

**The Sustainability and viability of small-scale timber as  
community economic development –the perceptions of the  
Entembeni community in Melmoth**

**By**

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**Submitted in partial fulfilment of the requirements for the degree  
of Masters in Social Science in the School of Community  
Development and Adult Education, University of KwaZulu-Natal,  
Durban**

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## DECLARATION

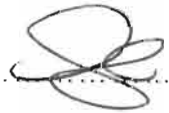
I, Isaiah Mahlalani Mahlangu, hereby confirm that, this thesis, which was conducted under the supervision of Dr. Betty Mubangizi and Dr. Sylvia Kaye, is my original work that is in partial fulfilment of the requirements for the degree of Masters in Social Science in the School of Community Development and Adult Education, University of KwaZulu-Natal. The work of different authors used in this study is acknowledged accordingly.

Signature of the student



Signed in.....Durban.....on this date. 18.....of APRIL 2005.....

Signature of the supervisors:

Signed in..........on this date. 18.....of APRIL 2005.....

Signed in.....Mubangizi.....on this date. 19.....of April 2005.....

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As my grandmother would have said: Khanimambu<sup>1</sup>!!

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<sup>1</sup> Tonga phrase meaning thank you so much

## ABSTRACT

This study was conducted to investigate viability and sustainability of commercial small-scale timber production. Random mushrooming and proliferation of small-scale timber production in KwaZulu-Natal and the lack of available literature on how small-growers perceive sustainability of their own practice prompted the study. Entembeni, a rural community located in northern KwaZulu-Natal, was selected for the study. High levels of illiteracy and increasing unemployment levels characterize the area. Based on a qualitative research design a stratified, random sampling was used to select a representative sample.

While an understanding of small-scale timber production tends to focus on small-scale growers as the main role-players, government structures, commercial timber farmers, and contractors play a significant role in regulating and transforming timber production respectively. The study found that small-scale timber production is either hindered or enhanced by the nature and effectiveness of existing institutional arrangements. Distribution of assets is characterized by social inequality based on gender and social status. It was also found that small-growers lack the necessary skills, expertise, land and infrastructure to effectively participate in commercial timber production. Partnerships with the private sector (in the form of contract farming) ensure that small-growers have access to loans, expertise and the markets.

Small-growers who are motivated by the prospects of increased income and entrepreneurial development, fail to reach anticipated targets. Reasons for this are numerous. Some small-growers operate in areas of land too small to yield the desired outcomes. Inability for value adding and reliance on large-scale growers and contractors for loans and harvesting and transportation services contributes to small-growers inability to maximize benefits.

The study concluded that small-scale timber production in its current state at Entembeni is not viable or sustainable. Viability and sustainability of small-scale timber production can be enhanced through a holistic land use plan and management that provides alternative land use options, not just timber production.

## LIST OF ABBREVIATIONS

CBO	Community Based Organization
DAEA	Department of Agriculture and Environmental Affairs
DFID	Department for International Development
DWAF	Department of Water Affairs and Forestry
EIA	Environmental Impact Assessment
ES	Environmental Scoping
FSA	Forestry South Africa
LAAC	Licensing Assessment Advisory Committee
LED	Local Economic Development
NGO	Non-governmental organization
NPO	Non-profit organization
RCA	Rotating Credit Association
ROD	Record of Decision
SLF	Sustainable Livelihood Framework
SMME	Small, Micro and Macro Enterprise
TA	Tribal Authority
UN	United Nations
UNDP	United Nations Development Programme
WCED	World Commission on Environment and Development
WMA	Water Management Area



# CHAPTER ONE

## 1.1 Introduction

*“One of the first injunctions given to man was to rule over the earth and over nature, with the obvious purpose of ensuring his own preservation. Whether this injunction has always been carried out with the responsibility necessary for so great a task is open to question. But it is a fact that only a good ruler is well served by his subjects and that a greedy ruler who exploits his underlings inevitably exhausts his domain and eventually destroys himself” (Malherbe, 1973:3).*

An evaluation of how people use and manage the natural resources forms an integral part of the current global debate on sustainable development and environmental management. Human activities have been and continue to be evaluated in various aspects of life. As a contribution to the debate on sustainable development, this study used small-scale timber production, to explore how humankind performs the sanction of managing and utilizing natural resources.

The logic for undertaking an evaluation of small-scale timber production is twofold. Firstly, the potential of large-scale or commercial timber production in South Africa is well researched and documented compared to small-scale timber production. Secondly, and perhaps most importantly, small-scale commercial timber production is a relatively more recent activity. For this reason, it is important to identify lessons about what works or does not work for the purpose of improving small-scale timber production, where necessary.

In setting the scene for understanding of subject of the study, this chapter is divided into four parts. The first part sets the contextual framework within which timber production and management occurs. The second and third parts deal with the reasons why this particular study was undertaken as well as giving relevant characteristics of the area of study. Lastly, the fourth part presents a layout of this study.

## **1.2 Historical background: timber production and African farmers**

Understanding the history of timber production in South Africa is essential to the discussions in this study. This section demonstrates how the timber industry emerged and has progressed over the centuries. It is maintained that the emergence of timber production attracted different institutional arrangements as it progressed from one stage to another. At its early stages of development in the sixteenth century, timber production was seen as the responsibility of government institutions. Timber production was associated then with protecting the natural vegetation and providing wood for domestic needs. It had little commercial value. As timber production progressed to its next stage, it became a commodity with a high market value and instead of public institutions, the private sector became the custodians of this industry.

A distinction is made between the motives of government and private sector. While the former was motivated by the need to protect the natural environment, the latter was motivated more by its interest to make profit. Parallel to both stages of intervention was the involvement of community and individual growers. In accordance with trends set by the government and the private sector respectively, the participation of rural communities and individual growers began with the objective of producing timber for the provision of firewood and building material and later progressed to producing timber for the market.

Discussions below show when and how different institutions such as government, private sector and community-based institutions became involved in timber production. While the study concentrates on the situation of small-scale commercial timber growers (hereafter to be referred to as small-growers), the relationship between small-growers and their large-scale commercial timber growers (hereafter to be referred to as large-scale growers) cannot be ignored. For this reason, the discussion on small-growers will make reference on the situation of large-scale growers. Further, a regulatory framework is discussed.

### 1.2.1 Government interest in afforestation

The need for timber production in South Africa can be traced back to the sixteenth and seventeenth centuries. The arrival of the Portuguese navigators and later Jan van Rieback in 1652 at the Cape, led to unprecedented over-utilization of indigenous trees, which among other things were used for building ships (Lückhoff, 1973:20). Inevitably, random utilization of indigenous trees led to the depletion of natural vegetation and shortages of good timber. South Africa first experienced a lack of adequate timber resources during the First World War (Malherbe, 1973:4).

In response to the depletion of indigenous vegetation, the government started to develop a policy framework to address this situation. Government intervention was directed at two levels, the first level of intervention involved policy formulation geared at bringing about responsible management of natural vegetation. The second level of intervention was intended to supplement the indigenous timber stock by establishing exotic timber plantations. Over-utilization of indigenous wood, and subsequent government intervention led to the emergence of exotic timber plantations in South Africa. Lückhoff, divides the history of timber production into two main periods:

“The first period lasted for more than a hundred years and ended in 1880s when indigenous forests were first placed under sound management. The story of this period is one of ruthless exploitation and despoliation of the forests of the Southern Cape and later of the mountain forests of Eastern Cape and the Transkei. The second period was the period of plantation forestry which started with the establishment of a small Worcester plantation in 1876...”(Lückhoff. 1973:20).

Policy formulation around depleted natural vegetation had identified the establishment of exotic plantations as one way of addressing the lack of timber material (Malherbe 1973:4). Coniferous plantations began at the Cape in areas where over-harvested indigenous trees had taken place. Initially, this took the form of rehabilitation, but was also a way of provision for future needs in terms of domestic timber.

In recent decades the South Africa government policies started to focus on the impact on environment of exotic species. Some of these exotic plantations had

been established to rehabilitate depleted natural vegetation or to stabilize the dunes along the coastal areas. Observations have been made that:

“Paradoxically, the timber plantations that were expected to be the saviour of South Africa’s forests (by providing alternative sources of timber to local consumers and taking pressure off indigenous species) have become the greatest threat to biodiversity in this country. (Timberwatch, undated – a)

In 1995, the Working for Water programme was established to eradicate invasive alien species such as wattle that had started to spread from formal plantations and was beginning to have a negative impact on the environment. (Department of Water Affairs, 2002). Negative impacts of alien species to the natural environment are discussed in Chapter 2 Section 2.3.1.

## **1.2.2 Commercial timber production**

It appears that when afforestation first began in the Cape, only the government was involved in this activity. From the region of the Cape, afforestation spread to the then Zululand and Transvaal areas, now KwaZulu-Natal and Mpumalanga provinces respectively (Lückhoff, 1973:30). As the supply and demand increased timber production shifted from the situation where the government was the sole responsible body to private sector initiatives. Lückhoff maintains that prospects for profit-making began to attract the private sector.

“The private sector also began to take an increasing interest in afforestation now that it had been conclusively demonstrated that forests were a profitable investment” (Lückhoff. 1973:30).

Afforestation only boomed after the Second World War, and at this period, the then Department of Forestry, now Department of Water Affairs and Forestry, increased the rate of planting trees (Lückhoff, 1973:29). Establishment of local and international market networks followed the involvement of the private sector in timber production.

Although industrial forestry began with the government projects in the last quarter of the nineteenth century, profitability of the industry has attracted a large proportion of private investment. (Department of Water Affairs and Forestry 1996). Currently, the private sector owns 77% of the existing forestry plantations, which



by 1994, had grown to about 1,45 million hectares (Department of Water Affairs and Forestry, 1996). In South Africa the role of government in commercial timber has been taken over by the private sector through privatisation (Republic of South Africa, 1995). Government's role regarding the growing of timber is becoming increasingly limited to policy making, management and monitoring. In her address to the National Council of Provinces (NCPO) in June 2004, Minister of the Department of Water Affairs and Forestry, B.P. Sonjica indicated that:

"In forestry, the Department has made good progress in transferring Government's commercial plantations to private management, while retaining ownership of the land. Of the 140 000 hectares which we managed in 1994, over 100 000 hectares, have been transferred to more appropriate management agencies, with a social plan put in place for the affected workers in conjunction with the Department of Labour. (Timberwatch, undated –c).

### 1.2.3 Community forests

In South Africa, and indeed other parts of the world, afforestation was initially incorporated into state policies as a response to the over-harvesting of indigenous trees for household use or commercial purposes (Department of Water Affairs and Forestry, 1996; Forestry South Africa (Undated), Harrison and Herbohn, 2002; Muir, 1990; Republic of South Africa, 1995; Foy and Willis, 1998; Ham and Theron, 1999; Bosch and Hewlett, 1980). It was believed that community foresters would provide the wood needs for the rural population and would save the natural vegetation. Ham and Theron maintain that:

"The traditional and widely held view of energy consumption and environmental problems in rural areas, has been premised on the assumption that observed instances of deforestation have been caused mainly by fuelwood collection. By extension of this view, all woodlots have been denuded and ended up under the cooking pot. (Ham and Theron, 1999:72)

The South African government established community forest programmes with the intention of helping rural communities meet their needs for firewood and building material. Community based plantations took different shapes and forms and with no consensus regarding the appropriateness of terminology. Different literature has referred to such plantations as either farm forestry, agroforestry<sup>2</sup>, community or village planting, woodlots and woodland management by rural people, as well as

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<sup>2</sup> "...land-use system in which woody perennials are deliberately grown or managed on the same land management units as crops and/or animals..." (Govere, 1997)

tree-planting in urban and peri-urban areas (Department of Water Affairs, 1996). With the understanding that these plantations were established by or on behalf of the community to serve their needs the concept 'community forest' is adopted in this study.

It is of significance to note that these plantations were established within a non-industrial context. The first community forests planted to provide fuel wood and hut material was established in 1893 near King Williams' Town. Since then, community forests development has continued slowly but accelerated in the 1970s and early 1980s, particularly in the Transkei (Ham and Theron, 1999:72).

The governmental approach to community forest development was to adopt a model of community ownership. This model emphasized shared responsibility and the distribution of benefits to the broader community. With regard to shared responsibilities, the model of communal ownership assumed that the members of the community would work collectively<sup>3</sup>, manage and protect the forest (Ham and Theron, 1998). Material benefits such as firewood and building material were, according to this model, to be shared among the members of the community under their traditional leadership. Lastly, the establishment of community forests was premised on the assumption that the success of one community forest would encourage other communities to participate in forest-based development.

The implementation of the model of community ownership, failed to reach its overall objectives. Community forestry among African people has had little success, except perhaps in some parts of the Eastern Cape, where community forest establishments around indigenous forests has helped to conserve the natural resource (Department of Water Affairs and Forestry, 1996). Ham and Theron, 1999 maintain that this model was a mistake in the first place, as it referred to

“...community development and community forestry as something that must be practiced by the community as whole... (Ham and Theron, 1999:46).

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<sup>3</sup> Mobilize and provide labour equitably

Community ownership is misleading, as it is unable to identify who in the community really owns the venture. If the true beneficiaries cannot be identified, it is difficult to hold anyone in the community responsible for the management and protection of the forest. By the same token, the distribution of benefits becomes complicated. Projects based on community ownership are more likely to be characterized with lack of ownership, uneven distribution of input by members and uneven distribution of benefits. As it will be discussed in Chapter 4 Section 2.2.2, communities are not homogenous, they are made up of an array of interest groups with diverse needs and objectives.

#### **1.2.4 Background of African farmers**

The significance of exploring the historical background of African farmers is that small-growers are part of this history. Attempting to understand small-growers outside this context may not give a full picture.

History on African farming and access to land shows that it is by no means a coincidence that the background of current farmers in rural areas is characterized by poor access to land, infrastructure, and the markets. Masiphula, van der Brink and van Zyl (1996) maintain that in the mid to late 1800s African farmers were independent and prosperous in such a way that their position began to threaten their white counterparts and the colonial administrators.

“Between 1850-1870 African farmers supplied the major towns of the English colony of Natal with grain and exported the surplus to the Cape. In 1860, over 83 per cent of the nearly half million hectares of white-owned land was farmed by African tenants. Their accumulation of capital and wealth caused the Native Affairs Commission (1852-3) to say that Africans were becoming wealthy, independent and difficult to govern” (Masiphula, van der Brink and van Zyl, 1996:40)

Following the stiff competition they suffered from their African counterparts, white farmers asked the government for protection. The intervention by the government involved (i) limiting African competition in the market place, and (ii) setting up native reserves of tiny pieces of land to create an artificial land shortage in order to force African farmers to seek work on manorial farms. (Masiphula, van der Brink and van Zyl, 1996). To complement and to justify these restrictive measures, the



government developed a regulatory framework to control the activities of black African farmers.

“Influenced by European settlers, the government restricted black African land rights very early and created reserves that were too small to support independent African agriculture. The Glen Grey Act of 1845 was a further measure introduced in this regard and restricted farm ownership in the reserves to one parcel of no more than slightly above three hectares” (Masiphula, van der Brink and van Zyl, 1996:40)

In addition to The Glen Grey Act, the Native Land Act was introduced with the purpose of further limiting the potential of African farmers.

“The Glen Grey Act of 1884 was followed by the Native Land Act passed in 1931, which limited the area where black Africans could establish new farming operations to the reserves (totalling 7.8 percent of the country’s area). The Native Land Act also confirmed the Glen Grey Act provisions concerning communal tenure, i.e. maximum holding size and restrictions in land transactions”. (Masiphula, van der Brink and van Zyl, 1996:43)

Chiefs, chosen on the basis of their willingness to co-operate with the colonial powers, were put in place and were awarded hereditary rights to manage land relations in their community and to allocate land to community members (Masiphula, van der Brink and van Zyl, 1996). The combination of colonial measures including the exclusion of African farmers from State-sponsored marketing co-operatives or farmers unions, and the implementation of labour tax to mention but two examples, began to erode the development of African farming around the 1920s (Masiphula, van der Brink and van Zyl, 1996).

The most significant impact of the restrictions put in place by colonial administrators on African farmers was to systematically reduce the once successful farmers to labourers:

“By gradually destroying tribal institutions and closing many income-earning opportunities, the exception being labour markets, the capital, wealth, farming skills and information based on African farmers had accumulated over generations began to wither away.” (Masiphula, van der Brink and van Zyl, 1996:47).

This background of African farmers explains why South African farming is today characterized by the relationship between a few white-owned large-scale farms and millions of black owned small-scale plots in rural areas.



### 1.2.5 Emergence of small-scale timber production

The failure of community forests led to the suspension of community forest programmes in most parts of South Africa (Ham and Theron, 1998). Suspension of community forests did not discourage participation of rural communities in forest establishment. As the model of community forest was discontinued, a new approach (the model of individual ownership) emerged.

“Owing to increasing evidence that a community-centred approach is less effective, the focus has been shifted to individual family farm units as an alternative to community-based programmes in community forestry. Instead of joint tenure and ownership, individual ownership is being promoted” (Ham and Theron 1998:47)

The shift from community forests to family and individual ownership coincided with a shift from non-industrial to industrial based small-scale timber production. It appears that fuel-wood and building material was not sufficient incentive to sustain forest plantations. Interest to generate income through timber production began to develop among local communities. The commercialization of plantations began to attract independent small-growers. As Ham and Theron observe, in the early 1980's:

“...the commercial forestry companies saw an opportunity in making communities their business partners. SAPPI entered into the arena of small grower schemes in 1982 and since then this type of scheme has picked up momentum” (Ham and Theron, 1999:76).

A proliferation of small-growers began in the late 1990's. Already in 1999, there were four main schemes running in KwaZulu-Natal province; the SAPPI's Project Grow, Mondi's Khulanathi, Lima Rural Development Foundation schemes and the South African Wattle Growers Union's Loan Scheme. (Ham and Theron,1999). Large-scale growers introduced an out-grower scheme, that is a tree-farming scheme aimed at subsistence farmers.

The South African government has an interest in promoting small-scale timber growing because this practice has the potential to create job opportunities and thus deal with the much challenging issues of increasing unemployment. In the case of South Africa, the Department of Water Affairs and Forestry is of the opinion that forestry is one of the approaches to community economic development, as it will help create jobs and improve the quality of life in rural areas.

“The basic objective of rural development is to improve the quality of life by increasing production and productivity rather than the provision of welfare.”  
(Department of Water Affairs and Forestry, undated -b)

Commercial timber production has the potential to generate benefits at two levels. These are the ‘upstream-flow-effects’ and the ‘downstream-flow effect’ (Harrison and Herbhon, 2002). An example of upstream-flow-effect are benefit to nursery operators and employment, while the downstream-flow-effect include harvesting, processing industries and tertiary processing such as furniture manufacturing (Harrison and Herbohn, 2002). Chapters 4 Section 4.4 and 5 Section 5.3.4 will continue discussions on the ‘upstream-flow-effect’ and ‘downstream-flow-effect’ with a view to demonstrating the level at which timber production benefit small-growers.

Another reason for the shift towards out-grower schemes is that large-scale growers are beginning to run out of sources of timber material. There are suggestions that “...large scale afforestation in South Africa is close to an economic and environmental ceiling, and incentives are encouraging complementary small-scale forestry to supplement the demand” (Olbrich, et al., 1997: 56). Olbrich et al 1997, also suggest that for this reason, South African commercial timber companies are already contemplating investing in the southern Africa sub-region in countries such as Angola, Malawi, Mozambique, Zambia and Zimbabwe.

### **1.3 Legal framework**

Because the emergence of timber production resulted from policy intervention aimed at the protection and management of natural resources, it is important to explore the framework within which the establishment of plantations currently take place. Afforestation is subject to a range of pieces of legislations. This section gives an overview of regulatory framework affecting the establishment of plantations by small-growers. These laws are concerned about accessing land and acquiring authorisation to plant.

### 1.3.1 Land tenure

In the case of KwaZulu-Natal, land tenure in rural areas is under the direct control of the Ingonyama Trust in terms of KwaZulu Ingonyama Trust Act 3 of 1994 (Department of Traditional and Local Government Affairs, 2004). At a tribal level the *Inkosi*<sup>4</sup>, and the tribal council administers the land. This responsibility includes allocation of land for residential, cultivation and grazing purposes. The function of the *Inkosi* and the *Indunas*<sup>5</sup> is, among other things, to confer land on individual household heads for residential and production purposes through tribal customary laws (Hatcht, 1996; Thorp, 1997; Cross and Friedman, 1997; Lipton, 1996).

Negotiations for accessing land starts with an *induna* who refers the matter to *Inkosi* for final confirmation (KwaZulu Natal Department of Traditional and Local Government Affairs, 2004). At present, members of rural communities do not have full ownership of land. Chapter 2 of The Communal Land Rights Act recognizes such tenure arrangements as “illegally insecure” (Communal Land Rights Act No.11 of 2004). To provide for secure land tenure, the Communal Land Rights Act proposes the transfer of communal land, including that which is under Ingonyama Trust, to communities. This Act further recognizes gender equality in terms of land transfer and tenure. In a bid to redress social inequalities created in the past, the post-apartheid government is presently contemplating a range of land reform programmes such as land distribution, restitution, and tenure reform, which aim at providing secure land to the poor and landless, including farm workers and labour tenants. It is not easy to predict how long it will take to successfully implement tenure reform in rural areas. Implementation of such land reforms is arguably one of the most important but at the same time most difficult tasks (Wynberg and Kepe, 1998, Kepe, 1999, Lipton, 1996). Further details on the situation of Entembeni TA on land tenure in general and land restitution in particular are discussed in Chapter 4 Section 4.3.1.

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<sup>4</sup> 'Traditional Leader or Chief'. He or she serves as the presiding officer of a Tribal Authority

<sup>5</sup> Second in command to *Inkosi*. In each Tribal Area there may be as many *Indunas* as there are wards (subdivisions of the total tribal authority area)

### 1.3.2 Acquisition of authorisation to plant

To establish forest plantations, small-growers have to comply with various pieces of legislation. In negotiations for the establishment of plantations, small-growers have to show that their activities will not have a severe negative impact on the environment. The National Forest Act (Act No.84 of 1998) recognizes that “plantation of forests have an impact on the environment and need to be managed appropriately”. The need for appropriate management is addressed by two separate pieces of legislation, the National Water Act (Act No. 36 of 1998) and the Environmental Conservation Act (Act No. 73 of 1989).

Firstly, the National Water Act is concerned with equitable allocation and beneficial use of water in the public interest. Chapter 4 Section 36 (1) (a) of the National Water Act regards the establishment of commercial plantations as a stream flow reduction activity (National Water Act (Act No. 36 Of 1998). In this case, the act regards small-growers as bulk water users. Obtainable from the Department of Water Affairs and Forestry, a water use licence therefore becomes a requirement for a stream flow reduction activity.

Secondly, according to the Environmental Conservation Act (Act No. 73 of 1989) environmental authorisation is required in the case of the change of land use from residential use to industrial or commercial use, from agriculture or undetermined use to any other land use, or from use for grazing to any other form of agriculture use. To get an environmental authorisation, an applicant has to be registered with Department of Agriculture and Environmental Affairs (DAEA). Environmental authorization may require Environmental Scoping (ES) and or an Environmental Impact Assessment (EIA) undertaken by an independent environmental consultant.

In accordance with Environmental Conservation Act, a decision to grow or not to grow, ‘record of decision’ (ROD) is issued by the DAEA. In the case where a permission to grow is granted, certain conditions may be attached. The ROD specifies the list of activities, conditions under which the ROD is granted and set requirements regarding the management of sensitive areas.



## 1.4 Motivation and purpose of study

In the past two decades, KwaZulu-Natal province has experienced a major shift in rural agricultural patterns. Small-scale commercial farming practices began to supplement subsistence agriculture. In some cases, the adoption of cash crops has had serious consequences for subsistence agriculture as the two farming practices compete for the same land. Commercial timber was among the different cash crops that have been introduced. A window of opportunity opened for rural subsistence farmers to participate in a commercial world they have watched from the sideline for many decades. Consequently, the province has experienced the proliferation of timber farming at an alarming rate. By the year 2004 the number of small-growers had increased from three in 1983 to more than 9,810 small-growers (Sappi 2004). This figure excludes the number of small-growers attached to other out-grow schemes such as Khuluanathi, which have also increased since they were first introduced.

Of major concern was that small-scale timber production seems to be taking place outside the proper planning of land use. The random mushrooming of timber farms makes it almost impossible to evaluate the outcome, manage bad practices and replicate successful practices. This study was therefore conducted to evaluate the performance of small-scale timber production and to measure how it contributes to local livelihoods. The second motivation for the study was to incorporate the voice of small-growers in the current debate about the sustainability of small-scale timber production. Currently two views dominate this debate. On the one hand there is an economic view that puts emphasis on the fact that timber production is important for its contribution to economic growth. The second view, on the other hand, treats timber production with caution as it has a negative impact on the environment. This study suggests that the social perspective, i.e. the contribution of timber livelihood (based on the perception of small-growers) needs to be incorporated into this equation.

### **1.4.1 Goal of the study**

The main goal of the study was to make a contribution to the debate on sustainable development. Timber production by small-growers was used as an example to explore how viable and sustainable different livelihood activities are in rural areas.

### **1.4.2 Research objectives**

Four research objectives were identified. These objectives are:

- (i) To gain insight on the pattern of local livelihoods in rural KwaZulu-Natal in relation to commercial farming practices;
- (ii) To identify and understand the roles played by different stakeholders directly and indirectly involved in small-scale timber growing;
- (iii) To explore the viability and sustainability of small-scale timber growing as community economic development (CED); and lastly
- (iv) To determine whether or not approaches used in the introduction and implementation of small-scale timber growing have the potential to support sustainable livelihoods.

### **1.4.3 Research Questions**

Five broad research questions were identified to achieve the objectives outlined above. These questions are:

- (i) What traditional livelihood activities do local people use and what is the potential of small-scale timber as a CED practice?
- (ii) What motivates subsistence farmers to adopt small-scale timber growing?
- (iii) Who are the actors, and what role do they play?
- (iv) What are stakeholders' perceptions regarding the viability and sustainability of small-scale timber growing? and
- (v) What are potential challenges facing small-scale timber growers?

## **1.5 Background to the study area**

### **1.5.1 Locality**

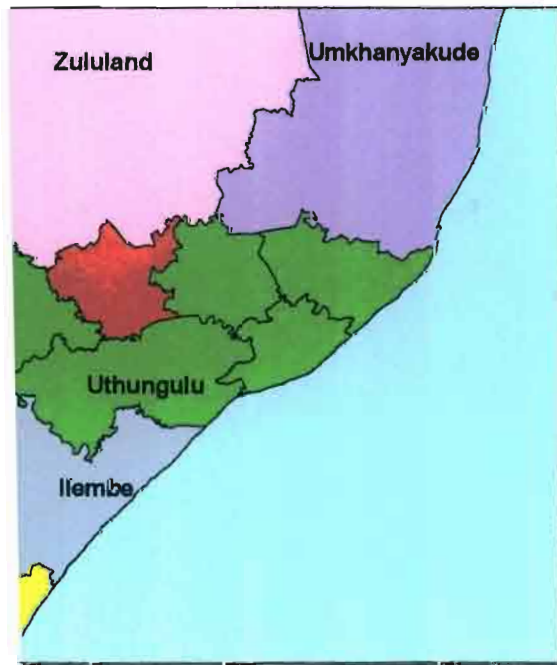
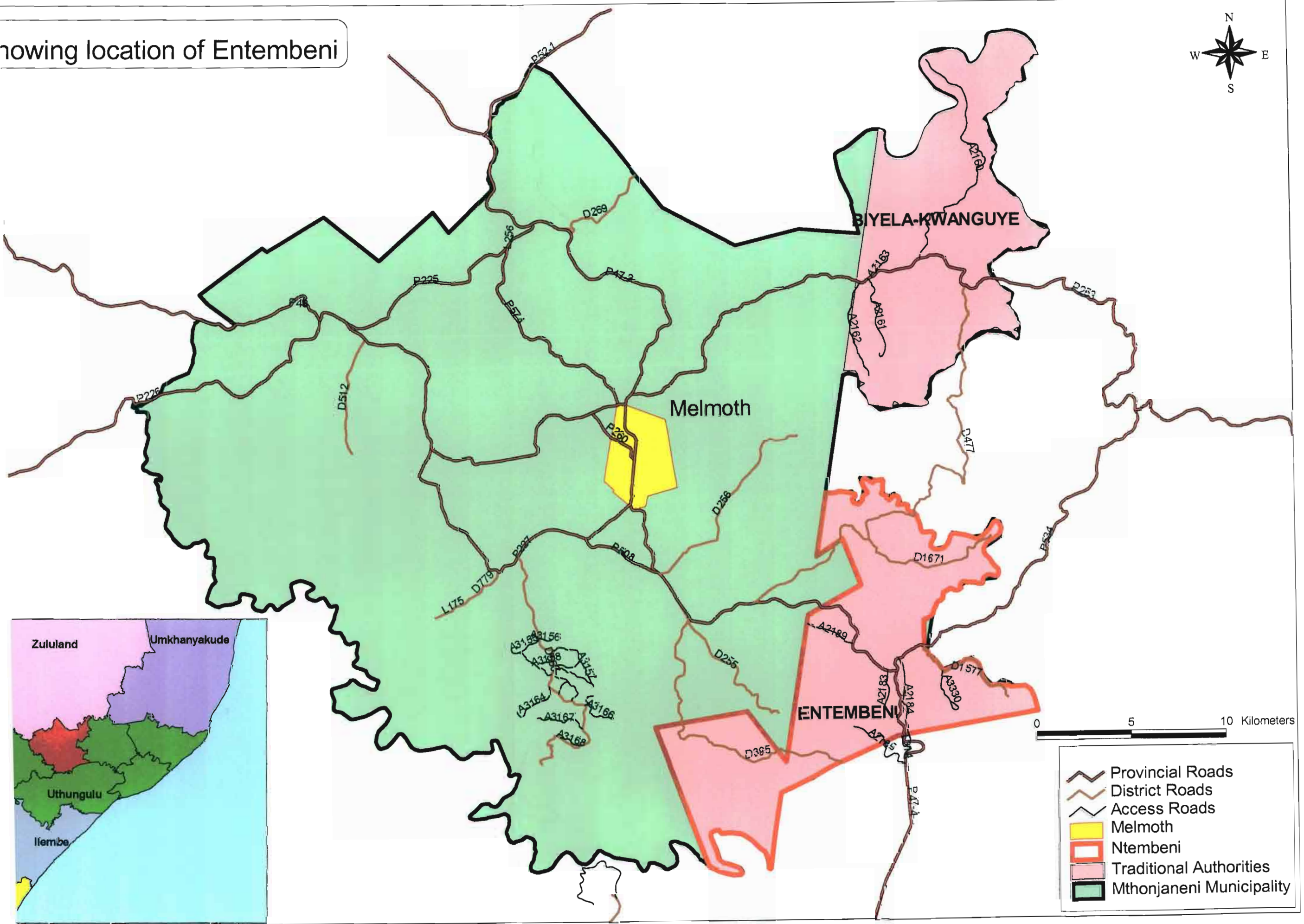
The study was conducted in the rural area of Entembeni Tribal Authority (TA) near Melmoth. The area is located in northern KwaZulu-Natal province. With respect to local government jurisdiction, Entembeni falls under Uthungulu District Municipality (DC28) and Mthonjaneni Local Municipality (KZ285). The total area of the Mthonjaneni Municipality area covers 1 086km<sup>2</sup> (Department of Traditional and Local Government Affairs, 2002). The map below demonstrate the physical boundaries and infrastructure of the study area (See Figure 1.1)

**Figure 1-1:** Map showing location of Entembeni Tribal Authority

NB: See overleaf



Showing location of Entembeni



- Provincial Roads
- District Roads
- Access Roads
- Melmoth
- Entembeni
- Traditional Authorities
- Mthonjaneni Municipality

### **1.5.2 Topography**

The topography of the area comprises rolling hills, undulating terrains and plateaus deeply dissected by drainage lines. The valleys consist of interlinking spurs and have steep gradients (Figure 1.3. below). Streams and wetlands are common features at the valley bottom. The natural vegetation is a mixture of grassland and bush-veld. It is this type of topography that is inhabited by rural communities. Available flat land at the foothill and mountaintop is the preserve of white commercial farming.

**Figure 1-2:** The topography of Melmoth



Photographer: Isaiah Mahlangu

### **1.5.3 Overview of socio-economic**

The total population has in the past 10 years increased from 36 848 to 50 383 people (Integrated Development Plan, 2004). The area is affected by a lack of employment opportunities with the majority of people working on farms and at least 93% earning an annual income of less than R6 400.00 (Integrated Development Plan, 2004). Basic services such as water are rudimentary with the majority of the population obtaining water from rivers and streams and only few receiving pipe

water in their dwellings or on site (Integrated Development Plan, 2004). Apart from timber production, subsistence agriculture and the retail sale of vegetables, fruits and craft at the two local markets form an important part of local livelihoods.

#### **1.5.4 Catchment Management Area**

Another important consideration is that the area of Entembeni is located in the Mhlathuze Water Management Area (WMA). In the larger scale, Mhlathuze is one of the WMAs constituting Usuthu to Mhlathuze Water Management Area, which is bordered by the Drakensberg Mountains in the north-west, Mpumalanga province in the south-eastern corner, Swaziland and Mozambique in the north as well as the Indian Ocean in the east (Department of Water Affairs, 2004). Mhlathuze WMA is dominated by afforestation (401km<sup>2</sup>), dry-land sugarcane (268km<sup>2</sup>) and irrigation crops such as sugar cane and citrus covering an area of 131km<sup>2</sup> (Department of Water Affairs, 2004).

WMAs are regarded as an important source of underground water reserve that sustains the flow of streams and rivers. One of the environmental concerns is that timber has the potential to tap into underground water and reduce stream-flow, hence the production of timber is regarded as a stream-flow reduction activity. It is anticipated that over-use of groundwater has the potential of reducing the surface water resource (Department of Water Affairs, 2004). The concern about an activity over-utilizing underground water stems from the fact that there are few catchments in South Africa that sustains sufficient stream flow. Witch maintains that:

“The main mountain catchments, with a climate suitable for afforestation, cover only four percent of the area of the Republic, but they deliver 85 percent of the stream-flow from the mountain catchments”. (Witch, 1973:6-7)

An assumption is often made that the catchments will continue to support stream flow even if there are little attempts for proper catchment management.

“It is taken for granted that clear water comes off mountain catchments in abundant quality and excellent quality” (Van der Zel, 1980:35).

The catchment area is therefore not only important for the development activity in a particular locality but also has implications for development activities down stream.



In this particular case, industrial activities in Richards Bay are dependent on how water resources are managed in the Mhlathuze WMA.

## 1.6 Structure of the Report

This study is presented in six chapters arranged as follows:

- (i) Chapter 1: This is an introduction and therefore focuses on the orientation of the subject of the study. To familiarise the reader with the subject of the study, the approach has been to give the historical background of timber production in general and that of African farmers in particular. This chapter also deals with the justification for undertaking this particular study as well as familiarization with the characteristics of the study area.
- (ii) Chapter 2: In this chapter, the definition of concepts and the theoretical framework used in the study continues to orientate the reader to the subject matter. Existing literature is discussed in this chapter. Lastly the Sustainable Livelihood Framework, a framework used to assess gathered information, is introduced.
- (iii) Chapter 3: Discusses the research design and methodological paradigm (sampling procedures, data collection and data analysis techniques) adopted in this study. Reliability and validity of research methods used as well as ethical issues and challenges faced with in the field are also discussed in this chapter.
- (iv) Chapter 4: This chapter presents the findings of the research. Certain themes have been identified to categorise data. This chapter also gives an outline of the different role-players involved in small-scale timber production and what their roles are. It identifies and categorizes data into themes and uses tables and graphs to further demonstrate the findings.
- (v) Chapter 5: Analyses and discusses the findings presented in Chapter 4. The Sustainable Livelihood Framework is used to analyse data.
- (vi) Chapter 6: This is the final chapter and it presents the conclusion and suggestions.

## CHAPTER TWO

### CONCEPTS, AND THEORETICAL FRAMEWORK

#### 2.1 Introduction

The purpose of this chapter is to give an orientation of the subject of the study. In the different stages of addressing the question asked in this study (the viability and sustainability of small-scale timber production), this study uses a combination of concepts, theories and a social model to measure the results. It is regarded as of importance that the reader has a clear understanding of the content and context within which these concepts and theories are used. To give this clarity, this chapter is divided into three main sections. These sections are arranged as follows: Section 2.2 defines all key concepts used; Section 2.3 discusses the theoretical framework and lastly Section 2.4 presents a social model adopted for analysing and assessing the primary information.

A mention must be made that this study opted not to present a separate chapter as a literature review. Some literature has already been incorporated into the discussion of background information in Chapter 1. The bulk of information on existing literature has been incorporated in this and the following chapters.

#### 2.2 Definition of concepts

Definitions of concepts are often subject to interpretation. Using different schools of thoughts, this section defines the key concepts and clarifies how these concepts have been adopted in this study. These concepts are:

- (i) Subsistence economy;
- (ii) Community;
- (iii) Local Economic Development;
- (iv) Community Economic Development
- (v) Small-scale farming;
- (vi) Contract farming

- (vii) Viability of small-scale farming and lastly
- (viii) Sustainability of small-scale forestry.

These concepts are defined and discussed below.

### **2.2.1 Subsistence economy**

Subsistence economy dates back to the era of nomadic hunter-gatherers to the first history of permanent human settlement. This economy is a traditional form of livelihood adopted by many indigenous societies throughout the world. Production is based on two key factors:

- (i) a non-market based production of food, i.e. producing food for family needs and not for the market (Cutling and Saaiman.1996) and
- (ii) as a result, production of food occurs without monetary costs and without generating income.

The principles of 'self-provisioning' and 'self-reliant' are central to subsistence economy. It is noted that:

"Small peasants were more or less self-sufficient...women produced a variety of food stuffs for their daily needs. Many consumer goods were not bought but traded..." (Bennholdt, Thomsen and Mies, 1999: 17)

Cited by Rantso (2001), the Benson Institute Programme (undated) maintained that a subsistence economy denotes activities where people produced a variety of crop and animal products for food security and provisioning of nutrients for the household. The non-market element of a subsistence livelihood implies that some of the inputs and means of production are based on communal ownership and shared values. Key production inputs include indigenous skills, knowledge as well as natural resources such as land.

Inevitably, the advent of industrial economy has introduced into the subsistence economy elements of costs in production and a degree of income generation. With the introduction of cash crops, reorientation of rural livelihood in terms of institutional arrangements was forced to take place in order to accommodate commercial production. In the study of small-scale commercial farming in Lesotho,

Rantso (2001) pointed out some of the changes. For example, production of food crops is no longer for consumption within the farmers' household, but it is now geared towards income generation. In addition commercial institutions are now required to facilitate the transformation from subsistence to commercial farming (Rantso, 2001).

This study accepts that the rural population at Entembeni are traditionally subsistence farmers. As it was discussed in Chapter 1 Section 1.2.4, the colonial and postcolonial administrators created conditions in tribal areas, which are not favourable to support independent African commercial farming. Part of the debate on the viability and sustainability of small-scale timber production was to:

- (i) Understand whether land rights are conducive to support commercial farming;
- (ii) How did the transformation from subsistence to commercial farming occur;
- (iii) What implications did this have on food security;
- (iv) What commercial institutions have been established to facilitate the participation of previously subsistence farmers in commercial farming and lastly
- (v) Whether such institutions are effective in interacting with the market.

### **2.2.2 Community**

Two main approaches, geographical and functional, are often used to define community. On the one hand, the geographical approach regards a group or population sharing a common geographical space as a community. Normally, such geographical space is clearly demarcated. Rubin and Rubin (1992) maintain that the community refers to both the place in which organization occurs and to the group which organising is happening. The former is referred to as geographical community while the latter is a functional community. The geographical community is defined as:

“...the neighbourhood, a connected physical territory. Ties in a neighbourhood are based on sharing a life-style, though these ties are often reinforced by common ethics or cultural backgrounds.” (Rubin and Rubin, 1992:83)

The functional approach, on the other hand, extends beyond the geographical boundaries to consider individuals or groups of people with a common vision who engage in common activities for the achievement of a common objective. This community may or may not exist within the same geographical boundary. In defining a functional community, Rubin and Rubin (1992) refer to community as a solidarity community.

“Solidarity communities come about when people of common heritage, ethnicity, religion, or language choose to remain together and by definition exclude those of other ethnicity or religious groups (Rubin and Rubin, 1992: 85)

Lombard (1992) believes there is an alternative approach, in what is termed the geographical functional communities. Geographical functional communities strike the balance between geographic and functional concepts. This alternative approach refers to a functional community within a particular geographical area.

The geographical perspective is limited in that it assumes that members of a particular geographical area are homogeneous. Homogenization of communities fails to understand the community members for whom they are and puts all sub-groups together as if they all had common interests and objectives. As was discussed in Chapter 1 Section 1.2.3, because of the homogenous perspective of community, some of the reasons for the failure of the community forests were a lack of clarity of ownership and line of responsibility. Observations show that the interest and values of members of any single geographical area may vary. Differing interests and values are better suited to the functional approach, which perceives a community as comprising members from different geographical areas.

In this study, Lombard's geographical function approach is adopted. In using the concept of community, this study takes into account both the geographical and functional concepts. This stance is based on the thinking that while timber growing at Entembeni can be delineated to specific geographical boundaries, not all members of the geographical community are small-growers. The community comprises growers and a range of groups who do not grow timber (thereafter to be referred to as non-growers). Discussions in Chapter 1 Section 1.3.1 and 4 Section 4.3.1, show that land tenure at Entembeni restricts small-growers to operate within the bounds of the tribal geographical sphere. In terms of the geographic functional



approach, small-growers are seen as a sub-community within the broader geographical boundary. This sub-community is conceived as such because it only comprises the members of the community with common interest, values and whose common objective is to enhance their livelihood through timber production.

Johnson and Johnson (1994) have used seven concepts to define a group. They include interpersonal interaction, interdependence, goals, perception of membership, motivation, structured relationship and mutual and influence. A group may be defined as:

- (i) A number of individuals who interact with one another;
- (ii) A collection of individuals who are interdependent in some way;
- (iii) People who join groups in order to achieve goals they are unable to achieve by themselves;
- (iv) A social unit consisting of two or more persons who perceive themselves as belonging to a group;
- (v) A collection of individuals who are trying to satisfy some personal needs through their joint association;
- (vi) A collection of individuals whose interactions are governed by a set of rules and norms and lastly
- (vii) A collection of individuals who influence each other.

According to Johnson and Johnson (1994), there are many elements that can be used to define a group in such a manner that it would not be proper to perceive a community as a homogenous group. While this study maintains that small-growers form a group, it is clearly understood that small-growers may from time to time associate themselves with other interest groups depending on their interest and any needs that may not be served within the broader small-grower group at a particular point in time.

In an attempt to ensure the effective implementation of group interests and objectives, institutions are established. In the case of farmers, the common institution is farmers' association and cooperatives. Cited by Gyllström (1991), Copac (1983) defines a cooperative as an association of persons voluntarily joining together to achieve a common end through the formation of a democratically

controlled organization (Gyllström, 1991). Cooperatives are used as a vehicle to achieve the objective of the group. Gyllström (1991) maintains that:

“...the main reason for a smallholder to join a society is to realize economic benefits that cannot be obtained on an individual basis (Gyllström, 1991).

Another form of association is a Rotary Credit Association (RCA) or as it is commonly known ‘stokvel’. Cited by Thomas (1991), Andener (1964) observes that

“An RCA is an association formed upon a core of participants who agree to make regular contributions to a fund which, is given in whole or in part, to each contributor in rotation (Thomas, 1991:290).

Thomas (1991) observes that RCAs are a worldwide phenomenon occurring in America, Asia, Europe, Africa and Oceania.

Some of the challenges facing small-growers include a lack of capital, expertise and poor access to the market. Associations help individuals deal with these challenges. It has been observed that:

“...working largely on their own and with little in the way of experience and capital, often encounter severe problems, both in obtaining enough stock to ensure a sustained profit and in securing adequate markets (McIntosh 1991:279).

Associations are built based on individual commitment and trust. Gyllström (1991) noted that members of the association are always concerned about the association’s level of efficiency and sense of quality. Development of mistrust as a result of lack of transparency and efficiency may break down the association. It is clear that groups can overcome the challenges of marginalization through establishing appropriate institutions to drive their objectives.

### **2.2.3 Local Economic Development**

The discussion of the concept of ‘geographical functional community’ above highlighted the interaction by members of a particular group who wish to achieve a common objective. The strategy for achieving particular objectives is crucial as to a great extent it determines the level of ownership and success. Local Economic Development (LED) is one strategy that can be used. Another strategy discussed below is Community Economic Development. The two are closely linked.

Cited by Nel (1999), Zaaijer and Sara (1993) observe that LED “is essentially a process in which local governments and /or community based groups manage their existing resources and enter into partnership arrangements with the private sector, or with each other, to create new jobs and stimulate economic activity in an economic area” (Nel, 1999 ). The Department of Provincial and Local Government defines LED as

“... an outcome based in local initiative and driven by local stakeholders. It involves identifying and using local resources, ideas and skills to sustain economic growth and development. The aim is to create employment opportunities for local residents, alleviate poverty and redistribute resources and opportunities to the benefit of all local residents” (Department of Provincial and Local Government, 2003).

Both definitions put emphasis on the use of local resources to stimulate economic growth and employment opportunities through the development of partnership between various stakeholders.

It is anticipated that there is no single approach to LED that is a solution to all problems (Nel, 1999, Department of Provincial and Local Government, 2003). Nel (1999) describe LED as:

“...a catch-all term to describe localised economic activity initiated by a local community or local authority / external agency / non governmental organization in a rural or urban area (Nel, 1999:7 ).

Activities ranging from farming and sustainable rural development to city-based development strategies can fall within the broad parameters of the concept of LED (Nel, 1999). In this regard LED is very broad in its focus. LED places more emphasis on optimization of local resources to create earning opportunities and to improve quality of life. Emphasis is also placed on entrepreneurial development as well as partnerships between different parties. Such partnerships can take place at local level (between local actors) or at an external level (between local people and outside businesses). Lastly, LED could either be initiated by local people or by external development agents such as government or private sector.

A distinction is made between the ‘top-down’ and the ‘bottom-up’ approaches. The ‘top-down’ approach is defined as authority-based and mostly exercised by the central state (Nel, 1999). In the case where the authorities have initiated the concept, they may “ ...in consultation with key stakeholders and sometimes with

the host community, unilaterally decide on development options for their locality” (Nel, 1999). The ‘bottom-up’ on the other hand is community based, and it is initiated from within the community. Nel (1999) observes that:

“... ‘bottom-up-’ development differs from that of ‘top-down’ development in terms of the focus and orientation of the controlling agency and the degree of local ownership which may exist’ (Nel, 1999:32).

In real terms, the ‘bottom-up’ approach should be more successful as conceptualization, planning and decision making takes place within the community by members who understand their needs and who know what they want.

In South Africa LED has been widely adopted by the local municipalities who, through the use of Integrated Development Plans, engage with local communities to understand their needs. The roles of the local municipalities in LED include, among others, technical support, coordination, assistance with capacity building and the monitoring of economic development initiatives. The Department of Provincial and Local Government (2003) observe that:

“...the constitution defines one of the functions of local governments as the ‘promotion of social and economic development’...” (Department of Provincial and Local Government, 2003).

The constitutional mandate is further reinforced by the White Paper on Local Government which observes the commitment of local governments to:

“... working with citizens and groups within the community to find sustainable ways to meet the social, economic and material needs and improve the quality of their lives” (Department of Provincial and Local Government, 2003).

In local municipalities, LED programmes are developed through inviting local stakeholders to have an input through IDP forums. Input from local communities is incorporated into the municipalities’ development plans and is used to identify community development projects in terms of the priority of the needs.

## 2.2.4 Community Economic Development

Another strategy for poor communities to deal with social and economic challenges is Community Economic Development (CED). Swack and Mason (1994) suggest that the root cause of underdeveloped communities is a lack of ownership and control of local resources such as land, institutions and capital. In order to improve their situations and bringing about community development, local communities may adopt CED. Shragge (1993) maintains that poverty is caused by the failure of the advanced capitalist system to meet the needs of the general population. Shragge (1993) concurs with Swack and Mason (1994) in that CED is a direct response by poor communities to market failure, such as exclusion of people from labour market.

It appears that the concept of CED emerged as an alternative approach to the capitalist view of economic development held by 'early theories of development'<sup>6</sup>. These theories viewed development solely from the perspective of economic growth. Contrary to these theories, CED takes a holistic approach to development by recognizing not only the economic but also the social well-being of the local people. Shragge (1993) observes that:

“... CED is not primarily about economic development in the conventional sense of stimulating the growth of private enterprise, but it is, rather part of the tradition of community intervention. Thus, there is a link between social and economic development, the traditions of mobilization and advocacy for social change and the building of alternative community institutions (Shragge, 1993:1).

The concept of CED therefore takes into account economic development initiatives with a combination of a range of non-market livelihood activities. The emphasis is on all livelihoods that contribute to the quality of life and social well-being.

The definition of the concepts of LED and CED are subject to interpretation. While, the approach used by the Department of Provincial and Local government (2003) suggests that that LED encompasses CED, a distinction must be made that the former puts emphasis on entrepreneurial development. CED, according to Shragge (1993) put equal emphasis on economic development as it does on social

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<sup>6</sup> See discussions in Chapter 2 Section 2.3 below



development. This study makes the assumption that small-scale timber production is a community intervention to bring about social change.

### **2.2.5 Small-scale farming as an informal sector**

It must be clarified that although the concept of small-scale farming was introduced in Chapter 1 Section 1.2.5, the purpose was to provide the historical background information on when it emerged. In this Chapter, the objective is to give an understanding on the functionality of small-scale farming. Before attempting to define what constitutes small-scale farming, it is essential to place this concept within the informal economy as opposed to the formal economy. Defining the informal economy takes into account several factors and there is no single criterion:

“...one criterion common to all definitions is that informal economy activities are small in scale and elude government regulatory requirements such as registration, tax and social security obligations and health and safety regulations” (Devey, Skinner and Valodia, 2003:144).

Devey, Skinner and Valodia (2003) also observes that the informal economy encompass economic activities, employment relations and degrees of potentials. The Informal economy may stay at a particular level (survivalist) or may graduate to the formal economy. It is important to note that the informal economy cannot be fully understood without understanding how it is connected to the formal economy. The interest of this study is to understand whether as part of an informal economy, small-growers are in a static state or in a state of transition to formal economy. There are other perspectives of viewing informal economy. In the case of small-growers these include the size in acreage and capital investment. There is lack of consensus regarding the size distinguishing small-scale and large-scale. Harrison and Herbohn (2002) suggest that:

“A planting by a farmer of less than 5 ha would be small; a planting of more than 500 ha by a company would be large” (Harrison and Herbohn, 2002:5).

The limitation with this approach is that there is a huge gap between 5 and 500 ha. This perspective is not precise but it can be regarded as a useful guideline.



Perhaps one useful approach would be to juxtapose the small-scale against the large-scale production. In terms of ownership, large-scale is owned and managed by government or large companies. Its vision is to produce large volumes of timber on very long-term basis. Large-scale production is part of a broader system that includes processing mills. Small-scale on the other hand "...typically consist of a single or small number of planting blocks, non-professionally managed and often a lack of silvicultural skills, with little planning for future marketing" (Harrison and Herbohn, 2002:6-7). Operating without necessary experience and capital is a common feature within informal economy (McIntosh 1991).

Lastly, in their study of small-scale farmers in the Western Cape, Cutling and Saaiman (1996), recognized the difficulties of defining a small grower, but came up with characteristics that can help to understand this concept. According to Cutling and Saaiman (1996) a small-grower is characterized by the following features:

- (i) A historically disadvantaged individual or group;
- (ii) Having access to land which normally supports a small or medium agriculture enterprise; and
- (iii) They were neglected in the past and have poor resources of land, water, capital inputs, skills and technology.

For the purpose of this study the concept of small-grower will be used specifically to refer to previously disadvantaged black subsistence farmers who now produce for the market. They are small-growers because of their lack of access to proper land, capital, skills and technology. Of interest to this study is to understand whether small-scale timber production is a survivalist approach or whether there is potential for small-growers to graduate to the formal economy.

The concept of LED does encourage the development of a partnership between different stakeholders. Of central concern is how authentic and effective such partnerships are.

### **2.2.6 Contract farming**

As part of the background of small-scale timber production, it is essential to understand contract farming, as it is at the centre of the sustainability debate for

small-growers. Contract farming in this regard denotes a relationship between large-scale growers and small-growers. Contract farming operates under certain conditions. Despite these conditions, as a form of partnership, contract farming has the potential for mutual benefits to both parties particularly with respect to risk and uncertainty (Glover and Kusterer, 1990). The arrangement entered into by large-scale and small-growers may:

“...specify several conditions of sale and obligate the firm to provide technical assistance, agro-chemicals and other services” (Glover and Kusterer 1990: 2)

Glover and Kusterer (1990), identified several advantages to the private sector, which are relevant to timber production. The prime motive for firms to engage in contract farming is that since their processing plants have high fixed costs, these firms have an interest in keeping raw material inflows at a steady level close to plant capacity (Glover and Kusterer, 1990). Contract farming in this regard addresses the uncertainties of sourcing material from an open market. Setting conditions that obligate small-growers to supply harvested material creates a closed market system and guarantees large farms material without competing for it with other buyers. Glover and Kusterer (1990) argues that contract farming is a way of distributing risk between the firm and growers and the company does not have to invest in land, hire labour and manage large-scale farming (Glover and Kusterer, 1990).

“The contract reduces much of the uncertainty that would exist if the company simply bought crops on the open market, and it gives it some control over the production process” (Glover Kusterer, 1990:2)

Taking into account the background of African farmers discussed in Chapter 1 Section 1.2.4 above, access to commercial farming by subsistence farmers is extremely difficult. For this reason, contract farming facilitates small-growers' access to technologies, credit and the market. Glover argues that

“...international markets, which are deeper than local ones, are inaccessible to peasant farmers unless specific channels have been established (Glover and Kusterer, 1990:)

Ideally, the concept of contract farming provides a platform for both large-scale growers and small-growers to overcome their risks and uncertainties.

“Contract farming has the potential to overcome these problems. The risk reducing aspect of the contract may facilitate technology adoption. Input supply and

extension may be superior to government services not because of private sector expertise, but because the firm has a direct interest in seeing that these are carried out efficiently: the results will be directly reflected in growers' yields and quality and thus in the firm's profit. Credit provision is facilitated because the firm can deduct loan repayment from crop payments and can use crop as collateral" (Glover and Kusterer, 1990)

It appears that difficulties in terms of accessing credit, experience and the markets are avoided through contract farming.

Chapter 4 Section 4.2.4 will demonstrate the practicality of contract farming followed by a discussion of this in Chapter 5 Section 5.2.4. The discussion will show whether or not contract farming is of mutual benefit to both large-scale farmers (in this case Sappi and Mondi) and small-growers at Entembeni.

### **2.2.7 Viability of small-scale farmers**

The use of the concept 'viability' in this study refers to practicality of a particular livelihood activity (in this case small-scale timber production), with the view to understanding whether the livelihood outcomes are sufficient to justify the inputs invested in an activity. Input to timber production includes individual based assets such as capital and expertise as well as assets based on communal property such as land. It is essential therefore, that any attempt to understand viability of small-scale timber production should create links between individual and community tradeoffs, in terms of what is lost or gained at individual and community level as a result of timber production. Existing literature has considered economies of scale (both physical scale and timber scale), access to land and efficiency and access to markets as some of the factors influencing the viability of small-scale timber production. These factors are discussed in turn below.

#### **Economies of scale**

Viability is concerned with the feasibility of a particular practice. In the case of small-scale growing, questions of availability and conditions of resources are taken into account. Understanding the viability of small-scale timber production is made complicated by the fact that various factors have to be considered. The question of

feasibility is also complex in that it involves many factors. Land may be available but conditions such as climate may make it not feasible to grow timber in a particular area. Other factors that may contribute to viability involve access to capital, expertise and the market. If the resources required to grow timber are available and favourable, but that the market is not accessible, the initiative may not be considered viable. Literature shows that there are various factors that need to be taken into account to determine whether a particular enterprise is viable. However, the concept of size seems to be the most generally considered in the measurement for viability. Studies in the agricultural sector suggest that a farm below a particular size is likely to incur more production costs per unit than are likely to be recovered. (Harrison and Herbohn, 2002; Briton and Hill, 1975). Subsequent to this view:

“Governments and large companies have traditionally favoured large-scale plantations to gain economies of scale” (Harrison and Herbohn, 2002:3).

Larger scale farming has the advantage that production costs per hectare are spread over the total area whereas in the case of a small-scale scheme this is not possible. Also, a large-scale operation is better able to deal with risk factors because:

“Given the necessary technical and administrative management, the larger the unit area of plantation the more effectively can it be planned and managed, and the less will be the cost per hectare of its establishment, maintenance and exploitation.” (Wattle Research Institute, undated:13).

Writing about the situation of small-scale farmers, Erskine (1991) argues that:

“ Data from some countries in Africa, for example, show that, in general, yields per hectare are higher on large farms which not only make more intensive use of modern inputs but also labour” (Erskine, 1991).

Perception of a schemes' efficiency based on the size, should not obscure the fact that the viability of farming depends on various other factors such as managerial capabilities and location (climate and soil) that may exist between small and large farms. Acreage is not the only measuring unit. A holistic economic perspective should take into account the level of resources required in terms of inputs, such capital investment and the number of workers employed and or even output (Briton and Hill, 1975:16). This suggests that conclusions cannot be reached based only on the size of the enterprise. Kinsey and Binswanger (1996) made observations



that size is not the only determinant for success as there is a range of other factors:

"More significant than physical scale appears to be the time scale from implementation, flexibility in the programme, and the quality of staff involved in the programme, labour, managerial skills, the machinery and capital stock that the farmers own and the farmers access to credit markets (Kinsey and Binswanger, 1996. 113).

Further, the study in Zambia showed that excessive allocation of land to farmers with little labour, poor farming skills and poor access to credit led to poor results (Kinsey and Binswanger, 1996)

Studies in KwaZulu-Natal suggest that the majority of small-growers are farming on less than two hectares (Forestry South Africa, undated; Cairns, 1995). In this case it appears that the physical scale hinders the potential of small-growers. A correlation between the size and the success of a farm has been noted. Due to the scarcity of land in KwaZulu-Natal, small-scale farmers are struggling to succeed (NCT Forestry Co-operative Limited, 2003; Cairns, 1995).

Available literature also considers the fact that timber is grown on a seven-year rotation. In this case the time scale becomes a significant factor in understanding the viability of small-scale timber production. If harvesting takes place on a seven-year cycle, this suggests that the farmer only receives income from timber production once in seven years. A'Bear, Friedman and Pollet (1991) made the observation that:

"...based on a one hectare (the average area planted to timber by existing growers) a farmer cannot make a living from timber. A minimum requirement is 3 harvestable hectares per annum. Thus in the case of a 7 year rotation period, a timber grower would require 21 hectares planted at 3 hectares per annum. This means that a livelihood will only be made in the seventh year after starting the enterprise." (A'Bear, Friedman and Pollet, 1991: 5-6).

Evidently, a combination of physical and time-scale effects weakens the viability of small-scale timber farming.

### **Viability of small-scale timber in relation to land use options**

There have been some references that viability of small-scale timber is affected by access and use of land in rural areas. Scarcity of land and conflicting interests over



the ownership and use of the available land brings an important perspective to this subject.

Studying the situation of small-scale cane growers Sokhela (1999) noted that the initiative to encourage subsistence farmers to participate in commercial sugar cane was superimposed on the already existing patterns of tribal land settlement (Sokhela, 1999: 42). This situation is also applicable to small-scale timber growers, and has the potential to compromise existing land use patterns. In the case of conflicting interests as a result of small-scale timber production, the observation made by Cairns (1995) includes conflict around land use options, which in some cases led to protests by local communities. Cairns observed that in KwaZulu-Natal, small-growers grow timber in plots, which were previously used as communal grazing areas (Cairns, 1995). Understanding viability in a broader context of understanding some costs was emphasized by A'Bear, Friedman and Pollet (1991) who observed that:

"It is impossible however, to discuss benefits without also raising associated costs or constrains involved" (A'Bear, Friedman and Pollet, 1991: 6).

Looking at the situation of small-scale timber growers in Biyela and Mbawzana, KwaZulu-Natal, A'Bear, Friedman and Pollet (1991) observed that the available grazing area was shrinking because of timber, but the cattle numbers were not shrinking accordingly. It appears, therefore, that the success of timber growing is not without costs. Ordinary members of the community may incur costs as a result of timber growing. Conflict of land use appears to be a common trend.

It appears that understanding viability cannot be limited to an individual farmer as his or her activities may have impact to the broader community. A conclusion whether or not an activity is viable, should ensure that there or no severe costs at both individual and community level.

### **Viability in relation to production efficiency and access to markets**

With regard to the challenge facing small-growers, Holding, Anyonge and Roshtko (2003) draw parallels between the need to produce the quality and quantity

required by the market and the role of the timber industry to generate the income required by the farmers. The evidence that small-scale growers do not embark on intense silviculture may well be linked to their limited investment capabilities. This situation is counterproductive (Harrison and Herbohn, 2002).

International market standards are slowly being introduced in the forestry industry. Producers and manufacturers are expected to have their practice certified in terms of management systems and the ability to comply with labour laws and to be in keeping with environmental monitoring systems such as Environmental Management Plans (EMP). The study conducted by the Institute of Natural Resources in KwaZulu-Natal regarding the forest certification standards showed that there was high level of unawareness and that such measures would only deny small-scale timber growers access to the market (NRET, undated). Discussions on the background of African farmers showed that small-growers were systematically excluded from the markets.

It appears that low volumes (due to scarcity of land) and poor quality (due to lack of management skills) also prevent small-growers from accessing the market. Certification standards is yet another hurdle to be crossed by small-growers in order to improve their access to the market. Lack of production efficiency and poor access to the market significantly undermines viability.

### **2.2.8 Sustainability of small-scale forestry**

The United Nations Development Programme (UNDP) has a sustainable development charter called the 'Millennium Development Goals'. Apart from campaigning for sustainable development in general, the Millennium Development Goals particularly regard an approach to work with small-scale farmers as part of the solution for poverty eradication, which can:

"Increase the productivity of small farmers in unfavourable environments-that is, the majority of the world's people. A reliable estimate is that 70% of the world's poorest people live in rural areas and depend on agriculture" (United Nations, 2003:4)

If the majority of poorest people are dependent on agriculture, it therefore becomes an important challenge to ensure that small-scale farming is practiced in a sustainable manner. Evidence provided by some literature shows that the potential for sustainability is very high in small-scale farming activities compared to larger scale or other land use options.

“In small-scale forestry, the intensity of silviculture is often low, which favours ecological sustainability...Less intensive silviculture can also result in greater soil surface protection. Small-scale forestry is a more ecologically sustainable activity than other land use, and small-scale forestry is more sustainable than larger-scale forestry” (Harrison and Herbohn, 2002:9-10)

The limitation with this approach is that it only views sustainability from the narrow sense of an ecological point of view. Other ecological concerns would include the effects of small-scale farming particularly forestry, on running and underground water as well as on natural vegetation. However, this approach does provide some guidelines and begins to answer some of the questions regarding the sustainability of small-scale farming practice.

## **2.3 Theoretical framework**

Just as in the case of the conceptual framework, it is crucial to highlight the theoretical framework within which the investigation of small-scale timber production is based. This section approaches the theoretical background from two perspectives. The first perspective is concerned with the debate surrounding timber production while the second perspective concentrates on theories of sustainable development in general.

The question of viability and sustainability of timber production attracts two contentious schools of thought. The first school of thought views timber production from an ecological perspective while the second school of thought is economist in its approach.

### 2.3.1 Ecological and economist schools of thought

The ecological perspective is more concerned with the impact of timber on the environment. These impacts range from replacement of natural vegetation by alien species, consumption of very large quantities of underground water, stream flow reduction, environmental degradation and loss of habitat (Gasana, 1999; Tewari 2003; Witch, 1974; Foy and Willis, 1998; Pott, 1997). Olbrich et al (1997) suggest that:

“Afforestation involves the replacement of large tracts of indigenous vegetation with alien trees. This change of the vegetation affects the properties of the ecosystem. The most important of these are changes to the hydrology of afforested sites (with implications for water yield, wetlands and riparian zones), changes to the habitats (with implications for biodiversity and soil fertility), and to the appearance of the landscape (with impacts on aesthetic)” (Olbrich et al, 1997:56).

In addition to the impact on terrestrial vegetation, plantations lower the water table and reduce stream flow for downstream users. This has implications for agricultural productivity, domestic water as well as aquatic biodiversity. The opposing view is that while afforestation has an impact on habitats, some species are adapted to forested areas.

“There have been other recorded instances of species becoming naturally re-established after the advent of forestry, such as klipspringer ...”(Pott, 1997:46)

The positive impact of exotic plantations have been observed:

“The tree farming industry in South Africa has had a number of positive environmental spin-offs, such as reducing the pressure on our indigenous forest resources by supplying saw wood, mining timber and woodpulp. (Timberwatch, undated –b)

The view from an economic approach contends that afforestation is crucial for national welfare and economic development through job creation and foreign exchange (Department of Water Affairs and Forestry, 1996; Malherbe, 1973; Foy and Willis, 1998). An environmental NGO has observed that:

“This is not to say that timber plantations do not play an important role in the local economy. There is legitimate cause for the cultivation of exotic tree species in South Africa, and it can be argued that they have played a role in preventing the further exploitation of our forest resources”. (Timberwatch, undated-a)

The opposing view is that much as afforestation may be an important factor in economic growth, it comes at a cost with respect to depletion of indispensable resources.

### 2.3.2 'Earliest theories' of development

Debate on the subject of development dates back many decades. Economists and social scientists developed an interest in this subject after the Second World War and probably at the end of colonial era in the Third World Countries (Burkey, 1993). Theorists have since then engaged in an academic debate to define what development is and how it should or should not take place. Neo-colonialism, modernization and conflict theories dominated early thinking of development. While all these theories were different in some respects, their common denominator was to interpret development in terms of economic growth (Burkey, 1993, Ngobese and Cock, 1997). Further, there was an assumption that developed countries would pave the way for development of the Third World countries and that economic growth would eradicate poverty. Of modernization theory, Burkey maintains that:

“Development and economic growth became synonymous with progress and higher levels of civilization... Development in the Third World was expected to imitate the process in which the less developed countries gradually assumed the qualities of the industrialized nations.” (Burkey, 1993: 27).

This approach made a simplistic assumption that development was nothing but economic growth. Social transformation and environmental concerns were not part of the development equation. Implications of development based on earliest thinking proved to have limited impact as observations showed no signs of a positive relationship between economic growth and social transformation. This is confirmed by Burkey (1993)

“And yet the optimism of the 1950s and 1960s could not be sustained. The empirical evidence could not be denied. More and more information accumulated which pointed towards growing poverty, marginalization, mass unemployment and recurrent starvation crisis.” (Burkey, 1993:28)

Earliest theories of development are criticised in that even in areas where economic growth was taking place, only the few elite members of the society or a few countries in the world benefited from development. Economic growth did not translate to social transformation and eradication of poverty as it had been anticipated. UNDP observes that:

“Poverty has increased even in some countries that have achieved overall economic growth, and over the past decade income inequality worsened in 33 of 66 developing countries with data.” (United Nations, 2003:15)



Further, Burkey (1993) observes that, despite economic growth, Third World countries experienced negative growth and debt crisis. Another criticism of the earliest thinking of the development perspective is that activities for economic development failed to recognize the physical environment as an important element for development. Ngobese and Cock (1997) argues that:

“In the past development has often been at the expense of the environment, and, in particular, the methods used to affect economic development have invariably led to environmental degradation” (Ngobese and Cock ,1997:256).

Concerns about the earliest theories of economic development led to a paradigm shift towards sustainable theories of development.

### **2.3.3 The theory of sustainable development**

Concerns about the lack of a clear cause and effect relationship between economic growth and social transformation as well as environmental well-being led to a paradigm shift towards a more holistic thinking in development. Munslow, FitzGerald and McLennan (1997) observe that a different kind of consensus is emerging, however, centred on notions of sustainability.

In the last three decades sustainable development has emerged as a new concept in the field of development. Burkey (1993) observe that sustainable development takes into account three main elements: physical, social and economical.

“Any productive economic activity involves the mobilisation and management of some combination of all or most of the factors of production. These factors are land and/or raw material, labour (skilled and unskilled), capital, energy, tools, machinery, plant, management and entrepreneurship” (Burkey, 1993:36)

The development debate is not only the concern of economic and social scientists. In the past three decades, politicians and policy-makers have taken a keen interest in the debate with, among others, the objective to create an enabling political arena by forming global partnerships and shaping policies. Further, religious perspectives also strongly advocate the elements of sustainable development.

Under the auspices of the United Nations (UN), international communities have engaged in the debate about sustainable development. The UN has since

convened international conferences, commissioned investigations on environment and development and its members have declared their commitment to sustainable development.

UN deliberations have resulted in, among other things, the 1972 Stockholm Declaration, the Doha Declaration, the Rio de Janeiro Declaration and the Johannesburg Declaration (United Nations, 1992a; United Nations, 2002). International processes and investigations on environmental and development studies have culminated in putting in place guidelines, principles and environmental programmes serving as a benchmark for sustainable development and environmental management. The Agenda 21 and the United Nations Millennium Goals are just two examples of these programmes.

In 1983, the UN resolved to establish a special commission to investigate environment and development issues and put forward suggestions and strategies which were to serve as guidelines for development to the year 2000 and beyond (United Nations, 1987:1). The World Commission on Environment and Development (WCED) also known as '*Our Common Future*', or the Brandtland Report, is viewed as a champion in setting guidelines for sustainable development in a holistic manner (Palo and Mery, 1996; Hunter, 1997; Ngobese and Cock, 1997). WCED viewed the concept of sustainable development as an approach:

“...that meets the needs of the present without compromising the ability of the future generations to meet their own needs. The concept of sustainable development does imply limits – not absolute limits but limitations imposed by the present state of technology and social organization on environmental resources and by the ability of the biosphere to absorb the effects of human activity (United Nations, 1987:24)

The WCED did not only highlight the three fundamental elements of sustainable development (management of physical environment, social transformation and economic growth), it also raised concerns about both intragenerational and intergenerational equity. Intergenerational equity refers to “...equity among members of present societies in terms of access to economic, social and political rights and resources” (Singh and Strickland, 1994:3). Singh and Strickland (1994) further observe that intragenerational equity promote a “...fair treatment of future

generations in their access to the means for sustainable development” (Singh and Strickland, 1994:3).

This new way of thinking recognizes that development is a process based on relationships between the necessary elements and the purpose of development. WCED further regards that:

“Yet in the end, sustainable development is not a fixed state of harmony, but rather a process of change in which the exploitation of resources, the redirection of investments, the orientation of technological development, and institutional change are made consistent with future as well as present needs” (United Nations, 1987:25).

WCED laid the path for the concept of sustainable development. Later, Agenda 21 endorsed the commitment of the international community for the protection of the environment, social and economic development and principles of sustainable development, reflected in both the Johannesburg Declaration as well as the UN Millennium Goals (United Nations, 2000: United Nations, 2002). Commitment to sustainable development begins with the recognition of the challenges facing nations of the world.

“We are confronted with a perpetuation of disparities between and within nations, a worsening of poverty, hunger, ill health and illiteracy, and the continuing deterioration of the ecosystems on which we depend for our well-being. However, integration of environment and development concerns and greater attention to them will lead to the fulfilment of basic needs, improved living standards for all, better protected and managed ecosystems and a safer, more prosperous future.” (United Nations, 1992b).

Political commitment, overlapped with increasing interest from scientific and religious proponents of sustainable development will promote a strong relationship between economic growth, social transformation and environmental well being as well as equity (Burkey, 1993, Hunter 1997, The Bahá'í International Community, 1996). Religious perspectives on sustainable development are based on the assumptions that development initiatives:

“...will succeed only to the extent that they link material progress to fundamental spiritual aspirations, respond to increasing interdependence among the people and nations of the planet, and establish a framework within which all people can become active participants in the governance of their societies” (The Bahá'í International Community, 1996:1).

The Bahá'í regards institutional and social development as fundamental elements for sustainable development. Institutional development is centred around the family which is seen as "...the primary institution of society and the principal incubator of values, attitudes, beliefs and behaviours". Whereas "...the physical, social, economic, legal and political designs of our communities must serve all members of the society, not just the privileged". (The Bahá'í International Community, 1996:2). These religious principles are common to the principles of sustainable development of justice, equity and social equality advocated by both the scientists and international politicians as demonstrated above.

The significance of political interest in the debate of sustainable development is premised on democracy, which seeks to promote institutional development, equitable distribution of benefits, social equality, gender equality and a just society. International politicians realize that sustainable development can take place efficiently in an enabling political system.

Clearly, inclusion of the physical environment and economic growth that enhances social transformation into the development discourse is increasingly dominating the debate of sustainable development. This study adopts and uses the concept of sustainable development as per the definition provided by South African Department of Environmental Affairs and Tourism which defined sustainable development as:

"...social and economic development within the biophysical environment that meets the needs of the present without compromising the potential of the future to meet their needs" (Department of Environmental Affairs and Tourism, 2002:3).

Mention must be made that sustainable development is not without some shortcomings. Firstly, 'sustainability' is open to many interpretations. It means different things to different people, and for instance environmental sustainability can then be differentiated from economic sustainability (Hunter, 1997, Ngobese and Cock, 1997). Secondly, because of the emphasis on long-term perspective, the North may use the concept of sustainable development because its realization lies far in the future (Ngobese and Cock, 1997). With element of long-term in this regard, there is no particular point in the near future where a consensus can easily be reached about sustainability, as the long-term perspective is infinitive.



## **2.4 Social model: based on sustainable livelihood concepts**

The objective of a social model is to serve as a framework for analysis and assessment of data, which will then help reach a decisive conclusion about the findings of the study. Because sustainable development is to be achieved through sound environmental management, economic growth and social development, measurement for sustainability should take all three of these elements into account. An assumption is therefore made that an assessment tool must be able to engage and respond to environmental, economic and social variables. It must be reiterated that the scope of this study was limited to an assessment of viability and sustainability of small-scale timber production primarily from the perspective of the small-growers. The scope and the nature of the study therefore emphasized the social aspects without ignoring the environmental and economic aspects. To achieve this, the study adopted the Sustainable Livelihood Framework (SLF).

SLF is a way of understanding how households derive their livelihoods by drawing on capabilities and assets to develop livelihood strategies (de Stag  2002:2). The SLF of the Department for International Development (DFID) suggests that "... It can be used in both planning new development activities and assessing the contribution to livelihood sustainability made by existing activities". (The Department for International Development, 2001). In particular, SLF has been adopted by this study for assessment purposes. However, the outcome of the study may well be incorporated into the planning and decision-making process by small-growers and or government and the private sector. A livelihood framework helps development practitioners and researchers to identify what people are already doing to cope with risks and uncertainties, to make connections between factors that constrain or enhance livelihoods (e.g. policies and institutions) and to identify measures that can strengthen assets, enhance capabilities and reduce vulnerability (de Stag , 2002: 4).

The DFID livelihood framework is people-centred and focuses on how people operate within a vulnerable context and how they draw on different types of livelihood assets or capital to achieve desired livelihood outcomes. (de Stag , 2002: 5). SLF has been defined by the DFID as follows:



“In its simplest form, the framework views people as operating in a context of vulnerability. Within this context, they have access to certain assets or poverty reducing factors. These gain their meaning and value through the prevailing social, institutions and organisational environment. This environment also influences the livelihood strategies, ways of combining and using assets, that are open to people in pursuit of beneficial livelihood outcomes that meet their own livelihood objectives” (The Department for International Development, 2001,1).

SLF comprise:

- (i) The Vulnerability Context;
- (ii) Livelihood Assets;
- (iii) Transforming Structures and Processes;
- (iv) Livelihood Strategies and
- (v) Livelihood Outcomes.

Each of these components is discussed in turn below.

### **The Vulnerability Context**

According to DIFD, the Vulnerability Context explores the total external environment in which people exist. “People’s livelihoods and the wider availability of assets are fundamentally affected by critical trends as well as by shocks and seasonality-over which they have limited or no control” (The Department for International Development, 2001: 13). External factors identified in the vulnerability context include shocks, trends and seasonality. In terms of assessing the sustainability of small-scale timber growing, it is important to understand how such external factors impact on timber production and how small-growers respond to these factors.

### **Livelihood Assets**

SLF attempts to understand “people’s strengths (assets or capital endowment) and how they endeavour to convert these into positive livelihood outcomes” (The Department for International Development, 2001). These assets include:

- (i) Human capital (skills, knowledge ability to labour and good health);
- (ii) Social capital (networks/connectedness, membership and relationship of trust);
- (iii) Natural capital (public goods such as natural resource stocks);

- (iv) Financial capital (availability of stocks credit, cash) and
- (v) Physical capital (affordable transport, access to information, secure shelter and buildings) (The Department for International Development, 2001).

This study sought to understand how small-growers accessed these capitals and how were they able to use these capitals to optimize the livelihood outcomes.

### **Transforming structures and processes**

Transforming Structures and Processes refers to institutions, organizations, policies and legislations that shape livelihoods. On the one hand, structures are seen as the hardware, the organizations, both private and public – that set and implement policy and legislation, deliver services, purchase, trade and perform all manner of the functions that affect livelihoods (The Department for International Development, 2001). Policies, on the other hand are seen as software. They determine the way in which structures and individuals operate and interact (The Department for International Development, 2001).

### **Livelihood Strategies**

Strategies “...denote the range and combination of activities and choices that people make/undertake in order to achieve their livelihood goals” (The Department for International Development, 2001:34). The total environment as described by the SLF informs strategies. A strategic decision is important as it may enhance or hinder the desired livelihood outcomes.

### **Livelihood Outcomes**

Livelihood outcomes refer to the achievements or outputs of Livelihood Strategies (The Department for International Development, 2001). Outcomes may include income, increased well-being and increased food security.

## **What does SLF regard as sustainable development?**

As it is the key to this study it is important to ask the question, when can an activity be regarded as sustainable? According to SLF, livelihoods are sustainable when they:

- (i) are resilient in the face of external shocks and stresses;
- (ii) are not dependent upon external support (or if they are, this support itself should be economically and institutionally sustainable);
- (iii) are able to maintain the long-term productivity of natural resources; and
- (iv) do not undermine the livelihoods of or compromise the livelihood options to others (The Department for International Development, 2001).

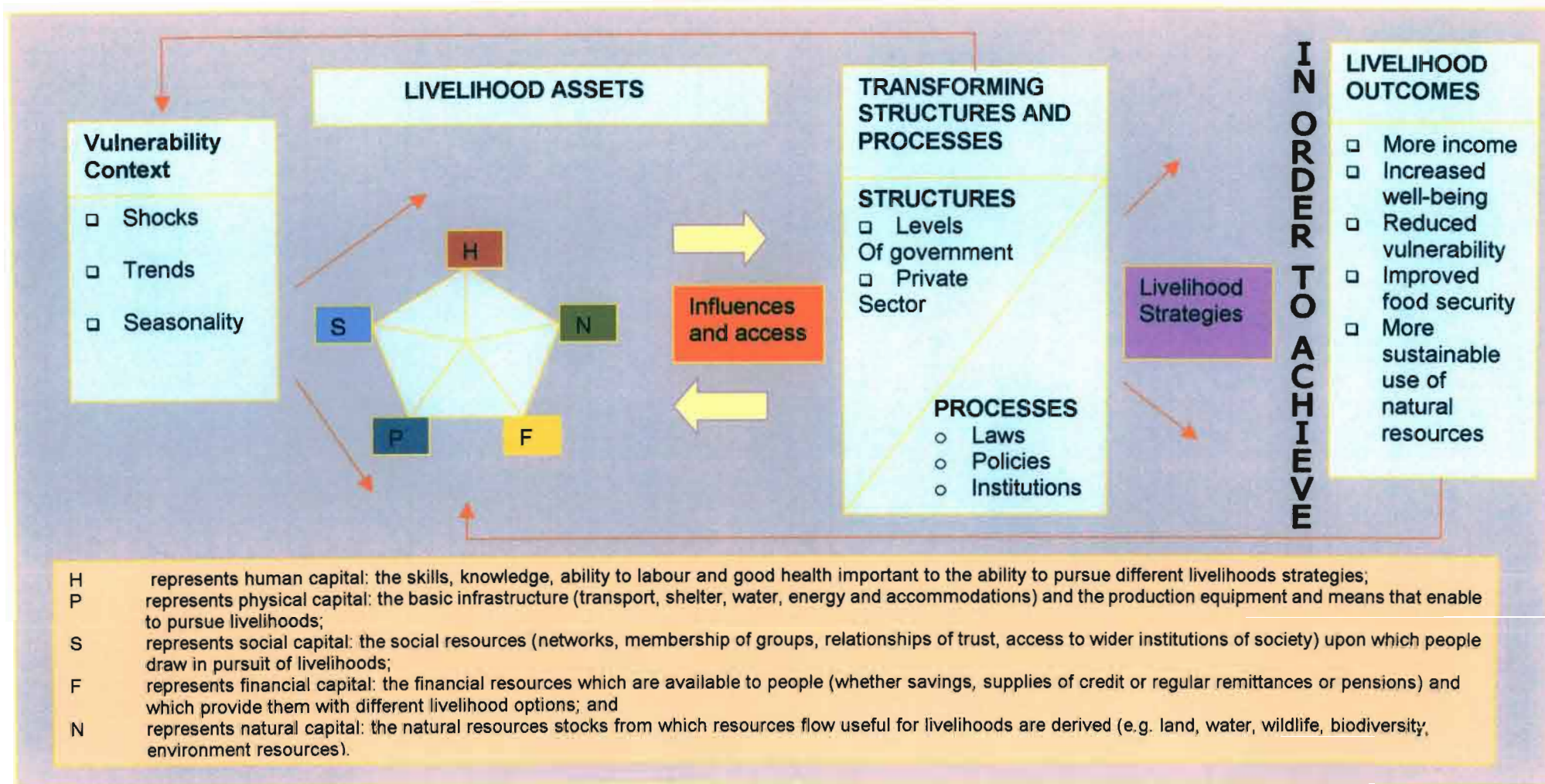
Further, the Department for International Development DFID (2001) also maintains that:

“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 and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resources base” (The Department for International Development, 2001: 1).

In making an assessment of whether or not small-scale timber production is sustainable, discussions in Chapter 5 Section 5 to Section 6 will be guided by this vision of SLF regarding what constitutes sustainability.

Figure 2.1 below demonstrate the Sustainable Livelihood Framework.

Figure 2-1: The DFID Sustainable Livelihood Framework



(Source: de Satgé, 2002:5).



## 2.5 Conclusion

In conclusion, this chapter defined the key concepts used in this study. Definition of these concepts and incorporation of existing literature, particularly on small-scale timber production, has set some parameters within which this activity can be seen as viable or sustainable.

In comparison to large-scale timber production, small-scale is favoured as more sustainable as it has less impact on the environment. However, it is clear that to be viable, economies of scale (physical and time scale) need to be considered. In other words, below a certain minimum scale, timber production may not be seen as viable. There are difficulties in defining such a minimum level, as it is dependent on numerous factors.

The lessons from the theories of development is that earliest thinking would have assumed that development through timber production meant economic growth without considering costs to the natural or social environment. An assumption would also have been made that once the capitalist timber giants have reach a stage of maximum economic growth, benefits would begin to flow to communities. Theories of sustainable development brought a healthier view of development in that economic, social and environmental aspects were treated equally.

In order to properly evaluate the status quo of small-scale timber production, a social model in the form of SLF has been adopted. The advantage in using this model is that it is capable of understanding all aspects of sustainable development. The livelihood outcomes in particular address issues of increased income, improved well-being as well as sustainable use of natural resources.



## CHAPTER THREE

### RESEARCH DESIGN AND METHODOLOGY

#### 3.1 Introduction

This chapter discusses the research design and methodological paradigm adopted to achieve the objectives of the study. Methodological paradigm includes qualitative sampling, qualitative data collection methods and qualitative data analysis techniques. Validity, ethical consideration and constraints encountered within the field are also discussed.

#### 3.2 Research design

Babbie et al (2001), maintains that the origins of modern social science can be traced back to the seventeenth and eighteenth centuries. Over the last four centuries, metascientific positions have emerged. Those who reflected on the nature of social enquiry then, like those who do so today, did not always agree on the fundamental questions and answers about the nature and methodology of social inquiry (Babbie et al 2001:20). Two important schools, traditions of metatheories emerged, these are the “positivist” and the “anti-positivist”. These two metatheories became research design.

De Vaus (2001) defines a design as a structure before data collection or analysis can commence, it is a logical structure of inquiry (De Vaus, 2001).

Babbie et al (2001) observe that positivism:

“...defended the view that the social sciences are analogous or comparable to the natural sciences... they believed that “...the social sciences would only make progress once they pursued the same goals as the natural sciences.” (Babbie et al (2001:20)

Positivism was later criticised in that there is difference between natural and social science. It is therefore inconceivable that social science would wish to imitate or emulate the natural sciences (Babbie et al, 2001).

As a result of this criticism, anti-positivist design (also known as phenomenologist or interpretivist) was developed.

“According to the phenomenological position, the fact that people are continuously constructing, developing, and changing the everyday (common-sense) interpretations of their world(s), should be taken into account in any conception of social science research” (Babbie et al, 2001:28)

The phenomenologist recognizes the fact that human beings are consciously engaged in defining and making sense of their own lives.

It is important to make a distinction between research design and research method. De Vaus (2001) observes that there is a tendency for researchers to confuse research designs with methods, by equating designs with quantitative and qualitative methods. For De Vaus (2001), this:

“...is erroneous to equate a particular research design with either qualitative or quantitative methods (De Vaus, 2001:10)

Babbie et al (2001) emphasize this point

“A research design is a plan or blueprint of how you intend conducting the research. Researchers often confuse “research design” and “research methodology”, but these are two very different dimensions of research (Babbie et al,2001: 75)

While the discussion above shows that research design is about the type of inquiry, the discussion below shows that research method is about the process of sampling, collecting and analysing the data in accordance with the design.

### **3.3 Methodological paradigm**

As the social research developed in the past four centuries, three broad methodological paradigms have dominated the scene in recent social research: the quantitative, qualitative and participatory action paradigms (De Vaus 2001). This study concentrates on quantitative and qualitative methodological paradigms. The former is linked to positivism while the later is associated with phenomenology or interpretivism (Babbie et al 2001).

On the one hand, the quantitative paradigm put an

“...emphasis on the quantification of constructs. The quantitative researcher believe that the best, or only way of measuring the properties of phenomena (e.g. the attitudes of individuals towards certain topics) is through quantitative measurement, i.e. assigning numbers to the perceived qualities of things (Babbie et al, 2001:49)

On the other hand, the qualitative paradigm

“...takes its departure point as the insider perspective on social action. Qualitative researchers attempt always to study human action from the insider’s perspective (also referred to as the “emic” perspective) (Babbie et al, 2001: 49).

To reinforce the debate on the differences between design and methods,

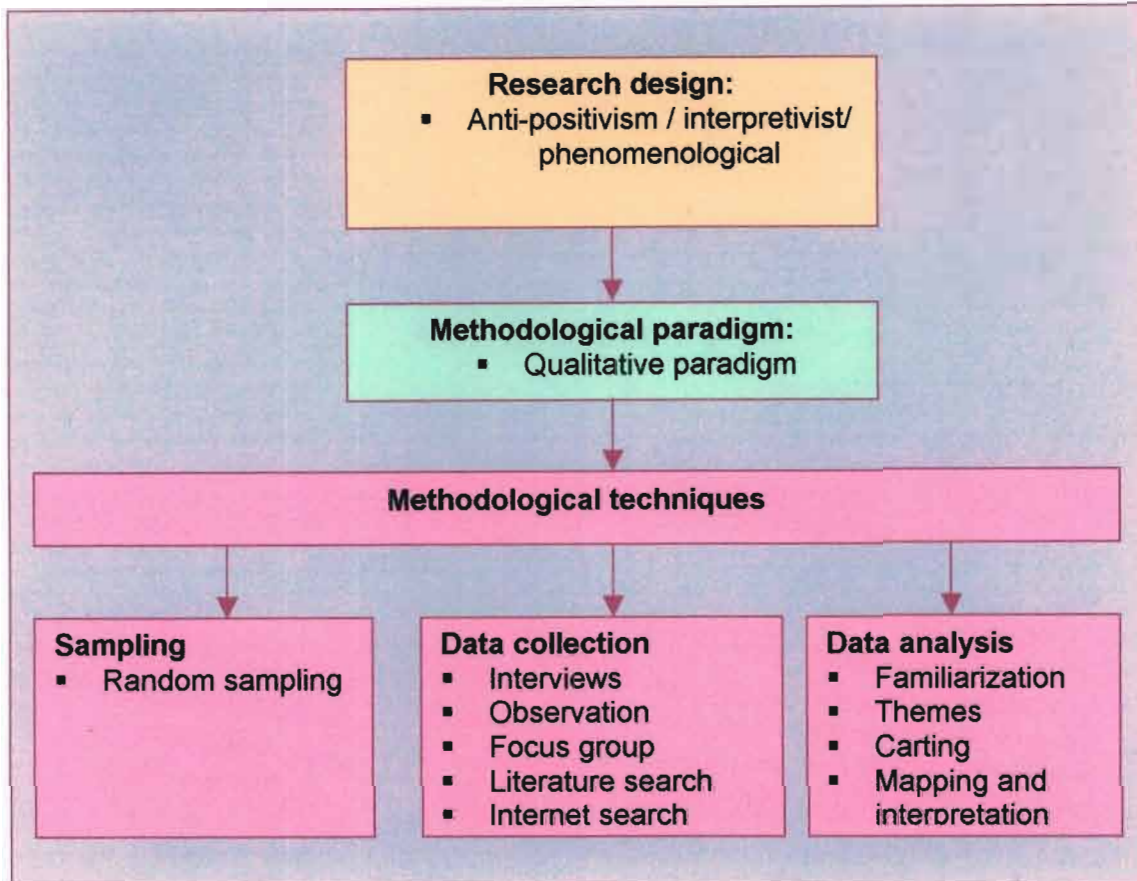
Babbie et al (2001) observes that:

“We use the term “methodological paradigm”, therefore to include both the actual methods and techniques that social research uses, as well as underlying principles and assumptions regarding their use” (Babbie et al, 2001:49)

### **Research design and methodological paradigm adopted by this study.**

Figure 3.1 below demonstrate research design and research methods used in this study. Research design and methodological paradigm have been discussed above. Below is the justification of the approach by this study as well as detailed discussions of qualitative methodological techniques, (sampling, data collection and data analysis).

**Figure 3-1: summary of research design methodological paradigm adopted in this study**



The main objective of the study, to understand the ‘viability and sustainability of small-scale timber production from the small-growers perceptions’, emphasized the need to understand and interpret the experiences and perceptions of the small growers. The design needed to have the capacity to capture the emotions, views, opinions and attitudes of the actors and understand the meaning that these actors give to sustainable development. To achieve this objective, the study adopted anti-positivist or phenomenological design as a logical structure of inquiry. On the basis of this design qualitative methodological paradigm was followed. Subsequently qualitative procedures of sampling, data collection and data analysis were adopted.

On the one hand, the choice for anti-positivist approach was informed by the recognition that social research has to take into account the fact that human beings are not primarily biological organisms, but first and foremost

conscious, self-directing, symbolic human beings (De Vaus 2001). On the other hand, the choice for qualitative approach was also informed by the fact that the quantitative approach would not have been suitable for this study. The quantitative research paradigm assumes 'standardized, fixed and replicable procedures', was therefore not suitable for this study (Fouché and Delport, 2002). Using this approach would have created a situation where an opportunity was missed to capture different stories of the respondents.

Further, the advantage of qualitative research in this regard was its ability to incorporate individuals' accounts of their attitudes, motivations and behaviour (Hakin, 1987). Fouché and Delport maintain that qualitative approach is able to:

“...the qualitative paradigm stems from an antipositivistic interpretive approach, is idiographic and thus holistic in nature, and aims mainly to understand social life and the meaning that people attach to everyday life. The qualitative research paradigm in its broadest sense refers to research that elicits participant accounts of meaning and experience or perceptions...It thus involves identifying the participant's belief and values that underlie the phenomena.” (Fouché and Delport, 2002:79).

Qualitative researchers attempt always to study human action from the insider's perspective (Babbie et al, 2001). Further, Fouché and Delport (2002) regards this as an interpretative inquiry seeking to understand and interpret the meaning and experience that subjects give to a particular phenomenon. A day-to-day encounter with a particular phenomenon is the main source from which the subjects derive the meaning and experience. Both the research design and methodological paradigm adopted for this study was capable of capturing stories of the respondents and the meaning they attach to their livelihood activities.

### **3.3.1 Sampling**

The population of this study comprised mainly local communities and actors in timber production at Entembeni TA. It was impractical to interview all members of the population. Sampling of the population therefore became necessary. Schutt (1995) maintains that the fundamental factor of sampling is



to select the subset of people or other entities to represent the population and that the findings as a result of engaging the subset are generalizable to the population. Discussion on generalizability of research results further takes place on Section 3.4 below.

To respond to the challenge of representative sample, probability-sampling paradigm was adopted. Cited by Strydom and Venter (2003), Seaberg 1988, maintain that:

“...a probability sample is one in which each person or other sampling unit in the population has the same known probability of being selected. In addition, the selection of persons from the population is based on some form of random procedure. (Strydom and Venter, 2003:203).

The types of probability sampling are simple random sampling, systematic sampling, stratified random sampling, cluster sampling and panel sampling. This study adopted simple random sampling. Simple random sampling is based on the principle that individual person or other sampling unit in the population has an equal chance to be selected for the sample (Strydom and Venter 2003, Babbie et al, 2001). For the purpose of this study small-growers, non-growers as well as all respondents were selected following simple random procedures. Apart from the actual respondents, to ensure representativeness of the population, four wards of Entembeni TA were randomly selected. These wards include Ekuthuleni, Mfanefile, Ndundulu and Ndabazensangu.

Thirty-eight people were interviewed for this study. Table 3.1, below shows the sectors and the number people that were interviewed per sector.

**Table 3-1: List of respondents**

Types of groups or organizations	Number of Sector/s or organization/s interviewed	Number of respondents per sector or organization
Small-growers	1 (small growers)	15
Non-growers	1 (non-growers)	10
Traditional leaders	1 (Entembeni TA)	1
CBO	1 (Lindokuhle Craft)	1
Commercial timber companies	2 (MONDI and SAPPI	2
Marketing cooperatives	3 (NCT Forestry Co-operative Limited, TWK Agricultural Limited and Natal Tanning Extract Union Cooperation)	3
NGO	1 (FSA)	1
Local government	1 (Mthonjaneni Local Municipality)	1
Government departments	2 (DWAF and DAEA)	4
<b>Total</b>	<b>13</b>	<b>38</b>

### 3.3.2 Techniques for data collecting

Primary data was collected by means of interviews, field observations and focus groups. Secondary data was collected through literature and Internet searches. References have been made throughout the study to acknowledge and reflect different sources of data.

Procedurally, access to the study area (Entembeni) was negotiated with the local Inkosi and members of the TA council. Negotiations with the Inkosi served to introduce the study and to gain the trust and cooperation of local interviewees. Strydom (2000) observes that it is important to gain permission to enter the field that has been decided on (Strydom, 2003:283). Cited by Strydom (2003), Van der Burgh (1988) observes that granting of permission by the relevant authority, such as the mayor of a town or headman of a tribe, is important, as it also lets the people on the ground know what the project seeks to accomplish. At the very least, all people directly involved with the project should be consulted in the process of gaining access to the community

(Strydom, 2003:283). During the introduction of the study, Inkosi G. Zulu delegated one of the senior induna to represent the TA in the interviews designed to engage with traditional leadership.

Negotiations for access also took place at the level of non growers and small-growers with Izinduna and small-growers in the Biyela Project respectively in all four wards of Ekuthuleni, Mfanefile, Ndundulu and Endabazensangu of Entembeni TA. It is envisaged that gaining permission is not a 'once-off' process. It became imperative to negotiate for permission and cooperation with each and every interviewee. Strydom (2003) maintains that:

“The permission granted at the beginning of the project does not entitle the researcher to all information and he should from time to time gain further permission as and when necessary” (Strydom, 2003:283).

Further negotiations with government officials and other actors in the forestry sector ensued to arrange interviews and also to gain their cooperation. The study treated all information gathered with confidentiality.

## **Interviews**

Interviews were used as a primary tool to collect primary data. Non-schedule structured interviews were adopted. This approach allows a researcher to prepare a questionnaire in advance, while still allowing some degrees of flexibility. Such flexibility is important because it enables the researcher to develop further questions during the interview when necessary. This approach is also advantageous because it does not limit interviewees to responses predetermined by the researcher before the interview. Bless and Higson-Smith (2002) maintains that:

“The list will contain some precise questions and their alternatives or subquestions,... But it is a non-scheduled interview in the sense that the interviewer is free to formulate other questions as judged appropriate for a give situation. Respondents are not confronted with already stated definitions or possible answers, but are free to choose their own definitions, to describe a situation or to express their particular views and answers to problems (Bless and Higson-Smith, 2002: 105).

Non-scheduled structured interviews furthers the principles of a qualitative approach with regard to allowing interviewees to be able to tell the whole story

according to their own experience and understanding. This approach is therefore more appropriate to represent the voice of the interviewees.

The important role of the interview was to gain insight and make sense of the knowledge the interviewee already has. Interviews were seen as a platform for interviewees to tell their stories. Greeff (2003) regards that:

“Stories are a way of knowing. The root of the word “story” is the Greek word *historia*, which means one who is wise and learned. Telling stories is essentially a meaning-making process. Every word that people use in telling their stories is a microcosm of their consciousness.” (Greeff, 2003: 292).

Interviews were held with individual non-growers, small-growers, government officials, local and traditional structures, and different actors (commercial companies and marketing cooperatives) in the forest industry.

## **Observation**

Observations were used to supplement data collection. A distinction is made between simple observation and participant observation. Simple observation refers to the observation of events by an outsider without interaction with the observed (Bless and Higson-Smith, 2000). The researcher remains an outside observer. In this scenario data is collected through covert (secret) means. Observing the activities of small growers, without their knowledge, would have caused ethical dilemma regarding the legitimacy of recording the findings of the study.

The participant observation is a very demanding way of gathering data and may involve extended periods of residence among respondents (Bless and Higson-Smith, 2000). This overt (transparent) approach requires the researcher to play two distinctive roles at the same time:

“When doing participant observation, one is faced with the difficulty of simultaneously being one of the members of the group, and also observing everyone else from the researcher’s point of view (Babbie et al, 2001:293).

Due to the time scale of this study compared to the cycle of timber production, participant observation would not have been practical. In the true sense,

participant observation in timber production would have to take place over a seven-year production cycle. A compromise between the two approaches is called a modified participant observation method. This approach restricts the researcher to participation only in major events, such as village meetings or ceremonies (Bless and Higson-Smith, 2000). Modified participant observation was adopted by this study.

Orientation of the location and patterns of plantations was gained through site visits in the presence of small-growers. The researcher, as participant observer, attended three meetings. The events attended during the study included, a small-growers meeting, a workshop to present 'mapping process by the DWAF, a cultural ceremony (by invitation of the TA) and a meeting between the representative of small-growers and DWAF as a follow-up on the application made by Entembeni small-growers for water use licences.

Some of the general challenges about participant observation is that the researcher is not always able to maintain the balance between observing and participation. Strydom (2003) regards participant observation as:

“...a qualitative procedure that studies the natural and everyday set up in a particular community or situation, ...the researcher should decide beforehand on the role he intends to take in the situation of a participant observer, since the roles to be taken can be placed on a continuum from complete observer to complete participant, with a variety of degrees of involvement in between” (Strydom, 2003: 280).

The continuum of participant observation has the potential to provide the privilege to the researcher (outsider) to view the world of the respondent (insider) from the respondents' perspective while at the same time retaining his or her status as an outsider. Overstaying the privilege of an insider observer status may prove to be a handicap as one may be drawn further into participation than observation.

### **Focus group interview**

Further, the focus group technique was adopted to reflect the findings back to the interviewees. Also this session was used to stimulate additional input. The



focus group is useful as it "...can provide the occasion and the stimulus for collectively members to articulate those normally unarticulated normative assumptions."(Bloor et al, 2001: 5).

### **3.3.3 Data analysis**

Data collected through qualitative methods is unstructured, text-based, consisting of verbatim transcriptions of interviews, field notes and observations (Ritchie and Spencer, 2002). To complete the process set as part of methodological paradigm, the qualitative researcher has to provide some coherent and structure to this massive data (Ritchie and Spencer, 2002). De Vos observes that:

"Data analysis is the process of bringing order, structure and meaning to the mass of collected data" (De Vos, 2002:)

Qualitative researchers use, among others, a framework as a method of data analysis. Ritchie and Spencer (2002) maintain that:

"Framework is an analytic process which involves a number of distinctive though highly interconnected stages" (Ritchie and Spencer, 2002:310).

These stages involves a systematic process of sifting, charting and sorting material according to key issues and themes. Key stages to qualitative data analysis involved in 'Framework' are: familiarization, identifying a thematic framework, indexing, charting and mapping and interpretation (this being the state at which the key objectives of qualitative analysis are addressed. (Ritchie and Spencer 2002, 311-312). This study adopted familiarization, identification of themes and sub-themes, charting and interpretation.

#### **Familiarization**

Familiarization takes place before sifting and sorting. At this stage the researcher gains an overview of the body of material gathered. This stage involves listening to tapes, reading transcripts, studying observational notes. (Ritchie and Spencer 2002, 312) This is important when the researcher was not involved with the process of data collection. In the case of this study, the

advantage is that the analyst collected the data, at which stage, some hunches about key issues and emergent themes were formed

### **Identifying a Thematic Framework**

At this stage analyst:

“... attempts to identify the key issues, concepts and themes according to which the data can be referenced. (Ritchie and Spencer 2002, 313)

Identification of themes is informed by priori issues (those informed by original research aims and introduced into the interviews via topic guide), emergent issues raised by the respondents themselves, and analytical themes arising from the recurrence or patterning of particular views or experience. (Ritchie and Spencer 2002, 313) Identification of themes is important aspect of qualitative data analysis and as suggested by Hurberman and Miles (2002) it is the thematic framework, which is concerned with setting up a framework within which the material can be sifted and sorted. In accordance with qualitative data analysis, data for this study adopted a SLF as one of the frameworks of data analysis.

### **Charting**

Having applied the thematic framework to individual transcripts, the analyst needs to build a picture of the data as a whole. Ritchie and Spencer (2002) maintain that charts are drawn up for each key subject area, and entries made for several respondents on each chart. In this study tables and graphs were used to create a summarized picture of information. Generating graphs involves representing and visualising information that help the reader to understand issues instantly. (De Vos 2002)

## **Mapping and interpretation**

This stage is important because it create links between the results presented in the form of themes or charts and the original objectives of the study. Ritchie and Spencer (2002) maintain that

“Although emergent categories, associations and patterns will have been noted and recorded during the index and charting phases, the serious and systematic process of detection now begins. It is here that the analyst returns to the key objectives and features...”(Ritchie and Spencer, 2002:321).

This stage was used in this study to respond directly to the objectives of the study and make conclusions.

### **3.4 Reliability, validity and generalizability**

This section attempts to explore how reliable, valid research methods used in this study were. Also, the section attempts to discuss the degree of generalizability of the findings of the study.

#### **Reliability**

Reliability is a matter of whether a particular technique, applied repeatedly to the same object would yield the same result each time. (Babbie et al, 2001)

#### **Validity**

Babbie et al (2001) defines validity as:

“... the term validity refers to the extent to which an empirical measure adequately reflects the real meaning of the concept under consideration”  
(Babbie et al, 2001:122)

#### **Generalizability**

Maxwell (2002) maintains that:

“Generalizability refers to the extent to which one can extend the account of a particular situation or population to other persons, times, or settings than those directly studied (Maxwell, 2002:52).

In qualitative research, reliability, validity and generalizability are goals that are difficult or rather may be not be achieved in the same way as in the quantitative research. This is because qualitative research deals with the meanings that those being researched attached to their own situations. What is important is for social researchers to strive for reliability, validity and generalizability. In this study interpretation of reliability of research methods was observed in instances where a certain number of respondents were interviewed more than in one occasion. Even in these instances the idea was not to repeat the entire questionnaire but to make follow-up where certain issues were not clear. It was observed that respondents managed to give additional information for clarity as opposed to contradicting the previous accounts. To achieve validity, this study used different complementary data gathering techniques. Lastly, this study maintains that generalizability of the findings may take place within Entembeni community, (that is, may be extended to small-growers and non growers who did not participate in the study) with a degree of confidence. Extending the results to areas outside of Entembeni may take place with less confidence. This is because the success or failure of timber production, among other things depends on variables such as topography, climate, soil type, and availability of land, expertise, management skills, investment and distance to the mill. These variables may differ from one community to another, one community to another and one period of time to the other.

### **3.5 Ethical consideration**

Bar-On (1996) maintains that before entering a study area, the researcher need to respond to this question:

“Do you really feel like interfering in his or her life? (Bar-On, 1996: 9).

Research has a potential to interfere or intrude into other people’s lives (Bless and Higson-Smith, 2000, Babbie et al, 2001). According to both Bar-On

(1996) and Bless and Higson-Smith (2000), the moment a researcher moves into any community to conduct research, there is potential for interference. Babbie et al (2001), contends that ethical issues arise when a researcher interacts with other people where there is a potential for a conflict of interest. The former has the right and obligation to search for information while the later has the right to live without interference.

“The scientist has the right to the search for truth but not at the expense of the rights of other individuals in society (Babbie et al, 2001:520).

The subject of ethical consideration is about ethical choices involved in trade-off or compromise between the interest and the rights of different parties (Babbie et al (2001). Social researchers have identified key ethical issues. These include, among others, voluntary participation, informed consent, no harm to participants and anonymity and confidentiality. (De Vaus, 2001, Babbie et al, 2001).

### **3.5.1 Voluntary participation**

Research respondents must chose to participate or not to participate at their own free will. De Vaus (2001) suggests that people should not be required or led to believe that they are require to participate in a study (De Vaus, 2001). To ensure that people understand that participation is voluntary, potential participants must be explicitly informed about this (De Vaus, 2001). Voluntary participation has some limitations as it can threaten validity of the study.

“ ... the scientific goal of generalizability is threatened if experimental subjects or survey respondents are all the kinds of people who willingly participate in such things... a researcher cannot generalize the sample survey findings to an entire population unless a substantial majority of the scientifically selected sample actually participates – the willing respondents and the somehow unwilling alike (De Vaus, 2001:521).

Data collection for this study ensured that participation was voluntary by informing participants before time and asking them to participate in an interview. As discussed in Section 3.3.2 above, it became imperative to consult with respondents before the interviews. The consultation process was not only used to gain access to set interviews but also for respondents to



decide whether to participate. The disadvantage of voluntary participation cited by De Vaus (2001) was not experienced as no respondents declined to participate.

### **3.5.2 Informed consent**

Before making a decision to participate in a study, potential participants need to be informed about, among other things, the purpose and the procedures of the study (de Vaus2001). The dilemma with regard to providing information to participants before the research process commences, is brought about the level of information required. This is because the level of information may differ from one situation to another, from one participant to the other and from one researcher to another. De Vaus (2001) observes that:

“Simply providing detailed descriptions of the study does not mean that respondents will be any more enlightened as a result. Indeed, detailed technical information may confuse, distract and overwhelm rather than inform. (de Vaus 2001: 85).

The approach to this study was to provide as much information as it was necessary for the participants to be able to make decisions about their participation to the study. Individual respondents indicated the level of information they required through asking questions. Although, during the process of setting the interviews the purpose of the study was communicated to all participants, local communities required less additional information compared to government and the private sector.

### **3.5.3 No harm to participants**

Research has the potential for physical harm or damage to the reputation of participants. Researchers have the responsibility to ensure that the study does not cause the situation of the participants to be worse of than it was before the study. Babbie et al (2001) maintain that:

“Social research should never injure the people being studied, regardless of whether they volunteer for the study or not. Perhaps the clearest instance of this norm in practice concerns the revealing of information that would

embarrass them or endanger their home life, friendships, jobs, and so forth. (Babbie et al, 2001: 522)

During analysis of data for this study, the researcher considered data so as to avoid information that might cause conflict or jeopardise the status of participants without compromising proper reporting of the study. The added advantage to this regard is that by and large, the subject of this study deals with issues that are part of the public debate as opposed to personal matters.

### **3.5.4 Anonymity and confidentiality**

Anonymity applies when the researcher cannot identify a given response with a given respondent. In the case of an interview respondents cannot be anonymous as an interviewer collects the information from an identifiable respondent (de Vuas, 2001). Confidentiality is achieved when the researcher does not publicly link sensitive information to certain respondents. Confidentiality is important ethically and methodologically. De Vuas (2001) observe that:

If participants are confident that their response are truly confidential (or even better if they are anonymous) we can expect that people are more likely to participate in the study especially if it is about private matters. (de Vaus, 2001:87).

Anonymity was not applicable to this study as the researcher / interviewer interviewed identifiable respondents. Data was treated with a degree of confidentiality. The members of the local community, both small-growers and non-growers have not been identified to this study. Identification of government officials, representative of the NGO and business sector is justifiable in that their work involves implementation of public policies or vision and missions of their organizations as opposed to serving personal interest.

### **3.5.5 Summary of ethical consideration**

The discussion on ethical consideration shows that conducting research brings about the dilemma and sometimes conflict of interest between the need

to do research and the rights of individuals or groups of people being researched. This situation is exacerbated by the fact that there are no universal norms that can be applicable to all research processes, all contexts and all respondents. While research outcomes has the potential to benefit individuals or groups of people being researched, it also has the potential to cause harm. Researchers have to be aware of this dilemma and seek to negotiate a compromise through taking into account norms discussed above. In the case of this study, the fact that respondents had diverse characteristics made it challenging to negotiate a compromise. Also, some respondents may feel that their rights and interests were well taken into account, while some may feel that their rights and interests were compromised. By the same token, some respondents may benefit from the study while others may feel harmed by the study. To make an example, small-growers are benefiting less from small-scale timber production because they are somehow in a disadvantaged position compared to large-scale growers and even contractors. This study makes some suggestions that, if followed could improve the situation of small-growers. Should this goal be achieved, large-scale growers and contractors will begin to get less benefits from small-scale timber production than it is currently the case, and therefore feel compromised by the study.

### **3.6 Challenges experienced**

Despite all the cautious steps and procedures taken into account to make arrangements for access and engagement with interviewees, certain constraints were experienced. First and foremost, gaining access was not easy. At least three initial attempts to gain access to the community were unsuccessful and arranged meetings were cancelled at short notice. It required a lot of patience to reorganize these meetings. Strydom (2003) observes that:

“Gaining access to a community can be problematic since a researcher is expected to avoid disturbing the community as far as possible” (Strydom, 2003: 283).

Secondly, gaining co-operation and trust proved to be time consuming. During initial meetings, interviewees said that the area had been over researched in

the past, but they had not received any feedback either in terms of research reports or improvement of livelihoods as a result of research undertaken in the area. To deal with this concern, a copy of this study will be made available at the local library.

Lastly, at times the role of researcher was confused with that of a development facilitation worker. Some interviewees had expectations that the researcher could intervene in certain social problems. This became more evident at the meeting between a small-grower representative and DWAF, where the researcher assumed the role of negotiating on behalf of small-growers as an attempt to support the negotiations. Small-growers from Entembeni had sent a delegate to meet with DWAF to make enquiries on the state of the processing of applications for water use licences that had been launched by the community. The researcher was asked by a particular representative to schedule a meeting with DWAF on behalf of the community and to help with facilitation of the discussions.

## CHAPTER FOUR

### RESEARCH FINDINGS

#### 4.1 Introduction

This chapter presents the research findings as a result of interviews with different respondents. Chapter 1 Section 1.4.3 stated five research questions. They included investigation into:

- (i) The current state of role-players in the timber sector and their roles;
- (ii) Traditional livelihood activities and the potential of small-scale timber as CED practice;
- (iii) Investigation of factors that motivate subsistence farmers to adopt small-scale timber growing project;
- (iv) Stakeholders' perceptions regarding the viability and sustainability of small-scale timber growing; and
- (v) Challenges facing small-growers.

Each broad question was subdivided into workable sub-questions in preparation for interviews (See Section 9.2 Appendix No.1).

Section 4.2 will present the themes identified during the data capturing process. The themes are useful to demonstrate how different interviewees responded to different questions. The justification of categorizing findings into themes was to:

- (i) Easily identify and distinguish between most significant and less significant variables,
- (ii) Promote a general understanding of small-scale timber production,
- (iii) To allow the easy use of information for planning purposes and
- (iv) Relate small-scale timber production to the debate of sustainable development.



In the case of presenting both the roles of various organizations and themes, the reader is reminded of the research questions, which led to the identification of particular understanding or themes.

## **4.2 Overview of organizations and their roles**

This section provides a background of all the structures involved with small-scale timber production. The area of interest of the study was to understand whether or not the role played by each organization enhanced or hindered the viability and sustainability of small-scale timber production. The understanding of the roles played by different organizations was established through interviews with these various organizations or sectors. With exception of Small Micro Macro Enterprises (SMMEs), which included contractors and harvesters, all sectors and organizations discussed below participated to this study as respondents. The question presented to these organizations were (i) what was the primary focus of each organization and (ii) what support programmes these organizations have in place for small-growers, i.e. how did they engage with small-growers?

The role played by these organizations range from planning (municipality, TA), land allocation (TA), authorisation (DWAF, DAEA), provisioning of technical support (Sappi, Mondi, DWAF, Natal Tanning Extract Union Cooperation), harvesting, transporting and marketing. The discussion below gives details of the role of each organization and sector.

### **4.2.1 TA**

As already shown in Chapter 1 Section 1.31, the TA plays two main roles; allocation of land and where necessary, conflict management between different interest groups. One hundred percent of respondents (from non-grower and small-grower sector) acknowledged the TA's role with respect to granting permission or a 'go ahead' for planting. Permission from the Inkosi

was seen as a prerequisite despite the fact that individual farmers grew timber on land already allocated to them by Inkosi.

#### **4.2.2 Local municipality**

The role of the local municipality ranged from planning to facilitation of capacity building and training for LED projects. In an interview with the municipal manager of Mthonjaneni Local Municipality, it transpired that small-scale timber production in the area did not feature in municipality programmes. The municipal manager acknowledged that both the original and revised Integrated Development Plan (IDP), did not include small-scale timber nor have small-growers participated in IDP forums. At the time of this study, Mthonjaneni had plans to assist local subsistence farmers to participate in cash crops such as sugar and rose geranium (for the production of essential oil) on small-scale basis. The municipal manager admitted that it was an error not to include small-scale timber production, and anticipated that dialogue between the municipality and small-growers could be initiated. Implications of exclusion of small-scale timber production will be discussed in Chapter 5 Section 5.4.

#### **4.2.3 Government departments**

Two government departments are primarily linked with the activities of small-scale timber production: Department of Water Affairs and Forestry (DWAF) and Department of Agriculture and Environmental Affairs (DAEA). Both DWAF and DAEA ensure that an activity such as timber production follows an environmental process to assess its impact on the receiving environment. Following environmental assessment process, DAEA issues an applicant with a record of decision (ROD). An environmental assessment process is conducted to identify and mitigate severe impact on environment. Mr. Howison (a DAEA official) indicated that among other things the assessment ensures that the proposed activity (in this case timber production) did not impact negatively on rivers, streams, and biologically sensitive areas.

DWAF has two directorates involved with timber production: Water Resource Management and Community Forestry. These directorates are charged with the responsibilities of, on the one hand, the monitoring and management of forestry activities in relation to water use and on the other hand, supporting small-scale growers. Water Resource Management is responsible for the issuing of water use licences, while the Community Forestry Section is responsible for technical support to small-growers. Technical support involves helping small-growers to complete an application for water use licence, communication of government policies and advice on silviculture practices.

To demonstrate the involvement of government structure, this study makes use of an example of an intervention (mapping process) by government department on timber production, which took place at the time of this study. The mapping process was undertaken in response to the frustration many small-growers face with delays in the processing of their applications for water use licenses. DWAF, in conjunction with DAEA, Forestry South Africa and Ezemvelo KZN Wildlife, embarked on a mapping exercise to investigate and show the potential of timber as well as the potential impact on the receiving environment in KwaZulu-Natal. According to Mr. J. Perkins of the Department of Water Affairs, the mapping process took into account factors such as temperature, soil type, agricultural sustainability of the area and the conservation value of the area and sources of water. The mapping exercise culminated in the production of maps for all district municipalities in KwaZulu-Natal. The Map for Uthungulu District Municipality, which Melmoth area falls, has been attached to this study (See Section 9.3, Appendix No. 2).

The maps show the potential of timber (high, medium or low) and the sensitivity of the environment (restricted or not restricted). The result of the mapping exercise in certain areas, such as Umkhanyakude District Municipality and Mthonjaneni Local Municipality, were withheld because of the sensitivity of these areas. Mr. J. Perkins (DWAF official) explained that:

“The fact that a particular area does not appear on the map does not mean that people will never be able to grow timber, they can apply for a licence, but that the process will be long, if the area is on the map the process will be quicker”.

Umhlathuze catchment is considered to be a high environmental risk area. Implications of the result of the mapping exercise to small-growers are of interest to this study. Generally, it is anticipated that the information gathered during mapping processes will help shorten the time frame for applications for water use licences. According to Mr. J. Perkins, the application process will improve as potential growers will not have to apply for Environmental Impact Assessments (EIAs), they will get an exemption for this, especially if they apply for less than 10ha at a time. Site visits by the government officials to the proposed area will still be essential to verify the existing information and also to make sure that there are no hidden features which were not captured during the mapping process. In the case of areas whose information for timber potential was withheld, the time frame for application will not improve. The outcomes of the mapping exercise has no direct implications for Entembeni community because it does not improve the current stringent application procedures.

#### **4.2.4 Commercial companies**

Giant commercial timber companies such as Mondi and Sappi are involved with small-growers through their out-grower schemes, Khulanathi and Project Outgrow respectively. The model through which these commercial timber producers engage small-growers is contract farming. This model implies that Mondi and Sappi make available capital investment to small-growers in the form of loans, which are repayable at an interest after harvesting of timber.

Khulanathi and Project Outgrow offer financial and technical support to small-growers from the planting stage right through to harvesting. The support programme comprises a loan scheme, the supply of seedlings and fertilizers and technical advice on silviculture practices. In addition, small-growers are expected to enter into an agreement that binds them not to supply wood to any buyer but the company that supported them in the first place. Mr. Gama, an extension officer for Khulanathi confirmed that:

“Khulanathi provides small-growers with technical assistance and loans which are payable once the plantation has been harvested. Some small-growers pay before harvesting, but most of them only pay after harvesting”.

Technical support begins at the stage of launching an application for ROD or water use licence from relevant government authorities. Because of its technical nature, small-growers require assistance with the completion of an application form. Mr. J. Ngubane a project manager for Project Outgrow explained that:

“We also help them to apply for the permits but the government has a negative attitude towards this, the government thinks that we are doing this for the interest of Sappi”

Discussions of the background of contract farming in Chapter 2 Section 2.2.6 showed that a mutual relationship between small-growers could be established. Chapter 5 Section 5.2.4 will take this discussion further, with the view of understanding the role of contract farming in small-scale timber production.

#### **4.2.5 Marketing cooperatives**

Marketing cooperatives interviewed for this study include Natal Tanning Extract Union Cooperation (NTEUC), NCT and TKW. Unlike Sappi and Mondi, NCT and TKW do not become involved at the level of establishing the plantations, but at the point of sourcing wood for their own mills or other markets, locally and internationally. According to Mr. Mdengu of NCT Forestry Co-operative Limited, small-growers are members of NCT. This model implies that while growers produce timber independently, they are shareholders in the marketing cooperative. In addition to technical support, benefits to members are twofold. Members benefit from direct sales of timber, but also benefit from profit-sharing based on their shares and the volume of wood they supply in a particular financial year.

NTEUC has the features of both the commercial timber companies and the marketing cooperatives discussed above. According to Mr. M. Ngubane of NTEUC, through Phezukomkhono (their out-grower scheme) NTEUC



supports small wattle growers through contract farming, from planting through to harvesting. Because of its interest in bark, NTEUC sources this material after harvesting and helps small-growers market the remainder of the wood.

#### **4.2.6 Non-profit organizations**

A non-profit organization (NPO) interviewed for this study was Forestry South Africa (FSA). FSA is an association representing all timber growers in South Africa including small, medium and large-growers with the objective of dealing with issues and concerns facing its members in the forestry sector. (Forestry South Africa, 2003). FSA represents the interests of small-growers in a number of forums, e.g. Licence Assessment Advisory Committee (LAAC) and mapping exercise by DWAF. At the time of the study, Mr. S. Ngubane (FSA Small Business Development Manager) was working on two main issues affecting small-growers: representation or coordination of small growers as well as developing an information package. The first objective aims at responding to the need to develop local, regional and provincial representative forums that will ensure dialogue and networking among small-growers. The second objective stems from the fact that currently there is no effective system to convey information on policies and technical information to small-growers, or for small-growers to have meaningful input either to the industry itself or to various government departments.

#### **4.2.7 SMMEs**

Small-scale timber production has created an opportunity for SMME-type contractors, harvesters and transporters. These undertake the role of harvesting and transporting wood from various plantations to the mill. Harvesters and contractors fill the gap between growers and the mills, where small-growers do not have the capacity. The discussions on LED in Chapter 2 Section 2.2.3 referred to the development of entrepreneurship as one of the responses to economic problems caused by both market and government failure.

Table 4.1: below give the list of all role-players involved in small-scale timber production as discussed above. The table is organized into three columns. The first column gives the name of each organization. The second column gives general responsibilities for each and every role-payer in relation to timber production. Lastly, the third column gives specific involvement with small-growers.

**Table 4-1: Roles of various organizations involved within small-scale timber production**

<b>Organization</b>	<b>Primary role</b>	<b>Involvement with small-growers</b>
Small-grower	Production of timber at a small-scale level	(i) Networking with each other
Tribal Authority	Administration of community affairs	(ii) Land allocation (iii) Conflict resolution
Local municipality	Planning (through IDP)	(i) Technical support (ii) Facilitation of LED projects
DAEA	Impact assessment	(i) Assessment of impact of timer production (ii) Issue an ROD
DWAF	Policy and forest management	(i) Extension service (ii) Technical support (iii) Issuing of water use licence
Sappi	Commercial timber producing company	(i) Provide loan (ii) Provide technical support (iii) Supply seedlings (iv) Buy timber
Mondi	Commercial timber producing company	(i) Provide loan (ii) Provision of technical support (iii) Provide seedlings (iv) Buy timber
NCT	Marketing cooperative	(i) Technical support (training) (ii) Buy timber (iii) Link small-growers with the market
Natal Tanning Extract Union Cooperation	Marketing cooperative	(i) Provide loan (ii) Provide technical support (iii) Buy pulp (iv) Link small growers with the market
TKW	Marketing cooperative	(i) Market timber (ii) Link small growers with the market (iii) Logistical arrangements e.g. organize transportation for small growers
Forestry South Africa	An association of organizations involved in timber industry (Large, medium and small-growers)	(i) Facilitate networking between growers (ii) Information dissemination (iii) In a process of establishing a forum for small-growers
Harvesters	Private contractors	(i) Harvest timber
Transporters	Private contractors	(i) Transport timber to the mill

### 4.3 Presentation of themes

This section presents and discusses the key themes developed during the stage of data analysis. Based on the research questions and subsequent responses, eight themes were identified. In certain occasions sub-themes were identified. Before each theme is presented, the reader is reminded of the research question from which each theme was identified. Where appropriate, links are created between themes and similar experiences identified by various literatures.

#### 4.3.1 Access and ownership of land

This theme was identified following the research question aimed at establishing how local people accessed land rights and practiced usage. Justification of this question was based on the assumption that to a large extent, viability and sustainability of any livelihood activity, including small-scale timber production, depends on the nature of land rights and the function of institutions established to manage land resources.

According to various sources of literature regarding land rights, particularly in an African context, land rights and practices can be accessed through market and non-market arrangements (El-Ghonemy, 1993). There is a difference between the functioning of these two systems of accessing land. El-Ghonemy (1993) observe that there is:

“... the distinction between access to agricultural land through the market and non-market arrangements. Under the former, contractual transaction is arranged by bilateral bargaining between seller or lessor (owner) and buyer or lessee (tenant). Non-market arrangements, on the other hand, refer to transfer of land title or right to manage its use through inheritance, inter-family marriages and land extortion by virtue of social power and official status” (El-Ghonemy, 1993:13).

Market arrangements basically refer to negotiations of land rights that involves buying or renting the land, while non-market arrangements refers to negotiation of land rights through customary laws. A market arrangement is formal while non-market is informal in its nature. The interest of this study was to understand how each of the arrangements affect the potential of timber

production. In Chapter 1 Section 1.3.1, land tenure arrangements were discussed. In this section the focus is on access and practice of land rights. More deliberations on land rights take place below.

Eighty percent of the respondents (including both small-growers and non-growers), confirmed that access to land was through non-market arrangements, i.e. through negotiations with Inkosi based on customary laws. The remaining twenty percent accessed land through market arrangements. According to this group of respondents, the group of local people at Ekuthuleni initially rented land from the missionaries.

One of the benefits of the democratic government that put in place in South Africa in 1994, has been the land restitution programme, particularly in situations where rural people had been once dispossessed of their land by different institutions including missionaries. With the implementation of the land restitution programme by the Department of Land Affairs, Ekuthuleni local community members launched a land claim to get their land back.

During the time of this study, processing of the claim was being finalized and the community had established a Communal Property Association (CPA). The CPA will administer the land on behalf of the community. Practically, once the land claim has been finalized, Ekuthuleni community will become full owners of the land. It must be mentioned, however, that because Ekuthuleni falls within the TA, the Inkosi will continue to have influence on the issues of land administration as well as managing the affairs of the community of Ekuthuleni. It must be realized that the CPA is used as a vehicle for formalizing land ownership of the people of Ekuthuleni, but this institution is not superior to the TA. Community affairs of the residents of Ekuthuleni will continue to be administered by the TA. Normally, land restitution involves a process whereby communities regain their land dispossessed in the past. Land restitution in Ekuthuleni is about change of ownership from the missionaries to the community over land already occupied by the current residents. The achievement of the CPA is with regard to the fact that the residents will no longer be required to pay rent to the missionaries. Because of this situation,



the local community will not gain access to additional land to what they already have.

For further clarity on access and ownership of land, three sub-themes were identified and discussed below. These are: inheritance of land, land rights practices and boundary demarcation.

### **Inheritance of land**

According to respondents (growers, non-growers and traditional leaders), land is allocated on the basis of membership of the community and is allocated to individual households through a male figure. Inheritance of land continues within households from one generation to the next. Individual households may subdivide the land according to the different needs of its members. According to one respondent, this arrangement is commonly practiced when some members, for example, newly weds, want to establish a new homestead.

Accessing land by virtue of membership of a community and through a male figure is common practice among rural patriarchal societies. In this case, people do not legally own their residential and arable allotments (Masiphula, Van der Brink and Van Zyl, 1996:58). Studies carried out in different African countries show that allocation of land is based on the virtue of membership to the community and is inherited through patrilineage system. (Benjaminses and Sjaastad, 2003; Masiphula, van der Brink and van Zyl, 1996). It has been observed that:

“Heads of households are granted access to land, and the whole family is expected to be catered for within that land grant. Children gain access to their father’s land until it becomes too small. An individual has the right to part with his right to cultivate the land”. (Klug, 1993: 172).

In the farming communities in southern Mali, membership in a lineage determines access to land. Agricultural production is organized in residential patrilineages (Klug, 1993).

### **Land rights practices**

Understanding how land rights are practiced is important as this influences the Inkosi's decisions in land allocation. It appeared that during land allocation, the Inkosi takes into account the land needs for residential, crop production and grazing. A respondent clarified that:

“Our grandfathers were given land by Inkosi, they were given land for building houses and growing food crops. They were also allocated grazing areas for all”.

The study had an interest to see how land for timber production was allocated i.e. whether new land was particularly allocated for this purpose.

It transpired that small-growers have to use land already allocated to them by Inkosi. Small-growers did not acquire new land specifically for timber, instead they used land already allocated to them by Inkosi. One hundred percent of respondents (small-growers) confirmed the view that no negotiations were entered into for the acquisition of new land for planting timber. This was stated by a respondent who indicated that:

“You use your own area, your own field, you do not go to get a new land, you do not buy, you use your family land – your own field”.

The requirement in the case where a subsistence farmer wants to plant timber is to inform and get approval from the tribal authority. This was seen not only as courtesy but put the Inkosi in a position to be able to manage conflict should it arise. One respondent said that if the Inkosi was not informed of the intentions to grow timber, he may not attend to reports of conflict concerning plantations that were never reported to the TA:

“In spite of the fact that you use your own land, you still have to inform the Inkosi about your intentions for timber production – he has to be

aware so that should some conflict arise, he will be able to intervene and resolve the conflict”.

An approval from Inkosi serves as a supportive mechanism on the part of the small-grower in the case of land dispute with neighbours.

### **Boundary demarcations**

One hundred percent of respondents indicated that land allocation did not involve formal demarcation. Land allocation is based on verbal agreements between the applicant and the TA. It was found that not even the Permission to Occupy (PTO) was issued to local people. PTO is a written consent issued by the TA to confirm land rights. Despite the fact that there are no written-records, respondents indicated that the TA was fully aware of boundaries between different landowners. One respondent indicated that “Inkosi and Izinduna knows which land belongs to whom.”

Forty percent of respondents indicated that they dealt with fear of land encroachment by neighbours by keeping the land in constant use. In certain African societies, conditions are built into the customary system to deal with the issue of land rights claims. Such conditions are based on the fact that landowners have demonstrated that they deserve the land by making use of it. The struggle for claiming and retaining land rights was noted in Tanzania where customary rights may only be retained if there is evidence that the land is in constant use (Odgaard, 2003: 78). A minimum period of time may be sanctioned within which the landowner may keep the land fallow without losing it.

“In most villages there are rules specifying the number of years that land can be left fallow. In principle, if the number of years is exceeded, the land may be diverted by the village authorities and made available to other people” (Odgaard, 2003:78).

Odgaard (2003) argues that because allocation of land through non-market arrangements often does not involve formal demarcation, individuals resort to various means to claim the land.

“Generally, any sort of investments on the land may be used to make claims, implying that the person investing in such a piece of land may eventually acquire rights to it” (Odgaard, 2003.78).

The discussions on intragenerational and intergenerational equity below shows that in the case of Entembeni, land rights may be forfeited only if the user is relocated to another area.

The three sub-themes above demonstrated the manner of accessing and usage of land rights. The experience of Entembeni community shows many similarities with the experience of different African people in different parts of Africa. The discussion below concentrates on implications for market and non-market arrangements for Entembeni community.

A number of weaknesses have been associated with non-market arrangements. They include the fact that the land allocation through the tribal system excludes women and discriminates against non-indigenous people. Contrary to this, market related arrangements also have some shortfalls, in that the market is not always accessible to all. The discussion on the background of African farmers in Chapter 1 Section 1.2.4 has shown how the colonial and postcolonial administrators controlled the markets to exclude the African farmers in favour of white farmers. El-Ghonemy points out some of these shortcomings:

“Agricultural land has been viewed by most people of North Africa not only as food-producing and labor-using asset, but also as a main source of economic security, and social and political gain. This high amenity value together with increasing numbers of working people in agriculture, have intensified the demand for owning or leasing agricultural land. Such characteristics of the demand and supply of land have tended to raise the rents, and to direct savings to bidding up land prices as a secure asset for holding wealth, particularly where the political future of big landowners is secure and when the rate of inflation is high” (El-Ghonemy, 1993. 35).

It appears that the question of land tenure in the rural system is extremely complicated and cannot simply be solved by alternating between non-market and market arrangements.

At the centre of the land tenure debate is the distinction between the formal and the informal tenure system. However, this is a simplistic view. The land

tenure debate is more complex than this. Benjaminses and Lund (2003) observe that:

“Hence what we are witnessing is competing forms of institutionalization one backed by state law and bureaucracy, encoded in official language and often exercised with the props of modern statehood, the other the institutionalisation of informal practices more or less grounded in institutions seen as distinct from colonial and post-colonial states” (Benjaminses and Lund, 2003:2)

The case of Entembeni shows that the complexity of land tenure in rural areas is not only limited to the differences between market (formal) and non-market (customary) process. It extends to overlapping ownership. In particular, while rural people have been allocated land rights to respective pieces of land, the full ownership (not necessarily legal ownership), lies with the Inkosi. This means that the Inkosi is still influential regarding what individuals may or may not do on land already allocated to them. Lastly, the complexity of land rights and practices is exacerbated by a lack of demarcation. As a result, land users have to constantly demonstrate their claims to particular pieces of land.

#### **4.3.2 Livelihoods through subsistence agriculture**

This theme was identified from the question posed to both non-growers and small-growers with regard to traditional livelihoods that local people practiced before the advent of cash crops, such as timber. The interest of the study was to understand trends that have occurred over time, particularly with respect to the impact that cash crops have had on subsistence farming.

One hundred percent of respondents (both small-grower and non-grower) confirmed that subsistence agriculture was an important traditional livelihood activity. Subsistence activities include cropping and livestock keeping. In areas with high levels of unemployment like Entembeni, subsistence farming is a significant livelihood activity particularly to households, which have no other income or whose only source of income was the old age government grant. Stable crops range from beans, maize and amadumbe<sup>7</sup>. Seasonal vegetables and fruit trees (such as avocado pears, paw paws and bananas)

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<sup>7</sup> Amadumbe is yam like root crop grown in the area.



are planted to supplement main crops. Figure 4.1 and Figure 4.2 below depict a subsistence field and a subsistence farmer working in the field respectively. The former shows some of the crops grown by local farmers, while the latter shows that working subsistence farming mainly requires manual labour.

**Figure 4-1 Subsistence maize field**



Photographer: Isaiah Mahlangu

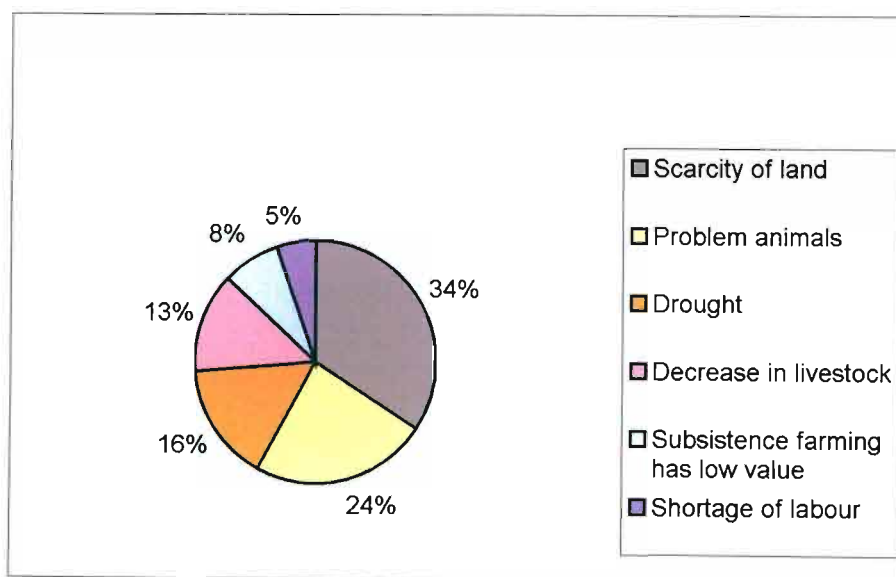
**Figure 4-2: An elderly subsistence farmer (non-grower) working in a field**



Photographer: Isaiah Mahlangu

One hundred percent of small-growers indicated that although they were participating in timber production, they had not abandoned subsistence farming. By implication, the extent to which they practiced subsistence farming had dropped since they had converted some of their subsistence fields to cash crop production. According to both non-growers and small-growers, trends suggesting a decline in subsistence farming have been noticed. Six sub-themes were identified as reasons for the decline in subsistence farming. These sub-themes include: scarcity of land, problem animals, drought, decrease in livestock, subsistence farming has low value and shortage of labour. Figure 4.3: below shows the ratings of different reasons attributed to the decline of subsistence farming followed by discussions.

**Figure 4-3: Reasons for the decline in subsistence farming**



### **Scarcity of arable land**

Thirty-four percent of respondents cited that subsistence agriculture has always been compromised by the fact that in most areas, some arable land is inaccessible because of undulating topography. One respondent summarized this view as follows:

As has already been pointed out, this situation varied from one area to another.

### **Problem animals**

Twenty-four percent cited that problem animals such as bush pigs and monkeys damaged crops in the field. Subsistence farmers indicated that they did not have means to control these animals. To a certain degree, damaging of crops by animals discouraged subsistence farming.

### **Drought**

It appeared that in recent years there has been persistent drought, which to a large extent discouraged subsistence agriculture. Sixteen percent of the respondents cited drought as one of the problems facing subsistence farmers. Due to a lack of irrigation infrastructure, local subsistence farmers had no way of dealing with drought. Small-growers cited this condition as one of the reasons why they were participating in timber production because eucalyptus trees showed resistance to drought.

### **Decrease in livestock**

It appeared that when local people used to keep a reasonable number of livestock, the oxen could be used to cultivate the land. Thirteen percent of respondents equated the shortage of labour with the decreasing number of livestock. Now that the number of livestock has declined, there are not enough animals to pull the plough, so it now requires hard labour to prepare the land.

“Before, people used their oxen to cultivate the land, but they don’t have oxen anymore. Now livestock have died, people have to till the land with their own labour”

The decline of livestock has been blamed to the government's campaign to decrease livestock in rural areas. One respondent explained that:

“Our cattle were killed by diseases, from injections at the dipping tank, when we took our animals for tick control, the government finished our cattle with poisonous vaccination. We were told not to eat cattle that died immediately after this injection, we were told to destroy the meat, that is because they knew they had poisoned our cattle.”

It was indicated that in the absence of oxen to prepare land for cultivation, this task was very difficult. The more prosperous local people hired a tractor to cultivate the land but this service was out of reach of the poorest of the poor. However, even for people who could afford it, a tractor was not always readily available as there are many people requiring the service and few tractors. The situation is exacerbated by the fact that available tractors are not always in a good condition. A non-grower articulated that:

“Look here, by this time of the year we would have grown our crops, we are waiting for one tractor, all of us, which is not in a good condition. It was better when we had our own oxen”

### **Subsistence farming has low value**

Eight percent of the respondents cited that subsistence farming had less value than cash crops. This group of farmers found cash crops attractive as they were able to earn income. Cash earned from commercial farming could then be used to purchase other essential household goods.

### **Shortage of labour**

While scarcity of land was rated as the most important reason for the decline of subsistence agriculture, there were other reasons including shortage of labour.

Reasons discussed above that were identified either to explain the decline of subsistence farming or to justify adoption of small-scale



timber production. One participant summarized the reasons leading to the decline of subsistence farming:

“It depends from one person to another. I have an area where I practice subsistence agriculture, but some people are not cultivating because they don’t want to, other people have other reasons, may be they are lazy. There are also those who do not grow food crops because they don’t have land, but most people don’t grow crops because of other reasons. Some people are discouraged by problem animals e.g. bush pigs and monkeys. But there are those people who do not plant and get good harvest.”

It appears that the small-growers view the introduction of cash crops as a complementary activity to local livelihood activities. Despite this, it is clear that the advent of cash crops has contributed to the decline of subsistence farming.

In conclusion the theme on livelihood through subsistence agriculture showed that both non-growers and small-growers continue to practice subsistence farming. While subsistence farming is an important source of livelihood for the non-growers, small-growers use subsistence farming as security for livelihood before earning some income from the sale of timber. Discussion in Chapter 5 Section 5.6 shows that small-growers are not earning enough from timber production to sustain their livelihoods. Perhaps this is the reason why small-growers continue to depend on subsistence farming.

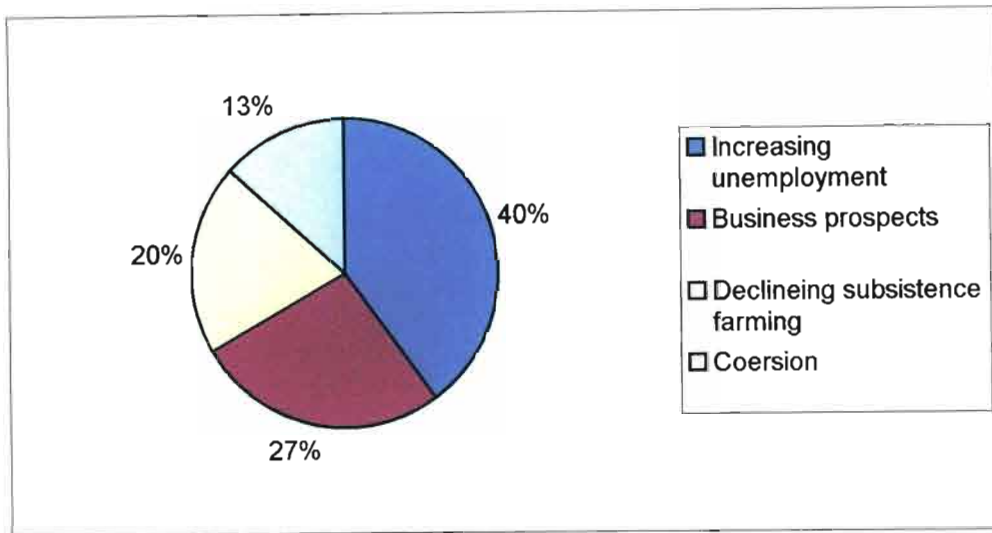
### **4.3.3 Transition from subsistence to timber farming**

The theme regarding transition from subsistence farming to small-scale timber production was identified from a research question seeking to establish what motivated subsistence farmers to become small-growers. Four sub-themes were identified as reasons that motivated subsistence farmers to participate in commercial timber production, they include: increasing unemployment, business prospects, declining subsistence farming and coercion by government and commercial companies.

Figure 4.4 below demonstrate different motivational factors for adoption of small-scale timber production.



**Figure 4-4: Reasons for adoption of timber farming**



### **Increasing unemployment**

Forty percent of respondents in this category indicated that, due to increasing unemployment, many people have become unemployed. The number of migrant workers who have been retrenched is also equally increasing. As a result of lack of employment, subsistence farmers turned to timber production in the hope that they would be able to make a living or to increase their households' income.

### **Business prospects**

Twenty seven percent of respondents indicated their desire to participate in business as one of the reasons why they were attracted to timber production. Instead of the need to generate opportunities for increased income, respondents in this category showed a desire to create business opportunities and to employ other local people.

"I planted timber because I wanted to start a business and create job opportunities for other people"

Successful small-growers became role models and as a result, other subsistence farmers became small-growers.

“I planted timber because other people were making money and getting rich out of timber. I planted timber and I did well for the first and second harvest. My third harvest was a failure, I started to struggle to get a truck to transport wood to the mill”

### **Declining subsistence farming**

Twenty percent of respondents saw timber production as a potential alternative to declining subsistence farming because species such as *eucalyptus grandis* are more resistant to drought conditions than vegetables and fruit crops.

The study also sought to establish whether small-growers thought they had made a good decision converting into timber production. Eighty percent of respondents indicated that they were not getting as much benefit as initially anticipated but they could not confirm whether or not they were satisfied with their decisions to grow timber. In certain instances where small-growers had experienced harsh realities, decisions to participate in timber production were viewed with regret. Twenty percent of respondents did not think that the decision to grow timber was good. One of the respondents whose entire harvest was burnt at the loading zone before it was transported articulated that:

“I have a plantation but I never received any benefits. My entire harvest was burnt at the loading zone. I do not have money to pay the people I had hired to work on my plantation and I also do not have money to pay back my loan. I regret having planted forestry, my forest burnt, I have debts to people who provided labour”

Such regret came with the realization that despite the fact that she had lost all her harvest, she owed people for labour and Mondi for the loan.

### **Coercion by government and commercial companies**

As discussed in Chapter 1 Section 1.2, the history of involving subsistence farmers in timber production has evolved from non-commercial to commercial purpose. Non-commercial timber production was aimed at relieving natural vegetation from over-utilisation for

domestic purpose. In KwaZulu Natal plantations were first introduced in the 1920 and 1930s (Addo and Lewis, 2002).

Thirteen percent of respondents indicated that their involvement in commercial timber production was as a result of coercion by either the government officials or commercial companies. In the area of Entembeni, remnants of old plantations grown as a result of early government initiatives still exist. Some small-growers, quite senior in age remembered that their parents planted timber many years ago.

Encouraging subsistence farmers to participate in timber production was also done by commercial timber companies. In the early 1980s, Sappi started off with three commercial small-growers (Sappi, 2004). In 1986 small-growers at Entembeni started to grow plantations through Mondi's, Khulanathi scheme. The principal aim of introducing commercial timber to subsistence farmers was to encourage the participation of these farmers in the commercial forest sector.

The sub-themes discussed above show that there are different forces that are responsible for transforming subsistence farmers to small-scale commercial farmers. A distinction between pull and push forces can be made. In this case a pull force may be associated with business prospects while push forces are associated with increasing unemployment, declining subsistence farming and coercion by government and commercial timber companies. While it is appreciated that transition from subsistence farming to timber production is done with the intention to improve local livelihoods, the limitation is that there is no holistic consideration of other options through which local people can deal with challenges of increasing unemployment or declining subsistence farming or achieve business prospects. Timber production seems to be presented as the only option available.

#### 4.3.4 Intragenerational and intergenerational equity

The concepts of intragenerational and intergenerational were defined in Chapter 2 Section 2.3.3. The theme of equity was identified based on research questions seeking to establish issues of equity among current generations but also between current and future generations. The question of equity was asked with a view to understanding whether small-growers were given equal opportunity from the perspective of land allocation.

It was found that the size of land varied from one area to another and from one individual to another. Respondents from Mfanefile indicated that they had access to large pieces of land. Contrary to this, respondents from Ekuthuleni indicated that land was scarce because the area was densely populated.

Respondents indicated that the size of land allocated to an individual was also influenced by an applicant's social status. A distinction was made between '*Umsinsi wokuzimilela*'<sup>8</sup> or indigenous local people<sup>9</sup> and 'migrant local people'<sup>10</sup>. Migration or movement of people is encouraged by the custom of *ukukhonza*<sup>11</sup>, which makes provision for local people to relocate from one tribal authority area to another. Social status based on whether one was born in the area or not, or how long one's generation has lived in the area manifested itself through land allocation as it was confirmed that indigenous local people had bigger pieces of land compared to migrant local people. This form of social inequality is not based on random discrimination, but on the logic that as new people move into an area, land becomes less. The size of the land therefore varies from one grower to other on the bases of social status.

"The size of the area varies, if you are *umsinsi wokuzimilela*, you have a bigger area, people who just came to live in this area recently don't have big areas".

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<sup>8</sup> Umsinsi is 'common erythrina tree'. Umsinsi wokuzimilela, can be translated as a naturally occurring in the area.

<sup>9</sup> In this study, indigenous people refer to local people who have lived in the area for many generations.

<sup>10</sup> In this study, migrant people refer to local people who have settled in the area recently from other tribal authority areas.

<sup>11</sup> Ukukhonza is system that allows local people from one tribal authority area to migrate to another.

The phenomenon of movement of the people was not seen as a one-way process whereby new people flocked into a particular tribal area, but also as process whereby local people left their tribal area. The movement of people out of their original tribal land as a result of urbanisation was mentioned as one such example. In the case of voluntary relocation to an urban area or to another tribal area, an individual household forfeits land ownership. The land concerned is recycled, and becomes part of the reserve that the Inkosi may reallocate for future needs.

The influence of social differentiation in the distribution of local resources has been observed in other parts of Africa. El-Ghonemy maintains that:

"The type of land rights held by the majority of rural people in the Iringa district are rooted in unwritten customary rules and norms. However this does not mean that all people who happened to live together in a specific area have the same type of rights. Land endowments differ for different groups and individuals in the society, not only in accordance with age, status and gender, but also depending on whether one is mwenyeji (indigenous) or mgeni (guest). ( El-Ghonemy, 1993:73)

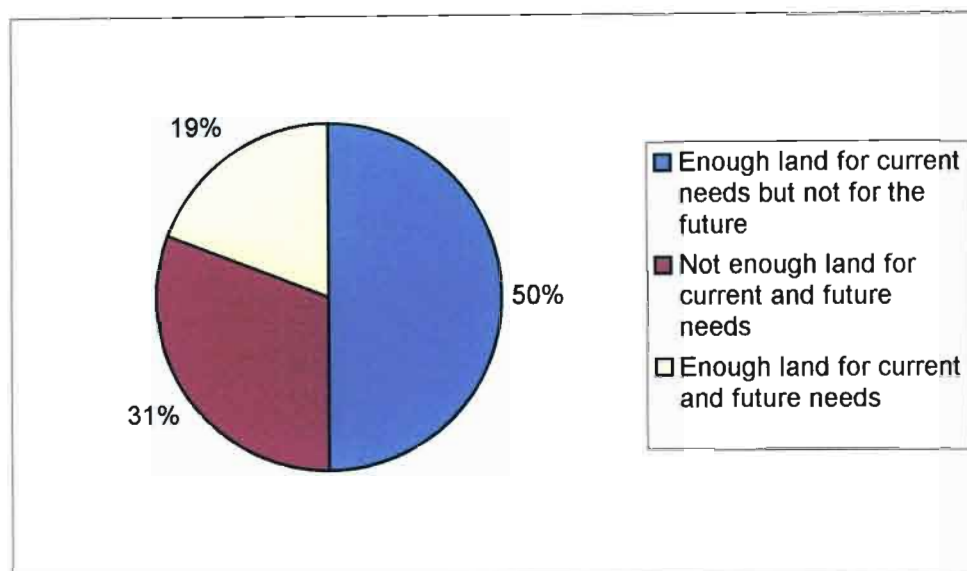
In addition to the social status and population densities, gender also influences land allocation. Discussion on the allocation of land above showed that land is allocated through a male figure. By implication the system of land rights discriminates against women.

Eighty percent of small-growers interviewed were males. However, most respondents confirmed that the number of women small-growers was increasing rapidly. There was no consensus with regard to the number of women growers, as some respondents thought that males dominated the practice while others thought females dominated it. Respondents reached a consensus regarding the fact that most women growers had been registered as such because their husbands were either dead or were working as migrant workers.



Figure 4.5 below demonstrates perceptions about the current and future land availability.

**Figure 4-5: Perceptions about land availability**



The study also investigated the availability of land for current small-growers as well as future generations. Responses from those small-growers varied:

- (i) Thirty percent did not have enough land for themselves let alone land for the coming generations,
- (ii) Fifty percent had enough land for themselves but not for their future generations and
- (iii) Nineteen percent were satisfied that they had enough land for themselves and future generations.

Firstly, as already indicated above, in areas like Mfanefile which are less populated, the experience of small-growers was that there was enough land for current as well as future generations for timber production. Secondly, in the case of densely populated areas respondents indicated that there was a scarcity of land even for the current generation:

“I have enough land for myself and my children, my brothers’ children don’t have land, I have to give them a piece of land around my home, but even this is not enough”.

Lastly, it appeared that in certain areas, future generations will find it difficult to access and own land.

“Our children will not get land for plantations, they will struggle even to get land for residential purposes”

It is clear that land is not allocated equitably among the current generation nor is it allocated and used in a manner that will ensure that the resource is available for future generations.

#### **4.3.5 Management of conflicting interest of land uses**

The theme on conflict of interests on land use was identified from a research question that attempted to establish whether there was any conflict between different land users and how such conflict was managed. The logic for this was not to limit the study in understanding the land rights for timber but to establish the relationship between different land users. The relationship between user groups was investigated with a view to understanding the level of conflict if any, and to understanding how such conflict was managed.

The relationship between small-growers and non-growers appears to be characterized by direct and indirect sources of conflict. Direct conflict between timber growers and non-timber growers is likely to occur when plantations encroach on the neighbour's field.

“Sometimes you grow gum trees, and they start spreading to someone else's field”

This form of conflict can be managed through good silviculture practice. One of the requirements for plantations in terms of the conditions of ROD as well as the water use license is to maintain the size of the plantation to its original size as was specified during environmental authorization.

Two observations were made relating to sources of conflict between small-growers and non-growers. Timber was associated with a loss of underground water. A non-grower suspected that timber production does affect subsistence agriculture:

“There is no conflict between the timber growers and us but I feel that because there is timber all around us, timber sucks water, - I am not sure about this but I suspect that timber sucks water”.

Cairns (1995) observed that conflict occurred between non-growers and growers on account of boundaries, or livestock damaging plantations and

runaway fires. Respondents indicated that hypothetically, conflict should not occur between the different land users (small-growers and livestock keepers) because as has been shown in discussions on land allocation above, small-growers use their own land to grow timber and that grazing areas are not directly affected.

It appeared that there is high level of competition between timber production and other forms of land use such as grazing and subsistence crop production. However, because small-growers use their own land to grow timber, competition between different land use options could not openly translate into conflict between growers and non-growers. It is assumed that feelings of animosity as a result of land use competition were expressed in an indirect manner. The theme on Section 4.2.8 below identifies theft and wildfire as some of the challenges facing small-growers. This could be one-way non-growers express their animosity over the competition of land use.

Apart from the tribal authority system, there is no other mechanism to maintain and harmonize relationships between different interest groups. Proliferation of timber could be an indirect source of conflict. Despite the fact that small-growers used their own land, this has implications for the availability of land for grazing and the harvesting of natural products for example thatch grass and medicinal plants.

#### **4.3.6 Leadership**

The theme of leadership was identified based on research questions seeking to understand the nature and role of existing leadership structures. The question regarding leadership structures was asked with a view to understanding what institutions had been established to facilitate transformation of small-scale timber production and whether these institutions were effective.

Eighty percent of small-growers were affiliated to small-grower structure. The first view raised regarding leadership structures was that such small-grower

structures existed in the form of elected committees. At the tribal ward level, there are small-growers ward committees. By implication, each of the wards used in this study (Ekuthuleni, Endabazensangu, Ndundulu and Mfanefile ) has a small-grower committee. All ward committees joined to form a single large structure, the Biyela Project.

Twenty percent of the respondents indicated that that they were not affiliated to any leadership structures. The second view was prominent among small-growers growing timber alone, without the support of commercial timber companies. These small-growers did not feel the need to associate themselves with leadership structures. This was because these growers perceived existing structures as an initiative of Mondi to take advantage of small-growers.

Small-growers who were affiliated to established leadership structures cited lack of commitment and loyalty of members particularly at a ward level. It was also cited that individual growers who had no official affiliation with structures would, from time to time, attend meetings organized by existing structures, particularly if they had serious concerns.

In an attempt to understand how small-growers made decisions to associate or not to associate themselves with leadership structures, two factors were cited. Firstly, respondents expressed lack of trust because existing structures had been established as part of Mondi's Khulanathi out-grower scheme initiative. In terms of this view, respondents expressed the opinion that it was in the interests of Mondi to have a committee in order to manage and monitor small-growers under their (Mondi) out-grower scheme.

More than eighty percent of the respondents expressed the view that the capacity to function also influenced the decision to participate in leadership structures. While leadership structures were seen to be credible in addressing certain concerns facing small growers, for example, ensuring that small growers have a fair chance to supply timber to the mill, there were doubts about the capacity of the structures to deal with broader issues. The supply of

timber to the mills is based on quotas that allow growers to deliver quantities according to the requirements of the mills. Quotas are then distributed among growers.

“The committee has worked for us. For example, at one time there was confusion regarding the allocation of quotas to deliver timber at the mills and the committee fought for that”.

Lack of transparency also seems to jeopardise the credibility of leadership structures. One respondent indicated that small-grower committees were unable to account for the finances, made up of contributions by members of their project. The need for leadership structures with adequate capacity to perform was expressed.

“It would have been better if we had structures, committees because we can work together, but we do not just need token structures, we need structures that can represent our needs.”

It appeared that while some leadership structures existed at Entembeni, they did not have adequate capacity or the full mandate to represent the interests and concerns of small-growers. Such a situation is likely to render small-growers vulnerable with regard to negotiating with other role-players in the forestry sector.

#### **4.3.7 Perceptions of government policies**

This theme was identified following the question of the relationship between small-growers and government structures. The question sought to understand how small-growers understood government policies and whether or not these policies were seen to be supporting or hindering small-scale timber production. The interest in this regard was to understand how government policies shape small-scale timber production and how small-growers interact with policies to improve their practices. Five sub-themes were identified to broaden the understanding of perceptions of government policies. These include: small-growers' perceptions of government, environmental authorisation, water use license, communicating government legislation and occupational health. The sub-themes are discussed below.



## **Small-growers' perceptions of government**

Government credibility is low among most small-growers. This perception has emanated from two reasons. Firstly, small-growers believed that the 'promise' made by the previous KwaZulu government was deliberately abandoned by the new democratic South Africa immediately after the elections in 1994. According to small-growers, the KwaZulu government had promised to help with the construction of access roads to different plantations. Articulation of the animosity between the government and small-growers by one small-grower captured the concern of small-growers.

"The relationship between the government and small-growers is not a good one. We started growing timber under the apartheid government. At that time, the government promised to build roads into our plantations, but after the 1994 elections, the promise fell through, the new government did not help us at all".

Secondly, most small-growers felt that different government policies only intend to discourage small-scale timber production.

## **Environmental authorisation**

As already indicated in Chapter 1 Section 1.3, currently, the Environmental Conservation Act (Act No. 73 of 1989), requires that for an activity such as planting timber, which potentially involves change in land use, an environmental authorisation is required. Depending on the extent of the proposed activity, this could be done through conducting an Environmental Scoping and Environmental Impact Assessment. These procedures can be costly and time consuming. It appears that in the case of the small growers, the DAEA conducts site visits to assess the impact of the proposed activity before a ROD is given.

One hundred percent of respondents found it difficult to understand and keep up with different stages of environmental procedures, and or even to engage with government authorities to make enquiries about the status of their applications.

## **Water use licensing**

The National Water Act regards forestation as a stream flow reduction activity. As a result, small growers have to apply for a water use licence from DWAF. The LAAC considers the application. LAAC is comprised of representatives from DWAF, DAEA, Ezemvelo KZN Wildlife, and Forestry South Africa. The license is only issued once an ROD has been provided by DEAE.

The time frame for both environmental procedure and water licensing is unpredictable. Respondents indicated that applications could wait up to four years before they are finalized. According to respondents, the last time any small-grower ever got an ROD and water use licence in the Entembeni area was in 1999, yet there are several outstanding applications. During the time of this study, the DWAF had a file of thirty applications from Entembeni Tribal Authority that have been waiting for an ROD for the past two years. The explanation for the delay was that at one stage DAEA did not have sufficient environmental officers to assess the applications. As a result of lack of personnel, RODs could not be issued and in turn DWAF could not issue water use licences.

DAEA gave several reasons for the delays in processing applications. Firstly, the applicant might not have supplied detailed information as required by the proposed project. Mr. Howison, (DAEA official), pointed to some reasons for delays in processing of applications.

“Some delays are as a result of lack of provision of necessary information e.g. applicant, proposed activity, size of the area etc, that is because you are dealing with illiterate population”.

For this reason, delays are caused as the process goes back and forth between government authorities and the applicant for the supply of additional information and processing of such information. Secondly, Mr. Dlamini (DWAF official), explained that delays are caused by the fact that there are different government departments involved, with little coordination between them. As a result, each department may complete its task in time, but the final decision may not be made until

all departments concerned have completed their tasks. Lastly, the LAAC meet every two months and the committee has to deal with large volumes of applications, thus some applications might wait longer before they get due consideration.

### **Communicating government legislation**

It was found that communication between various government departments and small-growers with particular reference to legislation regulating timber production was very little to non-existent. The manner in which government policies were communicated to rural communities leaves much to be desired. This function is one of the duties of an insufficient number of extension officers. The government does not have the personnel to support small-growers. Poor communication on the part of the government departments was confirmed by senior induna of Entembeni Tribal Authority, who suggested that even the tribal authority was not fully aware of some legislation regulating timber production.

### **Occupational health**

Occupational health regulations were concerned with the safety of workers involved in various forestry activities. A safe environment is essential for workers. This is to be achieved, among other things, through the use of protective clothing. Some small growers felt that occupational health was important to ensure that 'working environment was not dangerous and to avoid problems that may arise when people were not protected'. Only twenty percent of the respondents indicated awareness about occupational health regulations.

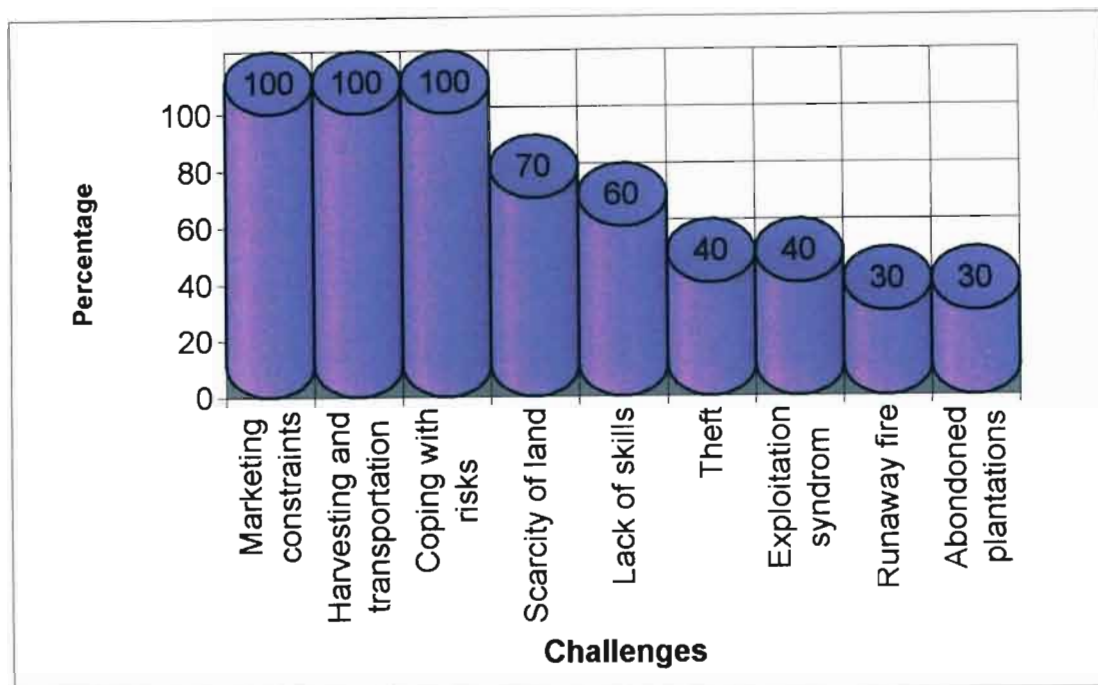
The discussion of the sub-themes shows that small-growers are pessimistic of the government. There are two main reasons for this. On the one hand, small-growers believe that the present government failed to deliver on the promise made by the KwaZulu government administration to provide roads. Section

4.2.8 below will show that lack of road infrastructure forces certain small-growers to abandon their plantations, as attempts for harvesting proved impractical. On the other hand, small-growers view government policies as a strategy by the government to discourage small-scale timber production. Two reasons can be cited for this perception. Firstly, the purpose of policies regulating timber production is not well understood by small-growers. Secondly, in an attempt to comply with policies, for example environmental authorisation, small-growers are not duly reciprocated. It is inconceivable that an application for environmental authorisation can be delayed by as much as three years without proper communication with the applicant.

#### **4.3.8 Challenges faced by small-growers**

The theme of challenges was identified following questions aimed at establishing the different challenges facing small-growers. Viability and sustainability of timber production among small growers has to be seen in association with two things, firstly, the challenges facing small-growers and secondly the ability of small-growers to deal with such challenges. Respondents (both small-growers and commercial timber companies) identified a variety of challenges, which face small-growers. These challenges were identified as nine sub-themes. These include marketing constraints, harvesting and transportation constraints, coping with risks, scarcity of land, lack of skills, theft, exploitation syndrome, runaway fires, and abandoned plantations. These sub-themes are summarized in a graph on figure 4.6 below. Discussion on each sub-theme follows.

**Figure 4-6: Challenges faced by small-growers**



### **Marketing constraints**

The study was interested in understanding the relationship between small-growers and the market, in terms pricing procedures and the type of products sold. The objective was to establish whether or not, in this relationship, small-growers were able to negotiate with confidence in order to optimise their benefits.

One hundred percent of respondents identified marketing constraints as one of an important challenge. It was found that wood was harvested and sold as raw material to timber mills in Richards Bay. According to small-growers it is not economically attractive to sell wood to the local market for uses such as building material. Two reasons were cited for this. Firstly, wood does not attract a competitive price at the local market. Secondly, even if the local market offered a competitive price, it would be considered second best, as small-growers are obligated to contracts that bind them to supply wood to specific mills. Small-growers at Entembeni are not engaged in any form of processing of wood. An idea to treat wood to sell as poles was once



contemplated by small-growers in the area, but this initiative was never implemented as it was going to require a substantial capital investment. Small-growers depend on marketing companies to find and negotiate deals with the market and negotiate price on their behalf. There was a tendency among marketing organizations to limit small-growers to concentrate on production, and to have marketing activities attended to by the private sector. Mr. Mdengu, an NCT official indicated that:

“Here at NCT, we negotiate deals with the market on behalf of the members. We negotiate the prices with the market. Prices are not fixed they are affected by the inflation rate. We do all the paper work. We fill the gap between the grower and the market”

At the time of this study, Mr. J. Ngubane, a Sappi official, indicated that the market price for wood was estimated at R255.00 per tonne. The price did not limit buyers from offering a slightly higher price in order to attract suppliers. Variations in wood prices, as a result of inflation, created some levels of confusion and misunderstanding among small-growers. The confusion was caused when the price of wood suddenly dropped. Lack of clear dialogue regarding the reasons that might have led to changes in price structure exacerbated their confusion. Growers supported by Mondi's Khulanathi scheme at Entembeni indicated that there were no negotiations about the price nor was the increase and decrease of prices properly communicated. One respondent indicated that:

“There are differences, Khulanathi, does not have a platform for negotiations about price, but in the case of NCT, you are able to negotiate. NCT organizes meetings for its members where issues including price are discussed. These meetings are open to members only, if you are not a member you are not in a position to attend these meetings “

Small-growers also expressed some level of frustration caused by a lack of flexibility due to contractual agreements binding them to supply wood to particular buyers. This situation prohibits small-growers from selling wood to buyers who may be willing to offer them a better price.

## Harvesting and transportation constraints

One hundred percent of small-grower respondents identified harvesting and transportation as one of the challenges faced by small-growers. These include lack of roads and poor services rendered by contractors such as harvesters and transporters.

All respondents complained that the lack of roads was a major setback. The provincial road connecting Melmoth and the mills in Richards Bay supports the transportation of wood from the Entembeni area. While some plantations are located alongside the provincial roads, others are located some distance from the provincial road. Roads connecting most plantations and the provincial roads are in a poor condition and are not useable in rainy weather.

“Roads are a major constraint. If you do not have roads, you need more labour and you lose more money in order to collect your harvest. We don't get infrastructural support. Our area is mountainous- in some areas you cannot get there even with a tractor”.

Lack of roads was attributed to the failure of new South African government to honour the promises made to small-growers by the then KwaZulu government.

“When we started growing timber we were lied to, we were told to grow timber in most difficult areas, now there is no road to these areas, which means that these plantations cannot be harvested”

Further, because some plantations are located in very steep areas, small-growers have had to spend more money to construct access roads in their plantations. A small-grower with a 6 ha plantation spent R6000.00 to construct his access road network.

“We pay a lot to contractors for harvesting, and construction of roads”

Respondents pointed out some further implications as a result of the road constraints. In certain instances small-growers indicated that they spend money constructing access roads. Also, to get wood out of the plantation, small-growers require the service of a tractor to transport

the wood to the loading zone. From the loading zone, trucks transport the wood to respective mills. Lack of good roads has cost implications.

The poor quality of service on the part of the contractors (harvesters and transporters) was identified as a contributing factor to the problems of small-growers regarding harvesting and transporting wood. Firstly, small-growers alleged that, in order to enhance their income, harvesters accepted contracts to harvest from different small-growers at the same time. This led to a situation where harvester's capacity was overstretched and were unable to honour their contracts with regard to finishing on scheduled time. This situation caused delays for delivery of timber at the mill. Secondly, it was suggested that harvesters were felling trees incorrectly (felling at the wrong height). Poor felling practice has implication for replanting.

Once a quota to deliver had been issued, each small-grower works out a plan for harvesting, transportation and delivery of wood to the mill. Because transportation proved to be a scarce service, it was not always possible to deliver wood at the mill on time.

“You don't get transport to the mill at the time that you need it, your timber dries up and may even get burnt because you don't have transport. This is a long process, even if you can make plans there are no guarantees. There are few people who transport timber, it is not easy to get them”

In theory, small-growers are only able to pay for all services rendered once they have been paid for wood delivered at the mill. However, transporters were not prepared to offer their services before a payment was made to them. It was suggested that:

“Transport operators complain that our places are difficult. Our roads are not all weather conditions. After rain, roads became muddy and it becomes impossible to transport your wood – harvested wood loses quality. To avoid risks in payment, transport operators ask for payment upfront, and this is not negotiable, this means that you have to pay for transport even if you don't have money”.

Demands for upfront payments by contractors suggested that delays in harvesting and transportation of wood were possible if a small-grower did not have payment available.

### **Difficulties with regard to coping with risk factors**

One hundred percent of respondents identified difficulties with regard to coping with risks as a challenge. The manner in which small-growers cope with challenges was viewed at two levels, firstly, at the level of coping with demands for livelihood and secondly, at the level of coping with unforeseen circumstances or risk factors.

Since *eucalyptus grandis* (the blue-gum tree), is grown over a seven-year cycle, the study had an interest in understanding how small-growers made a living while waiting to harvest timber. Small-grower respondents indicated that when embarking on timber production, some land had been reserved specifically for the production of food crops. While some growers had converted food crop fields to timber production, subsistence farming was never completely abandoned.

It was suggested that it was essential that small growers reserved land for subsistence farming:

“You keep land aside for subsistence farming. There are also places where you cannot put timber – we use these areas to plant crops for home consumption”

This view was confirmed by the view that:

“What I’ve noticed is that they have plantations but also practice subsistence agriculture”

Small-grower respondents identified two other sources of income. These are income from formal employment and loans from out-grower schemes. Some small-growers have formal employment. Small-growers are able to access loans on an annual basis from commercial timber growers for labour intensive activities. Instead of hiring local

labour, small-growers are encouraged to use their own labour or family labour so that they can keep the income within the family.

### **Scarcity of land to plant or expand**

While there were variations regarding the size of the land, the majority of small-growers did not have more than 2ha. Seventy percent of small growers identified scarcity of land as the most important challenge as small-growers were unable to expand their plantations.

“Our areas are very small. If we had say 5 or 10 ha we could harvest more frequently. As it is most of us can only harvest once in 7 years because we have small areas, this way you are unable to invest the money that you get”.

An observation was made by Mr. Mdengu that land size limits the potential for small-growers to expand in business. Shortage of land was seen to be a limiting factor for growth of small-scale timber production. This factor was seen to be a hindrance for the success of both current and future generations.

### **Lack of skills**

Sixty percent as a common feature among small-growers cited lack of basic skills in forestry and business management. An observation was made that:

“Small-growers lack basic business skills, to be able to work out expenses and profit, they do not have management skills and silviculture skills”

Also, one of the common characteristics of small-growers is the high level of illiteracy and a lack of technical skills in timber production. Small growers indicated that their level of illiteracy made them vulnerable to exploitation.

### **Theft**

Another challenge reported by forty percent of small-growers was theft. It was suspected that non-growers who needed building material



committed theft. Small-growers were not able to police their plantations. Because of this, damage was often discovered long after it had occurred.

“Those who do not have plants steal timber at night, sometimes even during the day because some plantations are in the valleys where no one can see anything.”

It appeared that small-growers had no mechanism to deal with problems such as theft. No cases of arrest were reported, as it proved difficult to trace the perpetrators.

### **The ‘middle men’ exploitation syndrome**

The role of contractors is to harvest the wood, transport it to the mill or assume both responsibilities. Forty percent of small-growers indicated that the harvesting and transportation of wood is arguably the most expensive transaction while the service may not always be of good quality.

“We pay a lot to contractors for harvesting. Some contractors start to harvest, leave and go and start another forest before they have finished yours”.

In theory, contractors are hired by a small-grower to harvest the wood. It appeared that contractors have identified this niche market and, instead of waiting for contracts from small-growers, they have become more proactive. They travel around the province looking for plantations ready for harvesting and start negotiating deals with small growers.

Respondents alleged that contractors are also able to negotiate business deals with the mills to get quotas, even though they do not have plantations. In this regard, contractors then supply wood and have money paid directly into their account instead of small-grower’s account. In a situation where a small-grower has not been part of the transaction and does not know exactly how much was paid for his/her wood, it was reported that contractors manipulated the figures and paid small-growers less than they deserved. Respondents also indicated

that there have been cases where after selling wood, contractors have disappeared and never paid money back to the small-growers.

“There are cases where contractors harvest and sell timber and don’t even come back to pay the owner, and some of these contractors are not traceable because they are not from this area”

Small-growers described the hiring of contractors from outside Entembeni area as a rebellious act or a breach of contract between themselves and Khulanathi. The breach of contract was described as a deliberate act not to sell wood back to Khulanathi as per contract and at a price offered by Mondi, but to sell to alternative buyers who might be prepared to make a better offer. Such an act is also supposed to enable small-growers to receive payment directly, instead of payment less loans as it would be the case if wood was sold to Mondi. Respondents revealed that the breach of contract of this nature led to other problems. Contractors from outside the area have taken advantage of the situation. When small-growers are robbed of their payments, they become unable to pay for either local labour they might have used and are also not able to repay back the loan and interest to Mondi. The relationship between small-growers was described by one small-grower:

“Small-growers prefer to use contractors from outside the area. The owner, the small-grower, gets little, the people who had harvested were not paid, I was not paid for my tractor. People get contractors from outside the area because they do not want to pay loans back to Mondi, but they get robbed by contractors”.

Exploitation of small-growers by contractors was attributed to two factors. On the one hand, because most small growers are illiterate, they are vulnerable in terms of negotiating business deals. On the other hand, this level of exploitation was taking place due to lack of efficient leadership.

### **Runaway fire**

Thirty percent of small-growers reported experiences of runaway fires at different stages of the plantation, i.e. immediately after plantation,

halfway through the life cycle and after harvesting (Figure 4.7) The induna from Entembeni TA confirmed that it was often very difficult to trace the source or cause of fire. One respondent suggested that the problem of runaway fires was the act of jealous people who did not want to see others progress.

While the sources of runaway fires are illusive, impact of the fire was severe. Depending on the stage at which the plantation was burnt, the crop may or may not recover. One implication of runaway fires is that an affected small-grower loses productivity and becomes indebted to his or her service provider with regards to loan.

**Figure 4-7: Plantation affected by runaway fire**



Photographer: Isaiah Mahlangu

### **Abandoning of plantations**

Thirty percent of respondents alluded to the fact that when small-scale timber production was first introduced, potential growers had been encouraged to grow timber even in the most difficult areas such as



steep slopes. At the time of harvesting some small-growers came to realize that because of the terrain of the area, it was impossible for tractors to gain access to such plantations in order to transport the wood. Plantations of this kind have almost been abandoned. During the study, a visit was made to one such plantation. The owner had once hired local labour to harvest the plantation but the process was abandoned when he realized that the wood could not be transportable. As a result, cut wood was left to rot, while uncut timber remained standing (Figure 4.8)

**Figure 4-8: Abandoned wood in a steep slope plantation**



Photographer: Isaiah Mahlangu

This study was unable to estimate the total number of such plantations. These plantations can be divided into those that are harvested at a very high cost, and those that have been completely abandoned. In both instances small-growers lose benefits from their plantations.

The sub-themes above show that there are numerous risk factors faced by small-growers. It was found that there were no measures in place to deal with most risk factors. With exception of fire brakes established in advance to prevent runaway fires, there are no contingency plans to deal with unexpected

situations. Planning of the timber growing seems to focus primarily on the ideal side and hope that nothing will happen to offset timber production.

#### **4.4 Perceptions of benefits**

The Issues of viability and sustainability of small-scale timber production have been dealt with in different sections of this chapter. This section presents the views and perceptions of small-growers regarding the benefits of timber.

With regard to the question of viability, it transpired that many small-growers do not undertake any form of feasibility study before embarking on timber production. Decisions to grow timber are based on availability of land and willingness to grow on the part of the small-grower. It appeared that on the part of commercial companies there was no consensus regarding what would be perceived as viable small-scale timber production. Sappi recommended that the minimum size of land should be at least 5 ha. Mr. S. Ngubane suggested that it was not justifiable to invest in less than 5ha and that at least 20 ha could be considered economically viable. Lastly, Mr. Mdengu maintained that NCT considered at least 60 ha to be viable and sustainable.

An observation was made that small-growers and large-scale growers view the benefits differently. Commercial timber companies tend to place emphasis on capital investment that has been injected into, as well as the potential income that can be generated from small-scale timber production. This view was demonstrated through the fact that, hypothetically, a hectare of land can produce 120 tonnes at a price of R255.00 per tone, which therefore suggests that one hectare can generate R30 600.00 The limitation of this view is that it ignores all the factors that contribute to productivity and it does not demonstrate the actual costs of productivity. There is also no consideration of the impact of such benefits on livelihood over a period of a seven-year production cycle.



On the other hand, small growers place emphasis on the costs incurred such as general labour, harvesting and transportation and paying back loans. According to small-growers the actual benefits are less than what it cost to generate such benefits. One small-grower used two metaphors to explain the benefits from timber.

“Ungasebenza ungafi kodwa futhi ungasukumi, kukubeka esimweni sokuthi uphile kodwa ngeke kuyithuthukise impilo yakho”<sup>12</sup>.  
“Yinto ephelela olimini kayifiki ngisho emphinjeni”<sup>13</sup>

There was lack of consensus regarding what was considered to be viable and sustainable. It appears that production costs incurred made it impossible for small-growers to realize expected benefits.

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<sup>12</sup> You can make a living out of timber but you never become affluent

<sup>13</sup> It is like something that you can taste in your mouth, but is barely enough to swallow it.

## 4.5 Conclusion

This chapter has presented the findings by giving an overview of the roles of different stakeholders involved in small-scale timber production, themes and small-growers perceptions about benefits from timber.

It appears that small-scale timber production is connected to a range of services. Small-growers have to engage with all involved stakeholders in order to ensure that timber is grown, managed, harvested and delivered to the mill. The ability to interact with all stakeholders is crucial as it influences the livelihood outcomes.

Presentation of themes and sub-themes showed that, participation in timber production starts with access and ownership to land rights. It appears that there are many factors that influence how much land each grower may have access to. The key factor regarding access to land is that most growers do not have access to enough land to enable them to participate in timber production in a meaningful sense. Another important factor is that introduction of timber has implications for local livelihood activities such as grazing and subsistence crops. Because of timber production in the area, there is less land now available for subsistence agriculture. It also appears that some local people are becoming less interested in subsistence farming.

Imbalances of land rights do not only have implications for the current generations. The future of timber is not clear. Future generations will not get land for the establishment of timber plantations. A trend may arise in the future whereby only certain families grow timber, as members of the families already growing timber will inherit existing plantations.

Small-growers do not have either a mechanism or the capacity to deal with numerous challenges that they are facing. Failure to deal effectively with risk factors renders them unable to properly optimise the potential of timber. Lack of capacity among small-growers was manifested at two levels. Firstly, leadership structures are unable to lead decisively, negotiate business deals

effectively or to address problems facing small-growers. At another level, lack of capacity resulted in a poor understanding of government regulations affecting timber production. As a result of this, small-growers are unable to proactively engage the government structures on issues of serious concern.

Lastly, the perception of small-growers regarding the benefits of timber is such that, although timber has a contribution to make to local livelihoods, it fails to reach their expectations. This is because they seem to be incurring more costs than benefits.

## CHAPTER FIVE

### DATA ANALYSIS AND DISCUSSIONS

#### 5.1 Introduction

Whereas the previous chapters have introduced and oriented the reader to the subject of the study its justification and the methods used, as well as the output of the study, this chapter serves to analyze and discuss the output with a view to interpreting the data in relation to the question of the study. Viability and sustainability of timber production depends on both the relationship between small-growers and their assets, and the relationship between small-growers and existing institutions.

To demonstrate the set of relationships suggested above, this chapter maintains that the establishment and development of small-scale timber production depends on the nature and extent of interaction between small-growers and their assets on one hand and growers and structures on the other hand. Interaction between small-growers and assets, in this case refers to access to and optimization of different assets. This is largely influenced by the availability as well as accessibility of different assets. It has shown earlier that to produce timber, small-growers have to interact with an array of structures including traditional leaders, non-growers, government structures, private sector and the market.

This chapter is divided into three main parts. The first part looks at the question of relationships small growers have to maintain with their surrounding environment. The second part applies the 'sustainable livelihood framework', introduced in Chapter 2 Section 2.4, as a yardstick to measure the level of sustainability. The third part discusses small-scale timber production against the background of CED and LED approaches.

## 5.2 Relationships

To a large extent the success of small-scale farming depends on the nature of interaction between farmers and assets as well as stakeholders in forestry industry. Different sets of relationships are discussed in this section. They include the following:

- The relationship between small-growers and their assets;
- The relationship between small-growers and government structures;
- The relationship between small-growers and the local municipality and lastly;
- The relationship between small-growers and the market.

### 5.2.1 Relationship between small-growers and land

Land is an important natural asset that to a large extent determines the success or failure of small-scale timber production. An understanding of how land influences the outcomes of timber production is in itself about how small-growers related to land in terms of access, ownership and size of the land.

Accessing the land through tribal customary law has implications for small-growers. These implications include:

- (i) The fact that small-growers do not fully own the land and as a result the value of such land cannot be included in the calculations of small-growers' assets,
- (ii) Small-growers are unable to buy or sell land,
- (iii) Tenure is insecure, and under certain circumstances one may forfeit ownership and lastly
- (iv) Access to and the size of the land is influenced by factors such as gender and social status.

Instead of full ownership, local people in general and small-growers in particular have the right to use the land. Because 'landowners' do not have proof (as in the case of title deed or PTO) and there is no land demarcation, ownership is open to dispute over boundaries from time to time. Although in



the experience of Entembeni, dispute over land use was not highlighted as a primary concern, the fear of losing the land to neighbours influenced decisions about livelihood activities. Growing timber was for some people a way of claiming ownership to the land. Experiences of constantly claiming land ownership in other African societies were referred to in this study. While it may seem that if boundaries were clearly demarcated, tenure security would be somewhat improved, the practicality of demarcated subdivision of land in rural areas would be a very challenging land survey exercise.

Non-market related land tenure arrangements imply that small-growers are unable to buy or sell their land and therefore are unable to increase the size of their land through buying additional land. Non-market land arrangement is therefore not favourable to horizontal expansion and the chances of growth through increasing land size are non-existent to small-growers. Despite all the constraints, the nature of land rights offers small-growers three significant opportunities. Firstly, access to land provides an opportunity to generate income through growing of timber. Secondly, land right is an important basis for negotiating with government authorities for the ROD and water use license. Thirdly, non-market arrangement also has an advantage in that it gives people, who probably cannot afford to buy, access to land. The rural tenure system also has limitations. Since land is negotiated outside the market parameters, it is not regarded as an asset that may be used for bargaining purposes with potential business partners. Small-growers may not use land to negotiate with banking institutions for credit. Subsequently, loans are only accessed from large-scale growers. Further, in the case of insolvency, land may not be sold in order to recover some outstanding costs.

Gender is perhaps the most acutely noticeable area of social inequality with regard to resource distribution. It has been observed that in a tribal system, women are particularly discriminated against and disadvantaged with regard to land rights (Wynberg and Kepe 1999; Kepe 1999; Cross and Friedman 1997). This characteristic features dominantly in the situation of Entembeni. Although there was consensus that the number of women small-growers was on the increase, this was purely by coincidence. Increasing participation of

women in timber production was not as a result of equitable access to land rights, but rather as a result of two phenomena. It is assumed that women assume the responsibility of managing plantations because their husbands are either dead or are working in urban areas. While statistics may show an increasing number of women small-growers, this distorts the inequitable land rights situation, and poses questions about whether unmarried women in rural areas are part of the statistics of increasing number of women small-growers.

Land allocation does not take place in a vacuum. Power relations and group dynamics have influence on the question of equitable distribution of resources such as land. As discussed in Chapter 2 Section 2.2.2, it would be misleading to presume that a community is a homogenous entity. It has been argued in this report that the community is made up of different interest groups. With regard to the allocation of land it appears that different sub-groups within the community are not treated equally. While other forms of social inequalities may exist, this study makes the distinction between indigenous and migrant local people. This particular form of discrimination extends the grounds for social inequalities regarding allocation of resources.

This study argues that the relationship between small-growers and the land is influenced by a number of factors such as tenure insecurity and social inequalities. The lesson is that while the tenure system in rural areas was designed to ensure that all people (rich or poor) could at least have some land (and that there are no landless people as it might be in the case of market arrangement), this tenure system was not designed to fully support the type of rural enterprise development that would be required in the case of timber production. Two essential elements for small-growers are missing. On the one hand there is no full ownership of land and this weakens small-growers' bargaining position with the market. On the other hand, due to the scarcity of land, small-growers are not able to grow horizontally through acquisition of more land.

### 5.2.2 Small-growers and government structures

The relationship between small-growers and government structures is important in terms of helping to transform small-scale timber production. There is the expectation for the government to address conditions of poverty in rural areas. However, this is not solely a government responsibility. Rural communities are also expected to initiate ways to develop themselves. The danger of such expectations occurs when dependency overrides the ability of rural people to come up with their own initiatives. In the case of Entembeni, small-growers regard timber production as a local initiative.

The relationship between small-growers and the government at Entembeni is not stable and is undermined by animosity, suspicions and mistrust. Such an unstable relationship is the product of various factors including:

- (i) The lack of communication;
- (ii) The dual function of government (of supporting and regulating timber production);
- (iii) The lack of corporate governance and to a large extent
- (iv) The lack of personnel on the part of the government.

Due to the lack of proper communication between the government structures and small-growers, the Entembeni community is not fully aware of the regulatory framework and procedures affecting timber production. Lack of awareness leads to a situation where compliance with government regulations is not voluntary but is out of fear of the law. Good understanding of government regulations can instil voluntary compliance and help small-growers make informed decisions about the sustainable use of natural resources.

Both the DWAF and DAEA perform two different functions, a developmental and regulatory function. These functions distort the message and causes confusion on the part of small-growers about the role of the government. As far as small-growers are concerned, one message encourages small-growers to design local resource-based economic initiatives while the other message

advocates preservation of these resources. On the one hand, each of these departments encourages resource-based rural development initiatives in general and in terms of the DWAF, timber production in particular. The national government views timber production as an important part of economic development that can improve the quality of life in rural areas. On the other hand, both the DAEA and DWAF have the function to regulate, manage and monitor any development activities, which may have a severe impact on the environment.

Lack of corporate governance is yet another area that causes unstable relationships between small-growers and the government. While environmental authorisation and water use licences are the responsibilities of the DAEA and DWAF respectively, they are interrelated in such a way that the former cannot be issued before the latter. Admittedly, some of the delays in processing applications have been caused by the fact that the two processes are housed in two different departments that sometimes do not coordinate assessment and processing activities adequately.

Lack of staff in the case of both the DAEA and DWAF has meant that the function of the government's regulatory and developmental support programmes has been compromised. Assessment of large volumes of applications is dependent on limited personnel. Also, the communications of government policies and programmes has been the responsibility of a few of staff with limited resources to perform these functions. To cope with the volume of work, there has been a tendency to focus on office administration type of work with little fieldwork and communication with small-growers. As a result, small-growers have been kept uninformed both in terms of government policies and the status of their applications.

### **5.2.3 Small-growers and the local municipality**

At the time of this study, the relationship between the local municipality and small-growers was almost non-existent. Taking into account the fact that in



the Entembeni area alone, small-growers were estimated to number 300 at an average of 2 ha each, small-scale timber production uses a reasonable area of land. In this case, small-scale timber production in the area has an impact economically, socially and environmentally, factors which need to be factored in municipal planning. The need for including timber production in local planning and management programmes cannot be overemphasized. Exclusion of timber production by small-growers, denies the municipality an opportunity to be aware of the contribution of this activity to the local economy and the potential for job creation. At the same time, small-growers are denied the opportunity to benefit from LED support-based programmes. Chapter 2 Section 2.1.3 showed that local municipalities have a constitutional mandate to promote social and economic development. Section 5.5.3 below further recognizes Mthonjaneni Local Municipality as an important transforming structure in timber production. The need to include timber production is not only essential for land use planning and management, it is also a constitutional mandate that the Mthonjaneni Local Municipality has to undertake.

#### **5.2.4 Small-growers, large-scale growers and the market**

This section discusses the nature of the relationship between the small-growers and the market. The private sector plays two main roles as far as timber production is concerned. Firstly, there is the role regarding the establishment of plantations, i.e. the planting and management of forests. Secondly, the private sector plays an important role in either buying or linking the production with the market.

Central to the relationship between small-growers and the large-scale growers in the market is contract farming. Discussions in Chapter 2 Section 2.2.6 showed that contract farming could be a mutual relationship. In the case of Entembeni, it appears that contract farming is based on a skewed relationship, with large-scale growers being the dominant partner. The relationship between small-growers and large-growers often takes place in a



rather closed market system, and as a result small-growers become vulnerable during negotiations. A closed market system here refers to a context within which small-growers negotiate with larger-growers without an awareness of different options of business-partnership. It is not a system whereby small-growers can compare options and make informed decisions.

It is important to demonstrate that partners should benefit from contract farming. Undoubtedly, this relationship guarantees small-growers important input and assurance of a market share. The establishment of plantations requires extensive financial and technical support. As small-growers are unable to access credit from banking institutions, commercial timber growers become almost the only source of funding. A normal business practice involves extensive research with regard to the product and the market. Small-growers are unable to support their practice through such research. It is therefore assumed that small-growers benefit from the research conducted by large-scale growers. Further, as a result of this research, small-growers can embark on timber production with confidence that the market is guaranteed.

From the perspective of large-scale growers, contract farming ensures the availability of wood material for their processing plants. It has to be understood that small-scale timber production takes place mainly on rural areas in land that is already used for residential and livestock grazing. Fields and some open spaces are used for timber production. Because of land tenure arrangements such pieces of land, in the case of Entembeni, are no more than 2ha on average. Land tenure and use in rural areas is not suitable for large-scale commercial farming. This would not be practical, as a large number of homesteads and their livelihoods might have to be displaced. Beside this, commercial farmers would be reluctant to invest in rural land where ownership is not guaranteed. The only way commercial growers can access rural land is through contract farming, which ensures that despite the complication, rural land can still supply timber to the mills. It has been observed that in rural areas commercial timber companies are:

"...effectively obtaining the free use of land, without any of the responsibilities associated with ownership. (Timberwatch, undated-a)

Another benefit is that, through contract farming, large-scale growers do not have to deal with and manage labour. It is clear that contract farming enables large-scale growers to access land and source wood material from rural areas in a way that otherwise would have either been impossible or complicated to do.

While in some ways it is clear that the relationship between small-growers and large-scale growers has the potential for mutual benefits, it is at present skewed in favour of the latter. Subsequently, small-growers are not in a good position to freely negotiate and influence the nature of partnership. The relationship is almost predetermined by large-scale growers long before negotiations even begin.

Small-growers access the market either through large-scale growers or through the marketing cooperatives. In the case of the former, one of the conditions for contract farming is an agreement that the small-grower will supply wood to the partner (large-scale grower) that has provided capital investment (in the form of loan) and technical input (through forest extension officers). Preset conditions imply that small-growers are unable to choose which market they want to sell timber to, and are also not able to negotiate the price. The irony of the contract farming conditions is that, while these conditions tie in small-growers as if they were members of the large-scale commercial production, when it comes to selling and buying timber, the relationship becomes independent. From the outside, it appears as if the relationship is that of a "willing-seller-willing-buyer". While the production of timber was not free of influence and interference of the commercial grower, wood processing is free of any interference from small-growers. This is because small-growers have no stake in the processing.

The second way of accessing the market is through marketing cooperatives. In this regard marketing cooperatives source wood for different markets including their processing plants. The differences between this model and contract farming are that quite often small-growers are members (share

holders) of the marketing cooperative. Benefits therefore are twofold: income from direct sales and income from profit. Here, though not directly, small-growers become part of the value-adding and processing that takes place beyond the stage of selling and buying of material. While this form of market may be attractive, it is not easily accessible as most small-growers are already tied up in the conditions of contract farming.

### **5.3 Assessment of small-scale timber through the use of SLF**

The Sustainable Livelihood Framework (SLF) was introduced and discussed in Chapter 2 Section 2.4. By way of recapping, SFL assesses a livelihood activity through the understanding of the vulnerability context, livelihood assets, transforming structures and processes as well as the livelihood outcomes. This approach is based on how the actors concerned are able to make use of the available assets and structures to optimize their intended livelihood outcomes. This approach also contends that favourable outcomes can be used to address the vulnerability context. In this section, various components of small-scale timber production are evaluated using SLF.

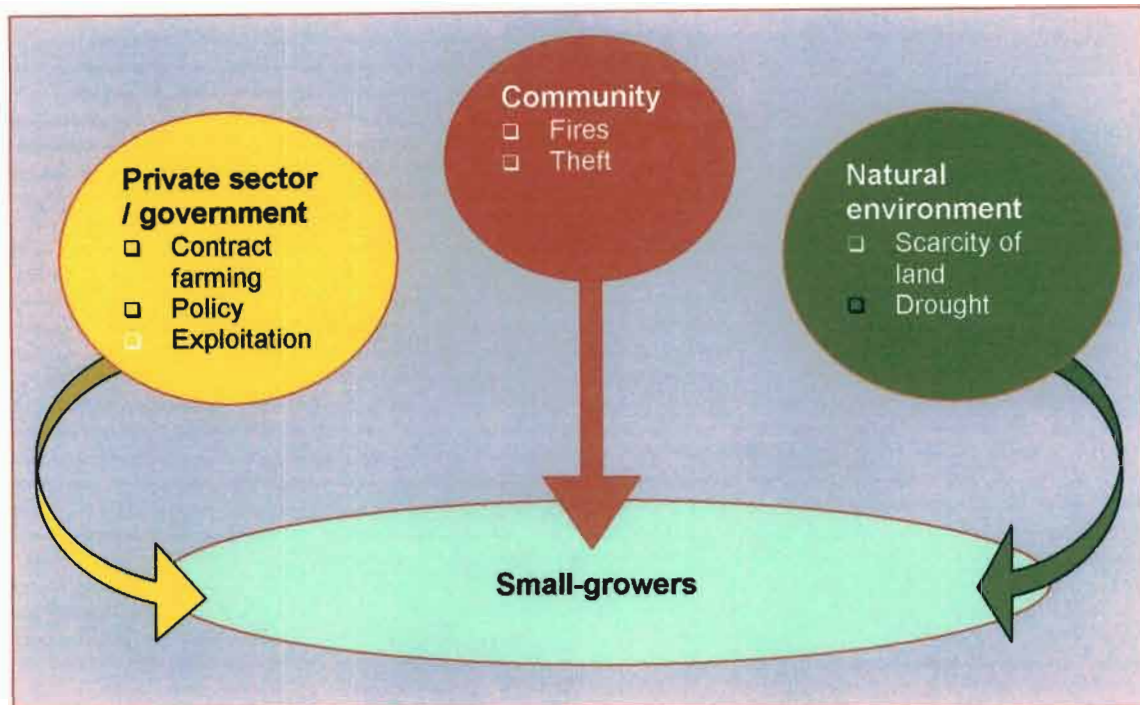
#### **5.3.1 Vulnerability context**

Vulnerability context examines the conditions (mainly external) that affect performance of a particular livelihood activity. Because the factors are external, the extent to which actors are able to manipulate the situation, is often limited. Understanding of the vulnerability context also seeks to understand what measures actors put in place to deal with external factors.

Small-scale timber production at Entembeni is affected by several vulnerabilities such as scarcity of land, contract farming, exploitation, undulating terrain, theft and runaway fires. Factors affecting small-scale timber production are located in three distinctive environments. These include the immediate surrounding community, the market environment (within which commercial farming is located) and lastly the natural environment.

Figure 5.1 below locates the different factors within different levels of environments.

**Figure 5-1: A demonstration of small-growers' vulnerability context**



The performance of small-growers in both the business and market environments depends on their ability to negotiate with the business community as well as of the government. Findings have shown that small-growers are in a weaker position to engage either the market or government. The private sector is in a position to dictate the level of participation of small-growers in timber production as well in accessing the market. With regard to negotiating with the government, it is accepted that small-growers lack a clear understanding of the regulatory framework and procedures. When the processing of applications takes too long, small-growers are unable to be proactive and make follow-up and get feed-back from government authorities.

In the case of the immediate environment, findings in Chapter 4 Section 4.3.8 showed that theft and runaway fires affect small-growers at Entembeni. It was also shown that small-growers do not have effective measures to deal with such shocks. Instead of having some measures in place, small-growers depend on the hope that theft and fire do not occur, and when such shocks do

occur it becomes a major setback. Likewise, there are no measures in place for dealing with natural disasters such as drought or storms that might affect the plantation and productivity. Plantations are not covered by insurance policies to deal with such situations as may be caused by natural disasters.

### **5.3.2 Livelihood assets**

Livelihood assets consider the strengths of human, physical, social, financial and natural capital. Discussions of the current state and the extent to which these capitals are optimized by small-growers follows below. This section first explores the availability of such assets and secondly how these assets are used to optimize livelihood outputs.

#### **Human capital**

According to the livelihood framework, strengths of human capital refer to skills, knowledge and the ability to provide good labour. Chapter 1 Section 1.5.3 showed that a high level of illiteracy affects Entembeni community. Despite the fact that small-growers have extensive indigenous knowledge, and have for decades utilized natural resources as subsistence farmers, they are struggling as commercial farmers. This is because this new practice requires a new level of expertise in forestry and business management, research and interacting with the market. The gap created because of the lack of such expertise on the part of small-growers, is filled either by the government extension officers or by large-scale growers. Lack of necessary expertise on the part of small-growers, create a high level of dependency on the private sector.

#### **Physical capital**

Physical capital refers to transport, shelter and roads. With the exception of the road network constructed in and around individual plantations, small-growers do not have an infrastructure of their own.



Poor roads from the plantations to the loading zone are considered the most important limitation for most small-growers. Lack of roads is responsible for elevating production costs in two ways. On the one hand, small growers have to construct roads at their own expenses in their plantations. On the other hand, the transportation of wood involves two levels of costs, as wood from the plantation has to be transported in tractors to the loading zone where it is in turn transported to the mill. Normally loading zones are located along the main road, which is some distance away from individual plantations.

### **Social capital**

In the case of small-growers, social capital refers to membership of networks and leadership structures. Leadership structures are poorly maintained. Coupled with high illiteracy, the lack of capacity within leadership structures fail the needs and interest of small-growers in engaging with business partners and the market. Networking with other small-grower structures throughout the KwaZulu-Natal province is non-existent. The nature of weak leadership again creates dependency upon the commercial forest sector.

The function of engaging the non-growers, private sector and government should be taking place within this context. Small-growers need to engage non-growers to harmonize their relationship. Such negotiations could also be useful to ameliorate such issues as theft and runaway fires. Engaging with the private sector could improve the position of small-growers to negotiate with this sector. Lastly, engaging with government structures could shorten the delays currently existing with regard to processing of applications.

### **Financial capital**

Capital investment required for the establishment of a timber plantation involves land preparation, fire brakes, road networks and actual planting. Machinery such as tractors or manual labour may be used to carry out these activities. Either option requires some prior capital investment. Once the plantation has been established, capital investment is required for silviculture. More capital is required during harvesting and transportation. Other than

through contract farming, small-growers at Entembeni do not have alternative sources of funding. Ideally, small-growers should be able to access other more formal sources of credit in the form of bank loans. Discussions in Chapter 1 Section 1.2.4 outlined some of the difficulties experienced by African farmers regarding accessing bank credit.

Small-growers depend on Sappi and Mondi for financial capital. It is assumed that such capital is often limited to activities related to the establishment of the plantation and the delivery of wood material to the market. Generally, running a business requires constant investment in training and research with a view of improving a particular practice. It is envisaged that limitations to capital investment precludes small-growers from investing in training and research. In other words, an opportunity for growth through empowering its own members is non-existent, and as a result small-growers will remain without expertise for a very long time.

### **Natural capital**

The natural capital base input to timber production includes land, water (both rain and underground water) and seedlings. The inclusion of eucalyptus trees on the list of natural capital is not contradictory to the fact that this is an exotic species. However, in terms of this discussion, eucalyptus (however exotic) is regarded as a natural plant.

It is important to note that a site earmarked for plantation is part of a particular ecosystem which comprises of range of fauna, flora and avi-flora species. Establishment of a plantation causes a certain degree of imbalance to the ecosystem. It is anticipated that critical negative ecological impacts are ameliorated during environmental scoping process that is conducted before a ROD is issued. It is also anticipated that an established plantation (wrongly or rightly) becomes part of the ecosystem and may provide habitat to certain species. Discussions in Chapter 2 Section 2.3.1 briefly mentioned the possibility of alien species being able to provide habitat to some indigenous animals. Further, small-scale timber production has the advantage that in

between relatively small plantations, are fields, homesteads and open communal grazing areas. As a result of this arrangement, the total ecosystem is not lost to entire plantation, as it would have been in the case of large-scale farming.

It is important to note that ownership to natural capital by small-growers is mainly based on user rights as opposed to full title deed ownership. In the case of water, user right is determined through a water use licence issued to small-growers by the DWAF. The right to use land is determined by the land tenure system. As natural capital, land can be optimized by small-growers through planning the best possible way of planting trees on a given piece of land. Discussions in Chapter 5 Section 5.2.1 indicated that most small-growers have access to no more than 2ha, and that possibilities for expansion are non-existent. Limitations with regard to land are posed by the scarcity of this resource. No optimization can really take place in the case of rain and underground water. Over and above this, the tenure system in the rural context is not a secured one. Land cannot be sold or transferred. While small-growers have access to natural capital, there are limitations with reference to land availability.

### **5.3.3 Transforming structures and processes**

Potential structures to transform small-scale timber production include traditional leadership, government structures and the private sector. The role of the traditional authority is limited to the allocation of land, which by its nature is characterized by a lack of vision and planning. This situation prohibits the tribal authority's ability to make a proper assessment of proposed development activities including timber production. It is highly unlikely therefore, that the decision fully accommodates the future land use as well as the carrying capacity for timber production in the area. The role of the TA regarding land administration is more suitable for subsistence and not commercial farming. Perhaps the lack of formal land use planning on the part

of the tribal authorities shows that these institutions do not have the required planning capacity.

The local government bodies are probably better placed to carry out such functions as planning and land management. This is because local municipalities have the capacity, expertise and resources to do so. IDPs have indeed been instrumental in initiating spatial planning for municipal areas including tribal authority areas. In the case of Entembeni, the Mthonjaneni local municipality's IDP excluded small-scale timber production. It was difficult to understand whether this omission was an error or a deliberate intention on the part of the local municipality. Exclusion of small-scale timber production from the IDP implies that small-growers are unable to benefit from such programmes as LED. The position taken by Mthonjaneni Local Municipality (to disassociate itself from small-scale timber production) makes it impossible for this structure to play a meaningful role in the transformation of timber production.

Government structures including the DWAF and the DAEA mainly play the role of regulating timber growing. While this role is in line with the objectives of sustainable development, there is a lack of involvement of small-growers in policy formulation. The government is seen as a champion of processes (policies) responsible for transforming timber production.

Private business appears to be the most influential structure in transforming timber production for small-growers. The availability of resources and a high level expertise enables large-scale growers to take the lead in building the vision for timber production in this country. Continuous research contributes to the development of knowledge regarding better species to be planted as well as management practices. Research also leads to a better understanding of market trends. Large-scale commercial growers are in a better position to transform timber production in response to market expectations.

#### **5.3.4 Livelihood outcomes**

Livelihood outcomes focus on more income, increased well-being, reduced vulnerability, improved food security and more sustainable use of natural resources. Small-scale timber production has the potential to increase income, which can then be used to improve food security and the quality of life. There are several factors that affect the level of outcome. Because small-scale timber production takes place at a small-scale level, has long rotational cycle and requires input that is sourced from different sectors, outcomes are often limited in scale.

Benefits from timber can be viewed from two perspectives, the 'upstream flow-on effect and the downstream flow-on effect' (Harrison and Herbonn, 2002). The upstream flow-on effect refers to benefits generated between planting and harvesting, while the downstream flow-on effect refers to benefits related to processing taking place well after harvesting. This approach is useful in that it considers both the actual and potential benefits. In the case of Entembeni, the benefits accrued from timber can further be divided into benefits enjoyed by small-growers as well as benefits enjoyed by general members of the community, both of which are regarded as the upstream flow-on effect. Knowingly or unwittingly, small-growers benefit from research related to species development or markets conducted by commercial timber growers.

The question to be asked is how much of the total outcomes goes directly to small-growers who are supposedly the owners of means of production. The manner in which small-scale timber production is set up is such that it enables a whole range of role-players to tap into the income that should be directed to the small growers. This is because most small-growers rely on loans from commercial timber growers and source their harvesting and transportation services from SMMEs.

To understand level of outcomes as a result of timber production, the approach has been to understand what inputs are required for timber



production, what the sources of these inputs are and how outcomes are distributed. Figure 5.2 below show that different sectors contribute different inputs towards timber production. The diagram also shows outputs derived by these different sectors from small-scale timber.

Small-scale timber production requires different inputs such as land, capital, extension services and technical expertise. These inputs are provided by various sectors:

- (i) Land is provided by small growers,
- (ii) Capital investment and technical expertise by large-scale growers and marketing cooperatives and
- (iii) Regulatory framework by the government.

The SMMEs do not have direct input required for timber production, their role (harvested and transported), comes after timber has been produced.

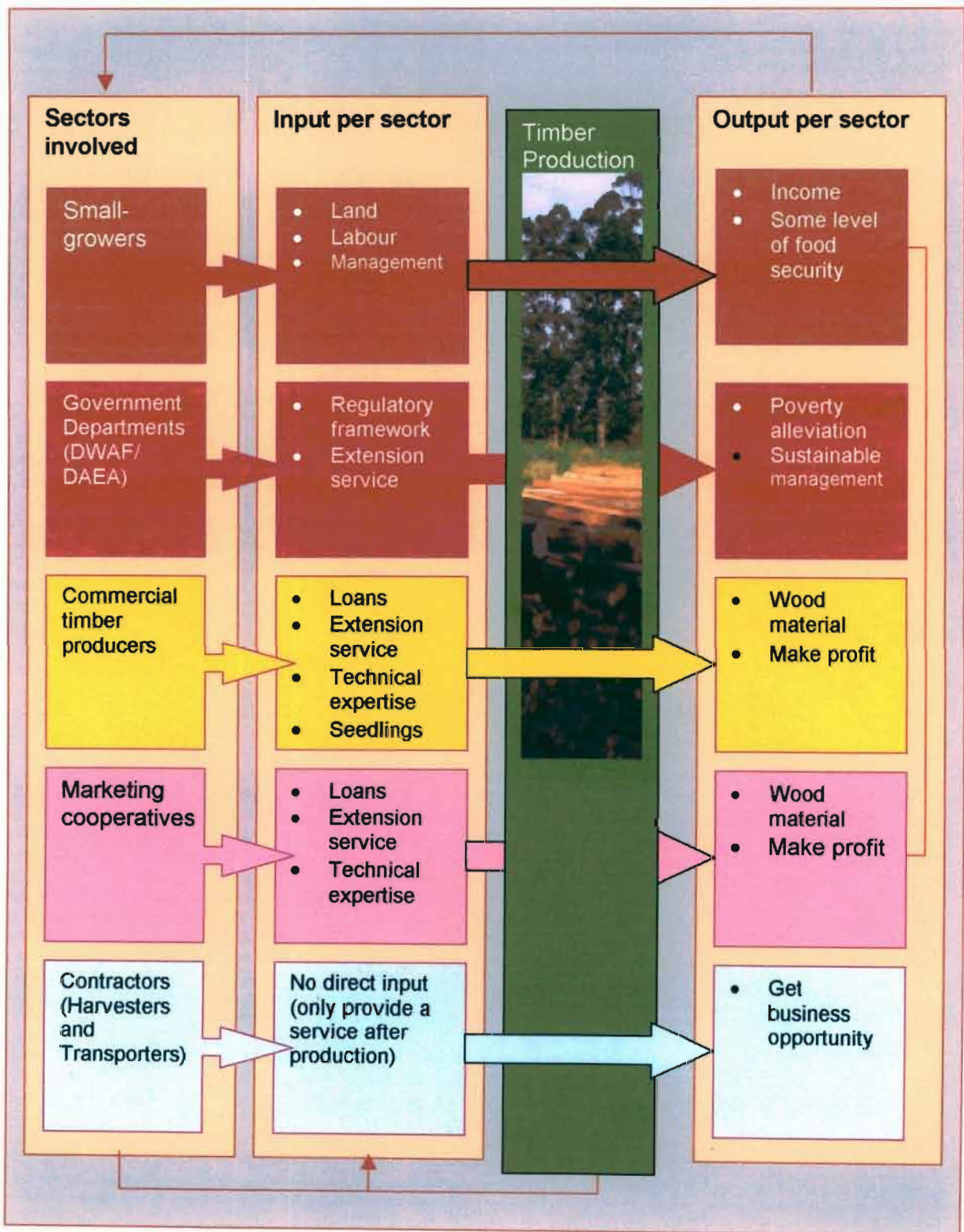
Benefits are accrued by different stakeholders in the following manner:

- (i) Small-growers benefit from income earning opportunities,
- (ii) Large-scale growers, benefit with wood material and after value adding
- (iii) Marketing cooperatives also benefit from material and profit making,
- (iv) The government's interest is served when poverty is alleviated and lastly
- (v) Small-scale timber production creates business opportunity for SMMEs.

It is important to note that livelihood outcomes can be divided into three levels. Firstly, there is direct income to small-growers. Secondly, large-scale growers and SMMEs, enjoy a different level of outputs. The sum total of these outputs escapes the small-scale timber production system and goes directly to large-scale growers and SMME. None of these outputs are invested back into small-growers. Thirdly, marketing cooperatives also enjoy some outputs. Some of the outputs at this level are redirected back to the small-growers in terms of profit sharing to members of these marketing cooperatives.

The Livelihood outcomes of any livelihood activity are supposed to improve the situation of the actors by providing more income, increased well-being, reduced vulnerabilities, improved food security and more sustainable use of natural resources. Under the circumstances described above, an improvement in the quality of life as well as food security could only take place at minimum level. In cases where field crops are converted into timber plantations, the chances of compromising traditional sources occur. Most important vulnerabilities such as theft, fire and manipulation by middlemen are not addressed properly, partly because of poor leadership structures but also because small-scale timber production is not designed to work in favour of small-growers.

**Figure 5-2: Input and outputs involved in small-scale timber production**



#### **5.4 Small-scale timber production as LED and CED activity**

The discussion in Chapter 2 Section 2.2.3 and Section 2.2.4 indicated that LED and CED are some of the approaches used by communities to address situations of poverty. While LED is a broader concept within which CED may occur, small-scale timber production has the characteristics of both the concepts.

In light of the discussions in Chapter 2 Section 2.2.3, small-scale timber production falls within LED, which was described as a process in which local government and community groups manage their existing resources and enter into partnership arrangement with the private sector. Participation of subsistence farmers in timber production proves to be a concept initiated from outside the area, initially by the government and later by the private sector. In both cases, extensive consultation to motivate subsistence farmers is required. Of the two approaches (top-down and bottom-up), timber production has been a result of the top-down approach. The participation of subsistence farmers in timber production is facilitated largely by contract farming, which in this case can be seen as a form of partnership advocated by LED.

Small-scale timber production is considered a CED activity because it is not practiced by small-growers solely on business principles. Small-scale timber production takes place as part of multi-sectoral livelihood activities including subsistence agriculture and labour employment. While LED places emphasis on entrepreneurial development, CED places emphasis on social and economic development, which is what small-scale timber production, proves to be. In reality small-growers are neither genuine subsistence farmers nor are they fully-fledged entrepreneurs.

It appears that one of the prominent features of small-scale timber production is its "in betweenness", because it is located between the subsistence and commercial economy. This situation makes it difficult to answer the question: is small-scale timber production in a stagnant or is it in a transition state.

## **5.5 Viability of small-scale timber production**

The paucity of empirical data (e.g. baseline data), makes it difficult to discuss fully the extent to which small-scale timber production is viable. This is based on the fact that none of the small-growers who participated in the study had information about the viability of their plantations. In other words, the establishment of these plantations was not as a result of prior feasibility studies. This is one field where participants depend on speculations and general assumptions that under normal circumstances, a hectare may produce a certain volume of timber. The danger with this approach is that it is not area-specific and does not account for variations in variables such as climatic conditions and quality of management that may affect production. Small-growers make the decision to plant on the basis of two main factors: the willingness to plant as well as the availability of land. This approach means that potential growers do not consider how much land is needed to grow the timber in order to reach a certain target.

A theory of economies of scale as discussed in Chapter 2 Section 2.2.7 is another approach used in this study to determine the viability of small-scale timber production. This approach assumes that small-scale is less likely to be viable compared to large-scale farming. The logic behind this view is that in large-scale, a farmer is able to spread production costs across the total plantation, whereas in the case of small piece of land, a farmer still incurs production costs some of which might not be recouped, as the size will limit his /her productivity. Theories of economies of scale seem more applicable in the case of small-growers considering the fact that on average a farmer has access to two hectares. It is in this small piece of land that a farmer has continuous expenses for a number of activities for the period of at least seven years. If farmers were farming the same piece of land with an annual cash crop, the situation would be different as the farmer would be able to generate income on an annual basis.

This study contends that, in spite of the lack of viability information, it would be dangerous to generalize that all small-scale plantations are not viable. The



assumption is made that plantations less than 10ha are less viable than plantations over 10ha. This assumption is based on the logic that growers owning plantations of less than 10ha can only harvest once in a seven-year cycle, whereas growers owning plantations of more than 10ha can subdivide the plantation into management blocks. This approach would then enable growers to harvest each block one year after another. The study conducted by A'Bear, Friedman and Pollet (1991), recommended that small-growers need at least a minimum of 21ha, the logic being that it would be practical for a farmer to harvest three hectares on an annual basis, so that income is generated annually. Generating income once in seven years creates a situation where a farmer depends heavily on loans between harvests. This study agrees on a model that would allow small-scale growers to harvest on an annual basis. This thinking is based on the fact that harvesting once in seven years is not desirable as it leaves a long gap in between where small-growers are not able to generate income. In a scenario where each farmer has 21ha, there are implications that not all subsistence farmers can convert to small-scale timber production in any given area. The justification for this is that, it would make sense to have less number of successful farmers than to have a large number of unsuccessful farmers. It is further anticipated that successful farmers can provide better income earning opportunities for themselves and other members of the community, a goal that cannot be achieved in the case of a large number of unsuccessful farmers.

### **5.6 Is small-scale timber production sustainable?**

As demonstrated in Chapter 2 Section 2.3.3, there is general consensus that sustainable development comprises meeting the present needs without compromising the potential to meet the future needs. The sustainable livelihood framework set parameters within which livelihood activities are regarded as sustainable or not sustainable. SLF maintains that a livelihood activity is sustainable when it is resilient against external factors, not dependent on external support, maintains long-term productivity and is equitable in terms of intragenerational and intergenerational equity.

In terms of SLF, small-scale timber production is not resilient to external factors nor is it, in a position to effectively optimise available livelihood assets. There is dependency on external support with regard to capital investment, technical expertise and the markets. Livelihood outcomes are minimal partly because a portion of the potential income escapes small-growers to benefit large-scale commercial growers (as profits) and SMMEs as business. Small-growers have acknowledged the fact that what they get as outcomes does not compensate their inputs. As a result of this situation, small-growers seem unable to ameliorate their vulnerable situation.

According to SLF, theories of sustainable development as discussed in Chapter 2 Section 2.3.3 as well as the research findings presented in Chapter 4 Section 4.4, small-scale timber production is not sustainable in terms of intragenerational and intergenerational equity. Theories of sustainable development put emphasis on activities that are achieved without compromising the ability of current and future generations to meet their needs. In the case of Entembeni, gender and other forms of social status are used to discriminate against some members of the community regarding access to land. This means that there is no equity amongst the members of the community. Research findings showed that other than assuming ownership of current plantations, future generations will struggle to get new land on which to plant timber.

## 5.7 Conclusion

Discussions in this chapter have showed that small-scale timber production is caught in a struggle of striking the balance between a range of relationships. The prosperity of small-growers depends on the relationship they have with resources, institutions (public and private), and other members of the local community. In the battle of striking the balance, small-growers are on the one hand faced with the harsh reality of scarcity of land and insecure land tenure, while on the other hand they have to accept that the relationship they have with public and private institutions is skewed in favour of the latter.

The SLF showed that small growers are not in a suitable position to participate effectively in timber production. There are two main reasons for this. Firstly, internal leadership structures lack the capacity to tackle the challenges of small-growers adequately and transform this kind of commercial farming that it is favourable to small-growers. Small growers are therefore not able to take full advantage of the livelihood assets, transforming structures and processes in order to decrease their vulnerabilities and improve their livelihood outcomes.

Secondly, and because of their weak position, small-growers depend heavily on either the government or the commercial timber sector. Also because of the lack of expertise on the one hand and the lack of necessary equipment on the other, more services are outsourced. This leads to a situation where most benefits escape the small-scale sector to middlemen or back to the commercial timber sector. This leads to the conclusion that small-scale timber production in its current state is not sustainable.

## CHAPTER SIX

### CONCLUSION AND SUGGESTIONS

#### 6.1 Introduction

Chapter Six is presented in two sections, the conclusion and the suggestions.

#### 6.2 Conclusion

The main objective of this study was to evaluate whether the transformation of subsistence farmers at Entembeni area to small-scale timber producers is viable and sustainable. Instead of adopting an ecological or economic approach to the evaluation of small-scale timber production, a social model based on the Sustainable Livelihood Framework was used. Rural Entembeni area in Melmoth was identified as an area of study. Like most rural areas in KwaZulu Natal, poverty, poor services, high levels of illiteracy and increasing unemployment are the common features of the community.

Studies have shown that the government, in response to the depletion of indigenous vegetation, first implemented the production of timber in South Africa. The demand for timber created an opportunity for the private sector. Community forests were established with the intention to provide firewood and building material. In the past decade, in most rural areas including Entembeni, subsistence farmers have been encouraged to participate in timber production as a cash crop.

This study has observed that the introduction of small-scale timber production in rural areas brings about a major shift in agricultural patterns. It was shown that although there is a range of actors responsible for the different roles necessary for production of timber, due to lack of resources (capital

investment and expertise), small-growers depend heavily on large scale-growers with whom they enter into a relationship through contract farming.

Initially subsistence farmers were motivated by the prospects of making money, creating jobs for others, easy and guaranteed access to market in comparison with other cash-crop products. Prospects become an illusion as small-scale timber production becomes nothing more than a reserve for cheap material for the private sector.

This study maintains that the current approach to introduce timber to subsistence farmers is, to most farmers, not viable or sustainable. There are several factors that lead to this conclusion. Firstly, a decision to participate in small-scale timber production does not involve the consideration of alternative options, both in terms of land use and different models of business partnership. Contract farming for instance, binds small-growers to a particular partnership that might prohibit them from supplying timber to alternative buyers.

Secondly, the position of small-growers to engage or negotiate with other actors is very weak. This is due to two factors. On the one hand, the leadership representing small-growers lacks the capacity to do so effectively. On the other hand a lack of resources on the part of small-growers creates dependency. Small-growers are therefore not ready to transform their own activities.

Thirdly, according to small-growers, benefits from timber production do not render the practice successful. On the contrary, often the production cost stifles the benefits. In this context, small-scale timber production almost subsidizes contractors, marketers and commercial timber companies.

Finally, from the sustainable perspective of reaching the current needs without compromising the needs of the future generations, small-scale timber production shows little prospects of satisfying the needs of future generations. Social inequalities taking place during land allocation and manifest



themselves in different sizes of land held by different small-scale growers. Further, small-scale timber production has the potential to undermine subsistence activities, as some field crops are converted into timber plantations.

### **6.3 Suggestions**

The current context within which small-scale timber production is taking place can be improved. Below are some of the suggestions that can be followed based on information gathered for this study.

#### **6.3.1 Alternative approach of introducing to timber to subsistence farmers**

The manner in which timber production is introduced to subsistence farmers is flawed. The approach elevates their expectations and does not create an opportunity for small growers to consider timber production in relation to a range of other options. This approach can be improved by designing small-scale timber production interventions with a view to making it more viable and sustainable. Taking into account that timber production is based on a long-term rotation, the establishment of timber plantations should not replace subsistence activities necessary to sustain the community including small-growers.

The provision of information needs to be a transparent process and must address issues of alternative land use options as well as different types of business partnership, that small growers can choose from. This function could be the initiative of a neutral body such as the municipality or government-based community development agents.

Guidelines indicating sustainable models of small-scale timber production should be developed. Notwithstanding the fact that to start a timber plantation is an individual decision, guidelines regarding the minimum and maximum

size of land for viable production is required. Such guidelines could be useful for small-growers to be more informed before embarking on timber plantation. An alternative approach to timber production requires putting in place an effective communication system. This would enable the provision of all necessary information regarding government legislation and policies. Such an information package should also allow continuous feedback from small-growers to different departments of the government.

### **6.3.2 Land use planning**

A land use plan should take into account needs such as land for residential purposes, subsistence production and commercial production. Perhaps this could be the joint responsibility of the local municipality and the Tribal Authority. The aim of this task would be to try and take an audit of the land available in order to determine beforehand how much land is available for residential purposes, subsistence and commercial production. The fear of not having a proper plan is that in the near future, there will not be enough land for other needs, as most land would have been put under timber plantation. Of course this study acknowledges that this undertaking would not be beneficial if it occurred in isolation from other process. This undertaking would make much sense if it were carried out as part of IDP and a process to identify viable livelihood activities.

### **6.3.3 Enhance food security**

Timber production is a long-term process. As a result income is practically earned in seven-year intervals. Considering the fact that some plantations have been grown in land previously used for food production, this arrangement weakens livelihood activities. It is suggested that when adopting timber production, small-growers should maintain subsistence food production. Continued participation in subsistence farming, growing fruit crops and vegetable gardens will enhance food security to sustain small-growers during the years when they cannot generate income from timber. Unlike large-scale growers, small-scale growers are not in a position to make a living only

from timber production. Further, because of their small-scale operation, to survive, small-growers need to embark on a multiple livelihood approach, of which food production is central to these approaches.

#### **6.3.4 Strengthening leadership structures**

Leadership has shown weakness with regard to engaging and negotiating with the private sector and government. There is a need to strengthen existing structures. The fact that the commercial growers are currently dictating terms of partnership through contract farming is an indication that they are the dominant partner. Empowered leadership can change the balance of this relationship. Structures could be established at local, district and provincial level. An effective structure could strengthen the position of small-growers and enable them to bargain with the market as well as with relevant state departments. An effective leadership structure could help minimize vulnerabilities and optimise livelihood outcomes. The establishment of leadership structures would have to be accompanied by intensive capacity building support mechanisms. Effective leadership can also facilitate the acquisition of skills and management expertise within its structures.

#### **6.3.5 Value adding**

Horizontal growth through expansion of plantations is, due to scarcity of land, not an option for small-growers. Small-growers have the potential for horizontal growth by expanding their business activities. Perhaps adding value in terms of processing the wood locally is something that might require a study into the different options available and the capital investment needed versus the returns. On the contrary, small-growers can add value through participating in forms of business other than production. This can be done through the establishment of a company owned by small growers that can invest in equipment such as tractors or trucks. Small-growers could purchase shares in the company. The company could then provide services including building roads harvesting and transporting wood to the mill at a reasonable

price. Because small-growers are shareholders to the company, both costs and profits will be divided amongst members.

### **6.3.6 Inclusion of small-scale timber production into IDP**

The inclusion of small-scale timber production into the IDP of the Mthonjaneni Local Municipality is necessary for two reasons. Small-scale timber production is widely land used in the area, and contributes to local economy. Timber production is a factor of effective planning both for land use management. The second reason is that the inclusion of small-scale timber production in the IDP will help small-growers lobby for municipal support through for example, Local Economic Development fund.

### **6.3.7 Further investigation on un-harvestable plantations**

Small-growers who planted timber in steep areas, are unable to harvest their wood. In instances where attempts have been made to harvest, wood was left abandoned because it could not be transported out of the plantation. The total size of plantations where harvesting is impossible is not known. A further survey is required to determine the extent of such plantations.

There are two concerns about plantations of this nature. Firstly, small-growers are unable to harvest and benefit from these plantations. Secondly, if these plantations cannot be harvested they will continue to have social and environmental impact. From a social perspective, the implication is that no grazing can take place in these areas. Also, no indigenous plants, essential for uses such as thatch grass or herbal medicine, can grow in these plantations. In addition these plantations continue to have impact on the environment through their continuous use of underground water. If left un-harvested, there is the implication of cumulative impact.

This study suggests that it is essential for authorities such as the DWAF and the Mthonjaneni Local Municipality to investigate the extent of plantations that are impossible to harvest. If the extent of the plantations is not significant, a decision not to do anything about such plantations may be taken. However, if

the result of the study shows that un-harvestable plantations are of significant size further options may be considered. In the last ten years, the Working for Water and other programmes have been established to eradicate unwanted plantations such as wattle in inland areas and pine trees along the coast. These programmes have been linked with poverty alleviation programmes, by providing unemployed people an opportunity to earn money by clearing the plants. Should a decision be taken to eradicate such plantations, a Working for Water programme could be adopted. The eradication of un-harvestable timber would involve negotiations with small-growers and may require compensation to them for their losses. Should a decision be taken to eradicate such plantations, Working for Water program could be adopted.



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## 8.1 List of respondents

Mr. J. Perkins	Department of Water Affairs and Forestry (17.09.2004, 22.09.2004)
Mr. B. Dlamini	Department of Water Affairs and Forestry (17.09.2004, 15.10.2004)
Mr. S. Ngubane	Forestry South Africa (21.09.2004)
Mr. J. Ngubane	Sappi (27.09.2004)
Mr. Gama	Khulanathi (29.09.2004)
Mr. Howison	Department of Environmental Agriculture and Environmental Affairs (22.09.2204)
Mr. Mdengu	NCT (27.09.2004)
Mr. M. Fowks	TKW Agricultural Limited (27.09.2004)
Induna	ENtembeni TA (01.10.2004)
Mr. Else	Mthonjaneni Municipality (13.08.2004)
Mr. M. Ngubane	Natal Tanning Extract Union cooperation (22.09.2004)
15 Individual small-growers	ENtembeni TA (19.07.2004, 13.08.2004, 01.10.2001,15.10.2004)
10 Individual non-rowers	ENtembeni TA (13.08.2004, 01.10.2004)



## 9.1 Appendices

### 9.2 Appendix N0. 1: Questionnaire

#### 9.2.1 Small-growers

##### **Land**

- Who owns (who has the title deed) the land on which you grow timber? and how big is your plot?
- How did you obtain access or ownership of the land?
- Did you have to obtain an alternative land for growing timber?
- How and from whom did you obtain permission to grow timber?
- What demarcations are there between your land and other land users in this area (e.g. grazing, cropping, residential) – i.e. how secured is your ownership – would it be possible for your neighbour to intrude on your land?
- Have you got spare land to expand timber growing if you wanted to or for future use by your children?

##### **Social structures**

- What structures have been established to promote the interests of the small-scale timber growers?
- What level of capacity / knowledge do these structures have to support your objectives?

##### **Traditional subsistence livelihoods**

- Before you participated in timber production, what traditional subsistence livelihoods were you involved in to make a living?
- Did you stop practicing these subsistence livelihoods after adopting timber production?

##### **Motivation and decision-making**

- What motivated you to grow timber?
- Before making the decision to grow timber, what information did you have about other land use options? [Where did you get this information?]
- Are you satisfied with your decision to grow timber? (i.e. If you had other land would you use it for timber?)

##### **Establishment and management of small-scale timber production**

- What resources did you invest to grow timber?
- What resources do you now invest in maintenance and harvesting?
- How do you obtain the resources required for the growing and maintenance of timber?
- Apart from production, what other timber related businesses do you participate in?

##### **Coping strategies and dealing with shocks**

- What strategies do you have to maintain subsistence during the 7-year period before generating some income from timber?
- In the case of a disaster what are your coping mechanism?

### **Government policies**

- What policies or legislation do you have to comply with during the establishment or management of the forest?
- What is your opinion of these policies?

### **Marketing and processing**

- What different productions of timber do you sell? [Do you sell processed products or just raw material?]
- Who are your buyers? (Local, external or both / big business – small business- Where are they located ?–How far is it? – Do you deliver or do they collect products from you?)
- How is the price decided and by who?– (talk about the relationship you have with your buyers?)

### **Challenges**

- Can you tell me the challenges facing small-scale timber production?

### **Success and benefits**

- What benefits do you derive from timber production?
- What is your perception about viability and sustainability of timber production?
- What non-timber benefits have been accrued to the community because of timber production in this area?
- Are you satisfied with the success of timber production?

## **9.2.2 Non-growers**

### **Land**

- Do you have access or ownership of the land?
- What demarcations are there between your land other land users in this area (e.g. grazing, cropping, residential) – i.e. how secure is your ownership – would it be possible for your neighbour to intrude to your land?
- Do you have spare land to grow timber if you wanted to or for future use by your children?

### **Traditional subsistence livelihoods**

- What traditional livelihood strategies does local people in this area use?
- Apart from traditional livelihood strategies, what forms of cash crop are you engaged in?
- How does timber production compliment or interfere with traditional livelihoods?

### **Motivation**

- What is the reason why you are not participating in timber production?
- If you had an opportunity, would you grow timber?

### **Success and benefits**

- What benefits do you derive from timber farming in this area?

- What is your perception about viability and sustainability of timber production?
- What non-timber benefits have been accrued to the community because of timber production in this area?
- What is your perception about the success of timber production in this area?

### **Challenges**

- Can you tell me the challenges facing small-scale timber production?
- 

## **9.2.3 Traditional leadership**

### **Land**

- How is land administered in this area?
- How is land allocated for timber production? (What criteria do applicants have to satisfy?)
- What permission is required for timber production?
- What demarcations are there between different land users in this area (e.g. grazing, cropping, residential) – i.e. how secure is ownership – would it be possible for neighbours to intrude on each other's land?
- Does this area have enough land to deal with future needs for timber production?
- What conflict exists between different land uses?
- Does such conflict of interest ever lead to dispute? Can you give me examples of such disputes?
- What is the role of the Tribal Authority in resolving such disputes?

### **Government policies**

- What policies or legislation do small-scale timber growers have to comply with during establishment or management of the forest?
- What is your opinion of these policies?

### **Coping strategies and dealing with shocks**

- What strategies do small-scale timber growers use to maintain subsistence during the 7-year period before generating some income from timber?
- In the case of a disaster how does the Tribal Authority help small-scale timber growers?

### **Motivation and decision-making**

- What motivates people to grow timber in this area?
- What other land use options are available?
- Do you support the decision for timber production in this area?

### **Success and benefits**

- What benefits do you derive from timber farming in this area?

- What is your perception about the viability and sustainability of timber production?
- What non-timber benefits have been accrued to the community because of timber production in this area?
- What is your perception about the success of timber production in this area?

### **Challenges**

- Can you tell me the challenges facing small-scale timber production?

## **9.2.4 Government departments**

### **Development programmes (Poverty alleviation programmes)**

- Does your department has poverty alleviation programmes?
- Do you think small-scale timber has the potential to support livelihoods, i.e. does it feature on you poverty alleviation programme?
- What support mechanism does you department offer small-scale timber growers?
- What is the impact of implementing your support mechanism?

### **Government policies**

- What policies or legislation do small-scale timber growers have to comply with during the establishment or management of the forest
- How does your department implement these policies?
- What does your department do to monitor and evaluate compliance?

### **Motivation and decision-making**

- What motivates people to grow timber?

### **Success and benefits**

- What benefits do you think small-scale timber farmers derive from timber production?
- What is the perception of your department about the viability and sustainability of timber production?
- What non-timber benefits have been accrued to the communities because of timber production in areas where timber production is taking place?
- What is your perception in your department of the success of timber production in this area?

### **Coping strategies and dealing with shocks**

- Does your department have a disaster management programme to support small-scale timber farmers?

### **Challenges**

- Can you tell me the challenges facing small-scale timber production?

## 9.2.5 Local government

### Development plans

- Does the municipality have an Integrated Development Plan (IDP), Objectives (LDOs) or a Land Use Management System?
- What are the priorities of the IDP with regard to community economic development initiatives?
- Do these plans include small-scale timber growing?
- What is the role of the municipality in the establishment of small-scale timber production?
- What support mechanism does the municipality have for small-scale timber growing?
- What has been the impact of implementing such support mechanisms?

### Motivation and decision-making

- What motivates people to grow timber?

### Coping strategies and dealing with shocks

- In the case of a disaster, what mechanism have you got to support small-scale growers?

### Challenges

- Can you tell me the challenges facing small-scale timber production?

### Success and benefits

- What benefits do you think small-scale timber farmers derive from timber production?
- What is the perception of your department about the viability and sustainability of timber production?
- What non-timber benefits have been accrued to the community because of timber production in areas where timber production is taking place?
- What is the perception of your department about the success of timber production as CED strategy?

## 9.2.6 Commercial timber growers

### Timber growing support programmes

- Does your company have a specific support programme for small-scale timber farmers?
- What is the view of your company about small-scale timber growing? [what are the reasons for supporting small-scale timber growing]
- Does your company offer support to small-scale timber growers, what support do you offer? What are the terms and conditions for offering such support?
- What is the impact of your support mechanism?



### **Government policies**

- What government policies do small-timber growers have to comply with?
- Do you think small-scale timber growers are able to comply with these policies?
- What is your opinion about these policies?

### **Motivation and decision-making**

- What do you think motivates people to grow timber?

### **Coping strategies and dealing with shocks**

- In the case of a disaster, does your company have a disaster management programme to support small-scale farmers?

### **Challenges**

- Can you tell me the challenges facing small-scale timber production?

### **Marketing and processing**

- Who buys timber products from small-scale growers? (local, external or both / big business –small business) Where are they located? –How far is it? – Do you deliver or do they collect products from you?
- Who and how is the price decided?

### **Success and benefits**

- What benefits do you think small-scale timber farmers derive from timber production?
- What is your perception about the viability and sustainability of timber production?
- What non-timber benefits have been accrued to the community because of timber production in areas where timber production is taking place?
- What is your perception of your company about the success of timber production as CED strategy?

## **9.2.7 Non government organization / Community based organization**

### **Organizational vision**

- What is the focus of your NGO?
- What is the opinion of your NGO regarding small-scale timber growing?
- What is the interest of your NGO with regard to small-scale timber production?

### **Motivation**

- What motivates people to grow timber?

### **Challenges**

- Can you tell me the challenges facing small-scale timber production?

**Success and benefits**

- What benefits do you think small-scale timber farmers derive from timber production?
- What is your perception about the viability and sustainability of timber production?
- What non-timber benefits have been accrued to the community because of timber production in areas where timber production is taking place?
- What is the perception of your NGO about the success of timber production as CED strategy?

### **9.3 Appendix No. 2: Map depicting potential of timber in Uthungulu District Municipality**

NB: See map overleaf