which has seen more than one million jobs being lost over the last five years, and also the fact that not everybody is entitled to pension grants and remittances. Other livelihood resources or assets (human capital, physical capital, financial capital and social capital) which are at the core of the livelihoods conceptual framework (discussed in chapter 2) are significantly lacking among individuals in the area. This has brought a great dependency and reliance on what common property resources provide. This in turn poses serious concerns about the livelihood outcome and about stress on the sustainability of these resources.

Livelihood resources (Scoones, 1998) in the area entail, firstly, human capital, which is imperative for the pursuit of different livelihood strategies. This involves health, knowledge, skills and labour. Skills based on formal education are a matter of concern. The two schools that are in Mkemane do not have matriculation level thus precluding school children from any chances of getting formal jobs that require a matriculation certificate. The closest high school is about 25 km away from Mkemane. Because of household sizes, household labour is sufficient, but the problem identified by the elders is that the youth are less keen to work without being induced with incentives.

The second livelihood resource is physical capital, which comprises infrastructure and producer goods needed for livelihoods (DfID, n.d.). Starting with health, health facilities in the area are very scarce. The area is visited once a month by a mobile clinic. The dates of the visits by the mobile clinic are not clear even to the residents of the villages. The station of the mobile clinic is central so that other people can access the service as well. This is the most reliable service as opposed to the one that comes to the village. Another source of health service is more than ten kilometres away from the villages. People walk the distance because of lack of transport. This health service comes fortnightly.

Transport in the area and the condition of the roads has always been a major concern. Although there were attempts to improve the latter, this has proved to be a futile exercise with the amount of heavy rain in the last year. Transport cost to the closest market is very high, considering the fact that most people in the area are unemployed, which is something that has serious implications for other means of survival. The bus costs R 18 for a return trip which is considered high by many people. People visit the market place occasionally because of high transport costs.

In most cases, people use common property resources to build their houses, although some who were migrant labourers could afford houses made of bricks. The Department of Water Affairs and Forestry, through its contractors, is in the process of installing standpipes. Although this is a major breakthrough, it is not linked to an improved form of sanitation. Some people use pit latrines and others have no toilets. This poses threats to human capital in terms of the health status of many individuals, especially children who are susceptible to diseases.

Means of telecommunication and access to clean and affordable energy are things that are far from being realised in the area. These might be easier to acquire if there were strong institutions in the area to lobby for the distribution and delivery of services.

The third livelihood resource is social capital, which is taken in the DfID framework to mean social resources upon which people draw in pursuit of livelihood objectives (DfID,

n.d.) which are developed through networks and connectedness, membership of more formalised groups and relationships of trust, reciprocity and exchange. One example is the membership in the Farmers' Association (see section 5.1). Membership in this group guarantees benefits such as exclusive grazing for livestock. The decay of institutions in the area complicates issues pertaining to natural resource management, land administration and livelihoods. One example is the semi-legal acquisition of land by the Farmers' Association, which has serious implications for livelihoods. These semi-legal benefits, as will be shown in the study, have been made possible through the networks that the Farmers' Association has with the tribal authority.

The fourth livelihood resource is financial capital, which is the financial resources people use to achieve their livelihood objectives (DfID, n.d.). A source of financial capital, which is most valued in the area and seen as a safety net, is the pension grant. Households with elderly or disabled people (although there are very few households with disabled people) entitled to social grants like pensions or disability grants are in many cases better off because of this regular inflow of money. This money helps to meet most basic household needs. Another source of financial capital, which is gradually decreasing, is remittances. The decrease is because of the high unemployment rate in the country, which forces many able-bodied persons to eke a living from natural resources.

The fifth livelihood resource is natural capital. This is at the core of this study. It entails mainly natural resources – in this study common property resources, particularly communal rangeland resources. People in the area use these resources for building, curing themselves and their animals, production purposes, aesthetic purposes etc. Land, which is another example of this capital, provides numerous benefits such as land for residential and arable purposes. Problems with the current land tenure arrangements will make this capital less beneficial for the broader community and that will also threaten people's livelihoods.

Natural capital provides an important buffer for the livelihood base of most households in the area. People rely on this capital for heating and cooking, medicinal purposes, production, building, ploughing, grazing and many other activities that will be outlined in

the following section. The importance of this capital underlies the need for recognition of the value of the natural resources people use, and empirical calculation of what that value is. Valuation of common property resources is seen as a requisite to stimulate policy makers to intervene in the manner in which they are managed.

1.3.2.6 Natural Resource Management and Use

Management of communal rangelands in the district is a combination of what people practised during the 'betterment' scheme (discussed earlier in section 1.2.1), a little bit of their perceptions of what should happen, an almost 'open access' situation and management of the mobility of animals e.g. opportunistic grazing in winter. There are no forums that sit to stipulate the rules that should be followed by 'members'. In most cases, the elite (i.e. the Farmers' Association) determines what should happen (this happens mostly in Small Location where the membership of the Farmers' Association is concentrated). This has become a common understanding among the users since it was practised during the 'betterment' scheme.

Rangeland fire, caused by certain individuals, is a matter of concern to big livestock owners (mostly members of the Farmers' Association). Some people would burn before the time that was agreed upon. During the winter season, people are always woken up by fiercely burning fires, which seem to threaten their homes. This has been going on for quite some time and has not been resolved amicably because of weak institutional arrangements. Rules that remain in the area and which people often refer to when asked about the management of common property resources are rules that were set during the 'betterment' scheme. This current decay of common property regimes has significant and serious implications for livelihoods. Ideally, people want a system that resembles the 'betterment' scheme, but believe that they should govern the system. They can relate to some of the benefits which the 'betterment' scheme brought, but they resent the manner in which it was introduced (Ntshona, 2000b).

In this democratic government era evidence shows that an almost 'open access' situation exists in rural areas of the Maluti District (Ntshona, 2000b). Many reasons prompt this situation:

- The Eastern Cape communal areas have a history of dependence on the South African government. The governance of natural resources changed from being decentralised before the 1930s, to being centralised for the following 60 years, to almost a 'free-for-all' after the democratic government came into power in 1994. For several decades, government continuously supported its policy of centrally directing natural resource management through the 'betterment' process of land use planning.
- In the Eastern Cape, many rural people have disregarded the leadership of chiefs. This led to unruliness, for example the cutting of government fences around grazing areas, which people considered as oppressive tools of the state. These fences were erected during the 'betterment' scheme, which aimed at reversing land degradation through, amongst other things, the use of fencing to demarcate grazing areas. The government to enforce the scheme, which caused strong disapproval in many communities, used headmen, police and chiefs.
- In the Eastern Cape, social grants provide benefits for the elderly people. These pension grants affect how land is managed, because people have their priorities elsewhere. The grants add to the multiplicity of livelihood strategies people have and reduce their dependence on natural resource management.

The above points do not insinuate that there is no property in these areas, but caution that the rate at which people engage with the management of the common property resources from which they benefit is significantly decreasing. The institutional arrangements governing these resources are weak and it is imperative to look at the conditions for successful management of common property in strategizing around this institutional dilemma, which threatens the collapse of the key governance element in the livelihoods of the rural poor.

Natural resources are important in the area since they have a certain value without any major 'costs' being involved. Grazing resources in the area are used for feeding animals, collecting thatch (although most thatch grass is found in areas demarcated under the 'betterment' scheme for arable purposes) and grass species used to make brooms, grass mats, grass platters and other crafts such as mud plates. Mud is used in the area to plaster homes and decorate – *Ukugudula*. Plants such as *Impepho* are used mainly to relieve chest pains, decorate and repel lightning. Wild resources that are found in the area are medicinal plants (used by a significant amount of the population), wild fruits and wild vegetables (mostly found in home gardens and in fields in the days when these fields were mostly in use). Trees are used for medicinal purposes, but mainly for fuel. Most of these benefits have been valued in this study, with a specific focus on fuelwood.

1.4 Research Themes and Questions

I selected certain themes and questions for this study in order to address the subject under investigation:

a) Livelihood information

This theme captures information on the socio-economic status of each household in the study area. My interest is in the livelihood strategies of these households and how these livelihood strategies relate to the main sources of livelihood. Information on the main sources of livelihood and livestock ownership is also dealt with under this theme. Using wealth ranking (explained in chapter 3), I have also looked at levels of wealth (rich, upper middle, lower middle and poor) and how they relate to the different sources of livelihood. More information on this theme is in chapter 4.

b) Use of Natural Resources

This is important to look at since it tells us whether people use common property resources or not, which resources they use and for what purposes they use these resources. Chapter 6, which deals with this theme, looks at the use, importance, scarcity and management of common property resources. This chapter also provides a resource directory with all the

natural resources people commonly use and the prices that people who trade in these resources charge.

c) The Value of Natural Resources

In this study, the value of natural resources was seen as important in influencing policy and making users more aware of the monetary value of the resources they use. The position of this study is that correct assessment of natural resource value would improve the management of common property resources since the value that would be attached to these resources would induce policy makers to create an enabling environment for their management. Because of limited time and funding, the value of common property resources was mainly researched for fuelwood. Chapter 7 reports on the results of the valuation method and looks at the implications of the results.

d) Management of Natural Resources

Management of natural resources has a direct influence on the use and the availability of these resources. Questions in this theme include the rules and institutions available in the villages to govern the resources. Management of natural resources is assessed with reference to conditions and criteria for successful resource management. Information from South Africa, from other areas and from the Maluti district is used to determine the applicability of these conditions and criteria for successful common property resource management in the rural areas of South Africa, particularly the Maluti District. This theme is also addressed in Chapter 6.

e) Land Tenure

This theme emerged because of the formation of the Farmers' Association in the area. The formation of the Farmers' Association is addressed against the background of the recent policy shift in land issues. Chapter 5 looks at how the issue of land tenure has impacted on the livelihoods of people and the general relations among villagers.

f) Livestock

Here I will look at the number of livestock households have, why they keep them, how they manage them and the multiplicity of benefits they derive from them. This is dealt with in chapter 4.

g) Land Degradation

The concern here is the extent of land degradation in the area and its causes. This theme helps to gather information on the forms of land degradation compared with what people perceive to be an ideal. This theme is important because it helps us understand how and why people value rangeland resources and how and why they manage them (or do not manage them) in certain ways. This theme is also briefly addressed in Chapter 6.

1.4.1 Research Questions

a) How much do communal rangelands contribute to people's livelihoods?
b) Why do people keep livestock?
c) What is the range of factors determining how people derive multiple benefits from communal rangelands?
d) What are people's perceptions of the contribution that communal rangelands make to their livelihoods?
e) How do resource users think communal rangelands can be sustainably managed?
f) How can management be improved if the valuation results show that there is more value in these resources than previously anticipated?
g) What is the impact of changing government policies on people's livelihoods?

1.5 Structure of the Thesis

Chapter 2 of this study will be a review of the literature on livelihoods, livelihood models, livestock, natural resource management and land tenure. Chapter 3 describes the methodology employed in this study. Chapters 4 and 5 are on livelihoods and land tenure in

the research area respectively. Chapter 6 deals with the use and management of common property resources, and the conditions and criteria for successful natural resource management in communal areas. Chapter 7 is on the valuation of resources: dealing with the methods used to calculate values, and presenting my findings. Chapter 8 discusses the wider relevance of the study and its policy implications.

Chapter 2 Theoretical Framework

2.1 Livelihoods

Chapter 1 broadly outlined the purpose and the aim of this study. It also emphasised the national and local context with regard to an array of issues including livelihoods, natural resource use and management, poverty, development challenges, land tenure and land valuation. This chapter attempts a theoretical review of some of these issues. The purpose of this is to have a conceptual framework for the analysis that follows. Issues that are included in this chapter fall into the broad categories of livelihoods, land value, land tenure, natural resource management, livestock and the importance of common property resources. All these issues are investigated in this study against the background which many rural people in South Africa face.

Poverty in South Africa is rife, especially in rural areas of the country. People are forced by many factors to eke out a living from cities and combine that with other activities in which they are involved in their rural homes. Strategies such as agricultural intensification and extensification, diversification and migration are the main strategies used in rural areas. People combine proportions of these strategies for a secured livelihood outcome. Any livelihood framework provides people with different forms of context. People have to deal with many factors in order to achieve a secure livelihood. The relations between these factors are extremely complex.

Widespread rural poverty in South Africa raises concerns about which strategies the poor and even the rich combine to secure their livelihoods. Livelihood strategies are seen in this thesis to be linked to a range of factors ranging from the political environment (national and local) to the natural and social environment surrounding individuals and the household environment, i.e. the socio-economic status of each particular household.

2.1.1 Defining Livelihoods

Scoones (1998: 5), drawing on Chambers and Conway, uses the Institute for Development Studies (IDS) definition of livelihoods:

"A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, while not undermining the natural resource base".

DfID (n.d.) in unpacking the sustainability of livelihoods, states that they are sustainable when they:

- *"are resilient in the face of external shocks and stresses;*
- *are not dependent upon external support (or if they are, this support itself should be economically and institutionally sustainable);*
- *maintain the long-term productivity of natural resources and;*
- *do not undermine the livelihoods of, or compromise the livelihood options open to others".*

Another way DfID used to conceptualise sustainability was to consider different aspects of sustainability. The aspects include firstly, environmental sustainability, which is achieved when the natural resources are conserved sustainably to meet the needs of the present generation without compromising the needs of future generations. The second aspect is economic sustainability. In the context of the livelihood of the poor, this is achieved if "a baseline level of economic welfare can be achieved and sustained". Third is social sustainability which "is achieved when social exclusion is minimised and social equity maximised". Fourth is institutional sustainability, which is achieved when structures can perform their duties over a long period of time.

2.1.2 Complexity of Rural Livelihoods

Rural livelihoods are "multiple, diverse and dynamic...[they] bridge the rural – urban divide...[they] maintain complex social and economic relationships across a number of levels, both locally and non-locally...highly differentiated by social identity and also...are institutionally mediated", (Cousins, 1998: 16-17).

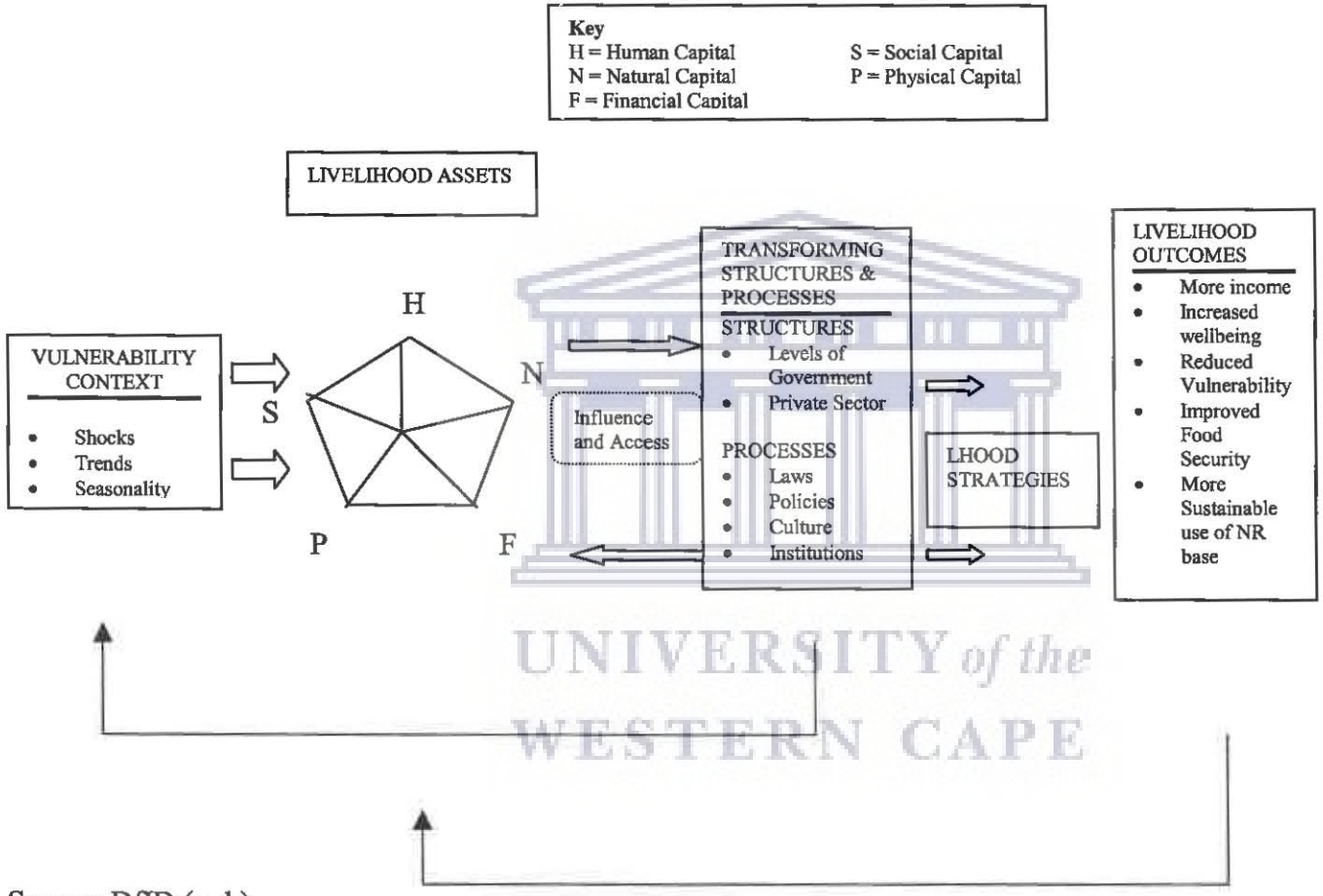
The quotation above describes the complexity of rural livelihoods in South Africa. The multiple, diverse and dynamic nature of rural livelihoods is aimed at "managing risk, reducing vulnerability and enhancing security" (Cousins, 1998: 16). The bridging of the rural and urban divide shows how people from rural, urban and peri-urban areas combine earnings from the informal sector, wages and remittances in the cities with rurally based agriculture, livestock keeping, disability grants, pensions, employment, micro-enterprises such as "beer brewing, and craft production trade in plant materials, and claiming through social networks" (May et al., 1995 cited in Cousins, 1998). Rural livelihood strategies also involve "maintaining complex social and economic relationships across a number of levels, both locally and non-locally" (Cousins, 1998: 17). They "link individuals, family members, social networks and community institutions" (Ibid: 17). They are also differentiated by social identity with variable and unequal outcomes depending on class, gender, age and many other factors (Bernstein, 1992; Crehan, 1992; Kepe, 1997a; Levin and Weiner, 1996; Carter and May, 1997 cited in Cousins, 1998). Cousins (1998) also states that "livelihoods are institutionally mediated". He argues that this can be complex where there is communal land tenure and most resources are collected from the commons. These factors all contribute to the complexity of rural livelihoods.

2.1.3 Livelihood Models

2.1.3.1 DfID Livelihood Framework

DfID (n.d.) used this livelihood framework as a tool for understanding the livelihoods of the poor. This framework "provides a checklist of important issues and sketches out the way these link to each other; draws attention to core influences and processes; and emphasises the multiple interactions between the various factors which affect livelihoods"(DfID, n.d.).

The vulnerability context in the DfID sustainable livelihood framework (see Figure 3) covers the external environment in which people live and over which they have limited or no control.



Source: DfID (n.d.)

Figure 3: Sustainable Livelihoods Framework

The trends include population trends, resource trends, national and international economic trends, trends in governance and technological trends. Shocks include human health shocks, natural shocks, economic shocks, conflict and crop or livestock health shocks. Seasonality includes seasonality of prices, production, health and of employment opportunities. DfID perceived the vulnerability context as important because its factors, which are alluded to above, have a direct bearing on people's assets and the choices open to them in pursuit of a livelihood outcome.

Under livelihood assets, the concern is how people endeavour to convert their assets into positive livelihood outcomes. This is founded on the belief that no single category of assets is sufficient for the numerous livelihood outcomes. These assets have been addressed in context in chapter one. Here I allude to the relationship of the assets using the asset pentagon.

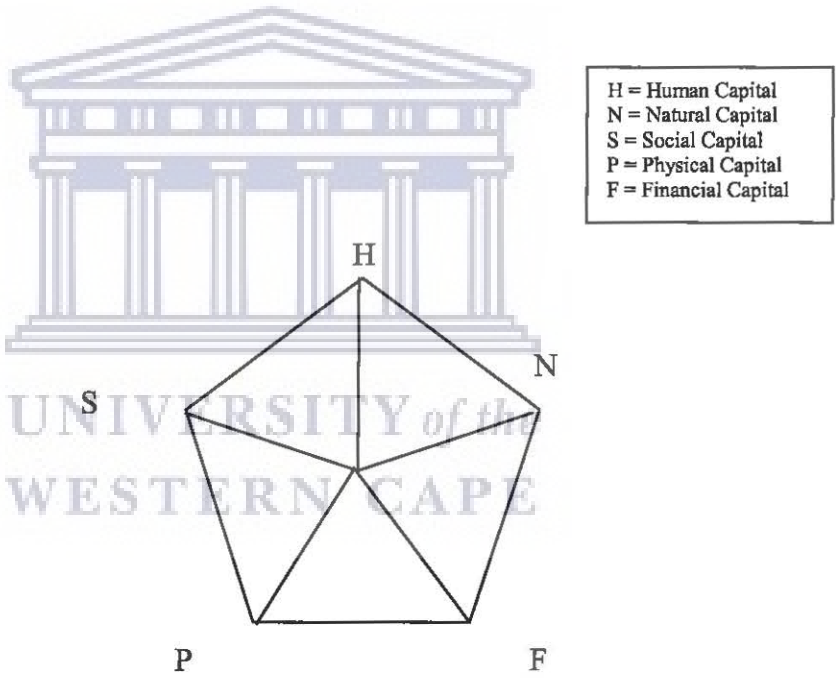


Figure 4: Asset Pentagon

The pentagon was developed to show visually the interrelationship between the various assets. The central point of the pentagon shows zero access to assets while the outer perimeter represents maximum access. As said in the previous chapter, most households in the villages studied have limited access to financial assets in the Mkemane area. As will be

shown in the rest of the thesis, natural capital is the most accessible for all the households in the case study area. It is imperative to understand the relationship between these assets. DfID alludes to this by saying that one asset can generate multiple benefits. If a household has secure access to land (natural capital) and uses it productively, that can increase its financial capital as well. When its financial capital is enhanced, it can gain respect and connectedness to the community (social capital). Livestock (natural capital) can also be used as physical capital – animal traction. These assets are influenced by the vulnerability context and in order for them to be easily converted into outcomes there are transforming structures and processes with which they have a reciprocal relationship.

Transforming structures and processes, within the livelihoods framework, include institutions, organisations, policies, culture and legislation that shape livelihoods. These transforming structures "operate at all levels from household to international arena and in all spheres, from the most private to the most public" (DfID, n.d.).

Structures (thought of by DfID as hardware) are organisations that "set and implement policy and legislation, deliver services, purchase, trade and perform all manner of other functions that affect livelihoods" (DfID, n.d.). These organisations, both public and private, include respectively political bodies at various levels from local through to national, executive agencies (ministries and departments), judicial bodies, parastatals/ quasi-governmental agencies, and commercial enterprises, corporations, civil society and NGOs. These structures are important because they make processes work.

Processes (thought of by DfID as software) determine the way in which structures operate and interact. Processes include policies (macro, sectoral, redistributive, regulatory); legislation (international agreements and domestic); institutions (markets, institutions regulating access to assets, rules of the game within structures); culture (societal norms and beliefs); and power relations (age, gender, caste and class).

DfID concludes its framework by assessing livelihood strategies and outcomes. Livelihood strategies are the "range and combination of activities and choices that people make/

undertake in order to achieve their livelihood goals... [This] is a dynamic process in which they [people] combine activities to meet their various needs at different times". An in-depth overview of these livelihood strategies is presented in Scoones' livelihood framework where he talks of agricultural intensification/ extensification, livelihood diversification and migration. Livelihood outcomes on the other hand are achievements of livelihood strategies. These include more income, increased wellbeing, reduced vulnerability, improved food security, and more sustainable use of the natural resource base.

2.1.3.2 Scoones' Framework

This framework is somewhat similar to that of DfID. It starts by asking a question in the analysis of sustainable livelihoods. This question shapes the framework itself... "*Given a particular context (of policy setting, politics, history, agroecology and socio-economic conditions), what combination of livelihood resources (different types of 'capital') results in the ability to follow what combination of livelihood strategies (agricultural intensification/ extensification, livelihood diversification and migration) with what outcomes?* The gist of this framework is based in the latter question. The framework itself more or less resembles that of DfID. Scoones' use of the IDS definition has been quoted above in section 2.1.1.

Scoones provides five key elements from the definition of livelihood for assessing outcomes. The first three of the elements link "concerns over work and employment with poverty reduction with broader issues of adequacy, security, wellbeing and capability. The last two elements add the sustainability dimension, looking, in turn, at the resilience of livelihoods and the natural resource base on which, in part, they depend" (Scoones, 1998: 5).

The five elements are:

a) Creation of working days – which "relates to the ability of a particular combination of livelihood strategies to create gainful employment for a certain portion of the year" (Scoones, 1998: 5).

b) Poverty reduction – level of poverty is a criterion that can be used in the assessment of livelihoods. However, such quantitative assessments of poverty can be used in combination with more qualitative indicators of livelihoods (Jodha, 1998; Schaffer, 1996 cited in Scoones, 1998:6).

c) Wellbeing and capabilities – Sen (1984; 1987) cited in Scoones, 1998)) "sees capabilities as 'what people can do or be with their entitlements', a concept which encompasses far more than the material concerns of food intake or income. Such ideas represent more than the human capital which allows people to do things, but also the intrinsically valued elements of 'capability' or 'wellbeing'. Chambers (1997) argues that such a wellbeing approach to poverty and livelihood analysis may allow people themselves to define the criteria which are important. This may result in a range of sustainable livelihood outcome criteria, including diverse factors such as self-esteem, security, happiness, stress, vulnerability, power, exclusion, as well as more conventionally measured material concerns" (Chambers, 1989 cited in Scoones, 1998: 6).

d) Livelihood adaptation, vulnerability and resilience – Scoones here argues that the "ability of a livelihood to be able to cope with and recover from stresses and shocks is central to the definition of sustainable livelihoods" (Scoones, 1998: 6). Citing Davies (1996), he further argues that "such resilience in the face of stresses and shocks is key to both livelihood adaptation and coping".

e) Natural resource base sustainability – "refers to the ability of a system to maintain productivity when subject to disturbing forces, whether a 'stress' (a small, regular, predictable disturbance with a cumulative effect) or a 'shock' (a large infrequent, unpredictable disturbance with immediate impact)" (Conway, 1985 and Holling, 1993 cited in Scoones, 1998: 6). This, according to Scoones (1998), implies avoiding permanent decline of the natural resource stock.

As said above, this framework is somewhat similar to that of DfID, but Scoones emphasises "clusters" of livelihood strategies. These are livelihood intensification/ extensification, livelihood diversification and migration. An example of livelihood intensification would involve capital investment or labour input for more output per unit area and for livelihood

extensification, more land under cultivation. Diversification involves diversifying a range of off-farm income earning activities and migration would be making a living away [mostly in metropolitan areas] permanently or temporarily.

The emphasis of both these frameworks is on the complexity of relations between components of the framework. Both stress the analysis of each component in order to understand the whole. For each component of the framework, Scoones stresses what should be analysed. For context, conditions and trends, the emphasis is on the factors which affect things like the policy setting. To understand any livelihood strategy that a person embarks on, one has to understand the policy environment that affects the person. Poverty conditions inform the livelihood choices that people have. For livelihood resources, Scoones stresses the analysis of these resources looking at trade-offs, combinations, sequences and trends. In structures and organisations, he stresses the analysis of institutional/ organisational influences on access to livelihood resources and composition of the livelihood strategy portfolio. In livelihood strategies and livelihood outcomes, he talks of the analysis of the livelihood strategy portfolio and pathways and analysis of outcomes and trade-offs respectively. ..."the combination of activities that are pursued can be seen as a 'livelihood portfolio'. Some such portfolios may be highly specialised with a concentration on one or a limited range of activities; others may be quite diverse.

2.2 Wild resources: their role and valuation

Cousins (1998) raises an interesting point when he argues that it is a South African government policy document, dealing with forestry, that gives recognition to the high economic value derived from common property resources. He further argues that the National Forestry Action Plan (NFAP) produced by the Department of Water and Forestry (DWAF, 1997) estimated fuelwood production to be about 11 million tonnes per annum, which is worth more than one billion rand; traditional medicine is estimated at between half a billion and a billion rand per annum and the curio industry based on woodland products is worth over seven million rand (DWAF, 1997 cited in Cousins, 1998, 23). DWAF (1997:

45) cited in Cousins (1998) states that these values are "largely unaccounted for in terms of national accounting (e.g. measures of GDP)".

The latter statement poses a challenge to policy makers to recognise the role, importance and economic value of these resources to rural people's livelihoods. These resources are shown in many studies to have significant economic values and to contribute to the wellbeing of rural communities (IIED, 1997; Clarke et al., 1996; Cousins, 1998, Shackleton et al., 1999; High and Shackleton, 2000). Many other writings have shown their value, role and importance.

Although these resources seem to be overlooked by policy makers, it is essential to recognise their characteristics, which confound the use of traditional economic assessment methods, and thus have contributed to their hidden/ wild/ invisible status:

- "They are highly site-specific and seasonal.
- Their importance differs from one social group to another.
- They are often collected opportunistically and sometimes illegally, making harvest assessments difficult.
- They are often marketed through informal networks or used as subsistence products and so do not have a formal market value.
- They often represent a value to local people, or to ecosystem function, which cannot be translated into financial terms.
- Their value may vary according to who has access or control over them. ..." (IIED, 1997: 7).

As said in chapter 1, the livelihood resource that seems to be most abundant and available compared to others, is natural capital. For the purposes of this study this form of capital is divided into three categories, i.e. wild plant resources, grazing resources and trees. These resources, according to IIED (1997: 6 – 7):

- "enhance food security by providing an important buffer during certain seasons and/ or major periods of stress;

- supply vital nutritional supplements to diets based largely on carbohydrate-rich staples;
- have significant economic value by preventing the need for cash expenditure, for example on construction material, fodder, and medicine;
- can provide ready sources of income to cash-poor households;
- have many cultural values, such as sacred sites or species used in ceremonies or for barter;
- hold the key for the future of agricultural production by providing essential genetic material;
- help to regulate climatic patterns and protect against natural disasters and degradation processes;
- represent as yet unknown medicinal values for future medical needs;
- and provide essential indicators of environmental change".

The importance of these resources is based on direct, indirect and non-use values.

Table 5: Economic Values of Wild Resources

USE VALUES		NON-USE VALUES
Direct	Indirect	Existence/ Cultural
Wild plants and animals directly consumed or marketed Examples: Food Medicine Construction material Non-consumptive benefits of resources Examples: Shade from trees Use of forested area as burial ground Use of wild species for improving domestic varieties	Species or system which supports other economic activities Examples: Role of forested areas in protecting watershed by regulation flooding Nutrient cycling in agricultural lands promoted by forest or wild areas Pollination of crops provided by wild species or birds or bees	Species or system which is valued for its own right without reference to an economic use Examples: Cultural appreciation and heritage Beauty Motivation to bequest resources to future generations (including a wide range of resources i.e. biological diversity)

Source: Barbier, 1991 cited in IIED, 1997: 23

The direct use value shows the direct use that people make of wild resources as means of subsistence. However, because many of these resources are not traded but are consumed by

people who collect them and also because "they rarely come under effective ownership or management, their true economic significance is often ignored" (IIED, 1997: 22). An example of indirect use value, as shown in the table above, is the role played by birds and bees in plant reproduction and that of non-use value can be an aesthetic value which an area provides (IIED, 1997).

Wild resources are harvested and processed for home consumption or sale (McGregor, 1995; Ainslie et al., 1996; Clarke et al., 1996; Campbell et al., 1997; Cunningham, 1997; Shackleton et al., 1999a; Shackleton and Shackleton, in press, cited in Shackleton et al., 1999). A number of rural households are dependent on the natural resource base for a range of basic living requirements (Shackleton et al., 1999). In their paper, Shackleton et al. (1999, citing Shackleton and Mander, in press) stated that the degree of use varies across regions based on a number of factors "including resource availability and accessibility, resource productivity, institutional controls, population densities, employment levels, income levels, education levels, availability of alternatives, and personal and cultural preferences". Evidence shows that it is poorer households and more "deep rural" households that use a diversity of these resources more than better off households and less isolated households (McGregor, 1995; Cavendish, 1996; Campbell et al., 1997, Qureshi and Kumar, 1998, cited in Shackleton et al., 1999).

Furthermore, in a study conducted in Haryana, India, (Qureshi and Kumar, 1998: 342) stated that the "formal invisibility and non-recognition of contributions of common lands to rural economy and ecology have led to their neglect by the welfare and production policy makers and planners, analysts and even rural society..." (Singh, 1986; Jodha, 1990; Pasha, 1992; Gadgil and Guha, 1995, cited in Qureshi and Kumar, 1998: 342). This situation, as shown in their study, has implications for the livelihoods of the rural poor, and is exacerbating land desertification, deforestation, rangeland depletion and atmospheric warming. But there is no "credible" intervention by the government and NGO's to reverse the situation (Rao, 1992 cited in Qureshi and Kumar, 1998). Qureshi and Kumar (1998: 342 – 343) stated that "an effective strategy for the regeneration, management and use of

these lands requires an improved understanding of the different types of goods and services provided by them to different groups of users in different agro-ecological regions".

Cousins (1998: 25) alluded to the fact that "economic valuation of benefits from land rights needs to take adequate account of the full range of benefits from communal rangelands. This has implications for the business plans and feasibility studies required for land redistribution and land restitution projects. For labour tenants, compensation for the loss of their rights should be based on a full economic valuation of the benefits derived from the rangeland they have been using...In relation to tenure reform, rights of access to communal rangelands are likely to receive the status of protected rights under the proposed legislation (Department of Land Affairs, 1998) [This was the legislation that was proposed before the recent policy shifts.] The importance of these for the livelihoods of the rural poor means that officials who witness group decisions on the use, development or disposal of rangelands should take particular care that the decisions are taken by a majority of affected right holders including those who use secondary products – and not just the livestock owners whose herds graze the commons (who often belong to the wealthier families)".

My work aims to demonstrate the importance of wild resources, grazing resources and trees in the communal areas of South Africa, by detailed investigation of their availability, ownership, use and management in the Mkemane area. Demonstrating the roles and importance of wild resources, trees and grazing resources requires careful measurement and valuation techniques which will be explored by applying them to field realities in Mkemane. This will be done in chapter 7.

The importance of wild resources, grazing resources and trees influences livestock production a great deal. When common property resources are properly managed, there are more benefits derived from livestock.

2.3 Livestock production

2.3.1 Livestock in Communal Areas

People in communal areas invest in different types of livestock for different reasons. With low offtake from livestock in communal areas (Tapson, 1990) and the fact that their productivity is often only measured using a single criterion, that of beef output (Scoones, 1990), livestock in rural areas play an important role (Hatch, 1996) which is overlooked by many. Hatch's study was on the KwaZulu Natal area. Tapson (1990) argues that cattle, in KwaZulu Natal, comprise "a valuable array of high-value goods in the household economy" and that this explains the behaviour of livestock owners. Livestock in most rural areas are kept for numerous reasons including milk, sales, investment, savings, feasts and ceremonies, cultivation, dowry, meat, manure, draught power etc. Studies have also revealed that per unit area, livestock in communal areas derive more benefits than livestock in commercial farms (Hatch, 1996, citing De Ridder and Wagenaar, 1986; Barrett, 1992; Scoones, 1992; Abel, 1993: 192). Communal grazers are seen as acting rationally, not in the sense of profit maximisation (Vink and Van Zyl, 1991, cited in Hatch, 1996), but in the sense of balancing "sustainable production levels and risk" (Hatch, 1996).

Cousins (1996) gives reasons why common property institutions offer economic advantages, where extensive livestock production is a central component of livelihood systems:

Firstly, that livestock herds within village economies are multi purpose in nature and yield more benefits per hectare when all functions are added.

Secondly, for these herds, high stocking rates make economic sense, and "optimum stocking rates in these systems will be higher than those in single purpose (e.g. beef) production systems; furthermore, these high stocking rates may well be ecologically sustainable. This is because livestock herders pursue 'opportunistic' strategies based on mobility, to optimise their use of the variability of African rangelands (Sandford, 1983 cited in Cousins (1996).

Although this might be true for other countries, in South Africa managing the mobility of animals and using opportunistic strategies could be a difficult because of 'betterment' boundaries. But since the fences are broken, animals cover large areas, crossing boundaries in the process to get pastures, especially in dry seasons.

2.4 Land tenure

A study on land valuation will not be helpful if the tenure context is not addressed and clarified in South Africa, because the valuation of common property resources gives more meaning when land tenure is addressed. Benneh (1987, cited by Toulmin and Quan, 2000: 1) said, "one of the important components of any land use or farming system is the land tenure system. The institutional arrangements under which a person gains access to land largely determine, among other things, what crops he can grow, how long he can till a particular piece of land, his rights over the fruits of his labour and his ability to undertake long term improvements on the land". The tenure system not only addresses the question of benefits accrued from arable land, but also the multiplicity of benefits from common lands, forests and other land areas that people use for a sustainable livelihood.

Most land tenure systems in Africa are 'communal', but it should be understood that this in fact means a 'mixed' tenure with individual, family and group rights (Cousins, 2000). This means that one cannot gain access to all areas of communal land because of mixed tenure, e.g. one cannot have access over arable lands belonging to another household except during drought or the winter season (Adams et al., 2000). Land rights may include rights to occupy a homestead and make productive use of the land, develop and improve it, bury the dead and harvest wild resources; rights to mortgage, lease and rent the land; rights to exclude others from the latter elements and rights to enforcement to protect the rights-holder (ibid: 135). This becomes problematic if people, like those in the Herschel and Maluti districts in South Africa, do not consider themselves the owners of the land on which they live (Turner, 1999: 10). In cases like these, tenure reform is imperative to enhance and secure people's land rights (Adams, 2000).

2.4.1 Resource Regimes

The historical background given above adds complexity to any typology of the property regimes found in South Africa. The 'betterment' regime formed a dysfunctional hybrid of common property and state property regimes, effectively extinguishing many of the features of the earlier, indigenous common property regime. It is imperative therefore to look at the different kinds of regimes to see which definition fits the way in which natural resources are managed today in many rural areas of the country.

2.4.1.1 State Property Regime

Ownership rights and natural resource management are vested in the state. National parks and military areas are examples of state property regimes (IFAD, 1995).

2.4.1.2 Private Property Regime

Rights here belong to an individual owner, although in many cases those rights do not mean that land owners are free to do entirely as they wish with the land resource (IFAD, 1995).

2.4.1.3 Open Access

This is a situation when "no resource regime applies and no property rights are recognised" (IFAD, 1995: 5). This notion of open access has come about partly as a critique of the "tragedy of the commons" concept. Literature over the past 25 years has argued how Hardin (1968), who developed the tragedy of the commons notion, failed to distinguish between open access and common property (Ciriacy-Wantrup and Bishop, 1975 cited in Lawry, 1990).

2.4.1.4 Common Property Regime

Under the common property regime "... common property rights accrue to specified groups or communities of people. Non- members are excluded from their use. Sets of rules define the rights and duties of members and non-members with regard to access to, use and management of these resources by both groups" (IFAD, 1995: 3).

The historical background depicts during 'betterment' a situation of a distorted common property regime, which was highly influenced by exogenous factors – rules and regulations decided almost solely by the state. Although state management has been found to be ineffective and local management activities often weak (Lawry, 1990), this thesis argues for the co-management of resources between the local communities and other stakeholders like the state, for a sustainable livelihood outcome. The natural capital, which is seen to be the safety net for most rural households, needs proper institutional arrangements if any benefits are to be accrued. These institutional arrangements must be seen, at least for the interim, to have the full support of the state.

2.5 Conditions, factors and criteria contributing to successful management of common property resources

This section focuses mainly on a synthesised theoretical framework adapted from Shackleton *et al.* (1998). This thesis uses their framework to see how it would work in the district under study – Maluti. This framework is seen as relevant in the district because it addresses issues pertinent to the success of common property resource management. The last part of chapter 6 addresses the applicability of these conditions, factors and criteria contributing to successful management of common property resources. This thesis uses the framework to identify problems and challenges and considers where the framework can work. This is not to say that the thesis rejects the framework, but it does suggest ways in which it can be modified. The modifications are based on the realities in the district and use arguments of Lawry (1990) on the role that the state can play in successful natural resource

management. Lawry (1990: 407) argues that "...the modernisation process itself has reduced incentives for individuals to participate in localised collective arrangements, has undercut the economic viability of common property institutions, and has reduced the political legitimacy of local management authorities. Population growth and technological change have increased pressures on natural resources to the extent that minimum common property rules do not provide effective regulation...Local common property management will not emerge simply by giving greater official rein to local action". Lawry was sceptical about the effectiveness of autonomous local action in Sub-Saharan Africa.

The Shackleton *et al.* (1998) framework is presented below. In section 6.4 it is coupled with evidence from the Maluti district (Ntshona, 2000a) that supports or differs from it. Not all part of the framework are addressed in section 6.4. The issues addressed are those perceived to be most crucial in the area. Statements that are in italics below are direct quotes from Shackleton *et al.* (1998).

Nature of the resource

Boundaries

Boundaries must be clear so that users can know their limits and exclude non-members. Boundaries are a necessary condition for common property resource management.

Shackleton *et al.* (1998: 14) argue that the situation in South Africa is complex. They argue that although many rural South Africans know the boundaries of their commonage, they are in many instances ignored.

Resource size

A resource with small boundaries is easier to manage than a resource with large boundaries.

Shackleton et al. (1998: 15) argue that in a situation where the common property resource is large, considering different use zones may be useful because "rules and regulations would then vary in strength and stringency depending on the zone". Their idea was zones of intensive use and zones of extensive use.

Supply – demand conditions and dependency on the resource

A high level of dependency on the resource results in more effective management structures to manage the resource.

Lawry (1990) states that because of other sources of income and the "open character" of village economies the stimulus for collective action is reduced. These circumstances can lead to competition and not co-operation in the use of communal resources. He also argued (ibid: 421) that for a sustained collective action, the resource in question should be scarce and of "critical importance to the economic wellbeing of a large proportion of the community, and where the transaction costs associated with collective action are less than would be the case if resources were under individual control".

Indicators of common property resource conditions

Indicators of the condition of the common property resource as a result of regular use are important for common property resource management. These indicators could be used to raise awareness among the resource users of their collective or individual impact.

Although this is important, it depends on whose indicators count. Scientists could come with their technical views of the situation, and the presentation of their views could be detrimental or helpful to the way these resources are used and managed. Also, the presentation of local views could be detrimental or useful for rangeland condition. Local knowledge together with scientific knowledge can produce effective results about indicators.

Characteristics of the resource users

User group size

A small user group is more conducive to successful common property resource management because the costs of communication and decision-making are relatively low, rules are easier to enforce, and social sanctions tend to be more visible and effective.

What the theory fails to state is how small the number of users must be for successful common property resource management. Carney and Farrington (1998) argue that there should be no more than 30-40 members for group agreement not to collapse. They were looking at criteria for assessing the strength of local forest management institutions.

Residence

It is preferable for users to reside in close proximity to, or in the same location as, the common property resource.

This can be problematic in this country since most able-bodied men, who are in many cases decision makers, work as migrant labourers (Shackleton et al., 1998). Bromley and Cernea (1989 cited in Shackleton et al., 1998: 18) argue that "absenteeism ...is the downfall of many common property regimes".

Eligibility

Members with ownership and access rights to common property resources must be defined, and agreed conditions for eligibility should exist.

In Japan, villagers have to earn their eligibility to the commons through a period of established residence in the village (Shackleton et al., 1998).

Degree of homogeneity

Resource users tend to co-operate better when they are not strongly divided by

- *Natural boundaries*
- *Different perception of risks of long-term extraction from the CPR*
- *Cultural antagonisms and*
- *Substantially different exposures to risk* (Shackleton *et al* 1998: 19, citing Ostrom, 1992).

Lawry (1989, cited in Shackleton et al., 1998) argues that "where interests are heterogeneous and views towards appropriate resource use standards vary, sufficiently strong support for enforcement of many kinds of rules will not emerge".

Local understanding and knowledge of resource characteristics

If a common property resource is a valuable resource worth the costs of managing it, the perception that benefits exceed costs is more likely to arise when members have relatively full and accurate information about: (i) the physical structure of the resource, (ii) the past actions of other users, and (iii) the relationship of demand to supply. They also need to know how the resource varies in space and time and the impact of use on it.

Awareness of resource use issues

... awareness of the risk of resource overuse as well as the relationship between use behaviour and the state of the resource helps ensure compliance to resource management rules.

... education to raise awareness of the vulnerability of the resource, the consequences of its overuse, and mechanisms to combat this are likely to be an important part of any common property resource management strategy.

Institutional Issues

Ownership status

Security of tenure is important.

Carney and Farrington (1998) cite a case in Namibia where "lack of clarity about the legal status of land has led to semi-legal fencing of land by the elite…". This study identifies a similar case in South Africa (Maluti District: see sections 5.1, 5.2 and 5.3).

Existing local organisations

Effective common property resource management is likely where resource users have had prior experience with minimal levels of organisation through:

- *Presence of a civic organisation which addresses general issues in the village area;*
- *Presence of a specialised organisational structure related to the resource e.g. group of thatch traders;* or
- *Presence of nearby organisations that helped others solve common property resource management issues.* (Ostrom, 1992 cited in Shackleton *et al.*, 1998.)

Centralisation versus decentralisation at a local level

Resource users should not be prevented by central government from exercising local initiatives. Also, a centralised form of governance at local level (council, executive committee, traditional authority) is necessary.

Policy issues

The characteristics of the legal and political environment in which the users reside

The state must protect the rights of people living on and using common property resources. If this is not the case, the "external threats to common property will not receive the same governmental response as would a threat to private property" (Bromley and Cernea, 1989 cited in Shackleton et al., 1998).

Relationship between users and the state; the role of the state

The state should play a crucial role in common property resource management.

This has been partially alluded to above. The suggested role of the state and resource users is co-management of resources, as this would prove more effective than purely a decentralised form of governance at local level or a purely centralised form of governance at national and provincial levels (Lawry, 1990). The government is needed to ensure that outsiders do not ignore local initiatives. Lawry (ibid: 420) argued that co-management would be helpful when dealing with the problem of rule enforcement, especially when the rules have broad support in the community.

Nature of rules, regulations and sanctions

Source of rules

Resource users should derive and agree on the rules and regulations.

The development of rules and regulations should build on customary systems and beliefs and technical knowledge (Shackleton *et al.*, 1998).

Flexibility of rules

Rules and regulations should be flexible to accommodate times of shocks and stress.

Those affected by the rules should participate in modifying them through consultations (Shackleton *et al.*, 1998).

Simplicity of rules

Rules should be simple and few, so that participants can remember them and be able to transmit them to others over time.

Sanctions and punishment mechanisms exist

Clear systems and mechanisms of punishment for rule infringement must exist.

Lawry (1990) argues that the state, as a body with authority, is needed to inflict punishment on those who break the rules and regulations set locally.

Economic issues

Incentives for common property resource management

Effective common property resource management would emerge only if the perceived benefits of organising and complying to rules exceed the perceived costs of collective action.

Value of Common Property Resources

It is argued that the greater the economic value of a common property resource, the greater the incentive for collective management to conserve it.

This thesis responds to some of these theories in Chapter 6 to see if they would apply in the Maluti District. The following chapter addresses methodology. It reflects the methods used, which were guided by, among other things, theoretical issues raised in Chapter 2.

Chapter 3 Methodology

3.1 Overview

The methods that were used for this study are mapping, 'aggregate' diaries, wealth ranking, questionnaire survey and valuation. Individual interviews occurred throughout the period of the study with resource users, herbalists, livestock owners and people in general. Table 6 shows all the methods that were used, villages where they were administered, and where the results are presented.

Table 6: Summary of Methods Used

ORDER OF USE	METHOD	VILLAGES	WHY METHODS WERE USED?	RESULTS
1	Social Maps	Small Location	To understand the geography of the area, land use, natural resources management and location of natural resources. Mapping was used as a foundation for other methods and different parts of its results are reported in different chapters.	Chapters 2, 3, 5 and 6
2	"Aggregated diaries"	Small Location, Mkemane and Mpofini (N=18)	To understand issues of natural resources management, natural resources use and livestock production at household level. Results from the diaries were used to design questionnaire survey by asking the correct questions	Chapter 6
3	Wealth	Small Location	To stratify the villages according to the	Chapter 4

ORDER OF USE	METHOD	VILLAGES	WHY METHODS WERE USED?	RESULTS
	Ranking	and Mpofini	perceived wealth ranks and to use the data with the survey results	
4	Questionnaire Survey	Small Location and Mpofini (N=58)	To generalise for the entire district on a number of issues that are represented in tables in chapters 4 and 6	Chapter 4 and 6
5	Valuation	Mpofini (N=10)	To gather the value of fuelwood over two periods of time	Chapter 7

Work could not resume in Zitapile because of local politics concerning the sub-headman. People were not happy with the person who was the sub-headman during the period of the study. They were in favour of another man as a successor. Information concerning meetings to build rapport could not reach members of the village and I could not bypass his authority since legally he was in power.

I started with my first method, social mapping in Small Location. In conducting the exercise I was assisted by EDA. People began to confuse what I was doing with the work that EDA was doing. Although the two projects are not completely different, I realised that I should not involve EDA so that people could see that the two projects are coming from two different positions but are converging towards the same goal – enhancement of livelihood outcomes. The maps are not reproduced in this thesis because they were solely used as a foundation for other methods.

I went on to do the 'aggregated diaries' explained below and gradually I was involving Mkemane. I struggled to get any co-operation from Zitapile because of the reasons explained above. Informants who gave me information for the diaries were from the three villages – Small Location, Mkemane and Mpofini.

I conducted a wealth ranking exercise in two of the three villages – Small Location and Mpofini. The information I got from the exercise informed the questionnaire I designed for the study. The low literacy level in the area prompted me to make some adjustments in the questionnaire. If a person was asked to rank something, for example, counters were used rather than Likert scales (for Likert scales see Judd, et al., 1991). People were given beans to use in showing the thing they preferred most. The more beans they assigned to one thing, the more preference they attached to it. I would then record the number of beans. Visuals were used mostly in assisting people to see all the different things they were asked about e.g. a picture with a person collecting fuelwood and another with a person using medicinal plants: people were required to put counters on the picture that resembled the thing they valued most. The chart with pictures was used when people were asked about natural resources and livestock. One questionnaire would take about one and a-half hours to administer. The process itself was not cognitively taxing since the literacy issues were catered for.

After completing the questionnaire survey of 58 households in two villages, I conducted the valuation exercise. The valuation exercise was conducted in ten households which were followed twice – in summer and in winter. These households were also in the sample for the questionnaire survey. The ten households were selected using purposive sampling. If time allowed, the sample size drawn could have been larger so as to draw inference for the broader population of the district.

3.2 Methods

3.2.1 Qualitative Methods

3.2.1.1 Social maps

A number of participatory methods were used to investigate the area and its complexities. Social maps were used to help understand the geography and the resources used in two villages - Mpofini and Small Location. In Small Location, two kinds of maps were produced. The first map was produced to understand the geography of the area and to share the usefulness of the resources found in the area. The second one was for wealth ranking. This exercise is explained in section 3.2.1.2. The workshop exercise for producing social maps was participatory in nature and in conducting it, the following format was followed:

a) Mapping of the area: where participants drew a map of their area indicating residential area, arable fields, roads, rivers, homesteads, rangelands, forests, schools, community gardens etc.

Participants were divided into two groups because of the size of the group. After they completed their respective exercises, the two groups agreed that the map drawn by one group captured everything. The map shows all the important local features, including roads, old and new residential areas, four camps, school, vegetable garden, arable fields, gates, tap, Mkemane river, mountains, forests, medicinal plants, different grass species, shops, economic activities and where the 'betterment' boundaries and fences were. From the map, participants were asked to give us a story of the changes in residential area, fields and local rangelands. The story was given over three periods of time i.e. pre- 'betterment' period, 'betterment' period and post- 'betterment' period.

b) People were further asked to give the number of households in the village.

c) In addition, from the map, participants were asked to identify economic activities within the area.

d) Participants were asked to indicate the location of essential natural resources which they use, whether in their area or just outside. This was important to understand because the values of the resources not only include resources found in the area but also those found outside the area in lands to which people believe they have rights.

e) They were also requested to indicate where boundaries were before fences collapsed. This helped to understand whether the 'betterment' or the pre-'betterment' boundaries are respected.

f) Participants were asked to give livestock numbers during the three periods: pre-'betterment', 'betterment' period and post 'betterment' period. This helped me to understand whether there has been an increase or a decline in numbers. Three informants, who were the only participants in the meeting with livestock, gave information about livestock numbers of their own homesteads over the three aforementioned periods. The information that was gathered showed that livestock numbers increased during the 'betterment' scheme and declined during the post 'betterment' period. The participants in general also attested to their claims.

g) Involvement of women in management of natural resources over these three periods of time. Women were asked about their particular activities that they were involved in concerning the management of natural resources. In the meeting it appeared that men have always dominated management of natural resources. It is only during the post 'betterment' period that women are invited to village general meetings to participate.

h) Change in species. People were asked to identify grass species that had grown in any of the three periods and/ or have become extinct.

i) Venn diagram to indicate organisations and government offices that work closely with local people.

j) Transect walks were used to help me understand the landscape and be able to identify the resources. A young man (in his late 30s) first walked with me telling me about the places where fencing was erected, plant species which are extinct because of lack of fencing, the landscape and the rotational grazing system they were using. An elder of Mkemane village told me of the species they were using for fuel and grasses which are unpalatable in winter, and reiterated what the young man told me before.

k) In-depth meetings and interviews, to identify who my key informants were (e.g. resource users and livestock owners), obtain detailed reasons why people use these resources, and clarify how they practically perceive sustainable resource use and management in future, among other things.

The information captured in the mapping exercise is not included in the data presented here. It helped though to understand the area and know the kind of question that can be asked in the methods used following the mapping exercise.

3.2.1.2 Wealth Ranking

This exercise was conducted in two villages, Mpofini and Small Location. The purpose of the exercise was to rank people's wealth using the knowledge of other people about the area. This initially involved people drawing a map of the area with each household appearing on the map. The households were assigned numbers and on the map, the numbers correspond to the location of the household in the area. The participants in the Mpofini meeting were +/-50 and in Small Location +/-10. Plus or minus is used here to indicate that some people in the meeting were moving in and out. As the participants were mapping people's homes on the map, the numbers were copied in the cards against the name by which that household is commonly known. In most cases, households are named after the husband, even when he is deceased. After the mapping exercise was completed, participants agreed on the major source of livelihood for each household. Participants gave one major source of livelihood for a household and further probing about other sources of livelihoods was done during the questionnaire survey. Participants were then asked to give indicators for the wealth of four groups in the village. The groups were characterised as 1, 2, 3, and 4. 1 is the rich and 4 the poor household. 2 and 3 are upper middle and lower middle respectively. Everybody in both meetings agreed on the indicators that should be given for wealth. The criterion they used in Mpofini was that a rich person is a person who can employ another person and has livestock. An upper middle person is a person who has livestock and gets regular remittances and a pension grant. A lower middle person is a

person who is a pensioner but gets inconsistent remittances or a pensioner with many children to look after. A poor person lives on food s/he gets from his or her next of kin or does irregular piece jobs and handicrafts. It is difficult in the area to separate piece jobs and handicrafts because people move between the two because of their uncertainty. The definitions they gave in Small Location were somewhat similar to the definitions they gave in Mpofini. The only difference was the emphasis of the number of livestock holding which for the rich was the number of cattle, specified as more than 50. For upper middle people, they looked at a source of income perceived to generate more money, like a taxi.

Three participants, who showed during the exercise to have tremendous knowledge of the area and the different households, from both groups were selected and asked to use the indicators given by the group to assign numbers to people – numbers indicating whether a person is rich or poor or somewhere in between. The three participants, shown as A, B, and C in the results, were not far from one another in their allocation of households to the different categories of wealth. The numbers given by the participants were converted to percentages (4 = 100%, 3 = 75%, 2 = 50% and 1 = 25%) for simplicity although if the actual numbers were used the same result would be found, and the percentages were added up to get averages: in other words, the lower a household's mean score (average of the three percentages) the richer the household is.

An example of the results from the Mpofini exercise (for only the first 10 households out of 105 households) is in the following table (Table 7):

Table 7: Wealth Ranking Exercise

Person	A		B		C		Average
1	3	75	4	100	4	100	91.6
2	3	75	2	50	3	75	66.6
3	4	100	4	100	4	100	100
4	4	100	4	100	4	100	100
5	3	75	3	75	4	100	83.3
6	3	75	2	50	3	75	66.6
7	3	75	1	25	3	75	58.3
8	2	50	3	75	3	75	66.6
9	3	75	2	50	3	75	66.6
10	3	75	4	100	4	100	91.6

3.2.1.2.1 'Aggregated diaries'

This method was used to get information about livestock, trees and wild resources. These are referred here to as 'diaries' although they are not diaries in the true sense of the word. They are referred to as diaries here because the initial idea was to ask people to keep diaries of their activities. But because of the fear that people would forget, the method was slightly altered. The name used reflects the intention rather than the actual method used. People just gave an account of their life in general with regard to livestock, trees, grazing resources and medicinal plants. They are 'aggregated' because it is an account of what people in the study area do generally and because they are not specific in terms of days or dates when these things are done. People generalised on these activities without stating the dates of their activities and hence the word 'aggregated'. These 'aggregated' diaries are people's responses to open-ended questions on livestock, grazing resources, wild resources and trees. People gave an account of the use and management of natural resources. In doing this exercise, they were guided by broad questions that were agreed upon in the meetings between them and me. The questions were broad issues that I intended to get insight into, but because I did not want people to forget what we discussed, writing them as questions was the next best alternative. The 'diaries' cover a period of five years (1995 until 1999). The information that was gathered from these diaries shaped the 'hidden harvest' exercises that were conducted in one village over two seasons – summer and winter. The information was collected from 18 participants. Respondents were selected using purposive sampling and the kind of information they provided informed the kinds of questions that were asked later in a structured questionnaire (discussed in section 3.2.2.1). The selection procedure considered both people with livestock and those that do not have livestock. The purpose of selecting both livestock and non-livestock owners was to see the benefits accrued from grazing resources by non-livestock owners because of the perception that livestock owners benefit more than non livestock owners from rangeland resources. After carefully studying the area, I discovered that the livelihoods of many non-livestock owners are derived from communal rangelands and hence I emphasised getting a representative group in my sample.

3.2.2 Quantitative Methods

The qualitative data was coded and matrices were developed which helped in the design of the questionnaire and the analysis of the survey results. Matrices can easily be replicated for different purposes by just changing the contents of the boxes. Below are examples of the matrices used:

Livestock (Cattle)

CATTLE	REASONS FOR KEEPING LIVESTOCK	MARKE-TING	AMOUNT INVESTED IN VACCINATION PER ANNUM	AMOUNT INVESTED IN FEED PER ANNUM	OFF-TAKE	TYPES OF LIVESTOCK
1 to 5						
6 to 10						
11 to 15						
16 to 20 etc.						

Trees

SOCIO-ECONOMIC STATUS AS SHOWN IN THE WEALTH RANKING EXERCISE	REASONS FOR USING TREES	AMOUNT OF FUELWOOD USED PER DAY	SUBSTITUTES FOR DIFFERENT TREE SPECIES	WHICH TREE SPECIES ARE USED FOR MEDICINAL PURPOSES AND WHY
Poor				
Lower Middle				
Upper Middle				
Rich				

Wild Resources

SOCIO-ECONOMIC STATUS	REASONS FOR USING WILD RESOURCES	WHICH WILD RESOURCES ARE USED AND WHY	WILD RESOURCES USED FOR MEDICINAL PURPOSES
Poor			
Lower Middle			
Upper Middle			
Rich			

The different socio-economic groups are perceived as important in capturing dynamics within the rural context. The wealth category a household fell into was determined by the village wealth ranking exercises that I facilitated.

3.2.2.1 Questionnaire Survey

Although qualitative methods served to generate valuable information that can be useful in its own right to help readers and resource users to get detailed insights into the issues investigated, more conventional methods such as quantitative methods were also used to generate a broad view of the issues that can assist policy makers in their decision making processes. This broader picture will help policy makers and other researchers to replicate the study, and to test the validity of the theories generated in other areas. The development of the questionnaire survey was informed by the qualitative methods mentioned above. The survey was conducted in two of the three villages because of time and financial constraints. It was used to generalise the kinds of issues I teased out using qualitative methods.

Another prevalent fact about the use of this method is that it enables the researcher to get the patterns and trends of the use and management of natural resources. One can get information on who frequently uses these resources. Is it because they could be poorer than families using other types of resource? This kind of information was collected using structured questionnaires, which can be repeatedly used in other areas as well if there is a need. The survey in Mpofini was conducted in 27 randomly selected households using a standardised questionnaire. The idea was to conduct the survey in 52 of the 105 households. This did not happen because in many households, especially the new

'mushrooming' houses, there were no people present at the time of the survey visit. This increased the household size of the relatives of those eking out a living outside the village. Their grandparents in many cases looked after their children. Although I wished to visit these homesteads when owners return, I feared that this could lead to duplication. The same procedure was followed in Small Location where a sample of 40 households was drawn randomly but only 31 of those were interviewed. In all, 58 households were interviewed.

The procedure followed in doing the exercise was to use counters for questions that in the conventional method would need response cards. This was done because of the low literacy level of many people in the village.

In Mpofini, many people especially in the newly built houses could not be interviewed because of the fact that they were employed or looking for employment in the cities. Some of those who were in the sample for the questionnaire survey left their children with their parents. In one instance, the family I was interviewing had a large household composition because the children of the absentee household were left under the care of their grandmother.

The information collected through the questionnaire survey was used with the information collected from the wealth ranking exercise – perceived level of poverty. The information collected using the questionnaire survey was: sources of livelihood, the contribution of the different sources of livelihoods to a particular household (contribution was from lowest to highest), use of different types of natural resources, number of times people collect different types of natural resources, substitutes for different types of natural resources, people's perception of how their quality of life would change if natural resources they are using were to become extinct, livestock ownership, livestock numbers, change in livestock numbers in the past five years, reasons people keep livestock, purchases of feed and vaccines for livestock in the past two years, livestock sales, use of natural resources to inoculate animals, reasons people sell livestock, amounts received for livestock sold in the past two years, questions on management of natural resources including 'betterment', condition of rangelands, involvement of women in the management of natural resources, effectiveness of

the contribution of communal rangelands, employment data of the household, education, age, household composition and gender of the household head.

3.2.2.2 Valuation

For the valuation method, only one village, Mpofini, was selected. Ten households were followed twice in conducting the investigation – once in summer and once in winter. In the field, I managed to undertake valuation of fuelwood and collect price data for medicinal plants. For the latter I consulted traditional healers who gave prices for the medicines they sell. From this information a resource directory was developed. The resource directory is a table with lists of grass, tree species and medicinal plants with prices attached to them when they are sold in a processed or raw form. The resource directory is discussed further in Chapter 6. There were flaws in asking questions to get prices because the cost of obtaining and preparing the medicine was omitted. For fuelwood, the story is different. Ten households were selected using purposive sampling from Mpofini village and permission was requested to weigh the wood they were going to use. The procedure across all the ten homes was to weigh the wood and the following day people were given paraffin and were asked to use it for the same purposes as for wood. Before they were given the paraffin, ash and unused wood was weighed and its weight was deducted from the weight of the wood before it was used. This was done to get the thermal units that the wood represented. The same was done with paraffin. Unused paraffin was deducted from the amount given. All this was done to attach a price per kilogram to wood. The table below provides the information that was collected. The exercise was conducted in summer and in winter, although paraffin substitution was done only in summer. Only one household was not followed in winter, due to its absence from the village.

The method I used to do valuation of fuelwood was based on the concept of net economic value. It is calculated as revenue minus harvesting, processing and transport costs, including non-financial costs such as own labour (IIED, 1997).

Chapter 4 Livelihoods in Mkemane

4.1 Livelihoods in the context of the study area

The main thrust of this chapter is to look at the livelihood strategies used by people in order to achieve a secure livelihood outcome. People in the area are faced with basically the same challenges in coping with shocks and stresses. These challenges include: retrenchments from work places; high unemployment; situations that prompt people to dispose of their livestock; unfenced fields, which make people more averse to risks because of open access; poor management structures at local level; lack of information; no markets; extremely poor infrastructure; loss of livestock through diseases; and many other shocks and stresses. All of these challenges and many more that are not mentioned contribute negatively to the livelihood outcomes of the different households. This kind of background and the past political dispensation of South Africa forced many people into completely different levels of social and economic wellbeing.

As mentioned in the earlier chapters of this thesis, this study did not employ any conventional methods to ascertain the extent of wealth of each household, but relied on people's perceptions about their situation. People in the two villages sampled had almost the same definitions or constructs of whom they perceived as rich, upper middle, lower middle or poor. Their definition of each level of wealth revolved around livestock ownership, access to pension grants, remittances, piece jobs and handicrafts, and kin dependency. People who rely on their next of kin for sustenance were mostly considered as the poorest, and those who had many livestock units were considered the richest. People who rely more on piece jobs and handicrafts were also considered as lower middle or as the poorest. Two wealth levels that were nuanced in their definition were the upper middle and lower middle. People would use the same livelihood source in defining the wealth of two people but would refer to one as lower middle and to the other as upper middle. There are

many factors which people considered before coming to their conclusion: household composition, assets, and generally the economic background of the particular household. This has prompted the use of different analyses to look at the relationship of different constructs which the study identified to be imperative for a sustained livelihood. A series of discussions with people in the villages informed the constructs used.

As a general overview of livelihood context in the study area, the following table divides the different levels of wealth as identified by the people according to the main source of livelihood, also as identified by the people during the wealth ranking exercise.

4.1.1 Main Sources of Livelihood and Levels of Wealth

The following table reports on the main sources of livelihood as given by people and the different levels of wealth to which each household was allocated. The main sources of livelihood show the highest livelihood contributor for a particular exercise and other sources of livelihoods and the different combinations people use are captured below.

Table 8: Levels of Wealth and Main Sources of Livelihood

MAIN SOURCE OF LIVELIHOOD	NO. OF HOUSE-HOLDS	% OF HOUSE-HOLDS	LEVELS OF WEALTH				
			Rich (%)	Upper Middle (%)	Lower Middle (%)	Poor (%)	Total (%)
Pension	16	27.6	0	18.8	62.5	18.8	100
Piece Jobs and Handicrafts	13	22.4	0	0	23.1	76.9	100
Remittances	13	22.4	0	23.1	46.2	30.8	100
Kin Dependency	1	1.7	0	0	0	100	100
Livestock Herding	1	1.7	0	0	0	100	100
Herbalist	1	1.7	0	100	0	0	100
Unemployment Insurance Fund	1	1.7	0	100	0	0	100
Subsistence Agriculture	5	8.6	20	20	60	0	100
Deceased Husband's pension	1	1.7	0	0	100	0	100
Early Pension (Pension before the age of 60 for women and 65 for men)	1	1.7	100	0	0	0	100
Spaza	1	1.7	0	0	0	100	0
Combination of natural resources and remittances	1	1.7	0	0	100	0	100
Specific Skill	1	1.7	0	0	100	0	100
Local Security Guard	1	1.7	0	0	0	100	100
Taxi Owner	1	1.7	0	100	0	0	100
Total	58	100					

N=58

Kin dependency, piece jobs and handicrafts, spaza, local security guard and livestock herding are shown in this table to be the livelihood strategies of most the poor households. Subsistence agriculture is one source of livelihood for the rich. They mainly use their produce for home consumption. This group of people also owns many livestock units. 63% of lower middle people have pension as their main source of livelihood and 18.8% of upper middle households get pension grants. What the table also shows is that people's livelihoods are centred most on pension grants, piece jobs and handicrafts which are mostly based on natural resources (e.g. broom making; plastering; making of mud brick, platters, ropes etc.) and remittances. Households for whom pension grants are the main source of livelihood are 27.6%, piece jobs and handicrafts 22.4% and remittances 22.4%. Even if all the households across the three villages were interviewed, the same results would be reflected. For example, there are only two security guards in the three villages looking after the junior secondary school and one was selected in the sample. In all the three villages there are only two taxi men, three people who regard themselves as herbalists besides other

people who have a flair for the use of medicinal plants, and a couple of people who have certain specific skills. In other words, the 1.7% households representing only one household in this sample are not unrealistic numbers, they reflect the actual situation.

The information above on main sources of livelihoods is given to show the main contributors in people's livelihood strategies. Having said that, main sources of livelihoods are not the only sources of livelihoods to which people have access. People rely on multiple sources of livelihoods, which they combine in different proportions for a secured livelihood. Using the wealth categories people gave during the wealth ranking exercise and the main sources of livelihoods given in Table 8, households in the area can grouped according to the following clusters:

- The first cluster includes households with livestock, old age pension and remittances as sources of livelihood. This group is able to support its livestock holdings and its crop production activities through its financial resources. Households in this cluster, depending on the household composition and the consistency of remittances, are considered as upper-middle households. Those with high large household composition and fewer assets (e.g. ploughs and livestock) are considered as lower-middle.
- The second cluster includes people who are eligible to old age pension. This cluster supports its agricultural activities through pensions. Households in this cluster are considered as upper-middle and lower-middle, also depending on the household composition in many cases.
- The third cluster consists of people involved in piece jobs, handicrafts and kin dependency. Most households in this cluster own very few or no livestock units. They switch between these three sources of livelihoods depending on the availability. Female-headed households dominate this cluster. It is mainly households from this cluster who depend heavily on a number of common property resources. These households are mostly poor female-headed and depend on irregular piece jobs couple with irregular handicrafts and kin dependency.
- The forth cluster includes households with large livestock holding who can afford to make productive use of their arable land. These agricultural activities are mainly supported through remittances or financial resources from businesses such as shops.

Some in this cluster, who are highly involved in agriculture, have obtained livestock and fields through inheritance. These are mainly rich households, who seldom provide employment to the poor.

- The fifth cluster consists of skilled labour and self-employment. This involves welding, bricklaying and brick making. According to the wealth ranks given, this cluster falls in the lower-middle and poor households.
- The sixth cluster consists of households who own *spaza* shops and/ or sell liquor. Female-headed households dominate this cluster. The ones who own both employ people to work their land or look after their livestock for food and liquor. They seldom do it for money. Households that sell liquor and have *spaza* shops fall in the upper-middle category and those that only have *spaza* shops fall in the poor category.

The following subsections deal with how people combine different resources for a sustained livelihood outcome, which this study perceives as a form of wealth. In general, people who have many livestock units are perceived as better off and can easily improve on their wealth by disposing of some of their livestock when there is a need. They also enjoy the multiplicity of other benefits accrued from livestock production.

4.1.2 Livestock

There has been a belief that Africans have "an irrational desire to accumulate cattle..." (Yawitch, 1981: 10) which means that cattle owners attach importance to simply holding stock. The multiplicity of benefits that are derived from cattle remain poorly understood. There have been interventions in the past by agricultural extension officers under the 'betterment' scheme to cull livestock because it was said they were above the carrying capacity. This section will show for what purpose people keep cattle, sheep and goats, and will further show households according to main sources of livelihood and livestock holdings. This would help the reader understand that there are households with certain sources of livelihood that have five or less cattle. These are the households that are poor,

and they struggle to buy feed for their livestock which is imperative in winter. This is the group which, this study found, rely more on the natural capital.

Reasons people keep livestock vary. Table 9 below gives these reasons. These were asked using a structured questionnaire, as most of the questions were informed by the 'aggregated diaries' done before the survey. The table below shows households that have cattle (43.1%) and/ or sheep (10.3%) and/ or goats (37.9%). Reasons people keep livestock are given for each livestock type.

Table 9: Reasons people keep Livestock

REASONS PEOPLE KEEP LIVESTOCK	% OF HOUSE-HOLDS WITH THIS TYPE OF STOCK THAT INDICATED YES	NO. OF HOUSE-HOLDS WITH THIS TYPE OF STCOK THAT INDICATED YES	% OF HOUSE-HOLDS WITH THIS TYPE OF STOCK THAT INDICATED NO	NO. OF HOUSE-HOLDS WITH THIS TYPE OF STOCK THAT INDICATED NO
CATTLE (43.1% of households own cattle)				
Saving	76	19	24	6
Aesthetic value	36	9	64	16
Sales	16	4	84	21
Milk	68	17	32	8
Draught Power	80	20	20	5
Dowry	40	10	60	15
Slaughter for feasts and ceremonies	52	13	48	12
Manure	92	23	8	2
Meat	32	8	68	17
Cultural Reasons	80	20	20	5
Cultivation	84	21	16	4
Sheep (10.3% of households own sheep)				
Saving	100	6	0	0
Wool	100	6	0	0
Sales	66.7	4	33.3	2
Slaughter for feasts and ceremonies	66.7	4	33.3	2
Manure	100	6	0	0
Cultural Reasons	66.7	4	33.3	2
Meat	100	6	0	0

REASONS PEOPLE KEEP LIVESTOCK	% OF HOUSE-HOLDS WITH THIS TYPE OF STOCK THAT INDICATED **YES**	NO. OF HOUSE-HOLDS WITH THIS TYPE OF STCOK THAT INDICATED **YES**	% OF HOUSE-HOLDS WITH THIS TYPE OF STOCK THAT INDICATED **NO**	NO. OF HOUSE-HOLDS WITH THIS TYPE OF STOCK THAT INDICATED **NO**
Goats (37.9% of households own goats)				
Saving	90.9	20	9.1	2
Cashmere	0	0	100	22
Sales	22.7	5	77.3	17
Slaughter for feasts and ceremonies	40.9	9	59.1	13
Manure	81.8	18	18.2	4
Meat	68.2	15	31.8	7
Cultural Reasons	90.9	20	9.1	2
Mohair	0	0	100	22

Many households in the sample own cattle compared to other types of livestock. Savings, daily subsistence in the form of milk, draught power, slaughtering for feasts and ceremonies, manure, cultural reasons and cultivation were reasons most favoured by cattle owners. This study makes a distinction between draught power and cultivation. The former is understood to refer to transporting of goods using livestock whilst the latter is understood to refer specifically to ploughing. In asking the questions, there was a distinction made between slaughtering for feasts and ceremonies, and cultural reasons. Cultural reasons (*Amasiko*) were explained to mean things like rituals, and ceremonies to mean parties and other activities not in honour of the ancestors. Meat is understood in the area as slaughtering an old cow (*Ukugugisa*) that does not have a market value. People would never slaughter a cow just for meat when it is not old except for a major ceremony or a feast. Sheep, in many households, would occasionally be slaughtered.

All the reasons that were given by people for keeping sheep were favoured by most of the households but with goats, not all the reasons were favoured. Cashmere, sales and mohair were the least favoured. The agricultural extension officers introduced people to the method of gathering cashmere from goats. The few who managed to gather a couple of kilograms did not get their money back. People are therefore discouraged to get involved again. As for mohair, no households have angora goats.

Table 10: Percentage of Households with Livestock according to Main Sources of Livelihood

MAIN SOURCE OF LIVELI-HOOD	NO. OF HOUSE-HOLDS	% OF HOUSEHOLDS WITH LIVESTOCK											
		Sheep				Cattle				Goats			
		No %	No	Yes %	Yes	No %	No	Yes %	Yes	No %	No	Yes %	Yes
Pension	16	81.2	13	18.8	3	68.8	11	31.3	5	62.5	10	37.5	6
Piece Jobs and Handicrafts	13	100	13	0	0	84.6	9	15.4	4	76.9	10	23.1	3
Remittances	13	100	13	0	0	53.8	7	46.2	6	76.9	10	23.1	3
Kin Dependency	1	100	1	0	0	100	1	0	0	100	1	0	0
Herding Livestock	1	100	1	0	0	100	1	0	0	100	1	0	0
Herbalist	1	100	1	0	0	0	0	100	1	0	0	100	1
Unemploy-ment Insurance Fund	1	100	1	0	0	0	0	100	1	0	0	100	1
Subsistence Agriculture	5	60	3	40	2	20	1	80	4	40	2	60	3
Dead Husband's Pension	1	100	1	0	0	0	0	100	1	100	1	0	0
Early Pension	1	100	1	0	0	0	0	100	1	0	0	100	1
Spaza	1	100	1	0	0	0		100	1	0	0	100	1
Combination of natural resources and remittances	1	100	1	0	0	100	1	0	0	100	1	0	0
Specific skill	1	100	1	0	0	0	0	100	1	0	0	100	1
Local Security Guard	1	100	1	0	0	0	0	100	1	0	0	100	1
Taxi Owner	1	0	0	100	1	0	0	100	1	0	0	100	1

The table above shows households that have or do not have livestock according to the main sources of livelihood. 18.8% of households whose main source of livelihood is pension own sheep and 40% of households whose main source of livelihood is subsistence agriculture also own sheep. The table shows that 100% of households of taxi owners own sheep. The reader should be cautioned here that it is only one taxi owner who was in the sample out of three taxi owners from the three villages. In each source of livelihood, except for kin dependency, herding livestock, and combination of natural resources and remittances, there are households that own cattle. The same situation applies for goats but

for goats there is another category of households whose main source of livelihood is 'dead husband's pension' that does not own goats.

In the following table (Table 11), all the households whose main source of livelihood is piece jobs and handicrafts have between 1 and 5 cattle. The same applies to herbalists and households whose main sources of livelihood are spaza, security guard and others. 16.7% of households receiving remittances have 21 to 25 cattle and 25% of households whose main source of income is subsistence agriculture (extensive use of arable fields) have 26 or more cattle.

Table 11: Main Sources of Livelihood and Levels of Cattle Ownership

MAIN SOURCE OF LIVELIHOOD	HOUSEHOLDS OWNING CATTLE ACCORDING TO DIFFERENT CATTLE CATEGORIES										TOTAL
	1 to 5 (%)	1 to 5	6 to 10 (%)	6 to 10	11 to 15 (%)	11 to 15	21 to 25 (%)	21 to 25	26 and above (%)	26 and above	
Pension	60	10	40	6	0	0	0	0	0	0	100
Piece Jobs and Handicrafts	100	13	0		0	0	0	0	0	0	100
Remittances	50	7	16.7	2	16.7	2	16.7	2	0	0	100
Herbalist	100	1	0	0	0	0	0	0	0	0	100
Unemployment Insurance Fund	0	0	100	1	0	0	0	0	0	0	100
Subsistence Agriculture	25	1	0	0	50	3	0	0	25	1	100
Dead Husbands' Pension	100	1	0	0	0	0	0	0	0	0	100
Early Pension	100	1	0	0	0	0	0	0	0	0	100
Spaza	100	1	0	0	0	0	0	0	0	0	100
Specific Skill	100	1	0	0	0	0	0	0	0	0	100
Local Security Guard	100	1	0	0	0	0	0	0	0	0	100
Taxi Owner	0	0	100	1	0	0	0	0	0	0	100

From a study conducted on livestock in the area (Ntshona, 2000c) and from this particular study (data not shown here), those with few cattle seldom sell their cattle as opposed to the groups whose main sources of livelihood are subsistence agriculture and remittances. The same applies to sheep, with households whose main source of livelihood is subsistence agriculture. Table 12 shows that only three main source of livelihood categories own sheep. Table 13 shows that 33.3% of households whose main source of livelihood is piece jobs and handicrafts have 16 to 20 goats, which is similar to households getting remittances. Herbalists appear to own more goats than other households in the sample. Another caution to the reader here: there is one herbalist in the sample out of three across the three villages.

Table 12: Main Sources of Livelihood and Levels of Sheep Ownership

MAIN SOURCE OF LIVELIHOOD	% HOUSEHOLDS OWNING SHEEP ACCORDING TO DIFFERENT SHEEP CATEGORIES						TOTAL
	1 to 5	16 to 20	21 to 25	26 to 30	46 to 50	>50	
Pension	33	0	33	33	0	0	100
Subsistence Agriculture	0	50	0	0	0	50	100
Taxi Owner	0	0	0	0	100	0	100

Table 13: Main Sources of Livelihood and Levels of Goat Ownership

MAIN SOURCE OF LIVELIHOOD	% HOUSEHOLDS OWNING GOATS ACCORDING TO DIFFERENT GOAT CATEGORIES						TOTAL
	1 to 5	6 to 10	11 to 15	16 to 20	21 to 25	36 to 40	
Pension	33.3	16.7	50	0	0	0	100
Piece Jobs and Handicrafts	33.3	33.3	0	33.3	0	0	100
Remittances	33.3	33.3	0	33.3	0	0	100
Herbalist	0	0	0	0	0	100	100
Unemployment Insurance Fund	0	0	0	0	100	0	100
Subsistence Agriculture	0	66.7	0	33.3	0	0	100
Early Pension	100	0	0	0	0	0	100
Spaza	100	0	0	0	0	0	100
Specific Skill	100	0	0	0	0	0	100
Local Security Guard	100	0	0	0	0	0	100
Taxi Owner	0	100	0	0	0	0	100

It is worth considering how livestock ownership is distributed among the different groups of wealth. The following table shows that all the rich and the upper middle households, as perceived by people, have cattle. 60% and 62% of the lower middle and poor households respectively have no cattle. 4% of the lower middle and 19% of the poor have no livestock whatsoever. Livestock ownership referred to ownership of cattle, sheep, goats, chickens and pigs.

Table 14: Cattle Ownership and Levels of Wealth

LEVELS OF WEALTH	WHETHER HH HAS CATTLE						
	No (%)	No	Yes (%)	Yes	(No livestock) (%)	No livestock	TOTAL (%)
Rich (3.4%) (n=2)	0	0	100	2	0	0	100
Upper Middle (17.2%) (n=10)	0	0	100	10	0	0	100
Lower Middle (43.1%) (n=25)	60	15	36	9	4	1	100
Poor (36.2%) (n=21)	62	13	19	4	19	4	100

N=58

The story is different for sheep. None of the poor households own any sheep. The table below shows that 50% of the rich have sheep. 30% of the upper middle also have sheep, but only 8% of the lower middle have sheep and the poor have no sheep.

Table 15: Sheep Ownership and Levels of Wealth

LEVELS OF WEALTH	WHETHER HH HAS SHEEP						
	No (%)	No	Yes (%)	Yes	Not applicable (No livestock) (%)	No livestock	TOTAL (%)
Rich	50	1	50	1	0	0	100
Upper Middle	70	7	30	3	0	0	100
Lower Middle	88	22	8	2	4	1	100
Poor	81	17	0	0	19	4	100

N=58

The following table on goat ownership shows a pattern slightly similar to cattle ownership.

Table 16: Goat Ownership and Levels of Wealth

LEVELS OF WEALTH	WHETHER HH HAS GOATS						
	No (%)	No	Yes (%)	Yes	Not applicable (No livestock) (%)	No livestock	TOTAL (%)
Rich	0	0	100	2	0	0	100
Upper Middle	20	2	80	8	0	0	100
Lower Middle	60	15	36	9	4	1	100
Poor	67	14	14	3	19	4	100

N=58

All the rich households, as perceived by people in the sample, have goats. 80% of the upper middle also have goats, but only 36% and 14% of the lower middle and poor respectively own goats.

Households that received remittances regularly were perceived as upper middle and those that did not receive them regularly as poor. The conclusion that can be drawn from the tables above is that people who have their main source of livelihood as remittances and subsistence agriculture have more livestock units than those who have other sources of livelihood. People with sources of livelihood such as piece jobs and handicrafts, livestock herding, kin dependency and a combination of natural resources and remittances tend to have no cattle. Most people in these groups survive mainly from using natural resources, especially those who have piece jobs and handicrafts as their main source of livelihood. The kind of handicrafts they do relate to the skills they have in transforming natural resources into marketable goods. Most of them are skilled in decorations using mud, and some make brooms, grass mats and grass platters for survival. What can be deduced here is that remittances and subsistence agriculture could be significantly related to higher cattle ownership.

Natural capital (for the rich and the poor) in the form of grazing resources, land resources and wild resources, and financial capital in the form of remittances and pension, appear to be making the greatest contribution to a secure livelihood for the people of these villages. When everybody was asked whether they use at least one of the natural resources available in the area, they all said yes. However, the contribution of natural resources to their livelihoods ranged from high to low. On the other hand, financial capital is also threatened, by the high rate of retrenchments. This forces many people to eke out a living in their rural homes. People quickly convert their earnings by purchasing livestock, which they believe would support their livelihood base in the long run. Although this is true in some cases, diseases are a huge problem. This also goes back to the support that the government can offer through livestock dipping and vaccination. Livelihoods could be promoted if those retrenched (and any other person wishing to invest in livestock) can be assured of alternatives through support in the management of natural resources and maintenance of livestock. The other problem for those who can afford to maintain their livestock is a market outlet where they can sell.

There were households which, although they owned livestock, did not have the money to provide feed for it during winter. Most of these households are the poor households. Only 4.8% of them bought feed in 1998, and no poor household bought it in 1999. Questions were asked in this study to ascertain how much people spent in maintaining some of the livelihood sources they have. The question was asked for cattle, sheep and goats. 50% of the rich indicated that they bought feed in 1998 and 1999. 40% of the upper middle, 8% of the lower middle and 4.8% of the poor also bought feed in 1998, and 50% of the upper middle and 8% of the lower middle had done likewise in 1999. It is interesting to note that very poor people also try to maintain the life of their livestock (except for 1999), since winters in the area can be fatal and stall feeding is an expensive alternative. The following table (Table 17) shows the amounts people spent on feed in 1998. Only 4.5% of the poor managed to buy feed in 1998, as compared to 50% and 40% of the rich and the upper middle respectively. The amount which the poor used to buy was in the R 1 – R 100 category. For the richest, it was in the R 1,101 or more category. In 1999 (Table 18) the poor did not buy any feed.

Table 17: Amount Spent on Feed in 1998 by Levels of Wealth

LEVELS OF WEALTH	AMOUNT SPENT ON FEED (R) IN 1998														
	1 to 100 (%)	1 to 100	101 to 300 (%)	101 to 300	301 to 500 (%)	301 to 500	501 to 700 (%)	501 to 700	700 or more (%)	700 or more	Do not know (%)	Do not know	Did not buy feed (%)	Did not buy feed	Total
Rich	0	0	0	0	0	0	0	0	50	1	0	0	50	1	100
Upper Middle	10	1	10	1	10	1	10	1	0	0	0	0	60	6	100
Lower Middle	4	1	4	1	0	0	0	0	0	0	4	1	88	22	100
Poor	4.8	1	0	1	0	1	0	1	0	1	0	1	95.2	20	100

N=58

Table 18: Amount Spent on Feed in 1999 by Levels of Wealth

LEVELS OF WEALTH	AMOUNT SPENT ON FEED (R) IN 1999														
	1 to 100 (%)	1 to 100	101 to 300 (%)	101 to 300	301 to 500 (%)	301 to 500	501 to 700 (%)	501 to 700	700 or more (%)	700 or more	Do not know (%)	Do not know	Did not buy feed (%)	Did not buy feed	Total
Rich	0	0	0	0	0		0		50%	2	0		50	2	100
Upper Middle	0	0	20	2	20	2	10	1	0	0	0	0	50	5	100
Lower Middle	8	2	0	0	0	0	0	0	0	0	00	0	92	23	100
Poor	0	0	0	0	0	0	0	0	0	0	0	0	100	21	100

N=58

Just by looking at the amount people spend on feed, it can be concluded that livestock is one fundamental livelihood source in the area but more beneficial to the rich as opposed to the poor. Although this cannot be said for all the levels of wealth, the attachment people show to this natural capital (i.e. livestock) is convincing enough to raise a challenge to the policy decision making process. The benefits accrued from livestock do not only flow to owners but to non-cattle owners as well. A resource such as cow dung (dry or otherwise) is one example.

The rich, upper middle and lower middle were the ones who bought vaccines to inoculate their livestock in the past two years. All the rich indicated that they bought vaccines. 50% of the upper middle and 4% of the lower middle also indicated the same. People also use other forms of vaccines to inoculate their livestock. Natural resource use for this purpose is one such example. 50% of the rich and the upper middle alike, 24% of the lower middle and 14.3% of the poor indicated the use of natural resources for livestock health care. The story differs when something affordable is used, like a natural resource. The lower middle and the poor were making use of such resources for their livestock. The availability of these resources has reversed something that was not affordable into something that can easily be found. However, the different effects of the resources (western medicine or traditional medicine) have not been determined.

Concerning livestock sales, in 1998 50% of the rich received R 1,101 or more, 10% of the upper middle received between R 200 and R 300, 4% of the lower middle also received R 1,101 or more and 4.8% of the poor could not say exactly how much they received. In 1999 the amounts that were received by all the wealth levels except for the lower middle were R 1 101 or more. 50% of the richest, 20% of the upper middle and 9.5% of the poor sold livestock in 1999 and all received R 1,101 or more. To meet household needs, 50% of the respondents sold their livestock to local people, and the rest sold through other avenues such as in neighbouring villages, to relatives and at stock sales.

In the logistic model below (Model A), poverty is dichotomous (1 being poor and 2 being the omitted category) and the number of cattle, sheep and goats are continuous independent

variables. This statistic was used based on the theory that people are not irrational by keeping many livestock units (see section 2.3.1). Logistic regression shows that when the number of cattle goes up, the odds of being poor (in local people's definition) decrease. Numbers of sheep or of goats are not significant predictors of whether the household is rich or poor according to people's perceptions. When other variables like remittances, pensions and subsistence agriculture were included in the model, none of them were statistically significant.

Table 19: Model A

	MODEL	EXP (B)	SIGNIFICANCE
No. of cases	58		
Constant	3.2302		
Number of cattle	-0.295	0.7445	0.0212
Number of sheep	-0.0249	0.9754	Not significant
Number of goats	-0.1159	0.8906	Not significant

$p^{ii}<0.05$

4.1.3 Contribution of Different Sources of Livelihood for each level of Wealth

4.1.3.1 Different Cattle Categories

Model A (Table 19) above shows there is a correlation between cattle owning households and low levels of poverty as perceived by people. This section looks at the account given by people of the contribution of other livelihood sources across the different cattle categories. The categories are in multiples of five. In the case study area, people with ten cattle are perceived to be better off than those with five cattle. As Hatch (1996) puts it, the actual number of cattle counts. People with four to five cattle can plough their fields without necessarily being involved in work parties. Disposals of cattle by this group are very scarce (Ntshona, 2000c). The fewer the number of cattle, the less likely it is for the household to dispose of them. People with five or less cattle can be involved in work

parties. As the number of cattle increases, more benefits are accrued from cattle. People are able to sell and or exchange.

This section focuses on the contribution of different sources of livelihood to people in different cattle-owning categories. Four sources of livelihood were selected – pension, piece jobs and handicrafts, remittances and subsistence agriculture. These were selected because more people make use of them. People indicated the contribution of these sources of livelihood using counters (as described in section 3.2.2.1). The contribution of these sources of livelihood was converted into an ordinal scale to ascertain whether it is highest, high, low or lowest. All these were compared with the different cattle categories. Taking only the sources of livelihood with the highest number of respondents, 33.3% of upper middle people who earn a pension and have 5 or fewer cattle indicated that pensions make the highest contribution to their livelihood. Also, 37.5% of lower middle pensioners indicated the same. When the number of cattle was more, the contribution from pension shifted from highest to high.

The contribution from fields was from high to highest for lower middle households with 1 to 5 cattle. For upper middle households with 6 to 10 cattle, the contribution from the fields was low. For households with more than 11 cattle, fields had the highest contribution.

Natural resources, which in many cases inform the kind of piece jobs and handicrafts people are involved in, have the highest (33.3% of people) and high (66.7% of people) contribution for upper middle people with 1 to 5 cattle. As the level of wealth goes down for the group with 1 to 5 cattle, the contribution shifts from highest to lowest. This could be referring to grazing resources particularly grass grazed by animals. People with fewer livestock units would perceive the contribution differently from those with more livestock units. For groups with more than 6 cattle, the contribution from natural resources is perceived as low.

All people in the different cattle groups receiving remittances indicated that remittances have the highest or, in some cases, a high contribution to their total livelihood.

Contribution from piece jobs and handicrafts mainly benefited the lower middle and the poorest. People whose main source of livelihood is piece jobs and handicrafts did not have many cattle.

4.1.3.2 Contribution of the Different Sources of Livelihood (Livestock owners and non-livestock owners)

The figures below highlight issues of concern regarding the contribution made by different sources of livelihood which were identified earlier in this chapter to be more beneficial to a substantial number of people. Each figure shows the number of households in each of the four wealth categories who said that the source in question made a 'highest', 'high', 'low' or 'lowest' contribution to their livelihoods, as well as the number of households who said that this livelihood source was not applicable.

Pension

Pensions make a 'highest' contribution to livelihood most often among the lower middle households (36% of households indicated the highest contribution) followed by 20% of the upper middle households who also indicated a highest contribution. 14% of the poor households also indicated a 'highest' contribution from pensions. Although this is the case for some households, many of the poor (86%) and lower middle households (52%) indicated that pension grants were not applicable to them. Looking at the proportional contribution of pensions to those who are entitled to them and those who are not, pensions contribute more to the upper middle households (50% indicated some contribution whether perceived as highest or high) followed by the lower middle households (48%) and then a few poor households (14%). If one looks at the groups where pension is applicable then one can see that the highest number of non-recipients occurs among the poor, then goes down for other levels of wealth. Pension grant as shown in the figure is not applicable to the rich.

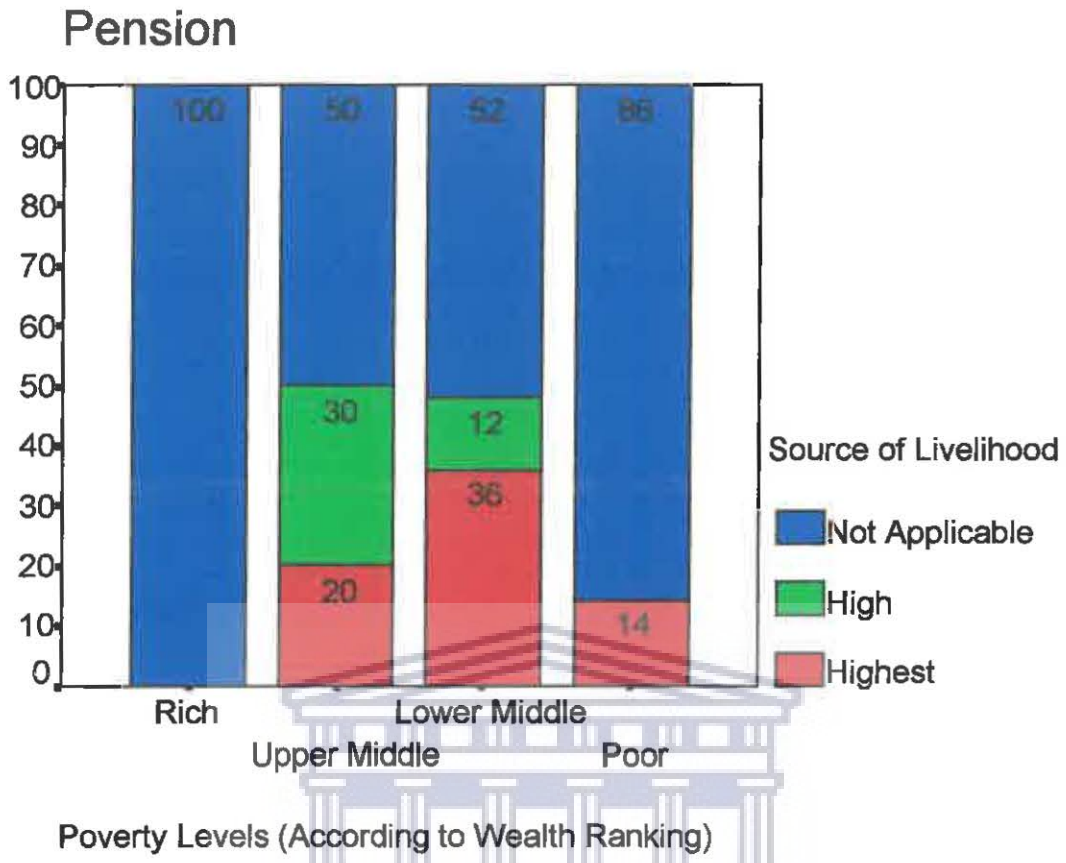


Figure 5: Pension Contribution across the different Levels of Wealth

Piece Jobs and Handicrafts

Piece jobs and handicrafts, which are derived mostly from natural resources, make a 'highest' contribution most often to the poor households (52% of poor households indicated a highest contribution). The emphasis here is on cash gains from services rendered or goods sold. These are not applicable to the rich and the upper middle households. For the lower middle households, they make a 'highest' and a 'high' contribution equally. As said before, handicrafts are mostly derived from natural resources. These involve making of brooms, mud bricks, grass platters, medicines using medicinal plants, decorations using a special type of mud, plastering and roofing using thatch grass. Making the same comparison as above, where piece jobs and handicrafts are applicable, piece jobs and handicrafts do not apply to most of the lower middle households followed by 33% of poor households. It is

surprising that most of the lower middle households were not involved in piece jobs and handicrafts. From the wealth ranking exercise, people indicated that some lower middle households earn pensions and receive remittances (which are inconsistent in this category of households). But because of the household composition of those households, they were classified as lower middle because the money they receive supports many people.

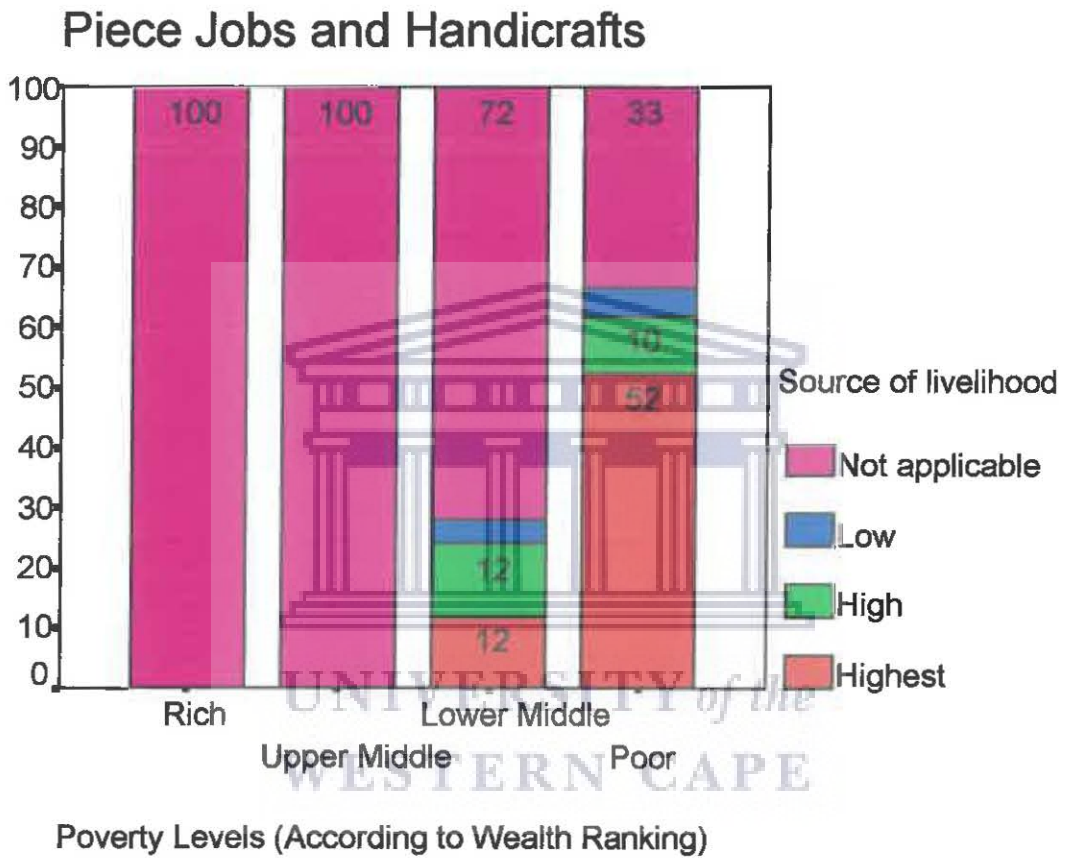


Figure 6: Contribution from Piece Jobs and Handicrafts across the different Levels of Wealth

Natural Resources

The contribution from natural resources is very high among the rich followed by the poor. The emphasis here is on use of natural resources. There is no wealth group to whom natural resources did not apply. Everybody uses them for different purposes. This study therefore suggests that natural resources are a safety net to all households, especially the poor. Some rich households also indicated that natural resources make a 'high' contribution to their livelihood. A 'highest' contribution was most often indicated by the upper middle, followed by the lower middle and the poor.

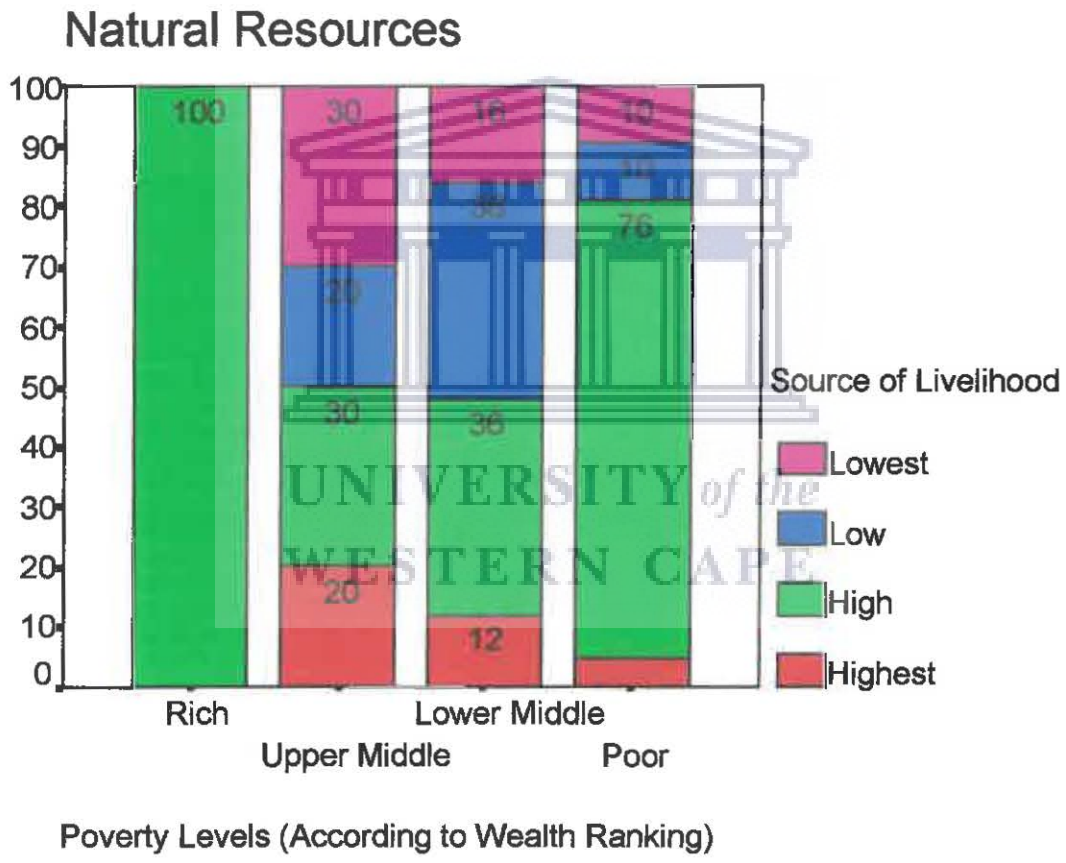


Figure 7: Contribution from Natural Resources across the different Levels of Wealth

Fields

The contribution of fields does not apply to most of the poor (90% of households), upper middle (80%) and lower middle households (76%). More rich households (50%) indicated a 'highest' contribution than did the lower middle (12%) and the upper middle (10%). In the past few years, especially during the democratic government era (post 1994 elections), there was lack of maintenance of fencing that was used to keep animals away from arable fields. This resulted in many people leaving their fields fallow and only using parts around them to collect thatch grass. The few rich people in the sample indicated that subsistence agriculture was their main source of livelihood.

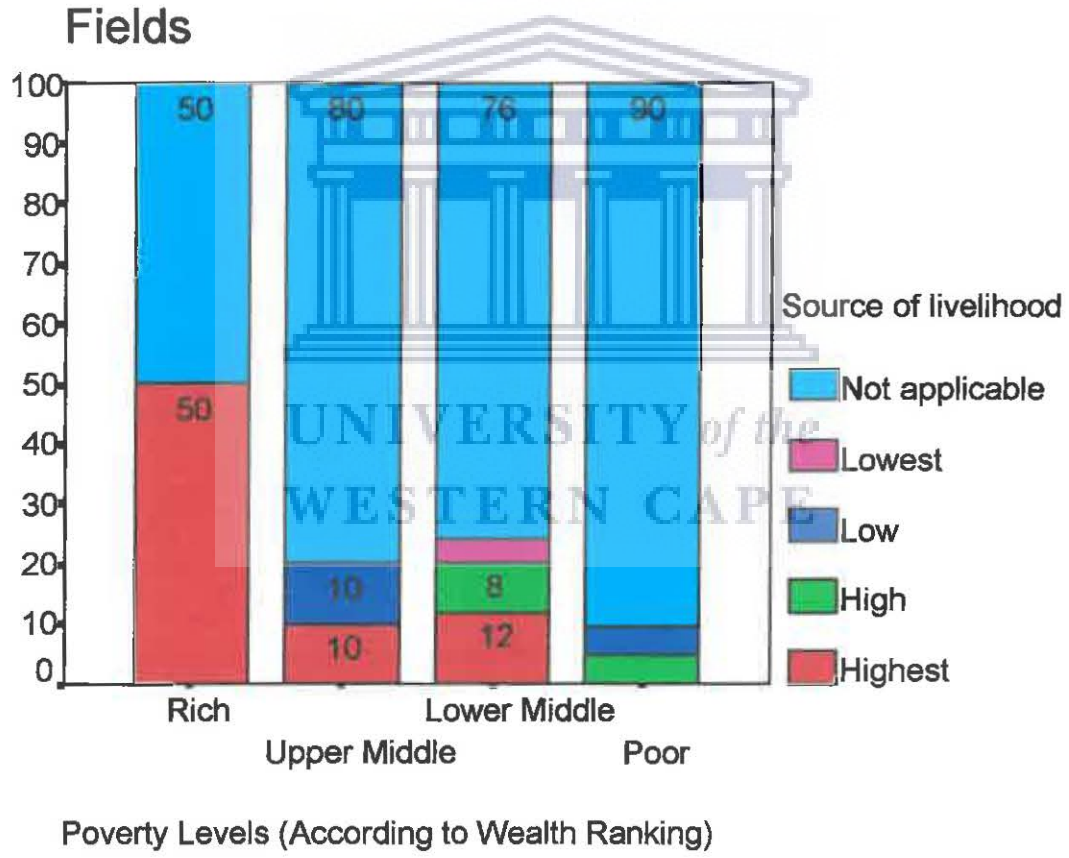


Figure 8: Contribution from Fields across the different Levels of Wealth

Remittances

Figure 9 below shows that most poor (86% of households), 70% of the upper middle and 60% of the lower middle households do not earn remittances, where remittances are applicable. Remittances make the most 'highest' contribution to the upper middle, then the lower middle households, followed by the poor households. A 'high' contribution was indicated by 20% of the lower middle households. There are no rich households who indicated that they receive remittances.

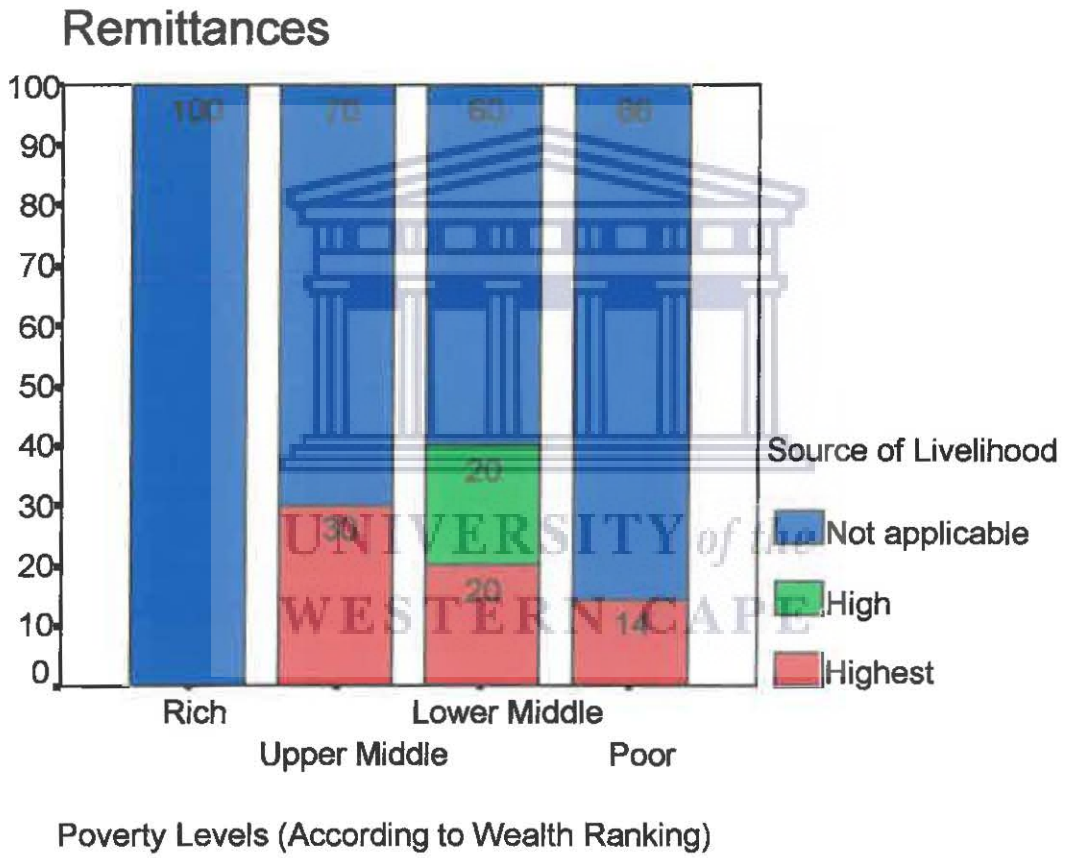


Figure 9: Contribution from Remittances across the different levels of Wealth

Livestock

The only 'highest' contribution from livestock was indicated by the rich. Livestock contributions do not apply to most of the poor (81%) and the lower middle households (56%). A 'highest' contribution from livestock was only indicated by the rich.

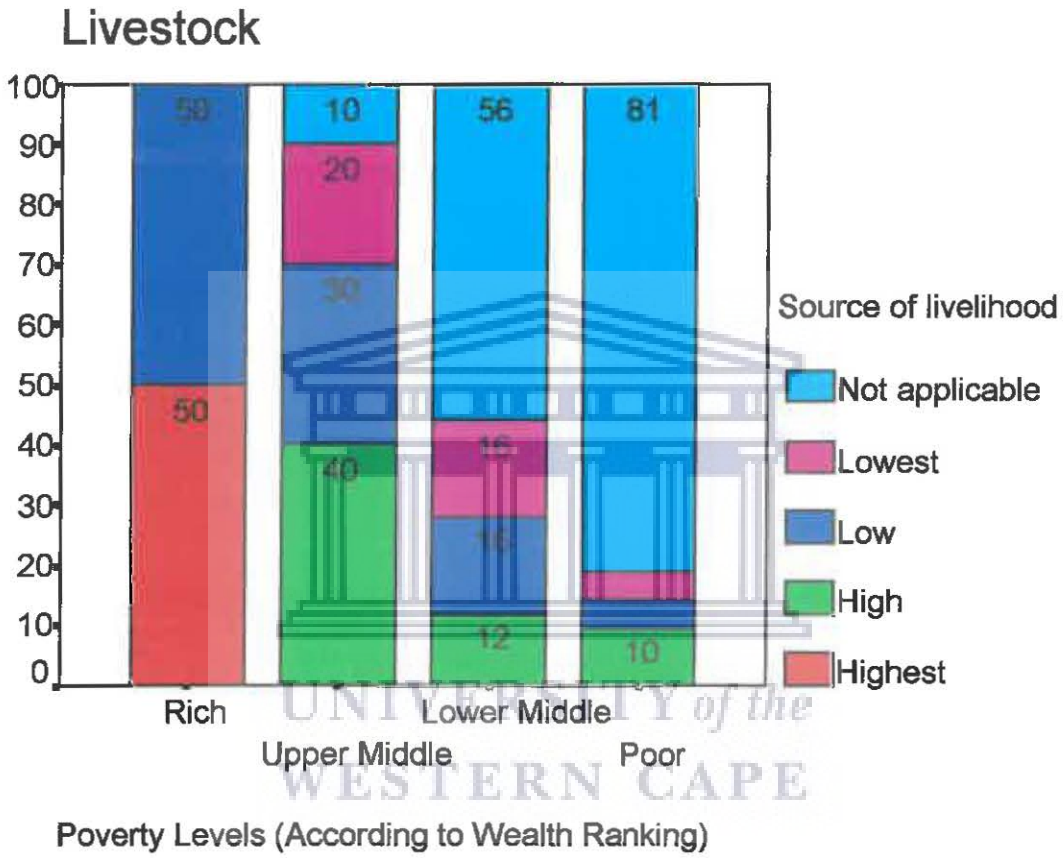


Figure 10: Contribution from Livestock across different Levels of Wealth

In synthesising the figures above, it is evident that different sources of livelihood contribute to levels of wealth in different ways. Livestock makes the highest contribution for the better off and does not apply to most households in poorer levels of wealth. Piece jobs and handicrafts, for example, make the highest contribution to most of the poor households. The case is different for pensions, which make a 'highest' contribution to most of the lower middle households. On the contrary, as opposed to these examples, where there are

households to which these sources of livelihood do not apply, natural resources contribute to all the households. Pensions only benefit some individuals who are entitled to them, especially the lower middle; remittances benefit households with migrant labourers; fields benefit a remnant of the rich, lower middle and the upper middle; piece jobs and handicrafts benefit mainly the poor and natural resources benefit everybody. Handicrafts, as said many times, are derived from natural resources.

This evidence shows that common property resources transcend the different levels of wealth and are mostly beneficial to the lower middle and the poor. Because of the lack of options that people have, the poor are forced to derive a living from common property resources. If this is to be sustained even for generations to come, then proper management of common property resources is needed. Lack of management of common property resources would not only affect the poor and the lower middle but the rich and the upper middle as well. Because everybody uses common property resources for different purposes there is a dire need for their proper management which will further ensure that the very poor are kept alive. There is confusion at this stage as to what the situation is regarding management of common property resources. People are not sure whether there are rules or not and some are not sure about the condition of the rangelands (discussed in some detail in section 6.3). The history that has been given above in chapter 1 concerning the local context, especially with regard to management of common property resources, suggests that there is a need to invite an agent like the government to assist and support what people are nostalgic for – a 'betterment' scheme, but in a different form which recognises the role which the common property resource users play.

In this section the importance of different livelihood sources to rural people, against the background of conditions in this country, is shown. People with remittances and subsistence agriculture as sources of livelihood have more livestock than other people with other sources of livelihood. The rich, as perceived by people, benefit more from livestock compared to the poor, but both groups benefit from the contribution of natural resources. The rich, because they hold many livestock units, benefit more from livestock and the poor, because of few alternative sources of livelihood, benefit more from natural resources.

All groups across the levels of wealth are affected equally by the challenges of this new political and economic dispensation, concerning management of natural resources, dipping, vaccination and marketing programmes. Programmes to support management of these natural resources and programmes to maintain livestock production are decaying. Looking first at the high rate of unemployment and retrenchments, people are forced to eke out a living back in their rural villages. People who have been employed in the past and have land to work in the villages managed to accumulate livestock. Although the data do not show this, most people with high numbers of animal units were migrants before and some got their large herds through inheritance. I argue that the government is aware of the conditions to which the able-bodied or the old are going back. The government needs to strike a balance in helping people to continue living even in their rural villages, through assistance with the management of natural resources, and government programmes that are directed at livestock health. The figures on the amount spent on vaccines and on feed show (see Table 18) that the lower middle and the poor cannot afford to maintain their livestock. In 1999 none of the poor bought any feed.

The kinds of handicrafts people embark on transform natural resources into useful things such as brooms. The only market outlet is pension pay points. In this study the argument is that an effective intervention by policy makers in the management of natural resources will prevent the decaying contribution that these resources make to people's livelihoods. Although this is necessary, other people saw these resources to make a low or the lowest contribution to their lives. This could have resulted from the fact that some people take things for granted, and it is through studies like this that awareness can be created.

For people in the district, livelihood strategies as defined by Scoones (1998) involve mostly livelihood diversification, and for a few households agricultural intensification. Migration is decreasing because of high unemployment and agricultural intensification only benefits a few people who can afford the capital needed for productive use of land.

Using the sustainable livelihoods framework of Scoones (1998), it can be seen that the past and present policy processes have severely impacted on the livelihoods of many rural people. The history of land allocation and poverty in this country has already been mentioned. People seem to lack livestock. From the data given above on livestock, very few people have livestock and even those who do have them, have few livestock units. Those who embark on piece jobs and handicrafts as their main source of livelihood have between 1 and 5 cattle. In the study area, this number affects the way other people judge you, which might have serious implications for the connectedness (a component of social capital) of these households.

Physical capital was addressed in chapter 1. It was said that the infrastructure and other related things such as schools are in a bad state and moreover, the schools do not go up to matriculation level. With human capital, besides the knowledge that people learn or acquire from the elders pertaining to issues of life and survival, formal education to higher standards, which to a certain extent guarantees a person a job, is lacking in the area. 25.9% of people have never been to school. 10.3% passed grade 4, 19% grade 6, 13.8% grade 7 and 12.1% grade 8. In South Africa jobs for people with grade 12 are scarce, which reduces the chances of people in getting formal employment.

The only capital which is freely available for everybody is natural capital. Although there are problems around its management (addressed in Chapter 6) which threaten that the livelihood outcome may be negative rather than positive, something can be done to assure its sustainability. Because of other reasons mentioned above, it will not be easy for natural capital to be managed sustainably if things continue the way they are. The study proposes an intervention by policy makers to look at the benefits accrued from these resources. The proposal is based mainly on the institutions governing common property resources. There is a great need for government to commit itself to issues of natural resource management and assistance to livestock owners through marketing, dipping and vaccination programmes. Having said that, it is imperative to convince policy makers of the use of these resources and whether their contribution is a convincing reason for them to act. The usefulness of these resources is addressed in chapter 6. Chapter 7 addresses their valuation in monetary

terms, since money is the most commonly used unit of exchange. Because there are many of these resources, valuation is only undertaken for fuelwood. Chapter 7 shows that the methods commonly used to convince policy makers that common property resources are beneficial to many rural households fail to consider the complexities of rural areas.

As the reader will see in the following chapter, the social structures and processes through which sustainable livelihoods can be achieved only benefit a few individuals. Formal institutions, such as the Ministry of Land Affairs, the chief and the headman at local level are becoming a barrier to sustainable livelihoods through the granting of usufruct rights to certain individuals. Scoones recognises in his framework that interventions in support of sustainable livelihoods must be attuned to social relationships, their institutional forms (formal and informal) and the power dynamics embedded in these, if sustainable institutional entry points are to be found. What the following chapter shows is that institutions that are supposed to mediate access to natural capital (seen as the most imperative capital in the study area) are biased – they are giving land 'parcels' to few individuals at the expense of other members in the village.

Besides management of common property resources, another pressing issue that needs a speedy intervention by government is land tenure. This will be discussed in chapter 5.

Chapter 5 Land Tenure

Land in Mkemane is nominally owned by the state and held under communal tenure. It is a hybrid of residential plots and arable plots which are held by individuals and grazing land which is held communally. Individuals have rights to exclude others from their residential and arable plots.

To access a plot (residential or arable) a person has to go through a sub-headman, who takes the application the headman for it to be approved by the tribal authority. The tribal authority forwards the applicant's name to the district Department of Agriculture. It is the district Department of Agriculture that demarcates the plot and issues the necessary documentation, a Permission to Occupy (PTO) certificate in the case of most communal land. Greenberg (1999) has alluded above to the fact that accessing land in the district takes time and money because of the different stages an individual has to go through before an application is approved and the money they pay at each stage.

Mkemane is one of the villages in the Maluti district that was subjected to 'betterment'. Because of the area is mountainous, 'betterment' could only be implemented in Small Location and Zitapile. Areas were demarcated for arable, residential and grazing purposes. This involved relocation of households to areas that were demarcated for residential purposes in the two villages where 'betterment' was implemented. Zitapile's and Small Location's rangelands were divided into four camps each. Both village shared, when 'betterment' was still in effect, two additional camps which were reserved especially in winter time when grass in the camps cannot sustain the number of livestock units.

The sections below show how tenure arrangements in Mkemane have changed in favour of a Farmers' Association in the area to access semi-legal rights to use and at the expense of the majority of the Mkemane population. It also shows how undemocratic chiefs are, in

allocating land to a minority when the large number of the population is against the granting of private right to land that was communal.

5.1 Tensions over land in Mkemane

A member of the Farmers' Association who was my contact person arranged a meeting for me with the association on my arrival in the area. The purpose of the meeting was to introduce the purpose, aims and objectives of the Community Based Natural Resource Management study to the entire village. It was later evident that he had extended the invitation to members of the association only. Halfway through my introductions, a conflict erupted between members and non-members of the association. Those who were not members had not been informed that the meeting was only for members of the association. From the issues discussed, I deduced that not everybody in the village is happy about the association. This emanated from the fact that the Farmers' Association requested one of the four camps of the village for livestock production, particularly dairy production. This turned out to be a transfer of the land into ownership by the members of the association only and not the entire village. The chief and members of the village who were present at that time approved the application. The association reported that those 'creating trouble' were not present at the time the application was made and approved. The association implicates those who were not part of the process in disrupting it. Consequently, people in the village are pulling in opposite directions. Attempts at development in the area have been made, but because of conflicts, some of those attempts were fruitless.

After the non-association members had left, members at the meeting explained management of natural resources in different periods of time. Three periods affected the management of natural resources, livelihoods and socio-economic aspects of the village. The association saw the period before 'betterment' as a period with outstanding productivity in crop and in livestock production. Indigenous forms of management worked well and people respected them. The only thing the members of the association perceive as a mistake done in the olden days was ploughing on slopes - hence, they praised the 'betterment' intervention as a lifesaver. People did not appreciate the way it was introduced, but they saw its productive

results. 'Betterment' improved their grazing area and now, because fencing has collapsed, they want it reintroduced. Indigenous forms of management did not prevent people from ploughing on mountain slopes. Although indigenous forms of management worked well, herding of livestock to manage its mobility happened at a cost. 'Betterment' made it easy for herders as fencing was used to control livestock mobility. Although the four villages (Zitapile, Small Location, Mkemane and Mpofini) are called by one name, Mkemane, and the latter three are under one headman, each has its own grazing and arable land. Mkemane village (encompassing the four sub-villages) forms part of Ludidi A, which is one of the 25 administrative areas of the Maluti District. Because fencing has collapsed, it is only members of the respective villages that can identify the village boundaries. One member of the association reported that there is a common understanding during winter that most of the Ludidi villages would graze their livestock at Small Location since it has higher potential grazing resources compared to other villages.

There is a reserve for six villages, including Small Location, Mkemane and Mpofini. The reserves were used in winter during the 'betterment' scheme to relieve pressure from the camps. Presently, any of the six villages can graze in the reserve as often as they want. However, grazing in other villages' reserves which are not part of the six villages alluded to above is respected, although because the fence has collapsed, at times it is overlooked. Zitapile and other villages have their own reserve.

Another interesting thing is the land they are claiming which is now used for commercial purposes by three white farmers. Before their land was taken, Mkemane was neighbouring Mvenyane village. It appears that at first whites received land from the chief for entrepreneurial purposes, in this case a shop. They later requested to graze their livestock in the grazing land of the village(s) and were granted permission. As the story goes on, it appears that a cow belonging to the villagers injured a sheep that belonged to the white entrepreneurs. They took their sheep to the chief complaining about the incident. They requested a piece of land to avoid further incidents. The chief was apparently given a bottle of brandy and as he was intoxicated, he signed the papers brought by the white entrepreneurs. The headman of Small Location refused that the land where the Mkemane

River passes be on the side given to white farmers, and he won his battle. Small Location is apparently the only village with the river passing through its land. All other villages have their water on the white farms. The villagers are eagerly waiting for their claim to be processed.

The association meeting was dominated more by concerns about what the researcher was going to offer in the village. The response to such questions was that my human resource skills would be made available to the community when there is a need. This involves helping the community to write proposals for funding, among other things, and involving the community in the analysis of results so that they can have a sense of ownership of the process of this study.

Things, which they mentioned as needed in the village, were fencing, dams, marketing of their livestock, means of transportation for their wool and training in livestock management and production.

Members of the association are divided into dairy, woolgrowers and red meat sections. Women in the village are also part of the association, and one woman is the chairperson of the dairy section.

The information gathered at this meeting reveals many issues of concern. The quarrel that erupted in the meeting shows the difficulties of working with a group and the difficulties of intervention in communal areas. The controversy around the ownership of the piece of land given to the association complicates the situation even further. It reduces the livelihood options for other people who had full rights to use the land but whose rights are now contested. People in the village, including some members of the association, claim that the piece of land was to be set aside for dairy production. The idea they had was that everybody would be welcome who has a cow that has given birth. People in the village graze their livestock by force in the piece of land the association is claiming to be theirs. The Farmers' Association has full support of the police with regard to their rights on the piece of land. Also, the government is now changing towards supporting those interested in

commercial farming systems, and moving away from the communal farming system. There is a belief among agricultural extension officers that indigenous breeds give less production per hectare compared to commercial breeds. This is proved by the fact that there is support among them for the suggested legal land holding entities associated with different sub-groups, e.g. communal land subdivided into different uses by different interest groups. Although this has not yet been implemented, it seems likely that it is most favoured by the Department of Agriculture in the district.

Another interesting thing emerging from this meeting are the three periods that have transformed management of grazing resources. The period that has been studied widely is the 'betterment' period. There is a decay of natural resource management in the post 'betterment' period. This has proved to be difficult for people concerned about the welfare of the village. The law-breakers are often not caught. People are nostalgic for the 'betterment' era.

The following section gives more detail about the Farmers' Association and its acquisition of land. There are contradictions between the statements from members and non-members of the association. A member of the association provided the information below.

5.2 A land grab by the Farmers' Association

When the Small Location Farmers' Association was established, the government recommended that they have 13 members because the idea was to first expose a few people before it was opened to everybody. The purpose was for the few members to train the rest of the village members wishing to join the association. When the association was opened to everybody, those who were complaining about barriers to entry were reluctant to join. There are about 22 members of the association. Other members are from the neighbouring villages. Livestock in the Small Location Farmers' Association belongs to individual members of the association. There are plans to secure livestock that will belong to the association as a whole. Members of the association bring non-Nguni type breeds to the piece of land they are claiming to be theirs. Anything that a member owns, ranging from

Jersey cows to up market rams, can be brought to the camp but their ordinary sheep, indigenous cattle breeds and goats graze in the commonage of the village. Some members of the Small Location Farmers' Association had intentions of securing a piece of land from the reserve mentioned above. They want the land for their sheep so that they can increase the amount of wool they produce. They will graze goats in the land as well. By the time I left the area, their intentions had already been fulfilled.

Some members of the Small Location Farmers' Association are affiliating under two farmers' unions, one Eastern Cape based and the other in KwaZulu Natal.

Members of the association are also thinking of planting rye grass and *Eragrostis* species they have identified as good for livestock feeding. They have tilled a portion in their camp for this purpose.

The joining fee for the association is R 45, and members get benefits for their livestock, especially sheep being mated with rams belonging to members of the Farmers' Association. The government at first subsidised the buying of rams and informed them that the subsidy was for the whole village to benefit. The intention was for all households in need of rams to book them. Now that the subsidy has stopped, the members of the association only rotate the rams among themselves.

Before the completion of the fieldwork, I discovered that some members of the Farmers' Association have managed to secure two camps from the reserves that are meant for villages in Ludidi A. The chief of Ludidi granted them permission to use the land.

A case study (Ntshona 2000b) shows that agricultural extension officers tend to advise people to farm with commercial breeds only and to dispose of their indigenous breeds. They neglect the multiplicity of benefits derived from indigenous breeds. The current trend towards land acquisition by Farmers' Associations would come at a cost for other rangeland users. If certain portions of the land within the communal area were to be 'privatised', then those using rangelands not only for livestock grazing but also for harvesting of various

common property resources would lose. This happened in one village where one of the four camps 'acquired' by the Farmers' Association happens to be rich in wild resources. The Farmers' Association is planning to sell these resources, like thatch, to harvesters. There are serious implications emerging from this. Firstly, the ownership of communal land has gone to private hands through the approval of chiefs. Secondly, the source of livelihood for other residents has been reduced tremendously. Thirdly, since the members of the association exclude people from the land, this has created a potential for conflict. This situation exactly resembles what the Minister of Agriculture and Land Affairs has been proposing – emerging black commercial farmers. Lack of information has resulted in the confused situation alluded to above. Members of the Farmers' Association together with some agricultural officers are partly to blame. The confidence of people in agricultural extension officers will be greatly affected because they reiterate the same sentiments as those of the Farmers' Association. Their involvement has confused the situation even worse – people believe that the association might have legal rights to the land because government officials are in support of their actions.

The chief of the Ludidi area has control over the activities in the area including the allocation of land. He recently allocated two camps to be used by the Farmers' Association. This land has been nicknamed by a member of the Farmers' Association as SONTOR B. These two camps are reserves for six villages, of which Zitapile is one. The Farmers' Association is planning to write the nickname SONTOR B on the hill close by with white rocks so that people far away can see the name.

In fact, the same individuals have managed to get three camps under different names. The first camp has been addressed earlier. This is one of the four camps of Small Location. Two shacks have been erected: one in Sontor B, which is the name for two of the three camps and the other in one of the four camps of Small Location (hereafter referred to as Jonathan because of the small hill in the camp that is called Jonathan). Jonathan is a camp that was closed during the 'betterment' scheme for eight to nine months and opened during the winter season. People refer to Jonathan as *Ikampu yonyaka* (annual camp). Jonathan is well endowed with natural resources, especially thatch grass and *Eragrostis* species. People

with livestock and those without livestock were using Jonathan for grazing and to collect thatch grass. Because Jonathan was rested for a long time and warm for livestock in winter, it was the hope of the village, not forgetting its natural treasure, thatch grass. The story of how that camp changed hands has already been alluded to above. It started with one man being advised by agricultural extension officers to form a Farmers' Association in order for his commercial breed, a Jersey cow, not to be injured by other livestock (indigenous breeds) if grazed together. When the village members were approached about the matter before it was presented to the chief, the understanding was that everybody would benefit. They were informed by those establishing the Farmers' Association that the camp must be rested for cows that had given birth so that they can increase milk production. Everybody welcomed the idea. They went ahead to establish the Small Location Farmers' Association and after their letter had gone through the chief for a stamp of approval and then to the agricultural extension officers, they came back to the members of the village to report that the agricultural extension officers recommended that the association consist of 13 people. That is when trouble began. One extension officer has denied the allegations. EDA and the agricultural extension officers have visited the camp. They gave their respective advice not knowing the existence and the extent of the feud that was brewing in the village.

The chief granted a letter of approval for exclusive rights to the Small Location Farmers' Association to use the land. Letters of this nature have been used when requesting a residential plot or when there is a case that has to be forwarded to the magistrate's office from the tribal authority. In the Eastern Cape, chiefs are still recognised as having legal authority in the land acquisition process. This authority is recognised by agricultural and justice offices, among others.

The implications of granting the Farmers' Association exclusive rights to use the land are serious, not only for the lives of people (through conflict that can result in deaths) but also for the livelihoods of many people. The members of the Farmers' Association call people who challenge their exclusive rights to use the land non-progressive. The Farmers' Association could not stand its ground in excluding people completely from making use of Jonathan. It went further to involve the police in the matter. The police visited the tribal

authority and reiterated the sentiments of the Farmers' Association that the government recognises them. The strategy that the Farmers' Association used to get the attention of the police was that people had unleashed their dogs when they walk in the camp to attack their livestock. It is true that a member of the Farmers' Association had his sheep attacked by dogs. Young boys used the dogs to hunt wild animals. The member of the Farmers' Association fired a couple of shots in the air when he saw the incident. When I visited one household, I was told that the boys are refusing to go anywhere near Jonathan lest they be shot. This strategy by the Farmers' Association to exclude non-members got the support of the police. The association is planning to sell thatch grass to harvesters because now they believe that other government offices respect their legal rights to the land.

People continue to force their livestock to graze in Jonathan. People have asked me to intervene but I refused because the situation is more volatile and my formal training is not in conflict resolution. One member of the association who is at the forefront of everything has called on other members of the association to take their commercial breeds out of Jonathan. There were allegations that one member of the Farmers' Association who is in charge of milking their respective Jersey cows is using the returns from selling milk for his own benefit. The man did not deny the allegation because members of the association do not help him with buying feed. He claims that he buys feed for the cows to give more milk using his own money. After everybody had taken out his/ her livestock, the champion of the Farmers' Association erected a shack and grazed his livestock, particularly sheep, in Jonathan. One member of the Farmers' Association complained that he managed to exclude everyone else (including members of the Farmers' Association) in order to graze livestock from his household alone.

When people were still troubled by his actions, this individual went again to the chief to request the two reserves for small stock units. He was granted permission to use the land, now known as SONTOR B (see above). He immediately erected another shack on this piece of land and he wants it fenced to exclude outsiders.

5.3 Conflict

The unclear land tenure situation in the country has not only affected people's livelihoods but is a threat to people's lives as well. People in the tribal authority and the agricultural extension officers acted hastily in the name of development without bearing in mind the consequences. A land tenure policy reform is needed in this country as a matter of urgency and the government has an obligation to protect the interests of the marginalised.

This privatisation of land has brought division in Small Location village. The situation is bound to continue in the same way because when migrant labourers arrive, the strife starts all over again. People who stay in the cities do not have control over what is going on in the area because of distance. When they come back, they find things having completely changed but in many cases it is difficult for them to challenge any change, as the most active member of the Farmers' Association is feared because he owns a gun. There is only one migrant labourer who does not fear the 'champion' of the Farmers' Association because he also has a gun. Although this might sound like a novel, to many people it is what they have to live with every day. On top of that the feud is kindled even further by the involvement of the agricultural extension officers through their adamant attitude that the way to go is to replace indigenous breeds with commercial breeds. They believe that commercial breeds are more productive than the indigenous breeds and hence they support people who want to invest in commercial breeds.

The conflict is not only between members and non-members, but also among the members of the Farmers' Association. Some members of the Farmers' Association believe that they are made puppets by being in the association – they believe that the Farmers' Association only benefits a few members.

5.4 The Irony

There has been a move by Minister Didiza (Minister of Land Affairs and Agriculture) to support emerging black commercial farmers. There is nothing wrong with de-racialising agriculture, but the new move would come at the expense of the poor and the marginalised who do not have land. The land reform process was aimed at the poor, but the focus of the Minister seems to change the focus to support the emerging black farmers without making enough provision for them to access funds through banking institutions.

What is happening in the Maluti district could easily be supported by the national government. It is exactly what the Minister is proposing. But the experience in the field suggests that the Minister's recommendations would not bear any fruit. The Business Day newspaper (2000, May 11) alleges that Minister Didiza's new policy shift concerning the emergence of black commercial farmers "suspiciously resembles white farmer promotion under the former National party government…". Big white commercial farmers could not survive in the past and were in many cases supported by the apartheid government through subsidies in order to survive. By promoting black farmers to be 'commercial' farmers, I believe the Minister wants something to point at as an achievement. It is sad that this new move would be catered for in the land reform budget and there is little in the pipeline about independent financial institutions to finance this new breed of farmers. It is also worrying that this step would be at the expense of the rural poor. It is ironic that the tension, injustice and conflict arising in the area result from changes that appear to be directly in line with new land reform policies.

5.5 Implications for Livelihoods

The 'stamp of approval' by the chief for the land grab by the Farmers' Association is bound to impoverish people even further. The thatch gatherers and other livestock owners have their resource base, which they used for many years, reduced in size. There are two options that people have. One is to comply with the requirements of the Farmers' Association (i.e.

joining them or buying natural resources from them as opposed to challenging their actions) in order to have access and rights to use the resources in the land. The second option is to challenge the acquisition of the land at law. There is a problem with this option. People are not aware of their rights. The government fails to disseminate information to people on the ground.

If the Farmers' Association goes ahead with its plan to sell thatch to harvesters, then people would lose R 11 to R 14 per headload which is crucial to many people - especially women - for survival. Livestock owners who are not members of the Farmers' Association would lose grazing for their livestock and more importantly lose a sheltered place for their livestock during the winter season. The Maluti district winter season can be fatal to livestock.

Chapter 6 Common Property Resource Use and Management

6.1 Natural resources in the study area

Natural resources in the area encompass a wide range of resources that contribute significantly to energy, medical, nutritional, building, cultural and other needs. They include wild resources, grasses and trees. Wild resources include medicinal plants, wild fruits and wild vegetables. Grasses include grass grazed by livestock; grass for thatching; grass to make brooms and grass to make grass mats and meat platters. Trees include trees used for fuel, for building and for other miscellaneous uses such as shade. These resources contribute to rural people's livelihoods in different ways. Most of them are for household consumption, some provide shelter and some are sold in informal markets. The most popular markets are the pension pay points. Another form of selling is to go door to door with the products.

Unlike other safety nets like old age pensions, these resources benefit everybody. People use them for building houses and cattle byres; as a source of energy, nutritional, and medicinal needs; for brick making; for decorations; for grazing livestock etc. Some people, through their expertise, make a business from these resources. Their businesses would bring more cash income if there were a better access to the existing markets.

Natural resources do not only enhance natural capital, but also financial capital (income generated through trading of these products), and physical capital (for example, schools built using these products). In addition, their existence also enhances social relations. Women collect these resources as groups and by so doing they build their connectedness within the female gender. Some of the resources need skills to process. That skill is passed from one generation to the next. Human capital in this way is enhanced. If these resources were to be extinct or unavailable through a land grab by a minority, a lot would be lost, thus

affecting people's socio-economic status. As an example of this, chapter 7 will show the contribution of fuelwood to people's livelihoods.

People's lives revolve around these resources, as is demonstrated by responses from 58 households on how their lives would change in the absence of natural resources. People mentioned all sorts of words that connote difficulty when discussing the implications of depletion of these resources. Their annual schedule shows that natural resources are at the centre of their lives. During the month of September, people prepare the soil for planting field crops. They break dry manure into fine pieces to spread it evenly on top of the soil. In October, November, December and January people plant maize and potatoes – these months are also crucial to herbalists for harvesting their medicinal plants since most of these plants become green during the summer season because of rains. Villages like Small Location plant earlier than other villages. They start planting in October and other villages begin in November. In February, people collect firewood and they plant radish and turnip to prepare livestock feed for the winter season. In March, they decorate their homes using special types of mud. In April and May they harvest their produce and during the winter season (June, July and August) they collect thatch grass. This is not a hard and fast pattern. People are engaged in other activities as well, but this is to show how central natural resources are to people's livelihoods.

The following subsections will show the resources commonly used by people. The importance, use, scarcity and management of each resource will be shown. The importance of the resource will address the benefits accrued from it; use will address the frequency of use of the resource; scarcity will address the availability of these resources in the area; and management will address whether there are any rules pertaining to their collection.

6.1.1 Wild Resources

6.1.1.1 Medicinal Plants

6.1.1.1.1 Importance

Medicinal plants in the area are used for numerous reasons, ranging from repelling lightning to curing animals and people. These plants are used to cure infants and adults for colds, sores, headaches, stomach aches and numerous other sicknesses. People who are experts in using these plants, like herbalists, claim to cure chronic diseases like cancer and HIV/AIDS.

In Chapter 1, it was stated that health facilities are more than 10 km away from the Mkemane sub-villages. This prompts many people to make use of these plants for their health. In addition, the unemployment factor needs to be considered. People cannot afford western medicine and hence they resort to natural resources for medical needs. As mentioned above, people are visited once a month in the village by a mobile clinic and another mobile visits once in two weeks. The latter is 10km away from the village. Most people have no alternative but to use these plants because of factors such as the deep rural nature of the area, lack of facilities and infrastructure, and the general socio-economic environment.

In the two years during which the study was conducted, no incidences of side effects of the plants were reported. People seem to know the correct amounts to use.

Besides health provision, most of these plants have economic returns. People sell plants like *Impepho* (*Helichysum odaratissimum*) in places as far as Durban, some four hours' drive away from Matatiele town. To some households, especially those without any source of income, these resources are a safety net. Nombeko's household is one such case.

Box 1: Nombeko's dependence on natural resources in the communal rangelands

Nombeko collects wood throughout the year. In March, she starts collecting more wood, preparing for the winter season. She has to prepare *Imbawula* (handmade fireplace, made from 25l tin of paint with numerous ventilation holes to allow the heat from the coals inside to spread) each day starting in May and gradually reduce the amount of wood she uses in September. She collects wattle trees for fuel. There are two types of wattle – black and silver wattle (*Acacia mearnsii and delbata* respectively). She uses the black wattle in winter for heating and cooking. This is because it burns slowly. The silver wattle burns quickly. The area has natural forests with trees whose wood burns slowly. These trees (like *Uqudu*) burn more slowly than black wattle. Other trees that burn slowly are *Intshitshi (Agrimonia eupatoria)*, *Isidwadwa (Leucosidea sericea)*, *Umlungu Mabele (Adenopodia spicata)*, *Isiqalaba (Faurea macnaughtonii)*, *Unyenye (Grewia occedentalis)*, and *Ilothwane (unidentified)*. These trees are no longer collected. The forest agent, during 'betterment', asked people not to collect them because they have strong poles (*Iziqonga*) that would be helpful to people. Fuelwood that is collected from wattle trees has been collected since she was a young girl. These trees never run out.

Plants that are helpful for fever and influenza, according to Nombeko, are *Iqwili (Alepedia amatymbica)*, *Umhlonyane* (*Artemisia afra*), *Impepho* (*Helichrysum odoratissimum*), *Amagqabi e-gum-tree* (gum-tree leaves). She uses them for her own health and that of her family. She persists in using them because she does not have money to visit medical practitioners. From time to time, they gather as harvesters to arrange trips to Durban to sell their harvest. They sell Impepho for R 1,000 a wool-bale and R 2 a bunch. The only problem they have is a market outlet. They are forced to stay in Durban for a long time if they want to sell all their produce.

There is a forest that has been giving them problems. The forest is called Maliphole. The land was taken away from them and was given to a white farmer. This year, permission has been granted to people in the neighbouring villages to collect medicinal plants and *Urasha* (grass used to make brooms) in this forest. In the forest, they collect *Iqwili* as well. The only thing they are prohibited from doing is to walk around with dogs, as they are a danger to the white farmer's livestock. They use their rangelands as well to collect other medicinal plants.

She earns her living from handwork using natural resources. In 1996, from the brooms she sold, she made R 600. In 1997 she collected earnings of about R 788, in 1998 R 978 and in (1999), she has not sold anything. In 1997, she made R 100 from selling grass mats and in 1998 R 15 from selling *Izithebe* (grass platters).

In 1995, she had 50 chickens. In January 1996, all her chickens died because of a disease. She started keeping chickens again and in 1997, they died because the disease struck again. She keeps chickens for home consumption only.

The case study above is typical of the way natural resources serve as a safety net to low-income households. The only concern in this case study area is land that people are claiming which was taken away from them. People consider natural resources on that land as theirs.

Like Nombeko, other people also reported that if there were numerous market places their sale of harvested and processed products would be easy. Although this might seem like an unsustainable collection just to make money, herbalists are mainly concerned with 'unskilled collectors' (see section 6.1.1.1.3).

Two other people in Mkemane sell processed medicine (*Amayeza*) in Cape Town. Ntlandlolo has established himself in Cape Town and the other is new to the business of harvesting medicinal plants from his home village to sell in metropolitan areas. Both are herbalists.

Box 2: Use of medicinal plants in urban areas, which are collected from rural areas

Ntlandlolo visits his home village as often as he likes depending on the availability of the medicine in the city where he is based. He visits his village, where his family stays, to harvest these plants in order to sell in Cape Town. About 140 km away from his village, his harvest of raw medicine would be half empty even before he reaches his destination, Cape Town, which is more than 1,500 km away from his village.

Sicknesses he encounters in patients are not treated with one medicinal plant but a mixture of many plants – sometimes up to six plants. Small pieces of these plants are boiled together and the remainder of the plant is stored for further use. It takes him 2½ hours to fill a 25l container using an electric stove.

He charges for medication separate from consultation. He normally charges R 22 for general consultation, R 500 for court cases concerning misconduct in the job, R 1,500 for court cases concerning stealing and R 500 for stomach related sicknesses. In the latter case, medication is already included. Ntlandlolo sells no less than 13 litres per day. He sells one litre for R 25.

He is involved in informal financial schemes where each member is expected to contribute R 2,000 a month.

Because of health reasons, his wife is eligible for a pension.

6.1.1.1.2 Use

The most frequently used plants are those that have many uses for many people, like *Impepho*. Its many uses explain its high frequency of use. The plant is used as incense for ancestors; it relieves fatigue; it is used to repel lightning; it is burnt when doing ancestral worship; it is used as cough remedy; and it is used for chest problems.

Box 3: Nkoduso's dependence on commercial vaccines and his opinion on natural resource management and use

In 1999, Nkoduso had 34 cattle, 17 goats and 100 sheep. He seldom uses medicinal plants to inoculate his livestock.

In 1996 he spent R 3,000 on vaccines. In 1997 he spent R 800, in 1998 R 1,000 and in 1999 R 500.

Giving his opinion about the management of communal rangelands, he advised that the government should provide them with fencing for rotational grazing. He also suggested that livestock should be kept for two weeks in a camp and then be taken out to the next camp to rehabilitate rangelands. He was worried about veld fires during the winter season.

The most important trees in his life are wattles. His household uses them for cooking and heating. He uses about 2 kg of wood per day. He also used them in building and roofing one of his houses, to build his cattle byre and to fence his garden. He collected between 300 and 400 wattle poles for different purposes in his house. He advised that there should be proper management of trees to get poles and feels that trees should not be burnt.

He uses wild resources in making baskets, grass mats and brooms. Medicinal plants are helpful to him when he has a cold or influenza. He uses specifically *Impepho* and *Iqwili*.

Among the important resources he uses are wild vegetables, which he uses to supplement his diet. In his childhood, he used them a lot.

He sees communal rangelands as a place where livestock can graze, which is the most important factor as far as he is concerned and a place from where they can collect fuel wood. This is how communal rangelands contribute to his livelihood.

Both women and men use medicinal plants, especially those plants known to everybody equally. In the survey people reported that they use medicinal plants when there is a need. Herbalists mainly use them frequently since they are a major part of their business.

There were complaints from herbalists that other users do not take enough care in harvesting these medicinal plants. This culminated in some of these plants becoming extinct.

6.1.1.1.3 Scarcity

Herbalists attribute the scarcity problem of some of these plants to people who, after collecting pieces of roots, do not cover the roots of the plant so that it can re-grow; and to outsiders who just collect without looking at future implications.

People generally attribute the scarcity of some of these medicinal plants to lack of management. People said that some medicinal plants, which were in the area in the past, do not grow any more. They find such plants in commercial farms near their villages where there is management. They see poor management of resources as a cause of the scarcity of these plants.

6.1.1.1.4 Management of Medicinal Plants

There were no laws reported on the management of medicinal plants. Harvesters only complained that most of these plants were available during the 'betterment' scheme, which means that when management was in place it was easier to collect these resources.

6.1.1.2 Wild Fruits

6.1.1.2.1 Importance

Wild fruits are important to many households as they can be used as substitutes for marketed fruit products. The plant mostly used is *Amaqunube* (wild berries).

6.1.1.2.2 Use

Wild fruits in the area are seldom used because of their scarcity. Almost everybody asked in the survey indicated that they only use wild fruit when someone has harvested them.

6.1.1.2.3 Scarcity

Because these resources are not easily found and are highly seasonal, people seldom harvest them. People eat them when others have harvested them.

6.1.1.3 Wild Vegetables

6.1.1.3.1 Importance

People use these resources as supplements for marketed vegetable products. Many households collect these resources especially during the months of November, December and January. These are the months when vegetable gardens and fields are planted. People combine these wild vegetables with maize porridge. They call the 'greens' in their meal *Isishebo*. *Isishebo* is a crucial additive in their meal since it substitutes for marketed vegetables like cabbage and spinach. The plant used by people is *Unomdlomboyi (Amaranthus paniculatus)*.

6.1.1.3.2 Use

If *Unomdlomboyi* were available throughout the year, many people would save the money they now spend on buying marketed vegetables. Many households prefer to eat their two meals per day with *Unomdlomboyi*. In summer, both fields and vegetable gardens are filled with this wild plant. Many people in the sample shared their experiences of how they save when *Unomdlomboyi* is available in their gardens. One woman who has two children studying in Durban supplements her diet with *Unomdlomboyi*. The little money that her husband earns pays the children's school fees.

It is mostly women who harvest these plants for their families.

6.1.1.3.3 Scarcity

Wild vegetables are not scarce in the area but seasonal. The only concern most women have is the fields that are not used. When fencing was still in place and the fields were fully functional, wild vegetables were in abundance. Proper management of fields results in good harvest of these resources, which are an important buffer for most households. Now that there is no fencing, livestock eats or tramples these wild vegetables. Presently, they are mainly collected from home gardens, which in most households are fenced.

6.1.1.3.4 Management

There is no communal management of wild vegetables. Those with fields and vegetable gardens assist those who have none by allowing them in their home gardens and or fields to harvest the vegetables. No respondent indicated that wild vegetables can be harvested from communal rangelands or in the forest.

6.1.2 Grasses

6.1.2.1 Thatch Grass

6.1.2.1.1 Importance

Many people use thatch grass for roofing of their homesteads. People say it is part of the tradition that there should be one thatched house within the homestead. Thatch grass, when used for roofing, keeps the house cool when it is hot and warm when it is cold. It also has high-income benefits even when traded through the informal market. One bundle/ headload of thatch grass (*Inyanda,* which equals 20 *Iintungo*) is sold for about R 14 depending on the

species. *Iintungo* are bunches people tie together to make one headload. Some thatch grass species are less durable than others. The less durable species cost about R 11 a bundle.

6.1.2.1.2 Use

Thatch grass is collected in winter. People collect as many headloads as they can, depending on the manpower. People can collect up to four headloads per day. In 1999, people mostly collected thatch to revamp their homes after heavy winter storms. Very few collected to sell. The camp which the Farmers' Association claims to own has plenty of thatch grass since it still has the 'betterment' fencing, although in a bad state.

6.1.2.1.3 Scarcity

Thatch grass would be scarce in future if fencing is not reintroduced. People are only getting thatch grass because of the controversy surrounding the grazing camp, which the Farmers' Association is claiming to be theirs. The association is trying to prohibit people from grazing their livestock in the camp, which in a way helps thatch grass gatherers to get the thatch when they need it. If there were no feud as to who should graze his/ her livestock in the camp, thatch grass would be difficult to get as it would be trampled by livestock. Many people are concerned about how difficult life would be if there was no thatch.

It is women who mostly collect thatch grass.

6.1.2.1.4 Management

Women have in some instances approached men to ask them not to graze their livestock where they collect thatch grass. In many instances men have taken heed of the plea, but the broken fences have complicated their co-operation. In this area, thatch grass is also

collected from arable fields. Women were in the past given time to collect the grass before the fields were open to everybody for livestock grazing.

6.1.2.2 Urasha

6.1.2.2.1 Importance

Urasha (unidentified) is grass used to make brooms. Brooms are sold by the few who can make them for R 4 to R 7, depending on the decoration. Broom makers sell these to other people in the village and at pension pay points.

6.1.2.2.2 Use

Many households that have experts (women in many cases) in making brooms collect *Urasha* from the neighbouring farms. This was not seen as trespassing by many because the land was dispossessed from them and they are claiming it back. Collecting from neighbouring farms is dangerous for some since they do not have permission to do so. In a study done by Kepe (1997) on environmental entitlements, he refers to the act of taking what once belonged to you, and which you consider still legitimately yours, as *Ukujola.* This means that people often steal resources like *Urasha* that contribute to their livelihood. People who usually collect 'common property resources' from the commercial farms are those who occasionally work in these farms. They mostly do this when they are contracted in the farms.

6.1.2.2.3 Scarcity

This is one useful resource that is hard to find in the villages. If people succeed in getting back the land of which they were dispossessed, then *Urasha* would be freely available.

6.1.2.2.4 Management

Because this resource is scarce in the area and not used by most people, there are no rules to manage it.

6.1.2.3 Incema

6.1.2.3.1 Importance

This species is a reed used to make meat platters. People combine *Incema (Cyperus marginatus)* with *Urasha* to make the platter. People use the platter when they have feasts and ceremonies and during cultural events. *Incema* is also used in making grass mats (*amakhuko*), which people mostly use for cultural reasons.

6.1.2.3.2 Use

Incema is used to make meat platters. Because of the durability of the platter, people do not collect *Incema* often.

6.1.2.3.3 Scarcity

Like *Urasha*, *Incema* is scarce in the area. It is also collected from neighbouring farms. Despite its scarcity, there are no rules in the area concerning its use.

6.1.3 Trees

6.1.3.1 Black and silver wattle trees

6.1.3.1.1 Importance

Black and silver wattle trees are used as a source of energy. Black wattle trees last longer and are preferred in winter, and the silver wattle in summer. People use them for cooking, heating and sometimes as medicine. The resource directory (section 6.2) shows some of its other uses. All the households in the three villages under study use these tree species. Black wattle tree is preferred mostly in winter because it burns slowly, and silver in summer. The tree is also used for poles (*iziqonga*) and droppers (*iintungo*). People do not sell poles and droppers to one another. Poles and droppers are used for fencing, building cattle byres and for building houses.

6.1.3.1.2 Use

These tree species are used every day for cooking and heating. Women collect it when it is needed, sometimes once or twice a day. Others make tractor loads (*vrag*) that will last them for four to five months depending on the season. Because of the cold winter season, sometimes with snow, people use more wood in winter compared to summer. They sometimes burn it the whole day until they go to sleep. More details on the use of wood are presented in Chapter 7.

6.1.3.1.3 Scarcity

Wattle trees are not predominant in the area. Before 'betterment', Mkemane people's residential area was located in an area which is now a camp for livestock. This shows a

change in land use. They were relocated under the 'betterment' scheme, which was implemented in the area in the 60's, to where their homesteads are located presently. Wattle is now found in the area where their former homesteads were located. They used to buy it from Mvenyane (a neighbouring ward). Because its seeds can lie dormant for a number of years, people attribute the abundance of the species to the seeds left in the former residential area.

6.1.3.1.4 Management

Because of the abundance and the resilience of the tree in the area, there are no rules about its management. Officials in the Department of Water Affairs see the tree as something that must be eradicated, but people see it as a source of fuel, building materials and medicine. In Mvenyane, through the Department of Water Affairs' Working for Water Project, people are paid to control the alien plant. Because of the incentives that people in Mvenyane are getting, Mkemane people also want the project, but some have expressed concerns about how the project would change their lives.

People whose land was reduced to cater for others under 'betterment' still have rights over resources on that land, especially if, in the end, nobody was allocated the land. In Mkemane, a person cannot collect firewood known to be in somebody else's land although in all cases the trees would be outside the person's plot. People respect the fact that the land once belonged to someone else, thus giving full rights over resources on the land to the previous owner even if the land is not occupied.

There are other tree species like *Umbangandlala (Heteromorpha arborescens)* (a cause of poverty) which people do not collect because of taboos attributed to the tree. It is believed that when one burns it, s/he brings poverty into his/ her home.

6.2 Resource Directory

The resource directory developed in the field is the focus of this subsection. The directory covers most wild resources, grasses and trees used in the area. It gives their local names, why they are used, the prices charged when they are sold and the units for the different prices. This directory was used to get a sense of which resources are known by residents and how they are used.

Table 20: Resource Directory

COMMON NAME	SCIENTIFIC NAME	IMPORTANCE/ USE	PRICE	UNIT
Bark of Black Wattle tree		Diarrhoea	R 20	Bottle (750ml)
(I-Blekwanti) Black Wattle tree	*Acacia mearnsii*	Cancer Loss of voice Make blankets used in prisons Makes one vomit poisonous substances in the stomach	Unidentified	Unidentified
Ibangalala	*Unidentified*	For erection	R 10 (Powder)	Mug
Icena	*Aloe maculata*	Livestock diarrhoea and Wounds	R 200 depending on livestock numbers	
Idambisa	*Kalanchoe rotundifolia*	Pain reliever	R 25	1 litre bottle
Ilabatheka	*Dioscorea dregeana*	Madness Fear	R 25	1 litre bottle
Impatshampatsha	*Unidentified*	Stomach ache	R 25	1 litre bottle
Impepho	*Helichrysum odoratissimum*	Used as incense for ancestors Relieves fatigue Used to repel lightning Used as cough remedy Used for chest problems	Handful was R 2 in metropolitan areas R 1 000 R 2	Handful Wool bale Bunch
Ingcelwane	*Aloe arborescens*	High-blood pressure	R 60	Bottle (750ml)
Inkondwane	*Helichrysum aureonitens*	Cough remedy	Unidentified	Unidentified
Intolwane	*Elephantorrhiza elephantina*	Diarrhoea Good in livestock when they lose weight	R 30 R300-R1000 depending on livestock	

COMMON NAME	SCIENTIFIC NAME	IMPORTANCE/ USE	PRICE	UNIT
			numbers	
Intlwenya	*Unidentified*	High-blood pressure	R 80	Bottle
Iqwili	*Alepidea Amatymbica*	Cures Asthma	R 20	Bottle
Iphakama	*Tieghemia quinquenervia*	Swelling of joints For luck Miscarriages To "poison" men to love women	R 25 for other sicknesses but for luck/ to get a higher position in employment situation it is R 500	R 25 for 1 litre bottle
Isaqoni	*Rapanea melanophloeos*	To develop the foetus	R 300	1 litre bottle
Ishwadi	*Boophane disticha*	To dress young men at the initiation school	Unidentified	Unidentified
Isidumo	*Ilex mitis*	For vomiting	R 25	1 litre bottle
Isihlehle	*Stapelia gigantea*	Internal wounds	R 200 depending on livestock numbers	Unidentified
Isiqalaba	*Faurea macnaughtonii*	Pain HIV	R 25	1 litre
Icima mlilo	*Ilex mitis*	For wounds caused by burning Stroke	R 25	1 litre bottle
Isidwadwa	*Leucosidea sericea*	Prolongs life during fatal sicknesses	R 25	1 litre bottle
Isiqalaba	*Faurea macnaughtonii*	Pain HIV	R 25	1 litre
Isiqungwa	*Unidentified*	Used as a pain killer and to repel flies when lambs have been castrated	R 25	1 litre bottle
Isirhalarhala	*Unidentified*	To hold soil together Used for fuel	Unidentified	Unidentified
Ithunyana	*Unidentified*	HIV Tooth Ache Cleaning of the womb	R 25	1 litre bottle
Ugobho	*Gunnera perpensa*	Unidentified	Unidentified	Unidentified
Umagaqana	*Bowiea volubilis*	Purgative	R 2 000	3 bags
Umajikanelanga + Ikhambi + Umhlonyane	*Malva parviflora + Plectranthus laxiflorus + Artemisia afra*	For diarrhoea when babies are teething	R 60	Bottle
Umaluleka + Impepho + umnquma	*Gerrardina foliosa + Helichrysum odoratissimum + Olea Europaea*	Strengthen livestock knees	R 50	Bottle
Umathunga	*Eucomis autumnalis*	Relieves constipation and used when injured	R 20	Bottle
Umbangandlala	*Heteromorpha*	For umlambo	R 25	1 litre bottle

COMMON NAME	SCIENTIFIC NAME	IMPORTANCE/ USE	PRICE	UNIT
	arborescens	(deficiency in immune system)		
Umhlonyane	*Artemisia afra*	Fever	R 60	Bottle
Umsila wengwe+ Intolwane	*Gnidia kraussiana + Elephantorrhiza elephantina*	Prevents livestock diarrhoea	+R 300 depending on livestock numbers	
Umtshekisane	*Euclea crispa*	Relieves constipation	Unidentified	Unidentified
Umzaneno	*Unidentified*	Poison in the stomach	R 25	1 litre bottle
Unonyongwana	*Centella coriacea*	Stomach ache	R 25	1 litre bottle
Unozitholana	*Unidentified*	For vomiting	R 25	1 litre bottle
Unyenye	*Grewia occidentalis*	HIV Appetite Swelling Strokes and High blood pressure	R 25	1 litre bottle
Urasha	*Unidentified*	Brooms	R 4 to R7	One broom depending on the size and decorations
Uzineke	*Unidentified*	Used in people struck by lightning to give them instant recovery	R 100 to R 120	Bottle (750ml)

The resource directory shows many resources that contribute to rural people's livelihoods, but the value of these resources was determined by only relying on key informants like herbalist. Methodological and other constraints meant that it was only possible to make a detailed investigation of the contribution made by fuelwood resources in the study area.

6.3 Management of Common Property Resources (Rules and the Condition of Rangelands)

The only concern of people with natural capital is the management of the natural resources, including grazing resources. Local management structures are decaying day by day. The policy makers at national level do not realise the contribution of natural resources to livelihoods, and hence in the new dispensation there is no serious intervention. In the discussion above it is evident that that the lower middle and the poor benefit more from natural capital than from other forms of capital, but if management continues to be inadequate then the sustainability of this capital will be jeopardised over time. This raises a

major concern for the lower middle and the poorest, since their sole survival alternative is threatened. In the long run this would affect the upper middle as well, since their livestock would have to be disposed of before the animals die, based on the assumption that lack of management can result in poor condition of rangelands. The following table shows that the richest, not surprisingly male-headed households are very dissatisfied with the present management of communal rangelands. This is to be expected, since it is the rich who have the highest numbers of livestock. The table also shows that across the different levels of wealth, most of the male-headed households are very dissatisfied with the present management of communal rangelands. The case is the same for female headed households. 'Not applicable' in both tables below refers to people who had no opinion on the question – mainly new people in the area.

Table 21: Management of Communal Rangelands

GENDER OF THE HHH	LEVELS OF WEALTH	PRESENT MANAGEMENT OF COMMUNAL RANGELANDS				
Male		Very dissatisfied (%)	Somewhat dissatisfied (%)	Very Satisfied (%)	Not Applicable (%)	Total (%)
	Rich	100	0	0	0	100
	Upper Middle	60	10	20	10	100
	Lower Middle	80	6.7	6.7	6.7	100
	Poor	70	10	10	10	100
Female						
	Lower Middle	70	10	10	10	100
	Poor	85.7	4.8	4.8	4.8	100

N=58

This raises a question about whether there are any rules that govern the use of these rangelands and how that affects their condition. 50% of the rich people who indicated that there are no rules felt that rangelands were badly degraded, and the rest felt that they were less degraded. 79% of the poorest, however, who said there were no rules, indicated that rangelands were badly degraded. Other people felt that rangelands were not degraded at all. The good rains they received during the period when the study was conducted influenced their view. Most people who said there were rules felt that rangelands were not at all degraded.

A question was asked also as to what people perceive to be the cause of degradation. A number of reasons were given but the role of people, lack of management and absence of fencing were emphasised by most households.

Table 22: Rangelands Condition

RULES	LEVELS OF WELL-BEING	RANGELANDS CONDITION						
No (74%)		Badly degraded (%)	Some-What degraded (%)	Modera-tely degraded (%)	Less degraded (%)	Not at all Degraded (%)	Not Appli-cable	Total (%)
	Rich	50	0	0	50	0	0	100
	Upper Middle	66.7	0	0	0	33.3	0	100
	Lower Middle	57.1	4.8	23.8	4.8	9.5	0	100
	Poor	78.6	7.1	0	0	14.3	0	100
Yes (19%)								
	Upper Middle	33.3	0	0	0	66.7	0	100
	Lower Middle	0	25.0	25.0	0	50	0	100
	Poor	0	33.3	0	33.3	33.3	0	100
Not Applicable (7%)								
	Upper Middle	0	0	0	0	0	100	100
	Poor	0	0	0	0	0	100	100

N=58

This lack of clarity as to whether there are rules and whether rangelands are degraded needs commitment from government officials to assist in issues pertaining to the management of natural resources, which benefits everybody. During the period when the study was conducted, there were good rains in the area. Some people, although they are aware that there are no rules, stated clearly how rainfall has improved the condition of their rangelands.

86% of the respondents, when asked about the contribution of communal rangelands to their livelihoods, indicated that it was most effective. 9% indicated that it was somewhat

effective. 2% indicated that the contribution was less effective, and another 2% of people indicated that the contribution was not at all effective. This question was asked last to ascertain how people see the contribution of common property resources to their livelihoods, other things being equal.

Livestock owners are likely to be affected negatively in future because of the present management of natural resources. The decaying structures preclude people from engaging in discussion about proper management. 82.8% of the people interviewed favoured the 'betterment' scheme, and those who felt that it was very effective were also 82%. 'Betterment', which can be re-introduced in a different form, provided opportunities like market outlets, dipping of livestock, rotational grazing etc.

6.4 Conditions for Successful Natural Resource Management

The following points are a reflection of the situation in the district based on common property resource theory. They address the theories on common property resources outlined in chapter 2. It was said in chapter 2 that the relevance of the common property theory would be assessed in the district under study. They cover respectively issues on boundaries, supply and demand conditions and dependency on the resource, user group size, residence, eligibility, homogeneity, local understanding and knowledge of resource characteristics, awareness of resource use issue, ownership status, existing local organisations, and characteristics of the legal and political environment in which the users reside.

Nature of the Resource

Boundaries

In the Maluti district, the boundaries that are recognised by resource users presently are those of the 'betterment' scheme. Although this is true in many villages of the district, people still regard land of which they were dispossessed as theirs. They collect resources

they need whenever they need them from the areas that once belonged to them. This is risky because the current owners of these lands regard this as trespassing.

In addition, because there are many ethnic sub-groups in the district, it is often possible for different ethnic sub-groups to neighbour each other. This poses a threat, since one group can disregard the regulations set by a neighbouring group to manage rangelands. In one of the villages, there is an application made by the Hlubi clan for fencing, although they have fears that the Bhaca clan might cut the fence. Also, if livestock not belonging to the villages that constitute a particular area have remained on the other side of the boundary for a long time, they are taken to the headman of the area on which they have 'trespassed'. After a certain period has elapsed, the government officers dealing with stock theft are called to take them away for impoundment. Although boundaries are clear, they are not well respected (Ntshona, 2000a). Theory on common property resource (CPR) issues states that boundaries are a necessary condition for CPR management but in the South African rural areas most boundaries were imposed under the 'betterment' scheme (see section 1.2.1) and therefore are not respected especially now that the 'betterment' scheme has collapsed. Enforcement of boundaries was made possible by the introduction of fences. The 'betterment' scheme has collapsed together with its fences which marked the boundaries of many rural areas.

Supply-demand conditions and dependency on the resource

People across South Africa, including Maluti District, do not only focus their livelihood priorities on rangelands. Social grants, in the form of old age pensions and disability grants, are the safety net for households with elderly people. These grants have diverted the focus from effective management of land and grazing resources for sustenance to products sold in market places. Lately, very few people recognise the impact of good management of natural resources. People, especially those who cannot afford herding labour, get almost nothing from these resources because livestock theft increases every day.

This criterion on 'high levels of dependency resulting in more effective control structures' is met in the study area but the group that benefit most from a range of common property resources (see Figure 7) is not the most influential group in CPR management issues. The elite, who are the most influential (see section 1.3.2.6), have their priorities elsewhere – private ownership of land and management of communal grazing resources for their livestock. The influence of the elite is in many cases undermined by the unavailability of fences and the differences between them and the village population, and hence they struggle to impose their preferred management practices. Also, issues mentioned in the paragraph above have diverted the focus of many individuals. A study of this nature can address the stereotypes of those natural resource users and policy makers who do not take the contribution of natural resources to livelihoods seriously enough.

Indicators of common property resource conditions

The almost 'open access' situation which exists in the Maluti district affects people who use communal rangelands to collect wild resources. People relate the current state of these communal rangelands, among other things, to the fact that rotational grazing is no longer practised because the fences have collapsed. They perceive communal rangelands (except for this year after heavy rains) as being in a bad state because some of the resources available during the 'betterment' scheme are no longer available. People who depend on certain communal rangelands for survival often clash with livestock holders for the resources not to be grazed by livestock. Harvesters of wild resources easily achieved their goals when fences were still in place. Although this change in species composition (from what people knew to be available to what is presently available) is raising awareness among users that some resources are depleting, their long dependency on the government (see section 1.3.2.6) prevents them from acting. Furthermore, the resources that indicate this condition are wild resources which are mainly used by the lower middle and the poor, and these groups are not very vocal on most issues in the village. The criterion is met - awareness is there - but nothing is being done.

Characteristics of the resource users

User group size

In one village in the district, considered small by many, range management is dominated by the elite group of the village (mainly big livestock owners). They inform everybody in the village where to graze their livestock and when. Although this is understood as a sound communal rangeland management effort by many, it is resented because of the clashes between the elite (mainly big livestock owners from the Farmers' Association) and the rest of the population. This study shows that the criterion is not met in the study area because clearly the number is not the issue. Certain underlying issues also need to be addressed.

Residence

This condition (for people to reside in close proximity to the common property resource) is generally met in Maluti. Although this condition is met, it obviously is not enough for successful common property resource management. Other factors combine to overwhelm whatever positive influence this particular condition may have – such as divisions among people who reside in 'close proximity' (see the discussion of rangeland fires in section 1.3.2.6 on natural resource management).

Eligibility

There are known and well recognised big families in each village. People apply for residence, which automatically entitles them to grazing and other rights. This becomes difficult with fields since they were reallocated to people who were present when the 'betterment' scheme was introduced. Therefore, newcomers are unlikely to get access to arable land. The condition on eligibility is met in the area although some people gain access to the village through questionable means – e.g. lying about their clan names.

Degree of homogeneity

In most villages around the district, there is a great degree of heterogeneity. Villages are highly stratified by social status. The people with the most livestock are the ones who 'contribute' significantly to the management of common property resources. Overall, these conditions regarding homogeneity are not met in the Maluti district.

Local understanding and knowledge of resource characteristics

In the district, people who are vocal about the characteristics of communal rangelands and how they should or should not be managed are the few members of the Farmers' Association. The association (the elite) pays little attention to the voices of other people. Although there are valuable resources in the area, their value is not considered by many because some resources are in great supply. For example, the supply of trees used as fuelwood far exceeds the demand. In the district, the Working for Water project which is run by the Department of Water Affairs and Forestry has been introduced in the area to eradicate wattle trees which are an environmental problem since they use large amounts of ground water. These trees are in abundance but some residents feel that if they are eradicated that would threaten their livelihoods in future. There are numerous benefits accrued from these trees. Even for other resources which are not in great supply, there is understanding of resource characteristics but there are many factors that overwhelm the management of these resources – factors which has been alluded to above.

Awareness of resource use issues

Although people generally have not been 'educated' about the vulnerability of the resource and the consequences of overuse, they are aware of actions to take to combat the problem when there is a need. Their intended actions are however hindered by the unavailability of resources such as fences. People are aware that certain wild resources were in the area when a particular style of management was adopted. The collapse of the style of management mentioned above (see section 1.2.1) culminated in the depletion of certain

resources, which local people feel is a sign that productivity is declining. There are no conservation mechanisms that can be put in place because fencing is needed to return to what people think of as ideal management. Although awareness is there, the problem is mainly with the issues discussed above on the multiplicity of livelihood strategies, the divisions among people in the villages and with the issue of past dependence on the government discussed in section 1.3.2.6.

The discussion above has highlighted issues of concern about the characteristics of resource users. The Farmers' Association in one village believes that it knows more than the rest of the population about range management. This has created a huge gap between the two parties. There have been rumours that the government supports actions by the association, but some government officials deny this. The land acquired by the association for private use has brought about the feud in the area. If the government had created an enabling political environment for common property resource management, issues like these could be avoided. Extension officers who spend most of their time in government offices could play a crucial role in protecting the interests of the marginalised if they spent more time working in the field within an enabling political environment. Also, the issue of the multiplicity of livelihood strategies and the dependence that people had on what the government introduced in these areas has complicated the situation of CPR management.

Institutional Issues

Ownership status

There have been proposals that land tenure reform would be piloted in this district. A joint effort to help people know their rights to land and be responsible for it would prove fruitful for many. If the process is well administered effective management of rangeland resources and profitable investment in livestock can be achieved. The Proposed Land Rights Management Functions According to the Status of Local Rights Holders (DLA, seventh draft, July 1998) might have hopefully brought about good governance of common property resources when finally promulgated. However, this draft proposal seems to have been

shelved. The tenure situation of people in the area is threatened by the semi-legal acquisition of land by the Farmers' Association. Therefore this condition is not met. If the Land Rights Bill were enacted, people would be assured of their land tenure.

Centralisation versus decentralisation at local level

It has emerged in Maluti that chaos can erupt if clear policy guidance and a firm enabling framework are not provided at the provincial and national levels in order to make governance of common property resources at the local level possible. For example, the Farmers' Association has taken over one of the four grazing camps in one of the villages and two of the four reserve camps that belong to six villages. Everybody realises that this might be illegal but because the government has distanced itself from issues of common property resource management, nobody knows for sure what is going on. Although theory suggests a centralised body at a local level (meaning that management functions should be concentrated and capacitated at the local level rather than at higher levels), this thesis further suggests that a centralised body, at government level, should also be involved to protect the interests of the marginalised, among other things. Management bodies at local level have proved to be biased. Semi-legal land acquisitions by some members of the villages have gone through these bodies, e.g. the tribal authority or headman. Although their role is a critical one, a complementary form of management at provincial and national level is imperative. This is a policy question of major concern. An enabling policy and political environment for successful common property resource management still has to emerge. This condition as presented in theory needs involvement of an impartial, external body such as the provincial and national government because clearly institutions such as traditional leaders have failed the majority of their constituency.

Existing local organisations

In the Maluti district, through the assistance of EDA, this has not been a major problem. This NGO's skill has ensured that Community Based Organisations are capacitated. This is not to suggest that there are perfect institutions in the district to manage common property

resources, but assistance from EDA ensures some form of co-operation and competence - although the process in many cases is frustrated by the elite.

Policy Issues

The characteristics of the legal and political environment in which the users reside

The elite in Maluti district have taken all range management issues into their hands. They decide on everything at the expense of those with no or fewer livestock. The acquisition of pieces of land is one factor that affects those with livestock and those with no livestock, since the latter also collected resources from rangelands. Rangelands are 'up for grabs', with people believing that government's new approach is for people to organise themselves into Farmers' Associations and have legal title to areas they want to use for farming. This is a very clear example of how the current government policies are likely to impoverish the poor still further.

Also, good governance of common property resources at local level and the support of the government would ensure the sustainability of rangeland resources and related livelihoods in the end. The present chaos prompts many to be silent about these issues. Biased headmen and tribal authorities have discouraged many from investing in any way in common property resources. People need a clear-cut position and assurance from the high echelons of governance. This would boost their confidence in the management of communal rangelands. People need to be assured that all the rules and regulations they set are going to be protected by the government, and that information about common property resource related issues is well disseminated.

The points above would shape any intervention by the government. The issues highlighted above, especially the emergence of the Farmers' Association, would threaten the livelihoods of other users. These points show that in these areas there is great dynamism and that any policy process should first look at that. The dynamism in rural areas should inform the policy making process of the priority issues.

Chapter 7 Valuation

This study has shown the importance of communal rangeland resources to rural people's livelihoods. This chapter takes the debate further by looking at the economic value of fuelwood from ten households purposively selected based on their household composition and levels of wealth. Chapter 4 of this thesis has demonstrated the importance and the role of common property resources in rural people's livelihoods. Although they are central to people's livelihoods, their value is unfortunately underestimated (Cousins, 1999).

7.1 Valuation of Fuelwood

In this chapter, comparison is made between the use of fuelwood during winter and summer. In the valuation exercise I used substitution costs to calculate the contribution of fuelwood to people's livelihoods. Ten households in Mkemane village in the Maluti District were selected for the exercise. The results of the valuation exercise are used to support the arguments made in this paper.

Although fuelwood should not have been used as an example because of its abundance, the decay in institutions of management and the condition of rangelands in Mkemane threaten its future existence.

7.1.1 Results

Table 23: Valuation of Fuelwood

Summer Season

NAME	FUELWOOD WEIGHT (kg)[iii]	NO. IN THE HH	TIME BEGAN	TIME END	PARA-FFIN[iv] (l)	ASH, HALF -BURNT AND UNUSED WOOD (kg)	UNUSED PARAFFIN (ml)
1) Mamqhinebe	4.5	4	3	6			
	5		7	9		1	
					2		200
2) Bod'ekhazimlayo	5.5	7	4	7			
	8		6	10		1.5	
					2		300
3) Nodaluthando	7.5						
	5.5	8	4	9			
			7	9		2.5	
					3		100
4) Msil'engwe	12	16	4	8			
	14.5		3	9		3.5	
					5		0
5) Ntab'etafile	10.5	4	7	9			
			6	8		3	
					2		100
6) Nobatha	5.5	5	4	7			
			7	9		0.5	
					2		100
7) Sbhubhu	5.5	3	4	6			
			6	8		0.5	
					3		100
8) Somagwala	10.5	4	4	8			
			6	9		0.5	
					3		0
9) Dontsela phezulu	15	3	3	7			
			6	8		0.5	
					2		100
10) Madala	5.5	8	6	9			
			3	7		0.5	

NAME	FUELWOOD WEIGHT (kg)[iii]	NO. IN THE HH	TIME BEGAN	TIME END	PARA-FFIN[iv] (l)	ASH, HALF -BURNT AND UNUSED WOOD (kg)	UNUSED PARAFFIN (ml)
					3		100
Winter Season (August) Equivalents for Paraffin are taken from the Summer Season							
1) Mamqhinebe	15.5	4	4	8			
			6	9		5	
2) Bod'ekhazimlayo	14.5	6	4	9			
			5	8		6.5	
3) Msil'engwe	28.5	16	4	10			
			3	9		7	
4) Ntab'etafile	20.5	4	4	8			
			6	9		4.5	
5) Sbhubhu	13	3	4	8			
			6	9		6	
6) Nodaluthando	29	12	4	8			
			6	9		4.5	
7) Madala	37	8	2	9			
			6	8		9.5	
8) Nobatha	18.5	5	4	8			
			3	8		8.5	
9) Dontsela phezulu	16.5	6	2	9			
			5	8		5.5	
10) Somagwala was working in commercial farms at the time I revisited this group for re-valuation of fuelwood.							

7.1.1.1 Analysis of Valuation Results

Taking the case of Mamqhinebe, she uses in summer 8.5 kg/ day of fuelwood, which is equivalent in her case to 1.8 l. of paraffin. If 1.8 l.[v] = R 6. 012 then the same value can be attached to 8.5kg of fuelwood. In winter she uses about 10.5 kg/ day of fuelwood. Deducing from the summer figures, 1kg = 0.212 l. therefore 10.5kg = 2.224 l. (2.224 l. = R 7. 428). Winter season runs over a period of four months in the area. Other things being

equal, the amount contributed by fuelwood in a year is (R 6. 012*245) + (R 7.428*120) = R 2,364.3.

Any benefit comes at a cost. People in the area work for R 25 to R 30 a day. Recently, they were involved in a water project, which installed standpipes in the area. People were employed five days a week and assuming that the jobs were available throughout the year, this would mean that people would earn on average R 7,800. Of this, 3 to 6 hours (average of 4.5 hours) of labour that could theoretically be invested in working for wages is spent collecting firewood. This is done once in two or three days. R 30/8hrs = R 3.75/hr, which, using a conservative number of days per year for collection of fuelwood (260/2 = 130 days), comes to an annual labour value of R 2,193.75 (4.5 hours*R 3.75/hr*130 days). 260 is the number of weekdays, since people never collect fuelwood during weekends. According to conventional economic theory, labour is one type of cost. There is another type, which is capital or tools used to collect the resource (in this case an axe and ropes to tie the load). The cost of capital resources used to collect fuelwood further reduces the net value. This reduced net value is not included in the calculations. I was only emphasising the point. When I use 6 hours, which is mainly for people who collect twice a day and skip one day, the net value becomes negative: R 2,364.3 – (R 3.75*6*130) = -R 560.7. The cost of tools is not included in the latter calculation.

7.1.1.2 Discussion of valuation findings

The conclusion that can be made from the calculations above is that the value of the collected fuelwood is R 2,364.3. This means that collection of fuelwood adds R 2,364.3 to people's annual income, which is a considerable adjustment of their wealth compared to their money income. But the substance of this is that they would be even better off if they had paid work instead of the collection of fuelwood. If they switched, they could earn enough money to buy the needed paraffin for cooking and heating, and still have an additional R 560.7 to use for other things. But unfortunately that is not the case.

The calculations above make assumptions that the costs and benefit issues in rural areas are straight forward as assumed by conventional economic theories like the one used here – net economic value.

7.1.1.2.1 Cost factor

One informant stated that there is no need for a special trip to collect the resource he was referring to, *Impepho*. He can collect it when he is visiting the rangeland for other purposes. This should suggest to the reader that there are nuances in valuation methods, especially in the rural context. IIED (1997) makes a distinction between aspects included in economic approaches for local-level valuation and aspects omitted.

Table 24: Definition of Terms and Concepts in Agricultural Economics Highlighting Aspects Included and Missed

CONCEPT/ TERM	ASPECTS INCLUDED	ASPECTS MISSED
Household	Unit of production, consumption	Intra- and inter- household interaction
Household income	Major flows of cash and kind	Low value self-provisioning sources yet regular and important
Yield	Output from main field in main harvest period	Between season harvest; harvests from other sites
Farm production	Major production activities	Intermediate activities, such as processing
Food consumption	Major recorded items: meals	Seasonal variations; snacks
Resource endowments	Private assets and production factors	Access to communal resources (labour, land etc.)
Labour	Person-hours or days, sometimes differentiated by age/ sex	Variation in work intensity; differences between individuals
Capital Information	Major asset acquisition	Small assets acquired, borrowed, loaned
Asset depreciation	Book-keeping value	Continued usability and recyclability
Efficiency	Single objective: production	Range of other, multiple objectives
Units	Conventional units	Local units

Source: Jodha, 1986, cited in IIED, 1997: 31

Although some of the issues in Table 24 are not relevant in this study, they nevertheless show aspects that are omitted when looking at economic valuation. In asset depreciation, the conventional assumption in the case of Mamqhinebe (quoted above) is that she has to replace her capital (axe) because it depreciates. The conventional economic theory overlooks the fact that people share things in the rural context. If she happens to have an axe, she will use it over a long period of time with its value having long been depreciated. She might on the other hand be sharing this asset with a relative or a friend or a neighbour, in which case costing would be directed to the wrong person. Also, tying of the head-load itself does not require new ropes. People put to use some of their old things. Also, in this case, women go to collect fuelwood as a group. These women assist one another whilst they share ideas on issues affecting the village at large. Fuelwood collection does not only

involve the drudgery and chores attached to fuelwood collection, but there is a broader value into it. Young wives connect to the broader village through networks with older women.

7.1.1.2.2 Employment Factor

In the case of Mamqhinebe, labour was accounted for by attaching value using a local wage rate. Since I arrived in the area in 1998, this was the first time people were employed in a public works programme, which has better wages. Also, the high rate of unemployment makes it impossible for people to get employed locally. If a person does not collect (in this case) fuelwood, hoping that s/he will not miss the opportunity of being employed, it makes no sense in the case of Mkemane. According to the conventional economic methods, looking at what you forgo does not work when there is surplus labour. In this case, the opportunity cost of labour is zero. Migrants are currently being retrenched in big numbers. If it could be realised that overemphasising costs could be to the detriment of people who need assistance concerning the management of common property resources, then the valuation of the benefits derived from common property resources would improve.

7.1.1.2.3 Price Factor

Market prices of paraffin are rocketing every quarter because of the increase in the price of crude oil. If this were not the case, according to conventional economic methods, the amount of benefit would have been far exceeded by the cost because the price of the close substitute would be less. The true value of the resource should come from the resource user. Mamqhinebe in particular cannot even afford paraffin. This is proved by the fact that, when the exercise was conducted, some people did not have paraffin stoves. The conventional economic methods overemphasise the cost factor (be it labour or capital cost) and also the substitution cost, as if people can afford the close market substitute. Valuation should be made relevant to a particular case to avoid under-valuation of resources – valuation in rural areas should cater for the complexity of the rural situation.

If any benefit is to be achieved by policy makers, then the dynamics and the complexity of the rural setting should inform their decisions. When conventional economic methods are used, there is a danger of simplifying complex situations. If economic valuation is intended to induce policy makers to act, then justice must be done in computing the figures. Things which affect people should be looked at seriously and uninformed assumptions about what should happen should be minimised. An overemphasis on costs would be a deterrent for any proposed reform. If it can be realised in the case studied above that unemployment is increasing, thus precluding chances of creating local employment, then labour costs cannot be estimated using local wage rates because there is no local employment. For these studies to really reflect the benefits of common property resources to rural people's livelihoods, the total picture must be given to motivate policy makers to stimulate reform.

7.2 Overall value of one common property resource in Mkemane and Maluti District

Following Mamqhinebe's example, values in Table 25 were calculated for all the households except for one (Somagwala's) household which could not be followed during the winter valuation exercise. On the basis of the argument I made above, I assume that the opportunity cost of wood harvesting labour is zero. For the method used in Table 25 see section 7.1.1.1.

Table 25: Valuation Results for all the Households Sampled in the Valuation Exercise[vi]

NAME	DAILY VALUE OF FUELWOOD IN RANDS (SUMMER)	DAILY VALUE OF FUELWOOD IN RANDS (WINTER)	ANNUAL BENEFIT	NO IN A HOUSE-HOLD	ANNUAL BENEFIT PER HOUSE-HOLD MEMBER
1) Mamqhinebe	6.01	7.43	2,364.3	4	591.08
2) Bod'ekhazimlayo	5.68	3.78	1,844.71	7	263.53
3) Nodaluthando	9.69	22.60	2,826.67	8	353.33
4) Msil'engwe	16.70	15.61	5,964.82	16	372.8
5) Ntab'etafile	6.35	13.54	3,179.21	4	794.8
6) Nobatha	6.35	12.69	3,077.81	5	615.56
7) Sbhubhu	9.69	13.56	4,000.27	3	1,333.42
8) Dontsela phezulu	6.35	4.81	2,132.33	3	710.78
9) Madala	9.69	53.27	8,765.83	8	1,095.73
MEAN					**R 681.23**

In calculating the amount contributed by fuelwood to rural people's livelihoods, I considered the points I have made above. I therefore took the average per person per year as calculated in Table 25 which is R 681.23. R 681.23 is more than 1/12th the amount received from pension grants, but the reader should be reminded of other resources from which people benefit. If the households in the table above were selected using probability sampling and the sample size large enough, then an inference could be made for the entire village and the district. Assuming that the correct sample size was used and that probability sampling was used, for the whole village with 105 households the value of annual fuelwood consumption is R 494 538.24, given that the average number of persons in each household from the sample is 6.9138. For the district at large, using the 1991 population figure of 160 777, the annual value of fuelwood would be R 109 526 115.71, assuming that all the households used fuelwood as they do in Mkemane.

Chapter 8 Discussion of Findings and Policy Implications

This study has shown different livelihood strategies for different people and how different groupings of people, rich or poor, make use of communal rangelands. The value of fuelwood has been calculated in this study and the importance of a number of common property resources for different people also emphasised. The economic value of communal rangelands is socially differentiated, with different actors making use of different resources for different purposes (Cousins, 1999). Many of these resources and values are significantly important for the rural poor, they contribute to food security and to balanced nutrition (ibid: 312). The issue threatening these economic benefits in the short term is the semi-legal privatisation of land brought about by the unclear land tenure situation in the country. Kepe (1997a cited in Cousins, 1999) argues that there is a possibility of conflict and power relations among resource users and that equitable outcomes are not guaranteed. Benefits maybe captured by the wealthy elites unless control over resources is vested in institutions which act in the interests and on behalf of the majority (Cousins, 1999). Clearly, the traditional institution, as shown in this study is benefiting the remnant of the population at the expense of the broader population and hence this study is calling for the intervention of policy makers to create an enabling environment for the management of these resources. It is evident in this study that there is decay in the institutions that are supposed to manage these resources and that a rethink on this issue is needed. Also, justification of the economic importance of common property resources was given to induce policy makers to act. A challenge for policy is support for appropriate institutional development at local level (Cousins, 1999). Cousins argues that given the socio-economic differentiation of resource use, it is likely that resource management will be marked by struggle as different groups seek to impose or retain rules that benefit their resource demands as the possible expense of others (Clarke et al, 1996: 16).

Some of the key findings in this study are summarised below.

8.1 The importance of natural resources in livelihoods as perceived by people

Benefits from natural resources are accrued by people from the different levels of wealth - the rich, upper middle, lower middle and the poor. Common property resources provide multiple benefits ranging from medical benefits from medicinal plants to energy needs from trees. Many of the poor households in this study indicated that the contribution from natural resources is high compared to other resources. It is this group of people who derive less from other sources such as livestock, since – to take cattle for example, they all have five cattle or less. This means that their livelihoods are more vulnerable. It is shown clearly in this study that these common property resources are not important to poor people only but to everybody. The study shows that everybody, one way or the other uses the natural resources found in the area. The assumption is that the rich, because of their high numbers of livestock, use more of the grazing resources.

The study, after discovering how important common property resources are to rural people's livelihoods, assessed the contribution they make in monetary terms. This was investigated for fuelwood since it is the one resource used by almost everybody in the village. The values (prices in this case) of other resources were shown in the resource directory (see section 6.2).

8.2 The monetary value of natural resources in livelihoods

Common property resources make a significant contribution to rural people's livelihoods which can be accounted for in monetary terms. Cousins (1999) argues that the National Forestry Action Plan (NFAP) produced by the Department of Water and Forestry (DWAF, 1997) recognises the high economic value of common property resources. This NFAP estimated fuelwood production to be about 11 million tonnes per annum, which is worth more than one billion rand; traditional medicine is estimated at between half a billion and a billion rand per annum and the curio industry based on woodland products is worth over seven million rand (DWAF, 1997 cited in Cousins, 1998, 23). DWAF (1997: 45) cited in

Cousins (1998) states that these values are "largely unaccounted for in terms of national accounting (e.g. measures of GDP)".

The cases of fuelwood and the resources listed in the resource directory show the amounts that are accrued from common property resources. The resource directory shows that for people who can exploit medicinal plants and/or trees for medicines which are in demand, the benefits are enormous. Having said that, though, the study questions the traditional economic methods that have been used in looking at the economic value of these resources. The conventional economic method used in this study is the net economic value. The study discovered that these methods tend to overestimate the cost of obtaining common property resources. What the study suggested was that any valuation method should consider the complex situation of rural areas. The study discovered that what the conventional economic methods consider as costs is actually less or an insignificant amount in rural areas. For example, costs associated with time forgone can be considered as insignificant, at least in the Maluti district where unemployment is high and where there is minimal or no local employment in the villages. Costs associated with depreciation of assets are also questioned in this study because of factors like the recycling of such assets in the rural areas. An axe, which will depreciate in value in three to five years' time, can be used in rural areas twice or more than twice the time the asset was expected to last. Although there are these concerns about methods of valuation, they do not nullify the contribution that common property resources make to rural people's livelihoods.

8.3 Common Property Resource Management

The uncertainty about land tenure in this country affects the way in which resources are managed. People are confused as to who the owner of the land is. This confusion has discouraged many people from being involved in issues of common property resource management. People have indicated their nostalgia for the 'betterment' scheme in many ways. Although they did not appreciate the way it was introduced, people need direction from those in authority – like the government. Land value, tenure and the management of

common property resources are viewed in this study as components of one issue. When tenure rights are vested in people who are users of the land and the government monitors progress on issues of land use and management as it did during 'betterment', then management of common property resources can improve. The only problem now is that there are no incentives to managing the land. In the past, during the 'betterment' scheme, the benefits of land management were clear to everyone. The benefits of rotational grazing benefited the owners and non-owners of livestock, fenced fields ensured that money was put to other uses than to buy maize meal, and there were numerous other benefits. This is what people are looking for. People also indicated that lawbreakers are seldom punished or not punished at all. If, induced by the understanding of the value of the land to rural people's livelihoods, the government could be involved as it was previously, then punishment could easily be inflicted because there would be a body in authority looking after the interests of everybody and making sure that rules agreed upon by the people are adhered to. The kind of revised 'betterment' scheme that this study proposes would be decentralised, with people taking charge of their activities and undertaking them in consultation with the government so that it also owns the process. If many people favour such a revised 'betterment' scheme, then the enhancement of land management does not need to be complicated. Also, as many people perceive chiefs as undemocratic, the government should not still be entrusting them with land management.

8.4 Land Tenure

Land tenure emerged in this study as an issue of urgent concern. The semi-legal acquisition of land poses serious problems for the livelihoods of other people who are not members of the Farmers' Association, and has created the potential for conflict. This land acquisition has reduced the commons to benefit a minority in the village.

The recent proposal by the Minister of Agriculture and Land Affairs to transfer communal land to tribes, which means that there will be support for chiefs who would hold land in trust on behalf of rural people, is bound to fail. This study shows the risks if the proposal

were to be enacted: the potential for conflict and the negative implications for the livelihoods of people who are not members of the association that is seen by this government as the new progressive breed of farmers. The study has concluded that the two groups, the government on the one hand and the Farmers' Association on the other, would merge their ideas when they 'discover' each other. The actions of the Farmers' Association are not directly linked to the move of the Ministry of Agriculture and Land Affairs, although the Farmers' Association is doing what the Ministry is proposing. When the Farmers' Association discovers that their actions are in line with government policy, all other common property resource users will be excluded from using the land. A member of the association has already hinted this after a meeting with the police. They are also thinking of selling resources such as thatch grass to harvesters since the camp they have acquired is well endowed with natural resources. The feud that is brewing in the area is because of lack of commitment from the government to view land tenure in totality, not as a policy of rights to land but as a policy that also incorporates issues of livelihoods and common property resource management. It has been said many times that most chiefs are despots (Ntsebeza, 1998), but the government seems adamant in pursuing its policy in their favour.

8.5 Implications for natural resource management

"Greater local understanding of present and/ or potential values may also help improve local resource management systems. This, in turn, can increase the value of the landscape and the viability of local livelihoods. These types of valuation can also help local people negotiate use with more powerful external interests that may be threatening their sustained use" (Hinchcliffe, 1995 cited in IIED, 1997: 8). When people understand and appreciate the value and the contribution that common property resources have in rural people's livelihoods, management of these resources would surely improve. This understanding applies to policy makers as well who are in a position to create an enabling environment to enhance the manner in which they are managed. However, the study discovered that this understanding would not automatically be implemented into a workable programme since

the issue of land tenure for rural areas is still unclear. This unclear situation has opened doors for the elite (Farmers' Association) to privatise pieces of land for their own use and benefit. If any policy reform is to be undertaken, based on the understanding of the contribution that common property resources make to rural people's livelihoods (viewing the contribution within the complexity of the situation in rural areas), land tenure should top the priority list of that reform.

8.6 Implications for land policy

This has partly been addressed above. The emphasis here is that an understanding by policy makers of the enormous contribution that common property resources make to rural people's livelihoods would prompt them to act to ensure that any management practices employed are appropriate. People's attitude towards land ownership (they say it belongs to the government) affects the way they use the land, and the attitude that policy makers have about rural areas makes them boost emerging black farmers at the expense of the poor. If rights to land (coupled with other intervening strategies to encourage people to make productive use of the land) can be vested in the common property resource users then management for sustainability will also improve.

8.7 Implications for rural development policy

The challenge facing rural areas that was posed by this study in chapter 1 concerns the institutions that carry the vision of the government about their development programs to the people, and vice versa. Tiers of institutions are needed to deliver and respond to people's demands on the ground. A thorough investigation is needed to look at the co-ordination of the different tiers, including NGOs, parastatals, private companies and government departments, in responding to the demands of people and properly carrying to the people government programmes that are informed by understanding of the complexity of these areas.

8.8 Implications for land degradation

For issues pertaining to land degradation, this study only relied on people's account of the common property resources that were available, how they were used and why they are scarce. Taking one example, one informant reported that *Impepho*, which is used for colds and flu, was in abundance when fencing was still in place. Hinchcliffe's point of negotiating use with more powerful external interests that may be threatening the sustained use of resources like *Imphepho* does not apply in this case. There is no room open for other parties such as the poor, who use common property resources more, to negotiate with livestock owners concerning the benefits they (the poor) accrue from these resources because the mechanism which helped to keep livestock out (fencing) is broken and the value of resources like *Impepho* to some individuals is overlooked by others. Although many people use medicinal plants, to some they are a secondary resource, which infringes on the rights of others to enjoy their benefits. During a transect walk in one of the villages, there were resources which our guide mentioned but stated that they were available when fencing was still in place. This goes back to Hinchcliffe's argument about understanding the value of common property resources. This understanding must be combined with proper management to ensure that the resources are protected for sustainable use.

This thesis raises many issues related to the livelihoods of rural people. In addition to the tenure problems just outlined, another issue is the decay of common property resource management institutions. There is no clear direction concerning the rules that must be adhered to in managing these resources. I therefore argue that there should be an intervention by policy makers in managing common property resources, since common property resources are the most promising capital available in the area under study. But how would policy makers intervene effectively in the midst of this complex situation – unclear land tenure, poor institutions of management and contradictory ways of calculating the value of natural resources and their contribution to rural people's livelihoods? This study therefore suggests that understanding the complexity of rural areas should be a

priority in any policy intervention. If any policy intervention is to be made, especially recognising the value of common property resources to rural people livelihoods, then the issues alluded to in this study should be very carefully considered.

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Notes

[i] The Tomlinson Commission for the Socio-Economic Development of the Bantu Areas within the Union of South Africa was set up to "conduct an exhaustive enquiry into and to report on a comprehensive scheme for the rehabilitation of the Native Areas with a view to developing within them a social structure in keeping with the culture of the Native and based on effective socio-economic planning" (Houghton, 1956, p. 1). The Tomlinson commission reported that people in rural areas had no management system for their land. They used the term "parasitic system of land usage" to describe land use in these areas.

[ii] p defines the level of significance.

[iii] Weighing of fuelwood was done in some instances in the morning and in the evening before people start using wood, hence there are two fuelwood weights, in some cases, for one person.

[iv] 1 l. = R 3. 34c

[v] 1 l. = R 3.34c.

[vi] One household (Somagwala's household) was discarded in the analysis because they were not available for the second round of the valuation exercise (winter valuation).