

Review of Current Policies which are Impacting on the Sustainability of Natural Woodlands in African Communal Rural Areas in South Africa

by

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DECLARATION

The research herein was undertaken in the Department of Geography, University of Durban Westville under the supervision of Dr Urmilla Bob.

The studies represent an original undertaking by the author. Where use has been made of the work of others, it has been duly acknowledged in the text. This dissertation has not been submitted in any form for a degree to any other university.

A handwritten signature in blue ink, reading "Ismail Banoo", is positioned above a horizontal dashed line.

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ABSTRACT

South Africa has a fragmented past. Attempts to redress inequalities must acknowledge and understand the context of rural South Africa in terms of natural ecosystems. We are used to being told that forests are good for us all. Certainly, the range of benefits that can be derived from forests, specifically natural woodlands are legion. The woodlands in South Africa are essential in the lives of many South Africans. It is for this reason that woodland resources are regarded as extremely important, not only for the maintenance of rural livelihoods but also as a potential contributor to the national economy. The woodlands are a diverse resource, extending over a vast area of the country and across several provincial boundaries. This as well as varied tenure systems as well as management objectives which exist, make the woodlands of South Africa a complex, yet essential resource to manage, monitor and sustain on a national level. Policy should therefore be able to ensure some kind of balance so that woodlands can be conserved, developed and sustainably managed in the most suitable ways possible. The findings of previous studies conducted on the woodland biome have highlighted the lack of sufficient knowledge of community perceptions with regards to the policy issues. This has been the catalyst in promoting informed reviews of current policies, in effect, which are affecting woodlands in African communal rural areas in South Africa.

This particular study illustrates that there are a range of policies, both national and international, that impact either directly or indirectly on the woodlands in South Africa. The research identifies some of the key limitations in the various existing policies. Furthermore, the key concern raised is that current policies remain fragmented and are not in synergy with each other. Additionally, the ability to translate policy intentions into practice (that is, the implementation of policy directives) remain problematic. The gaps in the policy environment as well as the failure to implement are the key threats to ensuring the effective use of policy in promoting the sustainability of the woodlands in the South Africa context.

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ABBREVIATIONS

CAMPFIRE	-	The Communal Areas Management Programme for Indigenous Resources
CBD	-	Convention of Biological Diversity
CCD	-	Convention to Combat Desertification
CITES	-	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMA	-	Catchment Management Agency
DEAT	-	Department of Environmental Affairs and Tourism
DoA	-	Department of Agriculture
DWAF	-	Department of Water Affairs and Forestry
EIA	-	Environmental Impact Assessment
FAO	-	Food and Agriculture Organisation
FCCC	-	United Nations Framework Convention On Climate Change
GEAR	-	Growth, Employment and Redistribution Strategy
GEF	-	Global Environmental Facility
ITTA	-	International Tropical Timber Agreement
ITTO	-	International Tropical Timber Organisation
NAP	-	National Action Programme
NEMA	-	National Environmental Management Act
NFA	-	National Forest Act
NFAP	-	National Forestry Action Programme
NGO	-	Non-Government Organization
NTFP	-	Non-Timber Forest Products
NWA	-	National Water Act
PRES	-	Socio-Economic Rehabilitation Programme
SEA	-	Strategic Environmental Assessment
SDI	-	Spatial Development Initiative
SFM	-	Sustainable Forest Management
TFAP	-	Tropical Forestry Action Plan
UNCED	-	United Nations Conference on Environment and Development
UNESCO	-	United Nations Educational, Scientific and Cultural Organization
UNDP	-	United Nations Development Programme

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CHAPTER ONE

1.1 PREAMBLE

South Africa's history of colonialism and apartheid, and in particular the conscious policy of dispossessing the black majority of land in order to force them into the labor market, has resulted in South Africa having one of the most skewed patterns of land distribution in the world. According to Wildschut et al (1998), some 87% of all land is owned by a minority of five million whites and only 13% by blacks. Bernstein (1992 : 14) accurately refers to the implications as "a bewildering variety of tenure arrangements".

The history of land dispossession and apartheid injustices in South Africa have resulted in at least seven million blacks being forcibly removed. Homelands were created as dumping grounds for Africans to serve the purpose of cheap labor. Levin (1997) asserts that forced removals have played a major role in shaping the geography and the distribution of resources in the South African context. An example of this is the central lowveld of Mpumalanga where forced removals have led to the creation of game and nature reserves, the expansion of exotic plantations, and the establishment of intensive and highly mechanized irrigated agricultural production.

Clearly, the issues pertaining to natural resource management (including woodlands) in South Africa are embedded in a myriad of complex concerns that need to be equitably addressed. These include questions of accessibility, natural resource management aspects, ownership patterns as well as policy and legal concerns. For the vast majority of people who live in poverty, especially in rural areas, livelihoods and household survival are directly linked to natural resources and this further impounds the burden placed on our natural resource base.

Forests and woodlands are one of the world's major renewable and sustainable natural resources. Edwards and Guyer (1992) state that they extend globally from the conifer forests of the northern temperate belt through to the tropical rain forests of the equatorial

regions. Grayson (1993) purports that throughout the world, forests and woodlands are managed for many different reasons and for a wide range of management objectives. Increasingly, forests are now being managed to provide a variety of complementary benefits which include, timber production, economic regeneration, access and recreation and the enhancement of biodiversity. In more recent times many environmental problems are now being directly linked to the inappropriate uses of the forestry source and methods of management. In many cases the problems relate to poor and inappropriate management.

Within the South African context, indigenous forests and woodlands are indispensable to the country's heritage, beauty, wildlife and environment. However, in attempting to redress the inequalities of the past, South Africa will need to acknowledge and understand the context of rural South Africa in terms of natural ecosystems. The woodlands in South Africa are essential in the lives of many South Africans. It is for this reason that woodland resources are regarded as extremely important, not only for the maintenance of rural livelihoods but also as a potential contributor to the national economy (Shackelton et al, 1999). The woodlands are a diverse resource, extending over a vast area of the country and across several provincial boundaries. Willis et al (2000) assert that the variety of tenure arrangements as well as management objectives which exist make the woodlands of South Africa a complex yet essential resource to manage, monitor and sustain on a national level. Policy should therefore be able to ensure some kind of balance so that woodlands can be conserved, developed and sustainably managed in the most suitable ways possible.

The findings of previous studies conducted on the woodland biome have highlighted the lack of sufficient knowledge of community perceptions with regards to the policy issues. This has been the catalyst in promoting informed reviews of current policies in effect, which are affecting woodlands in African communal rural areas. Furthermore, recent insightful case studies like Shackelton et al (1999) Twine et al (2000) and Watson et al (2001) have all concentrated primarily on aspects of direct use values of woodland

resources and they have also identified a lack in policy frameworks which will help in promoting sustainable woodland use.

Moreover, in South Africa data on the natural woodlands are extremely limited. According to Mckenzie (1998), uses, values and benefits have often been consistently understated, and conservation and management given low priority in government development plans. It is through informed policy intervention that significant improvements can be achieved in rural livelihoods while concurrently addressing sustainable management of these natural resources. This research endeavor therefore aims to thoroughly encapsulate the key policy issues and concerns related to the sustainability of woodlands in South Africa. Furthermore, lessons from other Southern African countries are integrated. Also, some critical comments and recommendations are forwarded.

1.2 CONCEPTUAL FRAMEWORKS AND THEORETICAL ASSUMPTIONS OF PROPOSED STUDY

In any understanding of policy issues it is important to consider the nature and importance of public policy.

Policy simply put, is a statement on intent by an organisation. “Policy has content, in the form of policy statements and policy instruments and it has a process viz, policy making, implementing and reviewing. We need to understand the complicated area between policy and practice, and to explain the difference between what people say they will do and what people actually do”

(Mayers and Bass, 1998: 4)

With regard to woodlands in South Africa, policy issues have been a source of continued debate for some time now. There has been a lack of sufficient information pertaining to the value and status of natural woodlands to rural communities. This has resulted in the woodlands being controlled by various policies and legislations which have governed this savanna biome in the past. In South Africa’s more recent forest developments, the government has taken on the responsibility of ensuring the sustainability of woodland

resources by identifying “woodlands” as a type of natural forest (White Paper on Sustainable Forest Development, 1996). This has drastically changed the perspective on the importance of woodlands in South Africa which are home to approximately 9.2 million rural inhabitants and 5.6 million urban inhabitants (Solbrig et al, 1991).

Thus, being home to a substantial percentage of the population, it is critical that policy makers and natural resource managers identify the elements which will ensure future sustainability of woodlands as well as provide efficient and effective forest management through policy in South Africa.

1.3 MAJOR AIM OF THE STUDY

The broad aim of the study is to evaluate the current policies, direct and indirect, which are impacting on the sustainability of natural woodlands in South Africa.

1.4 OBJECTIVES

To achieve the proposed aim of the study this research endeavor is guided by the following objectives : -

- To evaluate current policies that are directly and indirectly impacting on the sustainability of natural woodlands in relation to social, economic and political imperatives in African communal rural areas.
- To examine the roles of natural woodland resource use in rural areas and whether current policies are adequately addressing these fundamental aspects.
- To ascertain lessons from other developing countries regarding policies relating to sustainable usage of woodlands.
- To assess community perceptions regarding the use of natural woodlands and woodland policy issues.
- To forward policy recommendations based on the findings of the research conducted.

1.5 RESEARCH METHODOLOGY

The process of identifying the most relevant methodology has been continuous as understanding of the case studies and research questions increased. The research methodologies are guided by secondary and primary data gathering approaches. The methodology which will be implemented in this dissertation will constitute of two data sources: secondary data and primary data

1.5.1 SECONDARY DATA

A wide range of secondary data sources in the form of policy documents and reviews on woodlands as well as material on previous studies and research conducted on natural woodlands will be consulted. These can be identified as the key sources:

- policy review reports
- policy document
- research reports, articles and books pertaining to woodlands
- government documents

1.5.2 PRIMARY DATA

This aspect is intended to provide a case study that allows this research effort to incorporate community perceptions and attitudes relating to woodland policy as well as to highlight the importance of woodland resources for rural households and communities. Moreover, participatory research is consistent with many of the approaches adopted in rural development research that focus on subjectivity and knowledge stemming from everyday experiences. A questionnaire focusing on respondents knowledge, perceptions and attitudes towards woodland policies was implemented.

The questionnaire survey was conducted in 100 households in the Hlabisa area which is located in the Hlabisa district and the east gate of the Hluhluwe Umfolozi park. Three villages were selected from Hlabisa for the purpose of this study. The villages selected were KwaMduku, KwaNompondo and KwaMsane. These rural villages represented a unique range of similarities and differences, that is, from the small, remote and poorly serviced KwaMduku to the larger and road networked KwaMsane. The random sampling method was used to ascertain the required sample size.

1.6 CHAPTER SEQUENCE

This dissertation is organized into five chapters. As an overview, **Chapter 1** is the introductory chapter. It outlines the major aim and objectives as well as the research methodology of the study is presented. **Chapter 2** constitutes the literature review chapter. This chapter focuses on the evolution of international forest policy and policy processes. Furthermore, it explores the opportunities to save and sustainably use the world's forests through international co-operation. It then introduces the natural woodland resource in South Africa and highlights the importance of environmental policy and explores the often contested aspect of sustainability. **Chapter 3** is the methodology chapter. It provides an introduction into different research strategies. It then focuses on the methodologies employed in the study and the methods used for data analysis. **Chapter 4** is the data analysis chapter. It constitutes two parts. The first part of this chapter evaluates the current policies affecting natural woodlands in South Africa. It primarily focuses on the South African macro and sectoral policy frameworks and critically analyses them in relation to the woodlands. The second part presents the primary data ascertained from the questionnaire survey administered in the three villages. **Chapter 5** is the concluding chapter. This chapter summarizes the key findings of the research and proposes recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

In this section of the dissertation the existing literature pertaining to forests and woodlands are briefly reviewed. The key focus is to highlight the relative neglect of studies pertaining to community perceptions with regard to natural woodland usage. Furthermore, a critical examination of the literature illustrates the need for rethinking and reconceptualising the way woodland resources are managed and used within the South African context.

It is important to recognise from the outset that relations between woodlands and rural people are influenced by specific historical, socio-economic and physical environments which are under consideration and is location specific. The nature of human activities and their varied relationships to woodland resources differ significantly across these contexts. Furthermore, the availability and uses of woodlands are also influenced by diverse situations within rural communities. Many often competing parameters interact, each with their own power and dynamics. The various stakeholders involved in woodland usage and management in South Africa are represented in the figure 2.1 below.

FIGURE 2.1: Stakeholders involved in woodland use and decision/ policy making

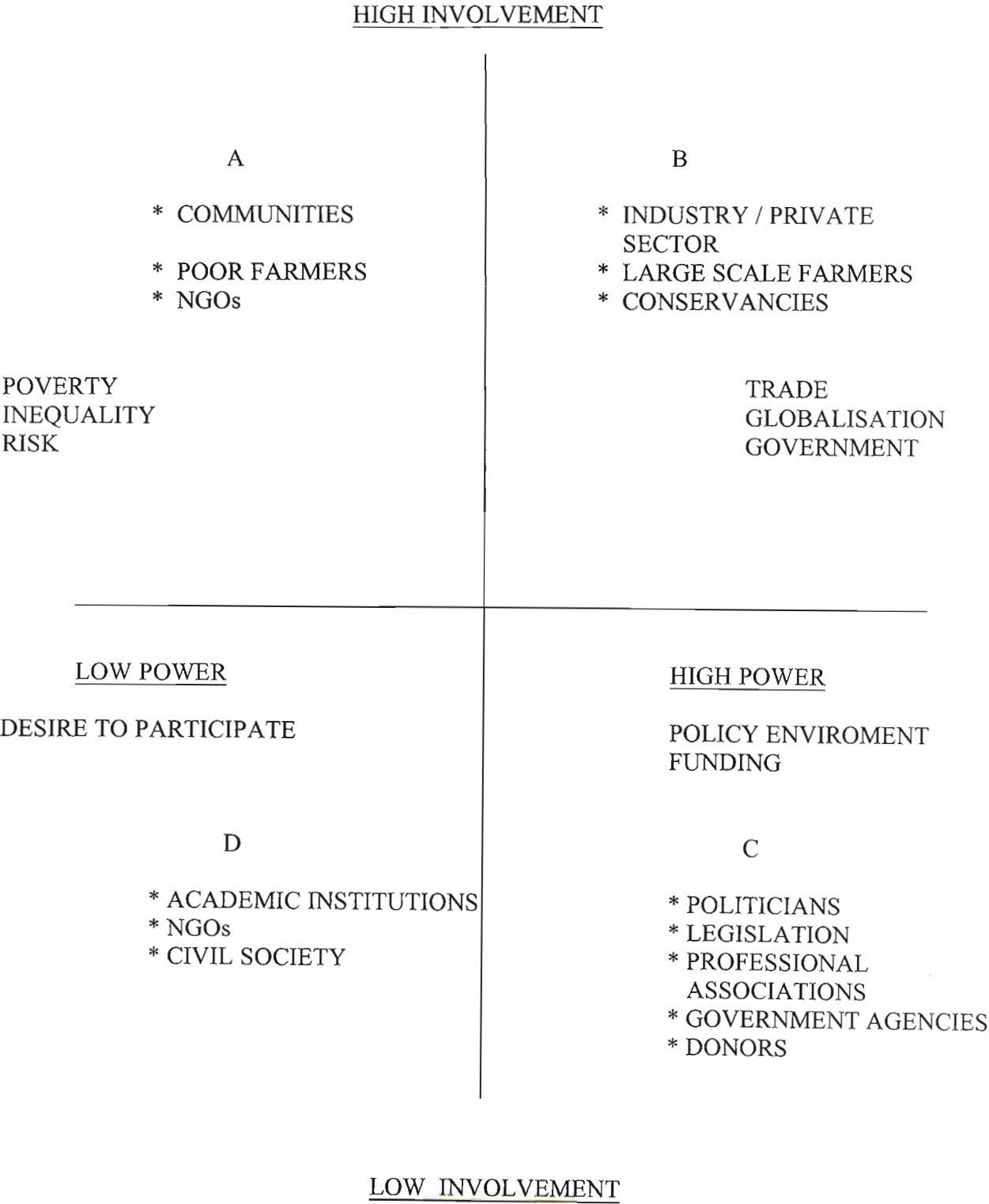


Figure 2.1 illustrates the major stakeholders that interact with the woodlands are communities, poor farmers, NGOs, industry, large scale farmers, conservancies, other private sector parties, politicians, government agencies, policy makers, donors, professional associations, academic institutions (usually for research and educational purposes) and civil society. Among these stakeholders, power and involvement (or direct interaction with the woodlands resource base) are differentially located. Group A (communities, poor farmers and NGOs) have high involvement as well as relatively low power. Communities generally as well as poor farmers who reside in or near woodlands utilise the woodland resources extensively. This will be discussed later in the chapter. However, they are often characterised by poverty, high rates of inequalities and tend to be risk-prone. Their ability to inform policy and influence decisions tend to be limited.

Group B (industry, private sector and large scale farmers) directly interact with woodlands, often extensively exploiting the woodland resource which leads to degradation. These groups are influenced by trade and processes of globalisation. They can be extremely powerful. Within this group (high involvement and high power) are the conservancies who are often linked to the government sector. It is important to note that in the case of South Africa, conservation areas are inextricably linked to the policies and politics of government who are one of the main funders of conservation areas. This was blatant during the apartheid era when conservation areas were often created not only to protect the natural resource base but were also created as havens for the rich. Indigenous peoples were often forcefully removed from conservation areas and/ or denied access of the resources in conservation areas.

Group C are stakeholders that are closely related to the policy and funding environments. These include politicians, policy makers, government agencies and donors. Although their direct interactions with the woodlands resource base is relatively low, they are extremely powerful and influential in terms of policies and funding.

Group D have the desire to participate in decision-making and attempt to do so in many ways. However, they have relatively low power as well as their interactions with the resource base are low.

2.2 WOODLANDS AS PART OF THE NATURAL RESOURCE BASE

Shackelton et al (1999) assert that woodlands are one of the world's major terrestrial ecosystems, comprising between 10% and 15% of the world's land surface and being home to over 30% of the world's population. Shackelton et al (1999) indicate also that woodlands are distributed across nearly all the continents and comprise of approximately 50% of the African continent, 65% of Southern Africa and one third of South Africa. Cowling et al (1989) argue that woodlands are also important for their rich biodiversity and the core Southern Africa woodland biome contains 5 780 species of plants of which 43% are savanna endemic.

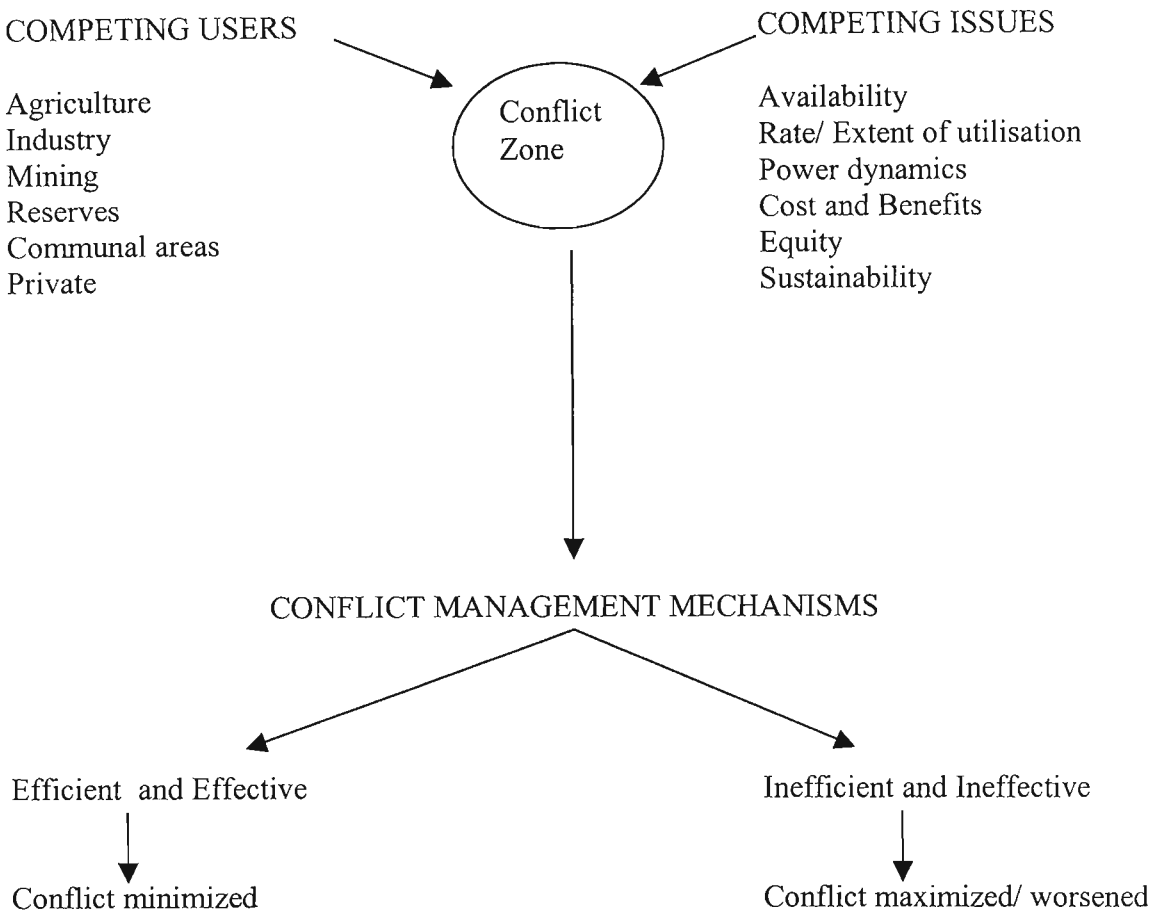
There has been much debate over a definition of woodlands, both internationally and in South and Southern Africa. There has been equal debate whether or not the term savanna is synonymous with the term woodland. Many authors have been divided on this issue but the terms savanna and woodland are often used synonymously within the South African context. Shackleton (2000) asserts that there are at least three regulatory definitions of a woodland and also explores a variety of scientific interpretations of the biome in South Africa.

It is important in South Africa that there is some inquiry into the language that is used for the defining of woodlands. There must be a need to acknowledge a language that is particular to the South African woodland experience and is unique to the areas we have. Edwards (1986) asserts that this definition will need to encompass the following list of variables which will provide a more comprehensive definition of woodlands in South Africa. These aspects include:-

- a biological term for a pristine collection of habitats and species which are inextricably inter-linked;
- where the woodlands are self-managing and self regulating;
- where rural people are part of the woodland usage and management; and
- a holistic system not requiring constant intervention.

In South Africa open savanna woodlands cover a large proportion of the country and at least 42 million hectares (32% of South Africa's total area) originally contained potential woodland (National Forestry Action Programme [NFAP], 1997). Much of this has been converted to other land uses such that woodland cover extends to just over 23 million hectares at present (NFAP, 1997) (Refer to Map: Appendix D). The remaining woodlands are relatively well protected with approximately 12% of the arid and 5 % of the moist savannas enjoying some form of legal protection (NFAP, 1997). Although a significant fraction of woodlands enjoy some form of protection there are also large areas which have been unsustainably managed and these are mostly located in the former homelands. Furthermore, overstocking has resulted in widespread bush encroachment and soil erosion combined with the failure to regulate invasive aliens has degraded extensive areas of woodland in both conservation and commercial farming areas in South Africa. The forest and woodland resource varies greatly from province to province in vegetation, type, extent, and condition. These provincial variations have economic and managerial implications which are often conflicting and need to be considered when planning for the sustainable utilisation of the resource. The conflicting demand for woodlands in South Africa is highlighted in the in Figure 2.2 below:

FIGURE 2.2 CONFLICTING WOODLAND DEMAND



Conflicting demand between users can lead to conflicts. Competing users include agriculture, industry, mining, conservation needs (reserves), communities (communal areas) as well as private owners. Conflicts often arise as a result of tensions around availability, rate/ extent of utilization, power dynamics (discussed earlier and illustrated in figure 2.1), costs and benefits pertaining to woodland use as well as equity and sustainability considerations. For example, profit-making enterprises may lay claims on woodland resources that could result in limited or no access to the resource base by neighboring rural communities whose livelihoods and survival strategies may depend on access to the woodland resource base. This competition for resources could result in conflicts between the competing users. If effective and efficient conflict management

mechanisms are not put into place then the conflict could be worsened and manifest itself in numerous destructive types and ways. These could include outright violence between the differing groups as well as deliberate destruction of resources or each others properties. The resource base suffers under these conditions.

In South Africa, the woodland biome comprises approximately one third of the country, incorporates the largest proportion of communal lands and is home to approximately 9.2 million rural inhabitants (Shackelton et al, 1999). In line with the NFAP (1997), the Department of Water Affairs and Forestry (DWAF) has recognized the need to include local communities in the management of natural woodlands. With the promulgation of the National Forests Act in April 1998, DWAF has assumed the responsibility for the legislative and policy frameworks affecting indigenous woodlands of South Africa. Shackelton (2000) highlights that this is the first time in South Africa that woodlands have received legislative significance, along with a positive vision for the productive use and maintenance of the woodlands for the benefit of the country as a whole. Cline-Cole (1996) and Othusitse (1997), suggest that this reflects the international trend towards a broader and more inclusive definition of forests and forestry, and the role of local communities and indigenous people in their utilization and management. Furthermore, woodlands are also of extreme value as they provide a wide range of goods and services. The following are a few tangible values of products obtained from natural forests and woodlands cited in the NFAP (1997):

Goods

- Fuelwood - Approximately 11 million tonnes of fuelwood (of which 66% is from woodlands) is estimated to be used by rural communities each year. Fuelwood sells between R100 and R200 a tonne. At an assumed value of R100 per tonne, fuelwood consumption has value of over one billion rand per annum;
- Traditional medicine – Although difficult to quantify, this informal industry is estimated to be worth R500 to R1000 million per year, with 150 000 to 300 000

traditional healers active in the country. Many people in South Africa utilize medicinal plant resources from natural woodlands;

- Food security – Natural woodlands make an important contribution to household food security in many areas by providing :
 - relatively more benefits to households of lower economic status
 - alternative sources of food
 - essential dietary supplements;
- Curio industry – A large curio industry is based on woodland products. The retail value has been estimated at R4.9 million per annum from formal wood carving and R2.5 million from the informal industry. In some districts, this use is now depleting the resource;
- Grazing – Many woodland areas are used for livestock and the value of livestock production could potentially exceed the value of fuelwood production, particularly if livestock is maintained as part of a production, rather than an investment system;
- Commercial timber and other species - These are harvested from many woodlands areas around the country, sometimes sustainably, sometimes not. Indigenous hardwoods and ferns are included among these.

Services

- Biological diversity – Natural woodlands provide the habitat for a diverse range of fauna and flora whose intrinsic value is being increasingly recognized;
- Water catchments – Woodlands contribute significantly to the maintenance of hydrological regimes;

- Soil conservation – Woodlands provides land use cover which protects the soil surface from erosion and contributes to maintaining soil fertility;
- Aesthetics and eco-tourism - Provides a visually pleasing environment and species-rich habitat which supports recreation and a thriving eco-tourism industry. Tourism was worth R12.5 billion to South Africa and woodlands are a major attraction, example, the Kruger National Park and other reserves;
- Cultural and spiritual – Many communities attach high spiritual and cultural values to individual trees or wooded areas;
- Carbon Sequestration - Plays a vital role in fixing the CO₂ from the air to compensate for carbon emissions.

Furthermore, Goreau (1992) states that the build of carbon-dioxide in the global atmosphere represents one of the principal causes of the greenhouse effect that is overtaking the earth's climatic systems and that threatens salient sectors of economic development in both the developed and developing worlds. A management response to offer scope to counter the buildup of carbon-dioxide has been the movement towards massive tree-planting programmes around the world. The conservation of woodlands as well as combining measures to halt deforestation will eventually serve to sequester carbon in amounts significant for the efforts to counter the greenhouse effect in South Africa.

Willis et al (2000) assert that the distribution of the woodland areas amongst the population of South Africa can be generally described in three broad categories. The first comprises the large proportion of the woodland resource owned by private landowners and managed mainly for agricultural and eco-tourism purposes. The second category includes predominately the former homeland areas where a large proportion of the rural population of South Africa reside and is directly dependent on the natural resource for its livelihood. The third category consists of those woodland areas under State ownership,

usually in the form of protected areas. These range from national parks to nature reserves protected under provincial ordinances.

The rural population resident in savannas represents just less than one quarter of all South Africans. Woodlands are of extreme importance in terms of both timber and non-timber forest products (NTFP) and these include building poles, thatching for roofs, fuel wood, medicinal plants, edible herbs, fruits as well as grazing areas (Shackleton et al, 1999). Several recent insightful case studies have recorded both direct and indirect use values of woodlands to rural livelihoods, for example, the Watson et al (2000), Shackleton et al, (2000) and Twine et al (2000) studies respectively. The study conducted by Shackleton et al (1999), which recorded both the direct and indirect values across three rural villages, found that the direct-use value of woodlands ranged from approximately R375 to R1 653 per person per year across the villages. This approximates to almost R8 billion if extrapolated nationally. Other studies like the Watson et al (2000), have also recorded direct use values of woodland resources, specifically within KwaZulu-Natal. The following section focuses specifically on demonstrating some of the actual use values derived from the woodland resource. The aims of doing so are to highlight the importance of woodland resources to rural communities as well as determining the market value of woodlands, combined with illustrating the importance of conserving woodlands as they form part of the natural resource base within South Africa. However, it is not within the scope of this dissertation to fully explain in detail all the resources derived from woodlands. The data presented below has been extracted from the Watson et al's (2000) study and incorporates such aspects like the percentage of usage, importance of the resource to communities and the economic value of the resources (wherever available).

2.2.1 Frequency of use of resources

A wide variety of woodland resources were used by households in the study. The most widespread use was of twig and grass hand sweepers, wild fruits, fuelwood, wild herbs

and household utensils. Other resources used included bush meat, thatch grass and muthi (medicinal) plants.

2.2.2 Indigenous Fuelwood

All the households in two of the villages indicated that they used fuelwood as the primary energy source for cooking and heating. However, although one of the villages was formally electrified, almost all the households surveyed in the village also used fuelwood for these purposes. This finding is consistent with those of other studies in rural areas in South Africa.

The mean daily mass of fuelwood used per household was calculated as being 2 880 kg per year. The individual annual consumption of fuelwood was 344.3 kg/ person/ year for the users. This gives an annual consumption of 340 7881 tonnes of wood for the three villages combined.

Furthermore, the study highlights that most respondents felt that there was not enough fuelwood in the immediate locality and they indicated that the availability had decreased over the last 5-10 years. They attributed this mainly to land clearance for residential and cultivation purposes.

The mean price per kilogram was calculated to be R0.09. The calculated annual value per household was R213.84, giving a value of R30.99 per person. Averaged over the whole community, this equated to R211/ household/ year or R30.58 / person / year.

2.2.3. Indigenous wood for housing

The study indicated that there was a considerable dependency on the woodlands for buildings and shelter. Indigenous poles were used by 89% of the households in the construction of walls and roofs of houses. Households reported using indigenous poles as a major building material.

A mean total of 18.3 indigenous poles were used. The mean number of houses per user household constructing with indigenous poles was 2.96. Each user household therefore used, on average, a total of 54 indigenous poles. The current local price for an indigenous pole was calculated to be R7.00. Therefore the current value of poles per user household was R379.40.

There was a perceived local decline in availability of indigenous wood suitable for using as construction poles. The decline was largely attributed to the increasing demand and growing population size within the communities.

2.2.4 Edible wild herbs

All households harvested and ate wild herbs. Wild herbs were eaten mainly as a relish with the evening meal. These were collected from the garden plots, yards, fields and other disturbed sites in summer as well as from flood plains in winter. In winter, fresh wild herbs were sometimes supplemented with dried herbs, which were dried by households in summer.

The current average price of a pot of fresh and dry herbs was R5.00 and R4.70, respectively. The calculated annual value of fresh and dry herbs per user household was R345.80 and R72.09, respectively. This equates to R50.11 and R10.45 per person.

2.2.5 Edible wild fruit

All households ate wild fruit. However, respondents found it difficult to estimate the consumption, frequency and amounts despite the popularity of wild fruit. This was because occasionally fruit are picked and carried in a container but the greatest proportion of fruit is consumed whilst walking in the communal lands for other purposes. In particular, herders, wood gatherers, field workers and children pick and consume wild fruit whilst going about their daily business.

Nevertheless, households estimated the amount of fruit consumed during the fruiting season by indicating the size of a container that would be filled with fruit. The calculated mean volume of fruit consumed monthly was 5.75 l per household. Therefore, a figure of 3.59 kg per household per month. The average value of a kg of fruit was determined to be R7.43. The annual value per household was thus R186.72, or R27.06 per person.

2.2.6. Wild honey

Two thirds of the households reported using honey from the wild. Honey collection occurred on an infrequent basis. It was also considered an opportunistic activity, carried out mainly by herd boys and other members of the households when they happen to come across a hive of bees whilst walking within communal lands. As a result households with herd boys consumed more honey than those without them. Herd boys were the major sellers of wild honey.

Honey user households consumed an average of two portions of honeycomb per month throughout the year. The average portions of honeycomb were 288 cm³ and sold for an average of R7.15, this equates to an annual value per user household of R171.60, or R24.87 per person. The estimated total annual value of wild honey to the three study villages was R164 929, 38.

2.2.7. Medicinal plants

The majority of households used medicinal plants for home treatment. Women in particular indicated that if one family member becomes ill, they would first try local remedies which they collect themselves before taking a person to a clinic or hospital. The amounts and types used were not recorded. The annual value of medicinal plants could therefore not be calculated.

No commercial gatherers were encountered and no households indicated that they sold medicinal plants. Medicinal plants were generally collected in the immediate locality, including people's yards. However, it is estimated that traditional medicinal plant usage and trade is in the excess of R500 million per annum.

2.2.8 Total Direct-Use Values

In common with Shackleton et al's (1999) study, this study found that rural households in the KwaZulu-Natal region made use of a wide range of resources from the woodlands around them. All households used twig and grass hand brushes, wild herbs as well as wild fruits. A substantial proportion of households used other woodland resources which varied slightly at the village level. These included wild herbs, fuelwood, indigenous wood, thatch grass, bush meat, fish, medicinal plants, housing poles and weaving reeds. The mean annual direct-use value of woodland resources per household was found to be R752.72.

South Africa does not yet have a system of natural resource accounts (i.e a system which would attribute values to forest goods and services other than those captured by market pricing). Consequently, the forest sector particularly the natural woodlands, is undervalued. Correct valuation is important when considering land-use options in future formulation of policies and allocation of resources.

The economic potential of woodlands needs to be considered in terms of alternative management options of the resource and of conversion to an alternative land use, such as dryland or irrigated crops or plantation forestry (NFAP, 1997). The conversion of woodlands to commercial agriculture, the costs of soil and carbon loss and the loss of other non-use values are typically not taken into consideration in government development plans. Similarly, market distortions and subsidies are seldom considered in such evaluations. If all these factors are not taken into consideration many agricultural practices would be non-sustainable in terms of both biological and economic criteria, even without taking these into consideration, agriculture has proved to be unsustainable

in many woodland ecosystems (NFAP, 1997). However, simply maintaining the status of natural woodlands may not be the most sustainable land-use option. An improved understanding of the options available for the utilisation of natural woodlands is urgently needed in South Africa so that the best use may be made of them to obtain optimal economic benefit.

Having explored some of the values of the products and services obtained from the woodlands and now having an understanding of the importance of woodlands resources in South Africa, the next part of this chapter will focus on the policy imperatives that are impacting on the woodlands. Here the focus is on introducing public policy and its outcomes, thereafter highlighting the recent policy initiatives that have taken place in response to global deforestation and then concluding this chapter with South Africa's international environmental policy commitments and the implications these policy obligations have for the sustainable use of woodland resources.

2.3 THE POLICY CONTEXT

When asked what policy really is, South African policy thinkers and practitioners are likely to produce a mixed bag of answers. Most people probably associate the term with government and national issues. But policy also underpins the activities of civil society institutions, and may guide even the smallest of organizations in either the public or private domains.

Before understanding the importance of public policy, we will begin with a working definition. Leonard and Thomas (1995: 3) define policy as,

A purposive course of action based on currently acceptable societal values followed, in dealing with a problem or matter of concern, and predicting the state of affairs which would prevail when that purpose has been achieved.

In any review on policy issues it is always useful to consider the nature and importance of public policy. Wildschut and Hulbert (1998: 31) assert:

That in a democracy it serves the functions of providing transparency and accountability. It minimizes the effects of individualistic gains by giving the electorate a basis upon which to evaluate the performance of those elected into office. Policy in essence becomes a tacit social contract between government and the governed about what is being done, by whom, for what purpose, and within the parameters of public resources and in the public interest.

Leonard and Thomas (1995: 2) further contend that public policy:

communicates what a society values, provides guidelines for the many decisions and actions that organizations and institutions take daily, embraces a very broad sphere of governance, confers predictability on the process of government and it provides a basis on which to foresee outcomes and yardsticks, for evaluating the performance of public institutions.

These basic definitions of public policy are the fundamental principles which all policy practitioners aspire towards in the policy process. The environmental policy arena was no different and the earliest environmental policies began worldwide in the early 1970s and this was heralded as the beginnings of environmental law within the international arena. Kidd (1997) cited in Willis et al (2000) asserts that environmental law in the last decade has been viewed as becoming more focused due to the political and legislative attention on environmental issues. For some time now, many commentators have noted numerous shortcomings of environmental legislation both internationally and in South Africa. The basis of the critiques has been a need to overcome conflicts, gaps and overlaps within the policy arena so that future development could proceed along a more sustainable path. These have included fragmented and minimally enforced environmental legislation and policy, lack of co-ordination, capacity, resources and skills and also inadequate administrative systems to effectively manage, monitor and sustain the forests and woodlands globally. One of the most important issues impacting on the woodlands worldwide has been the policies of globalisation and associated implications for rural livelihoods with regards to access to environmental resources.

2.4 GLOBALISATION AND THE IMPLICATIONS FOR WOODLAND RESOURCES IN SOUTH AFRICA

Globalisation is often used to describe a series of processes:

- the continuing growth of multinational and transnational corporations;
- the expansion of trade and foreign investments;
- the enhanced mobility of capital across international boundaries;
- flows of people across the globe;
- intensified international competition; and
- the globalisation of markets for consumer goods.

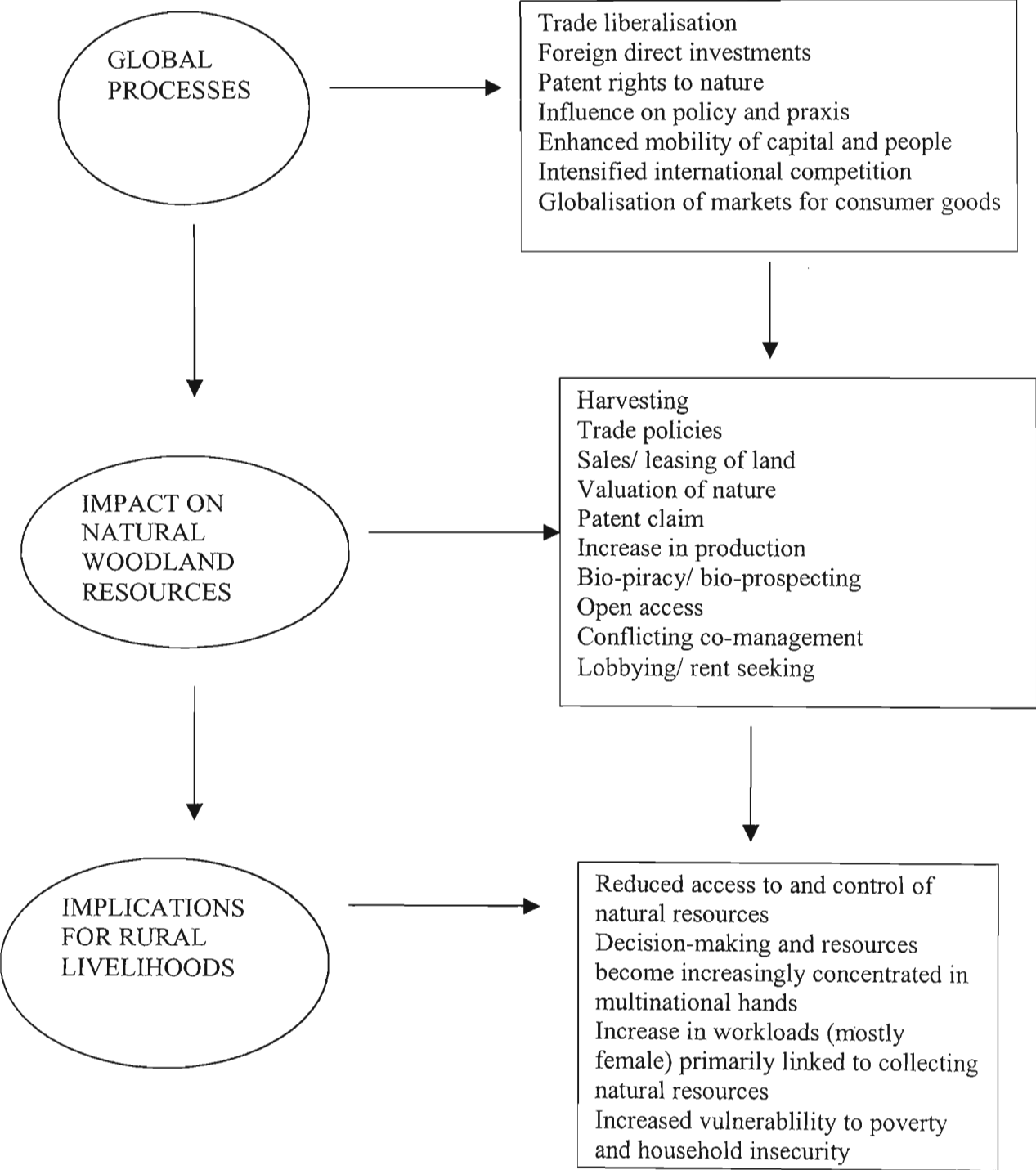
These processes, according to Held and McGrew (2000) are facilitated by physical (such as transport), normative (such as trade rules) and symbolic (such as English as a language) infrastructure. While some people have argued that globalisation plays a pivotal role in breaking barriers and making connections, others view globalisation as a form of imperialism that enhances western power. In the former case, globalisation is seen in part as a handshake to the world's poor. This dissertation is sympathetic to the latter position.

In the context of Africa where there are many emerging democracies, globalisation has played a major role in shaping macro-economic policies and decision-making. The focus of Growth, Employment and Redistribution (GEAR) in South Africa is one such example. Lehlere (1997), asserts that the effect of GEAR has been that development strategies and goals have been focused according to existing urban biases. In addition GEAR prioritises reduced spending and market-driven policies.

Schultz (2000), contends that a major component of globalisation is the decrease of international trade restrictions. This is likely to influence the market conditions for natural resource products as well as the value of nature and the ownership of nature values.

A key asset of rural people has always been access to land and natural resources like the woodlands. Colonial and apartheid practices in South Africa have ensured a skewed distribution and ownership as well as access to woodland resources. Woodlands are vital rural resources, they diversify rural livelihood options and provide a sense of security in an environment where formal employment opportunities are limited (Bonti-Ankomah, 1997). Woodland and environmental resources have both economic and symbolic meaning. As a result, real and long lasting improvement in social, economic and political well-being is directly linked to having access to and control of more and better quality woodland resources. The impact of global forces and processes on the woodland resource has a profound impact on those households whose livelihoods are intricately bound to having sufficient access to the woodlands. The negative impacts of globalisation on rural livelihoods especially in relation to woodland resources are illustrated in the figure 2.3 below:

Figure 2.3: Global Processes, impacts on natural woodland resources, and implications for rural livelihoods



2.4.1 IMPACT OF GLOBALISATION ON WOODLAND RESOURCES

Bryant (1998: 85) states:

A more detailed understanding of the Third World's politicised environment it to be found in the analysis of how unequal power relations are often linked to conflicts over access to, and the use of, diverse environmental resources.

In South Africa, tenure arrangements and resource management practices are central to the accumulation of wealth and power. These often reinforce and re-affirm race, class and inequalities and contribute to the maintenance of the *status quo*. Social and economic inequalities as well as heightened influences of global forces and processes are integral features of post-apartheid South Africa. The political and ecological effects of these processes are most acute in rural areas, especially the former South African homelands. Woodland control, extraction and use are intensely political and economic processes.

Property rights and concurrent control of woodland resources are central to global processes. Schultz (2000) argues that the World Trade Organisation (WTO) extends the security for foreign companies which makes investment in land and nature more profitable. This position is also supported by the World Bank system that generally protects the property of international foreign business in developing countries. Additionally, the WTO agreement ensures property rights for patents based on the biodiversity of natural resources. This makes it easier for capital and global companies to control and exploit woodland resources that forms the cornerstone of rural livelihoods. Moreover, poor rural communities and households are often forced to respond to outside market valuation pressures that often results in communities being disadvantaged from one or two sides. Either they cannot afford the market prices or prices of their land is undervalued since they cannot mobilise sufficiently to influence the markets. As global processes and companies increase, poor people lose their access to environmental resources like the natural woodlands.

Many studies have shown that globalisation supports commercial agricultural production and industrialisation (Bandarage, 1997; Bidsall, 1999; Costa, 1993; Shultz, 2000). This leads to increased competition for natural woodland resources. In South Africa, another major competitor is eco-tourism ventures and related nature conservation imperatives. Shultz (2000) argues that in Southern Africa trade liberalization increases opportunities for people living off nature. In particular, agricultural production for exports and eco-tourism are often cited as providing opportunities for better pay in the world market. However, this position needs to be guarded. While these ventures enable some rural communities to benefit economically, they do little to change the position and plight of the majority rural people in rural areas. Furthermore, Costa (1993) suggests that the benefits felt by a few who often belong to the more established and better off members in a community are gained at the expense of the marginalized, poor and landless groups.

Mayoral-Phillips (2000) asserts that global influences on the natural resource management in Southern Africa contributes to continuing inequity in resource distribution and decision-making power, and is partly responsible for resource degradation. Bob (2001) contends that the intention of environmental intervention is often not just about reducing soil erosion or combating deforestation, rather it is often embedded in power relations and the question of whose knowledge and interests count. Thus, as Bryant (1998) suggests, environmental problems and crises may be socially and politically constructed.

Much of South Africa's woodlands are under communal, private or state land tenure arrangements. Ownership of these resources are mainly in the hands of the state, the agricultural large-scale commercial sector as well as part of a wildlife and tourism industry (Murphree, 1995). In the latter case, private game parks and state owned nature conservation areas form major components. Nearby rural communities have historically and continue to depend on access to natural resources in these areas. In some instances access is granted to the communities while in many cases communities illegally use the resources.

Katerere (2000:25) acutely sums up the globalisation debate as he asserts that:

Globalisation is transforming traditional institutions and communities faster than they can adapt and modernize. If not managed, globalisation threatens to marginalize millions, dismantle and degrade the commons, denigrate cultures, and their worth reduced to their value as labour.

The globalisation of natural resource products if continued unabated is bound to have a detrimental impact on the lives of people living from them. The removal and concentration of resources will negatively impact on the options of various stakeholders within communities whose lives are intricately linked to the availability and accessibility of resources such as water, arable land, wild foods, medicinal plants and fuelwood supplies most of which are derived from woodland areas.

2.5 GLOBAL RESPONSE TO DEFORESTATION - RECENT INTERNATIONAL ENVIRONMENTAL POLICY INITIATIVES

Deforestation as an environmental issue has gained global prominence in the past decade. Some of the key questions which arise in dealing with global deforestation are: Why is deforestation important? Who is it important to? Why does it occur? What are the factors that contest the issue? Deforestation can be simplistically defined as the conversion of forests to other land uses. The United Nations Economic Commission (1992: 108) has defined deforestation as occurring 'when a forest is cleared to give way to another use of the land'. Myers (1989) refers to deforestation as the complete destruction of forest cover such that not a tree remains and the land is given over to non-forest purposes.

Deforestation has steadily become an intrinsically complex global issue. The complexity has arisen primarily from two broad factors. Firstly, deforestation introduces a wide range of political stakeholders. These range from government departments, commercial industries (including multi-national corporations), inter-governmental organizations and non-governmental organizations (NGOs). Furthermore, local government structures, community institutions and traditional authorities may also have vested interest at the local level. Hence, a diverse range of often competing stakeholders makes deforestation a

complex issue. Secondly, the complexity of deforestation is both an outcome and a causal factor. As an outcome, deforestation is the end product of an array of social, economic and political dynamics which arise at the international and national levels. As a causal factor, deforestation contributes to other environmental problems such as global warming, soil erosion and the destruction of biological diversity.

In response to the global threats of deforestation and degradation and the complexity in dealing with the issue, many governments around the world have embarked on international initiatives to promote global co-operation and compliance to ensure the security and sustainability of the world's forests. Geach (1999) states that international environmental agreements and treaties are important as they are the key mechanisms whereby nation-states manage natural resources and co-operate to find equitable and efficient solutions to problems which arise from the inter-relationships between natural and human systems.

In the past 10 to 15 years, international inter-governmental forest policy processes have focused on three major initiatives. These initiatives reflect the interests of governments, the private sector and other elements of society in promoting co-operation among governments and agencies to promote sustainable forest use while maintaining and expanding trade in forest products. These initiatives are:

- The Tropical Forestry Action Program (TFAP). An international exercise in donor co-operation to promote sustainable forest use in the tropics.
- The International Tropical Timber Agreement (ITTA). A binding international commodities agreement with 50 parties which collectively represent 90% of the world's international trade in tropical timber.
- A suite of legally binding conventions and legally non-binding documents and follow up processes resulting from the United Nations Conference on Environment and Development (UNCED). The implications of these conventions will be expanded upon later in this chapter. The emphasis will be placed on South Africa's response and commitments to international environmental agreements.

2.5.1 THE TROPICAL FORESTRY ACTION PROGRAMME

In 1985, international concern with the rate of deforestation in the tropics led to the formation of the TFAP, the largest ad hoc forest initiative to date. The TFAP was launched by four international organizations – The Food and Agriculture Organization (FAO), the United Nations Development Program (UNDP), the World Bank and the World Resources Institute. The TFAP was aimed to promote international donor co-ordination in the development of National Forestry Action Plans (NFAPs). The TFAP has helped to stimulate co-ordination and financing, but far less than what developing countries had hoped. Although exact figures are unavailable, an FAO report states that donor spending dedicated to forests in developing countries had grown from \$400 million per year in 1985 to \$1.3 billion in 1990. The TFAP has also promoted collaboration between the NFAPs of several countries at the regional level (Sizer, 2000).

The success of the TFAP has been relative. Sizer (2000) asserts that many critics of the program have claimed that it has stimulated minimal institutional and policy reform at the national level and generated insufficient information on the status of forests. TFAP's problems can be traced partly to the programs inception and launch which was implemented as a sectoral policy exercise and did not take into account the root causes of deforestation. Also, there was a lack of donor investment in most of the proposed national exercises.

The FAO together with other agencies evaluated the program in the early 1990s and the 18 reports prepared strongly suggested revamping the program. A major recommendation of the program was to create an independent consultative mechanism for the program with broader global participation and sponsorship. The FAO refused to expand the governance of the program, instead a consultative group was created within FAO. This move further reduced the FAO's credibility as the coordinator of the program. Without a dramatic shift in FAO policy the TFAP had increasingly become unimportant. Since

1990, international funds invested in forest conservation and sustainable use have been spent on other initiatives like the ITTA.

2.5.2 THE INTERNATIONAL TROPICAL TIMBER AGREEMENT

The ITTA is a binding commodity agreement between the consumers and producers of tropical timber as is governed by the International Tropical Timber Organization (ITTO). It was signed at the United Nations Conference on Tropical Timber. It was the first commodity agreement to include a conservation mandate. Initiatives coordinated by ITTA include the first internationally adopted guidelines for sustainable management of natural tropical forests and guidelines for conserving biodiversity.

A key issue in ITTO has been the Year 2000 objective of sustainable production of all tropical timbers exported by the ITTA's members (Roberts et al, 1991). Agarwal and Narain (1989) contend that the question of whether sustainable management of tropical forests designated for industrial use is widely viable, has still remained a debated issue by scientists and policy-makers. Many Non Governmental Organisations (NGOs) who initially had supported the institution have voiced concerns about ITTO, stating that it is strongly influenced by timber trade interests and politically biased. The ITTA was due to expire in 1994. By January 1994, a new agreement had been negotiated. However, renegotiations had encountered several difficulties. There had been growing concerns over the ITTO's resistance to embrace new initiatives, such as timber certification, which had been globally called for by various governments (Poffenberger, 1990). With the consumers refusing to accept the new agreement and calling for additional funds to be made available to them, this inevitably led to the ITTA being limited in its scope. The "consumer statement" in the new agreement contains a commitment to promote parallel but separate efforts for sustainable managements of forests.

2.5.3 UNITED NATIONS CONFERENCE ON ENVIRONMENT DEVELOPMENT (UNCED)

At the UNCED, held in Rio de Janeiro in June 1992, more than 170 heads of States addressed several issues related to sustainable use of forests. South Africa had minimal participation at UNCED. The sustainability theme set the tone of the UNCED which placed emphasis on integrated development through economic growth, also describing the ethical, political and economic challenges to achieving sustainability. Much of the environmental thought was focused through the identification of fundamental principles such as those of Agenda 21 and the Rio Declaration which had governed environmental development globally.

Since joining the international community in 1994, South Africa has subsequently signed and ratified many of the international environment related conventions and agreements. The Department of Environmental Affairs and Tourism (DEAT) is primarily responsible for administrative and institutional support for these international obligations. The following is a brief look at some of South Africa's international environmental conventions and agreements since joining the global community and the possible implications they may have on the sustainability of natural woodlands.

2.5.3.1 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

This convention was signed on the 3 March 1973 at the Washington conference and ratified in July 1975. It highlights the importance of conserving wild fauna and flora which are of extreme importance to natural ecosystems of the earth. The main objectives of this convention are the protection of endangered species prominent in international trade through appropriate trade control measures and monitoring the status of such species (DEAT, 1999). Under the convention South Africa has adopted measures to combat smuggling of species to ensure its biodiversity, also promoting sustainable utilization of species by trading and hunting. The Departments of Agriculture and

Customs and Excise have the responsibilities for control of movement of species across international borders. In terms of legislative support, Act 108 of 1996 highlights the responsibilities of provincial governments for the protection of fauna and flora and the import and export of these species. South Africa has also been commended on their approach towards endangered species (for example, rhino) as well as the protection of highly valuable plant species.

It is important to highlight that South Africa also serves as a gateway to Southern Africa and as yet has been unable to completely stem the movement of illegal wildlife products across the borders (Geach, 1999). Hence, although CITES in theory encourages the conservation of such species and indirectly promotes the sustainability of woodlands, illegal trade is still common. One way of alleviating this problem is to perhaps have increased awareness campaigns on the species contained on the endangered lists. The aim should be to inform the general public and influential organizations like the Traditional Healers Association of the species listed in the categories of CITES.

2.5.3.2 Convention on Biological Diversity (CBD)

The convention was signed in June 1993 and ratified on the 15 November 1995. The aim of the CBD is to effect international co-operation in the conservation of biological diversity and to promote the sustainable use of living natural resources worldwide (DEAT, 1999). It also aims to bring about the fair and equitable sharing of the benefits arising from the utilization of natural resources.

South Africa's development of the subsequent White Paper on the Conservation and Sustainable Utilization of Biological Diversity in 1997 published by DEAT is the guiding policy document which aims to affect cross sectoral co-ordination and implementation of aspects relating to biodiversity. The White Paper highlights the critical importance of conserving biological diversity by identifying the worldwide concern of human activities such as pollution, habitat destruction and over-population which will result in loss of crucial habitats and undermining rural livelihoods.

There are several subsidiary environmental policies and pieces of legislation which have been published or are being developed which refer to biodiversity. The DEAT framework policy for environmental management and the National Environmental Management Act (NEMA) Act 107 of 1998 notes that the disturbance of ecosystems and loss of biological diversity is to avoided, or at least minimized or remedied. The Marine Living Resources Act (Act 18 of 1998), National Water Act (Act 36 of 1998) and the National Forests Act (Act 84 of 1998) all outline various guiding principles and ideas with regard to biological diversity and stress the importance of protecting natural ecosystems and their rich biodiversity.

In theory the above convention bodes well for the woodlands. However, the issues of budgetary and financial constraints need to be considered. According to Geach (1999), less than 1% of the provincial budgets are allocated to environmental conservation and management. This factor is bound to affect implementation. Also, implementation of conservation strategies for biological diversity at local and household levels, especially in rural areas, have not as yet been devised. Future policies and strategies will need to focus specifically on biodiversity conservation at this level and identify which agencies should be responsible for devising, implementing, monitoring and evaluating these strategies.

2.5.3.3 United Nations Framework Convention on Climate Change (FCCC)

There are 154 governments which are signatories to the Framework Convention on Climate Change which was held in Rio de Janeiro during UNCED. South Africa signed the convention in June 1993 and ratified it on 29 August 1997 as a developing country. The implications of doing so are important for the access to technology, finance and information needed to facilitate future developments in climate control. Recently, South Africa has become eligible for the Global Environment Facility (GEF) which will provide financial assistance from industrialized countries.

The convention addresses the threat of global climate change by urging governments to reduce the sources of greenhouse gases. Woodlands are significant with regards to this, as they are involved in the process of carbon sequestration. This process, as Shackelton et al (1999) state, refers to the removal of carbon dioxide from the atmosphere, and its storage in live or dead biomass or soil carbon for a given period of time. With increasing concern over the steadily rising concentrations of atmospheric CO₂, the woodlands play an important role in carbon sequestration due to their vast extent and biomass. Willis et al (2000) assert that the economic value of these carbon-storing properties can be estimated, but what fraction of this value can be converted into a realized value depends entirely on how the international negotiations in relation to the UN Framework Convention on Climate Change and its protocols proceed.

The current market value of stored carbon is estimated at being between 1 and 30 US \$, so the theoretical worth of carbon sequestration in savannas is between R30 million and R1 billion annually (Shackelton et al, 1999). This economic potential value has positive implications for the country's woodlands as South Africa which is fast becoming an economic-orientated market in order to keep up with global trends. Therefore, this market value ensures sustainability of woodlands as they are a potential contributor to the national economy.

2.5.3.4 Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention)

The convention aims to promote co-operation among nations to protect natural heritage which is of such outstanding universal value that its conservation is of concern to all people (DEAT, 1999). The convention was adopted by United Nations Educational, Scientific and Cultural Organization (UNESCO) in 1972. South Africa ratified the convention on 10 July 1997. South Africa's commitment as a party member of UNESCO and the legislative support from the Natural Heritage Resources Act (Act No 25 of 1999), which encourages the protection of cultural and natural heritage, will be enhanced due to

accessibility of international funding and technical assistance in management of these heritage sites.

Furthermore, the National Heritage Bill (Bill 139 of 1998) notes that heritage resources of South Africa are those which are of cultural significance or other special value for future generations and the present community. These resources include landscapes and natural features of cultural significance and geological sites of scientific or cultural importance. South Africa is home to a wide variety of prehistoric sites of significant cultural and natural heritage. On the 1 December 1999 UNESCO's World Heritage Committee announced that Robben Island, the Greater St. Lucia Wetland Park, fossil homonoid sites at Sterkfontein and the Natal Drakensberg are now world heritage sites in South Africa.

The St. Lucia Wetland Park which enjoys world heritage status may have some indirect implications on the woodlands. Woodlands are important in that many of South Africa's major water catchments are covered by woodlands. The Wetland Park is a natural site of five inter-linked ecosystems in an area of almost unrivaled natural diversity and beauty. It is one of the largest protected wildlife areas in South Africa and the largest estuarine system in Africa (www.stlucia.co.za). It is also inhabited by open and closed woodlands with pockets of mixed thicket and scrub. The significance of enjoying such world heritage status and the associated conservation of this area, coupled with promoting increased tourism and creation of employment in communities near this site will ensure some form of protection for the woodlands and promote their sustainability. However, there is already evidence that increased tourism is having the opposite effect, that is, increases in fuelwood harvested to supply lodges and camps as well as craft wood to make curios and other wood related products may have a detrimental impact.

2.5.3.5 Convention to Combat Desertification (CCD)

The Convention to Combat Desertification in those countries experiencing serious drought and/ or desertification particularly in Africa, was adopted in June 1994 and

entered into force in December 1996. The convention was signed by South Africa on 9 January 1995 and ratified on 30 September 1997. The convention is aimed at encouraging integrated development which prevents or reduces land degradation, rehabilitates partly degraded land and reclaims desertified land (Geach, 1999).

One of South Africa's obligations as a full party member of the CCD is to develop a National Action Programme (NAP), setting out strategies and priorities for combating desertification. The Department of Agriculture (DoA), together with DEAT are largely responsible for development of NAP which provinces must implement. NAP aims to promote the sustainable use of natural resources, ensure that use of resources do not exceed the renewal rate as well as promote alternative livelihoods, poverty eradication, sustainable agricultural practices and efficient energy use.

Furthermore, the Agricultural Research Council and the Institute for Soil, Climate and Water are tasked with providing research back-up and support to the DoA in terms of CCD by developing tools and mechanisms to develop land quality indicators and early warning systems (Willis et al, 2000). South Africa needs to pay particular attention to the CCD as approximately 90% of the land is arid to semi-arid and this makes it susceptible to desertification and degradation. Furthermore, most of the woodlands on commercial farms and on communal lands are used to graze cattle and overstocking is a major problem in both categories of land use. This has also led to bush encroachment and extensive soil erosion over vast tracts.

2.6 THE CONTEXT OF SOUTH AFRICAN ENVIRONMENTAL POLICY

South Africa's history of apartheid and colonialism indicate that policies of the past did not encourage co-operation between local communities and the environment. Peart (1998) asserts that it fostered forced removals by conscious land dispossession and the withdrawal of rights to make use of natural resources. Instead of aiding the conservation of natural resources, policies led to massive poaching of wildlife and uncontrollable destruction of resources vital to local people's subsistence (Meintjies, 1995 cited in

Willis et al, 2000). In addition, historically there has been little ownership of environmental problems or common agreement on causes, as a basis on which to take action (Peart and Wilson, 1998). The White government identified increasing population pressures and high fertility rates as the major cause of environmental degradation. However, from the black perspective, apartheid policies were the major causes for a deteriorating environment.

The advent of a democratic government in South Africa provided a unique opportunity to assess environmental issues at the same time that other economic and social circumstances were undergoing sweeping change. Bromley (1995) asserts that there are two aspects of South Africa's recent history that have influenced the process of environmental policy reform. The first has been the extent to which past economic policy was driven by the politics of apartheid. The second aspect and one that flows inextricably from the first is the extreme dualism of the South African economy. The apartheid structure dominated and legitimized economic policy. In essence, South Africa was a state capitalist regime in which most private entrepreneurs were largely instruments of the state. This was most obvious in White commercial agriculture, though it was also prevalent in other sectors like mining. The economy of South Africa was state capitalist for the simple reason that the state decided which sectors it wished to favor and then set about to bestow subsidies on those sectors (Bromley, 1995).

The dualism of the South African economy can be traced to the history of displacement and forced removals to the so called "homelands". The people evicted from the areas desired by the White government of the past, were relocated to the homelands and suburban townships where they could constitute a compliant labour force. These rural and urban enclosures have had profound implications for environmental degradation in South Africa during the apartheid years (Bromley, 1995).

The labour situation in the homelands compounded the severity of natural resource degradation. Most of the residents were either very young or very old. The more active age group were sent away to work in the mines or in other domestic urban jobs. This

labour policy deprived the homelands of the individuals who might otherwise have provided leadership and labour to improve the quality of the land and its vegetative cover. Indeed,

“...some 70% of the homeland incomes was earned by unskilled wage earners who crammed buses and minibuses to travel for hundreds of kilometers daily or weekly to earn a living wage.”

(Durning, 1990: 13-14)

Within the townships, blacks were forced to live in semi-urban squalor without the usual amenities of urban places. In the homelands,

“...forced relocations and natural increase had combined to give the homelands an average population density higher than all but three countries on the continent. White rural areas were at most one tenth as heavily populated.”

(Durning, 1990: 13)

Erosion was the logical outcome of severe pressure on a limited land base. In the 1980s the government of Ciskei undertook an assessment of erosion. At that time,

“...46% of the land in the Ciskei reserve was already moderately or severely eroded and 39% of its pastures overgrazed.”

(Durning, 1990:8)

In the White agricultural areas, government policy paid scant attention to the serious problem of soil erosion. The incentives were geared to increased production of crops, almost regardless of the environmental implications (Bromley, 1995).

The current environmental situation in South Africa is the inevitable result of a political-economic system that no longer exists. The transition towards new thinking in environmental policy began with the advent of a democratic government in 1994.

2.7 CHANGING ENVIRONMENTAL POLICY AND LEGISLATION

The following section briefly outlines some of the legislative and policy changes that have occurred since transition to democracy in South Africa and analyses the extent to which these changes serve to facilitate the move towards sustainable environmental development. A primary concern is that the policy principles relating to sustainable development as set out in the Reconstruction and Development Program (RDP) base document (ANC, 1994) were not translated into workable mechanisms in the White Paper on Reconstruction and Development (1994). In fact the environment receives little mention and there is no development of the intentions expressed in the RDP base document.

The failure to address environmental considerations in the first official policy paper outlining the overarching framework for reconstruction and development of the country is indeed a cause for concern. However, Munslow and Fitzgerald (1997 cited in Sowman and Uruquart, 1998:5) state that there are many indications that the RDP itself has died an ignominious death at the hands of the government's macro-economic strategy, Growth, Employment and Redistribution (GEAR).

A critical indicator of the extent of South Africa's movement towards sustainable development would be the clear inclusion of environmental sustainability as a guiding principle in the government's macro-economic programme GEAR. However, the GEAR strategy has been heavily criticized by unions, activists and economists who have argued that the GEAR is a quick fix plan with insufficient emphasis placed on developing human resources, meeting basic needs and developing strong domestic industries and markets (Williams, 1996).

Williams (1996) further contends that an examination of GEAR reveals an alarming absence of any mention of environmental principles, not to mention any mechanisms for their integration into economic planning. Bearing in mind the implications for sustainable development of global inequities, an examination of the effect of South Africa's

reintegration into the global economy would be important for a fuller understanding of the country's progress towards sustainable management of its natural resources.

Major shifts in direction for governance in general are enshrined in the new South African Constitution in terms of the inter-related concepts of co-operative government and sphere of government. The latter represents a shift to a system where national, provincial and local governments are each distinctive and have equal status. The constitution envisages a new expanded and developmental role for local government with objectives including providing services to communities in a sustainable manner, while promoting social and economic development and a safe and healthy environment. Clearly, in terms of the Constitution, while national and provincial governments have concurrent responsibility for environmental management, local government has been charged with significant environmental management responsibilities. The new system for developmental and co-operative governance requires a radical change from past practices, which contributes to the challenging environment in which the sustainable development debate in South Africa is situated.

2.8 LEGAL FRAMEWORK FOR DEVELOPMENT PLANNING IN SOUTH AFRICA

The post 1994 policy-making explosion has extended into all the environmental spheres in South Africa. The White paper on Environmental Management Policy for South Africa (1997), was developed through broad consultation processes. The White paper defines sustainable development in the following way :

“Sustainable development is defined as development which seeks to integrate environmental, social and economic concerns, now and in the future, and to keep within the carrying capacity of the environment. The focus is on ensuring that environmental sustainability, health and safety are not compromised, and that natural and cultural resources are endangered.”

(White paper, DEAT 1997: 85)

The Consultative National Environmental Policy Process had culminated in the publication of a draft bill in May 1998, to replace the Environment Conservation Act, (Act 73 of 1989).

Major changes have also occurred in other policy arenas which are relevant to sustainable development. These include water, sanitation, forestry, agriculture and urban and rural development sectors. For example, there have been significant changes made to the water policy in South Africa. The National Water Policy promotes policy principles that place emphasis on equitable rights to water to meet basic needs and to ensure ecological sustainability. So to have other sectors been involved in developing new policies for sustainable environmental management for a more integrated development framework for growth in South Africa.

2.8.1 The Constitution of the Republic of South Africa

The constitution provides the state with a development mandate to implement sustainable development and demands that the state addresses, within its means, the realization of social, economic and environmental rights enshrined in the Bill of Rights (Section 24 to 27). This mandate has to be executed within an institutional framework consisting of three tiers of government which are national, provincial and local (Section 40), and allocates each of these various competencies, functions and powers. Development planning is classified as a concurrent responsibility, which means that all three tiers of government can be involved in any particular development planning exercise. Local government is however placed at the center of development planning and implementation (Section 152 and 153). The Constitution does make provisions for an act of parliament to establish structures and institutions to promote and facilitate intergovernmental environmental relations. The National Council of Provinces is one of these, but no coherent policy framework is yet in place (Lebert and Westaway, 1999).

- Development Facilitation Act (1995) (DFA)

The DFA is the most important piece of legislation aimed at transforming development planning in South Africa from a control paradigm to a normative one. To do so it introduces national norms to guide development decision-making and charges local government with the task of formulating Land Development Objectives.

- The Green Paper on Planning and Development (1999)

The Green Paper recommends changes to the land development legislation. It proposes a spatial planning system aimed at integrating different sectoral elements within the development enterprise and outlines the functions of national and provincial government. The responsibilities of national and provincial governments are as follows:

National government

- Establishment of an enabling legislative environment
- Coordinating spatial decisions of national departments
- Establishment of norms and standards with regard to planning
- Support and advice to provinces to achieve norms and standards
- Facilitation and co-ordination of interaction between different levels of government
- Limited national spatial planning functions

Provincial government

- Coordination of line-function activities
- A role in coordinating national sectoral priorities with provincial and local plans
- Development of enabling provincial legislation to cover planning functions
- Support to local government

- Monitoring the achievement of objectives
- Development of a provincial spatial plan to facilitate greater convergence between sectors and levels of government
- Regional planning

(From Lebert and Westaway, 1999)

All of the above-mentioned laws, policies and programmes provide a framework within which conservation, development and sustainable natural resource management should take place in South Africa. At the same time the framework provides guidance for the establishment of sustainable institutional and organizational frameworks for natural resource management and development. However, most of the government structures are still weak and inexperienced in development planning for the sustainable use of natural resources and this includes the use and management of natural woodlands in South Africa.

2.9 CONCLUSION

The South African environmental policy arena has in the past been dominated by various discriminatory policies which have had major implications for the state of the environment presently. Post democratic South Africa is now faced with the challenge of trying to promote sustainable natural resource management while still meeting the needs of its people. The task is a daunting one but one that must be equitably addressed in order to ensure long term growth and prosperity in the country. The framework and sectoral policy frameworks which impact on the natural woodlands will be critically analysed in chapter four. The policy imperatives presented so far will be elaborated upon in further detail and the implications for the woodlands will be highlighted.

CHAPTER THREE

METHODOLOGY

3.1 INTRODUCTION

The choice of methodology is of outmost importance in research as it determines the outcome of the research to a large extent (Rothwell, 1998). This dissertation is based on the collection, documentation and analysis of data with specific focus on the policies impacting on the sustainability of woodlands in South Africa. The primary data collected is supplemented with a wide range of secondary data sources to provide an in-depth analysis of policy outcomes within African communal rural areas in South Africa. This particular research was part of a broader initiative to examine woodland use and sustainability concerns in Southern Africa. Several case studies looked specifically at direct use value of non-timber forests products. However, research without a critical examination of policies and the contexts under which implementation of policies take place are inadequate. Thus, this component of the overall research agenda is to provide a critical overview of policies in South Africa in terms of woodland usage. This contribution utilizes two broad approaches, namely that of the policy review process and the case study approach conducted in the Hlabisa community in Kwazulu-Natal.

Although it is impossible within the context of this dissertation to fully explore the various methodological approaches in any depth, the following section is aimed at providing a starting point for the research strategies chosen in this study. This chapter attempts to outline and justify the different research techniques used in the study. The first part will focus on a brief description of some of the available theoretical frameworks used in the contested field of research methodology. The second part of this chapter focuses on the techniques used in the study. Finally, problems and limitations are highlighted.

3.2. OVERVIEW OF SOME RESEARCH STRATEGIES

3.2.1 MODERNISM AND POST-MODERNISM

A brief examination of current literature highlights that many researchers have adopted a wide range of data collection techniques. Cloke (1992) cogently states that evolution in methodology has reflected the prevailing approaches, as well as the changing societal norms, which have been most visible over the past century. The past century can be roughly split into what has become known as the modernist (1880-1970s) and the post-modernist (1980s to present) periods. Each of these eras has been characterized by distinct paradigms which have represented the dominant belief of the time.

Modernist techniques advocate an overall belief that it is possible to solve problems of society, once the correct information and techniques are available. The most prevalent paradigm of modernism is positivism and this is the foundation of scientific theory today. It is based on the assumption that objective and rigorous testing of hypothesis, followed by logical deduction, is the only way of arriving at the truth. Post-modernist belief on the other hand, stemmed from the dissatisfaction with modernist attempts at societal reform, due to their ineffectiveness and naivete. Post-modernism is based on the supposition that it is impossible to fully understand the world around us, and that societal behavior cannot be predicted or modeled (Soja, 1992; Spivak, 1995; Cloke, 1992 cited in Rothwell 1998).

Sayer (1984) provides an interesting critique of positivist approaches to social science research methodology. Through his critical social theory he contended that it is neither realistic nor possible for a researcher to remain uninvolved or detached from a social situation and yet retrieve an understanding of the social interactions occurring in that situation. It should, however be noted that although Sayer's (1984) belief has remained strong and still guides current research ideologies, the positivist approach is still widely applied to research in the natural world where it remains one of the most successful methodologies that is used for explaining natural phenomena.

3.2.2 QUANTITATIVE AND QUALITATIVE METHODS

Rothwell (1998) highlights that there are a number of ways to classify research methodologies. One common distinction that can be made amongst research methods relates both to the kind of data that is collected and how that data is analysed. Quantitative methods are generally geared towards the collection of numerical (or quantifiable) data which is then analysed and interpreted in a way that generally provides standardized information which can be relatively easily manipulated. The implications thereof is scrupulously pointed out by Mukherjee (1993) as he states that the use of standardized concepts and yardsticks for identification of rural realities are generally handicapped by the absence of a framework for capturing the complex linkages of rural livelihoods. Qualitative methods on the other hand tend to collect information which is more descriptive or illustrative of a particular situation.

3.2.2.1 Quantitative Methods

The quantitative research method is based on the measurement of phenomena and the expression of knowledge in the form of numerical data (Sayer, 1984 and Yin, 1984). This type of methodology makes use of deductive logic, leading to provable theories, which can be backed up by observation (Sayer, 1984). In order for the research findings to be considered socially acceptable, there is a need to adhere to certain standards or homogenization of data and also the samples have to be of appropriate size and constitution. Sayer (1984) asserts that within the social sciences, quantitative methodology includes the use of mathematical models and statistics, which are used to explain social phenomena and to create generalizations in order to predict the outcomes of similar situations.

3.2.2.2 Qualitative Methods

Yin (1984:83) provides an interesting definition of qualitative research methods as he defines it as “ a research method which is generally concerned with non-quantifiable (non-numerical) data, which is quite often specific to a particular situation”. He further asserts that ‘ research strategies in this category aim at generating interpretive data, and may include interviewing and field observation. This type of data utilized in qualitative research often includes historical accounts, a variety of texts, as well as transcripts from interviews’. According to Smith and Glass (1987), it is necessary to make use of a variety of different research methods and data sources in order to combat the built-up inadequacies inherent in most research methods.

3.2.3 CASE STUDY RESEARCH METHODS

According to Yin (1984), there are primarily six sources of evidence for case studies. These are documentation, archival records, interviews, direct observation, participant observation and physical or cultural artifacts. For the purposes of this dissertation only the context specific sources will be discussed in further detail.

3.2.3.1 Use of Documentary sources

The review of documentary sources enables the researcher to familiarize himself or herself with the study area and study topic. Furthermore, it also highlights possible directions that the research will take. Documentation comprises of both primary and secondary sources. Primary documentation is taken to be raw, uninterrupted information, for example, media articles, archival records, oral histories, maps and aerial photographs. Conversely, secondary documentation is data which has already been interpreted which include academic articles and accounts of events (Rothwell, 1998).

3.2.3.2 Interviewing

Interviewing is one of the tools commonly used in both quantitative and qualitative research to obtain oral evidence. Fontana and Frey (1994) contend that besides being the most common tool used to obtain evidence, interviewing is also the most powerful way we use to try to understand our fellow human beings. Furthermore, they highlight that interviews may be defined as structured, semi-structured or unstructured and each of these will be discussed in more detail in this section.

A structured interview implies a rigid set of pre-established questions asked in the same order and the same manner to each respondent (Fontana and Frey, 1994). These questions generally have a limited number of responses. This form of interviewing is used to address a defined topic and in instances where a large number of people are going to be interviewed around the same aspects in a short period of time. In this situation the interviewer is assumed to take a neutral position and the information attained tends to be highly quantifiable. This methodological tool is commonly used to elicit data within an extensive research design as it makes it possible to cover a defined range of topics (Sayer, 1984).

An unstructured interview implies a probing into the way the interviewee is thinking about the topic. Types of unstructured interviews include the open-ended ethnographic interview, participant observation, oral histories and conversations. This form of interview is important when an appreciation or understanding of the way that an interviewee conceptualizes a particular topic is required. According to Fontana and Frey (1994), unstructured interviewing is used to establish a human-to-human relation with the respondent and to fulfill the desire to understand rather than to explain.

A semi-structured interview lies somewhere between these two extremes. In a semi-structured interview it is necessary to have guidelines in order to ensure that a specific area of interest (to the interviewer) is covered to some degree (Fontana and Frey, 1994). However, this is not a rigid set of questions to be answered as in a structured interview.

The interviewer is therefore, somewhat direct but also somewhat flexible and serves to guide the interviewee only when necessary.

A group interview is defined by Fontana and Frey (1994: 364) as the “systematic questioning of several individuals simultaneously in formal or informal settings”, and may be structured, semi-structured or unstructured. Group interviews are a valuable source of information that is either exploratory or confirming. Difficulties encountered by this type of interviewing include domination, or conversely non participation, by a single person or few people within the group, and a difficulty in gaining access to sensitive information. The latter is easily overcome by carrying out follow-up interviews with key informants on a one-on-one basis. Additionally, groups are a potentially rich source of evolving or cumulative information with one person starting a story and others building on it (Fontana and Frey, 1994).

3.2.3.3 Direct Observations

While the survey questionnaire is a rather artificial and restrictive instrument to a relatively small number of previously chosen questions, the observational methods allows for an in-depth study of the individual as a whole. The observational method, especially unstructured observation is a very flexible technique that allows the observer to concentrate on any variables that prove to be important.

Yin (1984) asserts that direct observations are possible when the researcher makes a field visit to the study site. The researcher can then observe a variety of situations such as meetings, work situations and family gatherings and this strategy could even include the taking of photographs. This can serve both to acquire unspoken information about the people being studied and facilitate the researcher gaining confidence and acceptability in the intended study area. It can also be used to verify information and deal with concerns arising within the study area.

3.2.3.4 Participatory Research Approaches

Sayer (1984) states that there is a widely held assumption within social science research that the construction of knowledge is a process wherein the researcher and the subject mutually interact to create an understanding of some aspects of social reality. In response to this a wide range of participatory approaches have been developed and these form the basis of current research. The term participation means different things to different people. However, notions of contributing, influencing, sharing or redistributing power and control of resources, benefits, knowledge and skills to be gained through beneficiary involvement in decision-making are common aspects of participation. Mayoux (1995) asserts that there is considerable disagreement with the definition and the aims of participation. Pretty (1995), states that the term participation has become fashionable with many different interpretations, some hindering rather than supporting sustainability and empowerment. Pretty (1995) further indicates that two schools of thought and practice have evolved about participation. The first views participation as a means to increase efficiency. In this regard, the rationale is that if people are involved then they are more likely to agree with and support the chosen process. The second view sees participation as a fundamental right. In this regard, the main aim of participation is to initiate mobilization for collective action, enhance community capacity by stressing institution building and increase empowerment.

Recently, Slocum et al (1995) have noted that participation has been rediscovered by such diverse ideological groupings such as the World Bank, universities, NGOs and development agencies. This rediscovery has been attributed largely to the disillusionment of conventional models for conducting research and engaging in development. In response to this a multitude of field-orientated alternatives have been developed. These methods attempted through observation or participation, to understand problems of resource poor-rural communities and improve the quality of information collected. Many of the approaches combine both quantitative and qualitative methods.

Van Vlaenderen and Nkwinti (1993) assert that social science practice as conducted within the modernization paradigm of development has several weaknesses that participatory methodologies aim to address. It provides little space for the incorporation of indigenous values, knowledge and skills. This process alienates and disempowers the local communities who feel that they are unable to direct and sustain their development needs and aspirations. With the growing limitations of other approaches becoming apparent, it was increasingly recognized that poor communities did not always conceptualize their lives within the confines of a quantitative questionnaire.

To address these limitations of conventional development strategies and research methods, a range of participatory techniques began to emerge as early as the 1960s and 1970s. These included Rapid Rural Appraisal (RRA) from which Participatory Rural Appraisal (PRA) subsequently developed.

RRA developed as a methodology in the 1970s. Chambers (1990) defines RRA as an approach which gives recognition to 'indigenous knowledge' as a useful source of information for development. This approach was generally developed in order to gain access to sources of 'untapped' information. RRA allows researchers to learn 'from and with the rural people' by making use of their priorities, ideas and discoveries (Brace, 1995:8). RRA also allows for rapid assessment of a situation through the use of a team of researchers who go into an area and extract only the information that is needed to address a particular problem (Chambers, 1990). Whilst RRA is based on public consultation, PRA takes this one step further with a focus on the shared construction of knowledge between the public and the researcher or organization. Brace (1995) asserts that PRA is a significant step forward in understanding relationships between poor people and their environments.

PRA builds on RRA which was pioneered by Gordon Conway and Robert Chambers (Chambers, 1990). PRA is a methodology for interacting with villagers, understanding them and learning from them. PRA places poor people at the center of the process, the significant difference from traditional methods being the level of involvement of the local

community at the information gathering stage. Brace (1995) accurately sums up PRA as providing the window into the relationship between local people and their environments. PRA has provided new insights into the problems facing African communities.

3.3 POLICY REVIEW AS A METHODOLOGY

The past few decades have witnessed drastic changes in the context and contents of policy analysis and methodology. The conventional optimization paradigm is increasingly being replaced by more procedural or accountable modes of planning, in which a variety of different motives and policy orientations have been playing a role (Nijkamp and Vandigni, 1999). Furthermore, there has also been long term uncertainty over social, economic and political imperatives which have hampered a straight forward policy planning perspective. Finally, there has been a lack of social consensus and this has forced planners to develop new policy analysis tools to incorporate various types of conflicts among different stakeholders, localities and policy objectives.

In modern policy processes and planning there is an increasing need for proper assessment and an evaluation framework in the public sector with the goal to increase the efficiency and effectiveness of government decisions. Consequently, various methods have emerged in the realm of policy analysis in which an extended market evaluation system plays a prominent role. The most well known example of such an evaluation method is based on a social cost benefit analysis (Nijkamp, 1994). This method is the basis of numerous policy assessment methods and has been successfully applied in many case studies. However, despite its many merits it is also recognized in modern analysis that this tool has some limitations, because not all relevant modern policy initiatives can be expressed in the 'measurement of monetary value' (Nijkamp and Blaas, 1995: 108).

To cope with the weaknesses of monetary evaluation, various modern assessment methods have been developed over the last ten years to complement cost- benefit analysis and to offer new perspectives in which qualitative aspects can also be incorporated. Many of these methods simultaneously investigate the impacts of policy strategies on a

multitude of criteria and Nijkamp and Blaas (1995) refer to these methods as multi-criteria methods or multi-assessment methods.

The gradual shift from conventional policy assessment and implementation techniques (such as cost-benefit analysis) towards more multi dimensional assessment techniques (such as multi-criteria analysis) has prompted the need for comparison of previous studies. However, this requires an enormous study effort and leads to significant research cost. Fortunately, over the past twenty years a new set of research techniques known as meta-analysis has been developed which makes the rigorous analysis of study findings possible (Nijkamp and Vandigni, 1999). The purpose of meta-analysis is to summarise results from previous studies in a quantitative way in order to allow for transferability of findings.

Most modern policy decisions can be typified as being of a multiple objective or multi-criteria type (Jannsen, 1991; Nijkamp and Pepping, 1998; Nijkamp and Blaas, 1995). This means that a suitable alternative from a set of alternatives is to be determined which best satisfies a number of often conflicting objectives. Another complicating factor is that on the policy level, besides a set of quantitative criteria, qualitative criteria must also be taken into account in the decision-making process (Petitti, 1994). Research into policy issues has often resorted to cost-benefit analysis as a principal appraisal method and this has often been done in a successful way. However, as mentioned above, this method has severe shortcomings with regard to the valuation of intangible facets. In public policy evaluation, especially in studies of environmental impacts and sustainability issues the implications of using a cost-benefit approach becomes troublesome. This equates to a scenario where all advantages and disadvantages of policy options have to be translated into a common monetary unit. Therefore, qualitative data of an unpriced and intangible nature cannot be included in the decision-making procedure based on the principles of a standard cost benefit analysis.

Nijkamp (1994) asserts that the lack of policy processes recognizing the need to incorporate often intangible and unseen values of natural resources, based on basic cost

benefit analysis, has been the catalyst in promoting informed environmental policy reviews around the world and even in South Africa. Policy review as a methodology has steadily been gaining prominence as an accepted form of research methodology within modern social research. Reviewing of existing policy documents enables future policy development to improve on current gaps, overlaps and conflicts which are often synonymous within the environmental policy arena. With regards to the woodlands, policy processes impacting on them have been fragmented and have been controlled on the predominant purpose for which the land is managed (for example agriculture and conservation). It is important that policy-makers and natural resource managers who influence decision making in terms of land-usage and land use change move towards current trends in policy review which need to include aspects such as multi-criteria and multi-assessment tools which will guide effective future policy development and will ensure the sustainability of the natural woodlands of South Africa.

3.4. BACKGROUND TO THE STUDY AREA

The area is in the Hlabisa District (refer to Map: Appendix A) and is bounded to the east by the main N2 road north from Durban to Pongola, to the west by the Hluhluwe Umfolozi Park and to the south by the Mfolozi river. The Inyalazi and Hluhluwe rivers traverse its central and northern portions, respectively.

The area was regularly visited by Stone Age hunter-gatherer communities from about 500 000 (BC). By 1700 BC Early Iron Age cultivators had settled in it. By 1000 BC it was occupied by Late Iron Age pastoralists. By the mid 16th Century the first Nguni culture was established in it. The Zulu clan established dominance in the area from the late 17th Century. The game reserve now called the Hluhluwe-Umfolozi Park was proclaimed in 1985 and commercial sugarcane farms were established east of the study area during the early decades of the 20th Century. The study area remained under tribal authority with traditional communal land tenure and was part of the KwaZulu homeland during the apartheid era. The southern portion of the area is predominately underlain by Stormberg basalts of the Letaba formation which are predominately covered by Mayo soil forms and

their associations. These soils are dark grey to black, sandy clay loams with low to moderate erodibility. The northern portion is predominately underlain by Vryheid shale and sandstone which are covered by Swartland and Mispah soil forms. These shallow grey brown clay loams are moderately erodible. The mean annual rainfall in the study area ranges from 650 to 850 mm. The summer October to March mean monthly maximum, minimum and range in temperature is 28, 18, 23 to 27 degrees celcius, respectively. The winter mean monthly maximum, minimum and range are 25, 13, and 19 to 23 degrees celcuis, respectively. The area is predominately covered by Lowveld, a subcategory of Acocks' (1988) Tropical Bush and Savanna Types which includes a wide range of woodland communities viz: -

- closed woodland: *Spirostachys africana* and *Euclea divinorum*
- open woodland: *Acacia burkei*, *A. nigrescens*, *A. gerrardii*, *A. tortilis* and *Combretum apiculatum*.
- Thicket: *Acacia caffra*
- Scattered canopy: *Acacia karroo* and *Euphorbia tirucalli*

The herbaceous layer is dominated by *Aristida junciformus* and *A. bipartita*.

The information presented above has been extracted from the Watson (1990) study of the comparative study of soil erosion in the Umfolozi Game Reserve and Adjacent KwaZulu Area from 1937 to 1983.

Three villages were selected from Hlabisa for the purpose of this study. The villages selected were KwaMduku, KwaNompondo and KwaMsane (refer to map: Appendix B). These villages represented unique distinctions within the area, that is from the small, remote and poorly serviced KwaMduku to the larger, better serviced KwaMsane.

The villages were first established in the late 1940s. Most households interviewed had resided in their villages for over 20 years. Despite their close proximity to the Hluhluwe dam, residents in KwaNompondo obtain their water from boreholes while those in KwaMduku are reliant on streams for their supply. Boreholes are also the source of water

for KwaMsane residents. While KwaMsane was electrified in the early 1990s, KwaNompondo and KwaMduku remain without electricity.

3.5 METHODOLOGY EMPLOYED IN THE STUDY

The methods employed in this study are guided by the research objectives and methodologies presented earlier. The main intention of conducting the primary research is to evaluate the community perceptions with regards policies impacting on woodland usage in African communal rural areas. Given this focus on perception, participation and accountability, there seemed to be good reason to believe that listening to communities valuing and explaining the importance of woodland resources to them will provide the basis for assessing the type of information needed to clarify the objectives outlined in this study. The information analysed in this dissertation is based on multiple sources which can be listed as follows :

- secondary data and information sources have been used intensively in both the literature review chapter as well as the analysis chapter and forms the basis for much of the information presented in this study.
 - * policy review reports
 - * policy documents
 - * research reports, articles, as well as books pertaining to woodlands
 - * governmental policy documents
- primary data
 - * questionnaire survey
 - * participatory methods

3.5.1 Secondary data and Information Sources

There are several secondary sources of information in the form of research on environmental policy and woodlands in South Africa. The collection and analysis of secondary data was primarily a desk-top study aimed at visiting a variety of review reports and documents conducted by academics, government institutions and NGOs. With regard to the policy analysis, which is provided to a large extent in chapter four, this study used various pieces of legislation as well as unfolding policy debates. This research thus included a review of existing and pending woodland related legislation. To a limited extent, this information is used to make some comparative comments as well as possibly discern general trends.

3.5.2 Primary data sources

This method was used to provide a case study that allows this research effort to incorporate community perceptions and attitudes relating to woodland policy as well as to highlight the importance of woodland resources for rural households and communities. The survey was administered to a sample of 100 households interviewed with a questionnaire developed by Shackelton et al (1999) which assessed the uses and values of woodlands together with additional questions focusing on the respondents knowledge and perceptions as well as attitudes towards woodland policies (refer to Questionnaire Appendix C). The villages selected were KwaNompondo, KwaMduku and KwaMsane. A total of 100 samples were randomly sampled; 30 in KwaNompondo, 40 KwaMduku and 30 in KwaMsane.

Within social research there are an array of sampling methods which have been devised to enable efficient and economic samples to be drawn in a variety of practical settings. Sampling is a process of systematically selecting cases for inclusion in a research project. If done properly, sampling lets a researcher measure variables on the smaller sets of cases but generalize results accurately to all cases. Samples can be classified into those that

yield probability samples and those that yield non-probability samples. Probably the best known form of probability sample is the random sample.

This study used the random sampling technique over other sampling methods for a variety of reasons. Random samples are most likely to yield a sample that truly represents the population. In a random sample each person in the universe has an equal chance of being selected for the sample, and every collection of persons of the same size has an equal opportunity of becoming the actual sample. All that is required to conduct a random sample, after an adequate sampling framework is constructed is to select persons without showing bias for any personal characteristics. The adequacy of the random sample depends on the adequacy of the sampling framework.

The usual procedure in random sampling is the use of a table of random numbers i.e. to assign a number to each person or sampling unit in the sampling framework so that one cannot be biased by labels, names or other identifying criteria. After this done, it would be possible in theory for the researcher to pick sampling units at random from the sampling framework without any set pattern. However, in this study a table of random numbers was not used due to the study being conducted in a rural setting with a variety of unique elements. Instead the researcher picked homesteads at random with care not chose samples in any set pattern.

The questionnaire was arranged so as to facilitate interviewing. Questions were designed to establish the type of resources used, frequency of amount of resources utilized, availability of and accessibility to the resources and the extent to which they were traded. Formal household interviews were conducted at different times among different villages. In KwaMsane they were conducted from the 15th to the 27th of May 2000. In KwaNompondo they were carried out from the 6th to the 14th of June 2000, while in KwaMduku they were carried out from the 15th to the 25th of June 2000.

When formal interviews were over, a series of interviews were conducted with key resource users in all three villages. This was conducted from the 8th to the 12th of August

2000. These were more general interviews without any format. Open-ended questions were asked about perceptions of policies and the information provided was useful to the study. In addition to the methods outlined, in each community, problem ranking exercises (a PRA technique) using pair wise ranking and scoring, was also conducted in each of the villages. Pair wise ranking and scoring are tools for identifying issues of concern, their causes and prioritizing these problems. Facilitators can use these tools to ensure that the problems of less powerful groups are at least discussed and perhaps also acted upon. They may not be a concern common to the entire community, rather they may be priorities and solutions that differ according to class, ethnicity, gender, age and race within different contexts.

The PRA exercises were conducted from the 12th to the 14th of January 2001 across all three villages. There were three four-hour PRA exercises conducted for each village. In KwaMsane the PRA session was held outside the church. In KwaNompondo it was held under a tree in a place called eMganwini, where local community members normally held their meetings. In KwaMduku the exercise was held outside a local homestead.

The attendance for the PRAs ranged between 9 to 16 participants, with KwaNompondo having more participants (16) than the other two villages. Due to the small number of participants the groups were only sub-divided in terms of gender. After each exercise some time was spent on checking for inconsistencies between groups.

3.6 LIMITATIONS

Like with any other social research, there were some problems in the process of data collection. A few respondents were suspicious of the intentions of the researcher and therefore would not give accurate information for certain pertinent issues. However, most respondents were very accommodating, hospitable and co-operative. There were no serious problems encountered during the study with the exception of the PRAs. The PRA exercises were scheduled to take place towards the end of September 2000. However, conducting PRAs in all three villages was unsuccessful. This was attributed to the

political tensions in the villages as they were approaching local government elections in the country. Therefore, the PRA exercises were postponed and only one PRA focus group exercise, problem ranking, was eventually conducted in the three villages.

3.7 CONCLUSION

In this chapter the background to the case studies as well as the methods employed in the study are presented. The methods chosen provide the opportunity to probe and explore the themes under investigation in a flexible manner. This study offers a useful example of integrating qualitative and quantitative methods to provide an analysis of a topic which has so far received minimum attention. The research also draws upon data which are representative of South Africa as a whole, thus complementing existing research.

The techniques used in this study are therefore thought to have been successful overall. Experience was found to be a key factor in the effectiveness of individual techniques. However, the most important lesson learnt by the researcher from the research methodology was that careful planning and choice of the correct technique for each task is essential for successful research.

CHAPTER FOUR

RESEARCH FINDINGS

4.1 INTRODUCTION

This chapter provides a critical analysis of the primary and secondary data. To this end, certain issues presented in chapter two will be elaborated and integrated in the discussions and analysis. The first part highlights the key findings in the secondary sources that were reviewed. The second section analyses the primary data gathered in the study. This is done in relation to the community perceptions with regards to woodland usage in South Africa as well as the research questions identified in chapter one. The purpose of this chapter is to draw out pertinent findings and make relevant links to the literature review outlined in the previous chapter.

4.2 SECONDARY DATA ANALYSIS

4.2.1 SOUTH AFRICAN MACRO POLICIES

Environmental management of natural resources in South Africa is the responsibility of various governmental ministries and departments as alluded to in the previous chapter. While inter-departmental co-ordination in research and planning are encouraged, the cross-sectoral approach results in gaps and overlaps in the administration of natural resources. Therefore, in order to assess the implications of these various sectors, one should focus on the primary objective of this dissertation which is sustainability of woodlands. At the top level of policies that impact on the natural environment are framework policies which are intended to provide broad principles for action and guide a wide range of other policies and activities.

4.2.2 RECONSTRUCTION AND DEVELOPMENT PROGRAMME (RDP)

At the core of South Africa's transformation process is the overarching framework policy of the RDP. Although the programme is no longer a responsibility of one ministry, it still enjoys some political support. Many of the government's policies subscribe to the principles, goals and objectives of the RDP.

The RDP establishes six basic principles to guide government action to be implemented within five key programs. The natural environment is addressed in relation to the programme of meeting basic needs. The RDP Document of the African National Congress, (1994) sets out three prime goals in relation to the environment:

- equitable access to natural resources;
- safe and healthy living and working environments; and
- a participatory decision making process around environmental issues, empowering communities to manage their natural environment.

Willis et al (2000) note that the implementation of the RDP in terms of the rural woodlands is critical, given that they sustain such a large percentage of rural livelihoods.

4.2.3 ECONOMIC AND DEVELOPMENT POLICY

Economic and development policies in essence, do not deal directly with natural resources, they nevertheless have a profound impact on the way resources are utilized and managed due to the inter-linkages between the environment and the economy. In addition, social, monetary and fiscal policies determine how much money is made available for environmental management (Willis et al, 2000). The natural resource base is the cornerstone upon which economies are built and provide environmental services such as carbon sequestration and various other products and goods. The priority which environmental issues are given at an economic policy level provides some indication of

the likely commitment of government to implementing environmental policy and the financial support it will provide.

The South African government is committed to enhancing the quality of life for South Africans through poverty relief and building a people-centered society that is sustained by a growing economy. Recent policy trends have indicated that national and provincial governments have focused more on social spending. Over the past three years there has been a major shift towards social service provision in medium term budget policy statements (www.finance.gov.za). This is particularly apparent when one looks at the high proportion of provincial budgets spent on health, education and welfare with the budgets amounting to almost 90% of 1999/ 2000 provincial budgets, while budgets for other non-social sector departments such as economic services, transport, agriculture, environmental conservation and management have dramatically declined (Willis et al, 2000). This has significant implications for the achievement of sustainable development which requires the integration of environmental and development considerations. The implications alluded to suggest that if less money is made available for environmental considerations there will be a negative impact on woodlands because government officials charged with regulating the management of woodlands will be unable to do so effectively. Therefore, as concluded by Willis et al (2000), although South Africa has promulgated excellent environmental policy and legislation in recent years, the apparent lack of priority given to environmental issues indicates that these are unlikely to be effectively implemented.

The GEAR policy is the macro-economic strategy which was released in 1996 as a major tool to implement the RDP. It is guided by the following key goals:

- a competitive fast growing economy which creates sufficient jobs for all work-seekers;
- a redistribution of income and opportunities in favor of the poor;
- a society in which sound health, education, and other services are available to all; and
- an environment in which homes are secure and places of work are productive.

GEAR is intended to provide an integrated strategy to enhance economic growth and employment creation. The core elements of the package include:

- reforming fiscal management – to sharpen the redistributive thrust of expenditure and contain costs;
- gradual relaxation of exchange controls and implementation of monetary policies to reduce inflation and stabilize the currency;
- consolidation of trade and industrial policy reforms;
- implementation of a public sector asset restructuring programme;
- expansionary public infrastructure investment programme;
- structured flexibility within the collective bargaining system; and
- social agreement to facilitate wage and price moderation, underpin accelerated investment and employment, and enhance public service delivery.

The GEAR strategy has been characterized predominately with issues of privatization and Spatial Development Initiatives (SDIs). As one of the key investment strategies of government, the SDIs aim to unlock inherent economic potential in specific Southern African locations by enhancing their attractiveness for investment (www.sdi.org.za).

A contention arising from such initiatives is the associated implications of aspects like globalization on natural resource management. Globalization may have both positive and negative implications for woodlands in South Africa. On the positive side, increased tourism will increase demands for goods and services, thus encouraging a shift from agricultural land uses to that of nature reserves and game ranches. Furthermore, another aspect of globalization which is steadily gaining attention is the issue of Intellectual Property Rights. Schulz (2000) asserts that the value of a nature asset is the net present value of its future resource rent. In other words nature assets, like property rights and access to resources are critical in promoting sustainability of natural ecosystems globally. The CBD highlights the importance of property rights for sustainable use of biological resources, however there have been problems relating to access to technology and just

remuneration for communities and countries of origin for these genetic resources. South Africa needs to ensure that all benefits arising from property rights over indigenous biological diversity as well as the wealth of traditional knowledge like the uses of many medicinal plants which are found in some of the woodland areas, generate social development together with environmental sustainability in the future.

4.2.4 ENVIRONMENTAL MANAGEMENT

The White Paper on Environmental Management Policy in South Africa is an overarching framework policy. Specific subsidiary and sectoral policies to carry forward the detailed tasks of everyday governance will fall within this framework. They must subscribe to the vision, principles, goals and regulatory approach set out in the framework policy. The policy applies to all government institutions and to all activities that impact on the environment.

Through this policy government undertakes to give effect to the many rights in the Constitution that relate to the environment. They include rights relating specifically to the environment, as well as those relating to governance such as the legal standing of parties, administrative justice, accountability and public participation. The policy furthermore defines the essential nature of sustainable development as the combination of social, economic and environmental factors. It takes ownership of sustainable development as the accepted approach to resource management and utilization in South Africa, thus entrenching environmental sustainability in policy and practice.

The government's subsequent development of the National Environmental Management Act (NEMA), together with the White Paper on Environmental Management provide a framework within which all environmental management plans have to be formulated. NEMA was assented to in November 1998. NEMA is regarded as a 'landmark statue' in environmental affairs in South Africa because it is the first 'umbrella' national legislation which endeavors to establish an integrated framework through which most of the currently diverse and fragmented sectors of the environment will be transformed and

coordinated (Willis et al, 2000). Its prime aim is to provide for cooperative environmental governance through three main elements:

- establishing principles for decision making on matters affecting the environment;
- establishing institutions to promote co-operative governance; and
- establishing procedures for co-ordinating environmental functions which include the preparation of Environmental Implementation Plans (EIPs) and Environmental Management Plans (EMPs) and Integrated Environmental Management (IEM) procedures.

It is further guided by the following principles:

- Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably;
- Development must be socially, environmentally and economically sustainable;
- The environment is held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage; and
- A risk-adverse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and action.

NEMA does not address woodlands specifically, however, it will have positive implications for the sustainability of woodlands. It clearly addresses, through its various principles and elements, the importance of such aspects like the conservation of biological diversity, civil society participation in environmental governance and co-operative governance procedures (for example, EIPs and IEMs), which collectively may well be the mechanisms of overcoming the constraints of the fragmented management of the woodlands in the past.

4.3 SECTORAL POLICY FRAMEWORKS

4.3.1 LAND REFORM

The focus of the Department of Land Affairs (DLA) is on access to and the development of land. The White Paper on South African Land policy was published in 1997 and addresses the issues of land through three main program. These include land redistribution, restitution and tenure reform.

4.3.1.1 Land Redistribution

Land Redistribution is a broad based program which aims to provide the disadvantaged and the poor with land for residential and productive purposes. Hence, redistributive land reform aims to make additional land available to previously disadvantaged people. Thus far land redistribution has operated on a willing-buyer, willing-seller arrangement, through the allocation of the land acquisition grant by the state. More recently, government has begun to explore bringing formerly state owned land into the programme in trying to address past injustices and improving access to and benefits from land and natural resources. To date, 427 areas have been designated for redistribution, comprising a total of 1.86 million hectares (Willis et al, 2000).

However, much of the land in question is already in use for a variety of alternate land uses, like developed agricultural farms and only a small percentage of the projects are on land that has not been developed. Therefore, the land redistribution programme may not have a significant impact on the natural woodlands of South Africa.

4.3.1.2 Land Restitution

The purpose of land restitution is to restore land and provide other remedies to people dispossessed by racially discriminatory legislation and practice after 1913 (White Paper on South African Land Reform Policy [1997]). The Restitution of Land Rights Act 22 of 1994 and the constitution provide a legal framework for the resolution of land claims. It

is estimated that of the 64 000 claims lodged with the Land Claims Commission, approximately 8 820 have been resolved (Charl Goodman pers. com, 2001). The slow pace at which claims are being resolved may have implications for natural woodlands. On a short-term basis the impacts of restitution claims may not be significant. However, when evaluating the impact on the natural resources, the total number of claims lodged with the commission may prove to be quite substantial when a larger number of claims are resolved over the next few years in South Africa.

4.3.1.3 Tenure Reform

The main intention of tenure reform is to upgrade informal rights to formal legal rights. Tenure reform seeks to ensure security of tenure for every South African irrespective of whether they own the land which they occupy. The tenure reform programme in essence has two major components, firstly policy development and advice which focuses on developing tenure policy and secondly, making assistance available for land acquisition and settlement, settlement planning assistance, dispute resolution and converting land rights. It is important that these processes create greater levels of tenure security and enables an equitable distribution of resources.

The tenure reform programme is perhaps the most significant component of land reform in terms of the impacts it may have for the sustainable management of woodlands. As with many developing countries in the world, insecure tenure arrangements have led to constraining factors on land based livelihoods (Shackelton et al, 1999). In communities or households where tenure arrangements are insecure, the uncertainty over land rights have been commonly associated with poor levels of productivity. Unlike in communities which have had secure ownership of land, the result has been a system of controls over natural resource management. These have included stronger local institutions with elected leadership and a sense of common goals and practices with regards to utilization and equitable sharing of natural resources (Shackleton et al, 1999).

Hence, with the slow progress of the land reform program the overall implications for natural woodlands would be difficult to estimate. However, it would be safe to say that

land reform and more specifically tenure reform may well contribute significantly to the way our natural resource base will be utilized and managed in the future.

4.3.2 BIODIVERSITY

The White Paper on the Conservation of Biological Diversity (1997) recognizes the role of and need for incentives which support the maintenance of biological diversity at user level. It contains numerous policies and strategies based around six goals and nineteen policy objectives. It highlights South Africa's unique biological diversity with its variety of genes, species, ecosystems and ecological processes occurring in the country. The biodiversity of savanna biome is second only to the fynbos biome in South Africa and they are important for providing homes for much of South Africa's faunal composition and a loss of woodland would result in a loss of some of our world renowned faunal diversity and much of its tourist appeal for South Africa.

4.3.3. ENERGY

The energy sector of South Africa aims to contribute towards economic growth and employment as well as providing infrastructure for rural households. There are approximately three million rural households which use fuelwood as their primary energy source. The government's energy policy recognizes the larger environmental impacts it may have than most other economic sectors.

The White Paper on Energy Policy of the Republic of South Africa (1998) commits itself to evaluate all factors which may impact on the environment. It further recognizes that over harvesting of natural resources like fuelwood will result in environmental degradation, soil erosion and desertification.

The White Paper has six main objectives with short, medium and long term goals. However, all of them do not impact on the woodlands. The following are regarded as perhaps having greater potential implications on the woodlands:

1. Increasing access to affordable energy services
 - Facilitate the production and management of woodlands for rural households;
 - Promote improved combustion techniques and appliances for fuelwood and other traditional fuels.
2. Stimulating economic development
 - Promote energy efficiency in all sectors of the economy;
 - Develop standards and codes of practice for the correct use of renewable and non-renewable energy systems.
3. Managing energy-related environmental impacts
 - Government will promote access to basic energy services for poor households in order to ameliorate the negative health impacts arising from the use of certain fuels;
 - Monitor international developments and participate in negotiations on response strategies to global climate change.

Perhaps, the most significant of the above is the first where government aims to promote alternate energy sources and decrease the consumption of fuelwood. The result of doing so will be a decrease in the over-utilization of woodlands and will promote long term sustainability of the biome. Furthermore, there is also a commitment towards limiting all adverse environmental impacts and conserve woodlands for their carbon storing properties in attempting to alleviate the impacts of global warming.

4.3.4 POPULATION

An analysis of the population and human development situation in South Africa reveals that there are a number of major population issues that need to be dealt with as part of the numerous development programs and strategies in the country. The White Paper on Population Policy published in 1998 is based on a set of twelve guiding principles which

provide the ethical context for a human rights approach to integrating population concerns into development planning, implementation and monitoring.

The White Paper outlines a number of major concerns with regards to human development, which cover a full range of population, development and environmental challenges. One of the challenges focuses on the pressure between the interaction of population, production and consumption patterns on the environment. However, most of the challenges highlighted are concerned more with social, political and economic imperatives, with little concern over environmental issues and more specifically natural resources like the woodlands.

Human activities are increasingly affecting the environment in ways that have potentially enormous long term effects on human welfare. The problems are well known and include, increasingly clear evidence of global warming with projected effects on weather patterns and rising ocean levels, depletion of the ozone layer, acid rain, dwindling ocean fish stocks, deforestation, expanding deserts, land erosion that threatens long-term agricultural productivity, and extremely rapid rates of extinctions leading to a significant loss of biodiversity (LeGrand, 1996). Myers (1994) estimates that approximately 30,000 plant and animal extinctions occur annually, and there is also an increasing scarcity of clean water relative to population size in large areas of the globe. Therefore, there is an urgent need to take actions to limit the extent of environmental degradation and to develop policies for handling the consequences of foreseeable environmental change. Furthermore, the challenge posed by sexually transmitted diseases, especially HIV/AIDS, and the projected socio-economic impact of AIDS on population growth and the ramifications it may have for the environment in the future need to be integrated.

There have been concerted efforts to reduce population growth and these should remain key components of policies seeking to preserve the natural environment for several reasons. Slower population growth and an ultimately smaller world population may be extremely important as this will mean that we will have more time in which to devise and set up mechanisms to preserve the environment as well as ensure long term sustainability

of all natural resources. Moreover, the demand on the natural resource base will also be reduced.

4.3.5 WATER

South Africa is a water stressed country and the water sector is faced with increasingly complex issues to deal with. Most of the water has already been allocated to irrigated agriculture or forestry with almost no water allocated to the communally held rural lands. This has created tensions amongst users and these conflicting interests need to be managed to ensure a smooth transition from the old order to the new.

According to the Constitution of South Africa (Act 108 of 1996), it is every person's right to have access to clean water. The development of the Water Services Act (Act 108 of 1997), together with the National Water Act (Act 36 of 1998) and the Water Law Principles provide the necessary legislative support for the rights to clean water for all which is entrenched in the constitution. The Water Services Act is guided by many principles including some of the following:

- The national government is the custodian of the nation's water resources and has the ultimate responsibility for water resource management, the equitable allocation and usage of water as well as the transfer of water between catchments and international water matters.
- Water quality and quantity are interdependent and shall be managed in an integrated manner, which is consistent with the broader environmental management approaches.
- The promotion of effective and sustainable use of financial and natural resources.

The National Water Act (NWA) requires the registration of all water users, and the Department of Water Affairs and Forestry allocates licenses according to the water use. Irrigation and any direct taking of water from a water resource are typical forms of use. Industrial forest plantations are a prime example of direct users as they are declared as stream flow reduction activities. The NWA's aim is to affect a radical change in the

concept of “private water” and also establish the framework for a very significant devolution of power in water management (Versfeld, 2000: 2). The purpose of the Act is “to ensure that the nation’s water resources are protected, used, developed, conserved, managed and controlled” taking into account a wide range of factors addressing issues of equity, ecological sustainability and beneficial use (National Water Act, 1998).

4.3.5.1 Water Management Areas (WMAs)

The country has been divided into 19 WMAs which are primarily based on the boundaries of catchments. The water resource will be the responsibility of Catchment Management Agencies (CMAs), which will make decisions on how water is allocated and used. The CMAs power is limited by the fact that the agencies must act within the bounds of the Catchment Management Strategy, which has to receive ministerial approval, and will be required to manage within the framework of that strategy (Versfeld, 2000). Furthermore, public participation and co-operative governance are the key tenets in the operation of the CMAs and WMAs will have the authority over water use and all forms of land transformation taking place.

4.3.5.2 Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA)

Strategic Environmental Assessment (SEA) is a relatively new concept in Environmental Impact Assessment (EIA) which advocates that all forms of land use change must be subjected to an EIA. SEA is acknowledged in the Water Act of 1998. It is a process which assesses the environment and establishes a holistic view of what that environment can best, and sustainably, offer to development (Versfeld, 2000). The approach is based on information gathering, participation, joint analysis of opportunities and constraints, and information sharing.

What does this mean for the woodlands? Catchment areas are now the lead agencies in water resource availability in South Africa and fast becoming self-operated and managed.

The woodlands are an integral part of the water generating resource and are significant for the quality of water which is generated in these areas. SEAs will play a vital role in ensuring the equitable dissemination of information as well as linking all environmental concerns around water resource usage.

Water is now recognized as a scarce and highly valuable resource and there is little opportunity for further expansion of such sectors which have monopolized water resources in the past. Government has further strengthened this intention by reducing the amount of licenses being issued as well as limiting the construction of large dam schemes. This will limit the pressure on the woodlands from being transformed into these alternate land uses and provide some form of protection against extensive usage.

4.3.5.3 Working for Water Program

The project was launched in 1995 by the Department of Water Affairs and Forestry with a dualistic approach of employment creation, together with gaining some form of control of invasive alien plants in South Africa. The invasive alien plants are a major threat to water resources and reduce the amount of water available for other purposes, whilst also threatening the biodiversity of the natural vegetation and overall functioning of catchments.

The program has been widely hailed as a success and has been characterized by a rapidly increasing rate of clearing invaded land and with large numbers of unemployed people being employed and trained to become more self sufficient within their communities. In addition to employing people the program aims to develop disadvantaged communities by training people from these communities in a range of skills with a view to enabling them to form viable business enterprises and initiatives. The program has also created opportunities for cut wood collected to be sold as fuelwood or converted into charcoal. Furthermore, the program has provided the opportunity for institutional co-ordination over the removal of invasive alien plants and a vital linkage between biodiversity, economic issues and water production. If this model could be replicated in other areas, the interests of biodiversity conservation could be positively affected in many ways.

4.3.6 AGRICULTURE

Agriculture is one of the principle means whereby natural habitats are converted to other land-uses. South Africa is characterized by a scarcity of high potential agricultural land and a key challenge in South Africa is meeting the food needs of the rural poor. In attempting to provide this basic need for all South Africans, agricultural policy may have significant impacts on the natural woodlands. McNamara (1993) states that it has been increasingly recognized in recent years that land use policies have in the past failed to take into account the inter-linkages between woodlands and agricultural production, and the indirect contribution of forest and woodland resources to the national economy. Agriculture poses the largest threat to the woodlands due to land clearance to plant crops and overstocking of cattle which has led to bush encroachment and soil erosion.

The Department of Agriculture (DoA) is responsible for developing and implementing all policy guidelines. The White Paper on Agriculture (1995: 6) is based on a central vision, which is supported by the following mission statement:

Ensure equitable access to agriculture and promote the contribution of agriculture to the development of all communities, society at large and the national economy, in order to enhance income, food security, employment and quality of life in a sustainable manner.

The White Paper is essentially a set of principles which are provincialized, with the primary aim of establishing an environment where opportunities for higher incomes and employment are created for resource-poor farmers alongside a thriving commercial farming sector.

More specifically, the DoA has stated three policy goals to promote sustainable agricultural use in South Africa:

- to build an efficient and internationally competitive agricultural sector;

- to support the emergence of a more diverse structure of production with a large increase in the numbers of successful smallholder farming enterprises; and
- to conserve our agricultural natural resources and put in place policies and institutions for sustainable resource use.

The DoA's more recent 1998 discussion document on agricultural policy specifically highlights the importance of conserving natural resources through three broad principles. Firstly, it is the government's responsibility to promote the sustainable use of natural resources in agriculture, ensuring that resources are used within their capacity for renewal, maintaining and enhancing the ecological integrity of natural systems, and minimizing or avoiding risks that will lead to irreversible damage. Secondly, the primary custodian of the land is the resource user whose actions have an impact upon the environment. Thus, the Government will design policies and enact legislation that will strengthen the rights of land users and facilitate their assumption of responsibility for the conservation, sustainability and maintenance of biodiversity. Thirdly, those responsible for all forms of environmental damage should pay the costs of remedial measures in respect of the impact of such damage on the environment and human health. It will be required of land users whose activities may have an impact on the environment to institute measures to prevent pollution and environmental damage.

4.3.6.1 International Policies Affecting Agriculture

There is increasing global concern about issues such as climate change and loss of biodiversity. The agricultural sector of South Africa is most likely to be affected by changes in climate, land degradation and loss of biodiversity. The Convention to Combat Desertification obliges the South African government to develop a National Action Programme on Desertification addressing the underlying causes of land degradation. The National Action Programme is required to address a range of issues including sustainable agricultural practices. The Convention also promotes the establishment of national desertification funds. The Convention on Biodiversity obliges the government to regulate

or manage processes or activities determined to have a significant adverse effect on biodiversity. This would include managing poor agricultural practices.

4.3.6.2 Current Impacts of Agriculture on Woodlands

In the past, commercial farmers were heavily subsidized by the government and so could clear marginal land for crops. The removal of these subsidies and particularly the requirement that they must now pay for irrigation water has seen cultivation on a significant proportion of these marginal lands being abandoned (Scholes, 1995). Additionally, marginal land is now being offered for sale by White commercial farmers as part of the land reform program. This bodes well for the woodlands because the beneficiary communities will re-colonize the abandoned land and most of that transferred to African land-use will be for multi-purpose uses, that is, small scale cultivation and grazing which is better for the woodlands than total clearance (Watson Pers. Comm. 2001). The loss of subsidies, increased stock thefts and the implications of the new farm workers regulations have also caused many cattle (both beef and dairy) farmers to change to game ranching. This is also good news for the woodlands because even at high stocking rates, wild ungulates have been less detrimental on natural ecosystems than cattle. It is important to note that cattle are not native to Africa. In terms of the communal areas, the land reform program could play a crucial role in taking these marginal lands out of production (Watson Pers.Comm. 2001). The major assumption is that land reform, especially the redistribution and restitution processes, will move people onto new land. Thus, there will be a decrease in the numbers of people and livestock in the over-populated former homelands. This reduction in the total number of people and livestock will give the former homeland range-lands a chance to recover and will promote the sustainability of the woodlands.

4.3.7 LANDCARE INITIATIVE

The South African Land Care initiative is one of the first programs that the post-1994 Department of Agriculture began to develop which aims to promote sustainable management of land, water, plants and animals. Major program elements identified for the implementation of Land Care in the agricultural sector in South Africa include a major work program for resource conservation, public works, job creation programs and incentives and disincentives for natural resource management. An overall framework for Land Care in South Africa is to be developed which will allow each province to develop a provincial strategy by involving all stakeholders and role players in that province. To date Land Care has been relatively successful. Although the programme has been limited in its implementation it will have far reaching benefits for land management in rural South Africa if it becomes a popular movement in the future.

4.3.8 FORESTRY

There is increasing pressure world-wide for improvement in the quality of forest management and forest policy. The forestry sector of South Africa has been no different in the development of its own policies and legislation in response to this global demand. The White Paper on Sustainable Forest Development in South Africa is committed to the overall goal of promoting a thriving forest sector, utilized to the lasting and sustained benefit of the total community and developed and managed to protect and to improve the environment. The government has achieved this through the preparation of a strategic plan, the National Forestry Action Plan. Furthermore, the promulgation of the National Forests Act (NFA) - Act 84 of 1998 provides the necessary legislative support for the implementation of the forest policy.

The government of South Africa has for the first time, as mentioned earlier in this report, taken on the responsibility of managing woodlands by identifying them as a type of “natural forest”. This recognition has been in compliance with global trends in forestry management such as those of the United Nation’s Food and Agricultural Organizations

definition of forests. Mention is also made of the relationships that exist between people and the resources provided by the forest, which include the use and husbandry of wood, fruits and other products that come from trees, as well as the wildlife that dwell in the forest.

The White Paper addresses forests of all types, but it also highlights more specific issues concerning woodlands. DWAF recognizes the importance between woodlands and rural people and addresses this issue in the section called 'community forestry'. Community forestry has been designed and applied to meet social, household, and environmental needs and to promote local economic development (NFAP, 1997). Furthermore, the economic value of woodlands to rural households provides a significant proportion of the incomes generated in these areas and makes the sustainable management of woodlands vital in ensuring the maintenance of rural livelihoods. The main resource base is the natural forests and woodlands, followed by industrial plantations, then home gardens and woodlots.

The White Paper also discusses government's involvement in international initiatives like Sustainable Forest Management (SFM) and development tools like criteria and indicators. Following the recommendation in Agenda 21, that countries and the international community should develop and apply a suitable set of indicators of sustainable development, there has been much work done in South Africa as in other countries to find appropriate indicators. It is the role of government to develop these assessment tools and these shall be applied at various levels ranging from national to local and household levels and where necessary two or more or all levels. Thus far the process has been drafted by the National Forestry Advisory Council's appointed committee for SFM and it is envisaged that South Africa will have a well documented set of criteria and indicators, which will dramatically change the policy arena and provide national government with the mechanisms to play a co-ordinating and enabling role in the sustainable management of the forest resources at all levels of governance in the near future.

NFAP has various strategies and tasks which need to be implemented by DWAF at national, provincial and local levels. The role of DWAF in implementing the tasks for achieving sustainable woodland management are stated below:

- Develop an effective system for monitoring the changes and influences on the extent and condition of woodlands;
- Improve understanding of the value of woodlands;
- Develop and implement guidelines which relate to technical and social aspects of woodland management;
- Develop criteria and indicators for sustainable development of woodlands;
- Clarify rights and responsibilities regarding tenure and inform stakeholders;
- Integrate the forestry sector with other natural resource policies and legislation;
- Initiate pilot projects for joint forest management and community based forest management; and
- Equip forest authorities with skills and capacity to fulfill its mandate.

The measure of success in the implementation of NFAP's tasks has been limited since the release of the programme. Constraints such as the lack of capacity within DWAF and other institutions together with limited financial assistance and budgetary cuts have proved to be significant stumbling blocks in achieving the tasks set out by NFAP. However, NFAP is an excellent framework of action with its various strategic plans and enabling factors. These need to be implemented to make the forestry sector successful in its goal of achieving a thriving, equitable and sustainable sector.

The NFA defines woodlands as "a group of indigenous trees which are not a natural forest, but whose crowns cover more than 5% of the area bounded by the trees forming a perimeter of the group". Moreover the Act obliges government to ensure that a minimum area of each woodland type should be conserved. Furthermore, the NFA makes provision for the following with regard to principles affecting forests and of significance for the woodlands:

1. natural forests must not be destroyed save in exceptional circumstances, where in the opinion of the Minister, a proposed new land use is preferable in terms of its economic, social or environmental benefits; and
2. forests and woodlands must be developed and managed so as to
 - conserve biological diversity, ecosystems and habitats;
 - sustain the potential yield of their economic, social and environmental benefits; and
 - promote fair distribution of their economic, social, health and environmental benefits.

The forestry sector of South Africa has undoubtedly made considerable progress in the past few years with the development of the forest policy and a plan of action. These combined with the necessary legislative support from the Forest Act have radically changed the way forests and woodlands are now managed and utilized. However, if forestry is going to be economically, environmentally and socially viable, South Africa will now need to investigate the effectiveness of its resource conserving technologies and then identify the gaps which may exist, after which innovative and appropriate ways forward can be sought.

Some of the key indicators and concerns surrounding natural woodland usage and management in terms of the impacts of the policies discussed above are highlighted in the table 4.1

Table 4.1 Impacts of policy frameworks and concerns for natural woodlands

Indicators/ Concerns for Natural woodlands	White Paper on Sustainable Forest Development	White Paper on Land Policy	White Paper on Conservation of Biological Diversity	White Paper on Energy Policy	White Paper on Population Policy	White Paper on Agriculture
Clear definition of woodlands	X	-	-	-	-	-
Identification of Users	X	-	X	X	X	-
Allocation of natural resources	X	X	X	-	X	-
Monitoring of woodland use	X	-	X	-	-	-
Local capacity building	X	X	-	-	-	-
Social and economic importance	X	X	X	X	X	X
Conservation of biological diversity	X	-	X	-	-	X
Monitoring and evaluation systems	X	-	-	-	-	-
Research agenda	X	-	-	-	-	-

It is important to note that some of the key indicators surrounding natural woodlands which have been neglected in the sectoral policies are a lack of clearly identified management structures, efficient conflict management within woodland areas and a lack of identifying responsibilities for implementation of resource conserving strategies at local levels. Also of significance is the lack of private sector input into natural resource

management. Additionally, monitoring and evaluation of woodlands is only on the research agenda of forestry and none of the others policies address these imperatives.

It is important to note that most of the government's policies fail to address the issue of local capacity building. This is crucial given that all natural resources including the woodlands are consumed and utilized at the local and household levels. With a lack in recognizing the need to improve local capacities and also trying to change existing practices in woodlands within rural communities the detrimental impacts on the sustainability of the resource will continue unabated.

4.3.9 LESSONS FROM DEVELOPING NATIONS

This section aims to highlight the policies relating to woodlands that have been relatively successful and effective in some of the developing nations in Africa. The focus is on policy statements and strategies that have been extracted with specific relevance for South Africa. However, it is important to state that there are various unique factors which prevail in each of these countries pertaining to natural resource management but many environmental issues extend beyond the boundaries of one country, or are beyond the resources of a single country to address. Therefore, a look at the progress of other developing nations towards sustainable management of their natural resources, especially woodlands, will be beneficial to South Africa in achieving this common goal.

4.3.9.1 ZIMBABWE

Zimbabwe as a whole is relatively well endowed with woodlands. There are also a range of policies that affect them. The woodlands cover approximately 53% of Zimbabwe's total land area (Forestry Commission, 1997). However, the land hosting most of the resources is very unevenly distributed amongst the population.

Zimbabwe's distribution of land, people and woodland can be broken down into four major land tenure categories. These are communal, resettlement, commercial and state-

owned land areas. According to Nhira et al (1998) almost 74% of Zimbabwe's rural population, or a little over half of the total national population, lives in the communal areas. These areas cover 42% of the land area and contain about 43% of the country's woodland and scattered trees. A further 6% of the rural population live in the resettlement areas which occupy about 8% of the land area. The commercial farms occupy about 31% of the land area, supports 19% of the rural population, and hosts 30% of the woodlands. Clearly, the picture painted is one of inequitable access to land and woodlands which inevitably have many implications for the sustainable management of woodlands and the policies that affect them.

Nhira et al (1998) assert that the legislation on use and management of woodlands inherited at independence in 1980 reflected the dualistic nature of the colonial period, that is, voluntary self-policing and investment in commercial lands and state enforcement and regulation in communal lands. In an attempt to redress these inequalities, the Zimbabwe government initiated CAMPFIRE – The Communal Areas Management Programme for Indigenous Resources in the mid-1980s. The aim of the programme was to place proprietorship of natural resources in communal lands with local communities, based on the supposition that through direct benefits derived from their management of these resources, communities would perceive a vested interest in their conservation. The program has enjoyed some level of success with 32 districts (more than a quarter of a million people) engaged in the programme by the late 1990s (Watson and Dlamini, 2000). It has served to increase an appreciation for the need to manage woodlands more sustainably due to its focus on local resource use.

Since independence the government has promoted national development in two phases. In the 1980s it was, "growth with equity" which was founded on large scale redistribution of land. By the late 1980s, the slow progress of redistribution and a stagnant economy gave rise to the second phase that of "structural adjustment".

Forests and woodlands have not held a prominent position in national development strategies since Zimbabwe's independence. Although forest management was part of the

central “growth with equity” framework it was given minimal priority. Agriculture on the other hand had clear national priority over forestry and other associated land uses. Therefore, the lack of a national vision of the role for the forestry sector in development is the underlying cause of conflicting approaches to woodland management in Zimbabwe.

Gondo and Mkwanda (1991) estimated that 1.5% of the woodland area is cleared annually. The progressive decline in woodland cover has been attributed to both practice related and policy related activities. The most significant direct cause has been agricultural expansion, with 70 000 ha cleared for cultivation annually (Watson and Dlamini, 2000). Some of the other direct causes that have been identified are:

- infrastructural development (dams, roads, power lines);
- industrial uses (brick making, tobacco curing);
- poor land use practices (overstocking, burning too often); and
- firewood and construction material collection.

Watson and Dlamini (2000) further assert that the direct (for example, shortage of woodland products) and indirect (for example, land degradation) consequences of Zimbabwe’s declining woodland resource is felt acutely by the poor households in communal and resettlement areas. This is not only because they are the most dependent on the contribution of woodland products and services to food security and basic well-being but also because of their inequitable access to this resource

Perhaps one of the fundamental issues in the policy context has been the recurring question of land in Zimbabwe. Concerns about land tenure insecurity prompted government to set up the Land Tenure Commission in 1993. In 1994 the commission concluded that “radical changes in tenure and rural governance systems in both communal and commercial areas are much needed”. However, Nhira et al (1998) warn that with comprehensive land redistribution, if settlement is not accompanied by support services and effective incentives for conservation, widespread stripping of woodlands is likely to occur.

Clearly, addressing Zimbabwe's sustainable management of woodlands is a complex web of various factors. For example, the land issue, agricultural intensification and many more. Finding policy processes which deal with all these aspects equitably are often very difficult to achieve. We simply cannot wait for the "perfect policy", it therefore becomes important to highlight some of the key lessons about policies that have been successful in woodland management, which will enable future policy developments to deal with further issues surrounding sustainability of woodlands.

Nhira et al (1998) suggest many lessons and recommendations about policies that work in the case of Zimbabwe and of particular significance are the following:

- Following through on land reform, redistribution of land to the people is a vital step, but is a step which requires the backing up by sufficient investment in infrastructure and institutional support in the redistributed lands.
- Opening up formal policy making to more stakeholders, to increase the knowledge base, improve accountability and make prescriptions more workable. Some of the more recent examples which are on the right track include the Forest Sector Review, Land Tenure Commission and the Environmental Law Review.
- Networking and strategic inter-sectoral collaboration to improve co-operation amongst all sectors and promote collaborative efforts across the various programs.
- Building skills for control of land and natural resources at community level. Government agencies and key NGO programs are making progress on building local technical and managerial skills.
- Making legislation facilitate local action in order to promote policy implementation. This legislative support is crucial to affect local participation in the policy process.
- Focusing on local knowledge and natural woodland management. The forestry Commission and NGO extension strategies are increasingly geared to this and thus reversing the reliance on extension packages.

- Incorporating gender equality in all policies, whilst a little progress has been made on access to land and resources, there is urgent need to look at the issue of female-headed households and it is time for a major push.
- Sharing forest benefits and responsibilities across tenure boundaries. This is a key mechanism to overcome long standing conflicts over forest resources and a viable way to address resource shortages, share management responsibilities and build trust between different landholders.

A process of debating these lessons and detailing as well as prioritizing the potential ways forward is now needed in Zimbabwe. Also, questions of effective implementation needs to be addressed. If the forests and people are to be mutually supportive, there is a need for policies which will engage with practice in the real world of its people, institutions and various stakeholders for sustaining the forest and woodlands now and in the future. All of the recommendations stated above can be lessons for South Africa as these are broad principles which can be adapted to the South African context.

4.3.9.2 BOTSWANA

Woodland products have been utilized by people of Botswana for a variety of purposes. The significant contribution that woodland products make toward food security and income generation particularly for poor rural households has only been researched over the past two decades and only recognized at national policy level in the past few years.

The major uses of the woodlands in Botswana is that of pastoral use, fuelwood, construction and fencing wood, and other ancillary uses like basket making, worm harvesting and medicines. The woodland products are under greatest pressure from land clearing, harvesting of wood for fuel, construction and fencing.

According to Arntzen and Veenendaal (1986), approximately 45.5% of the total wood harvested in Botswana is used for fuel, supplying about 80 % of the energy needs of most rural households, small enterprises in rural areas as well as low and medium income

households in urban areas. This wood is used for the purposes of cooking, heating and lighting most of which is done over an open fire and is only 8% energy efficient. Fuelwood is becoming increasingly scarce in South East Botswana particularly around large village areas and urban centers. This scarcity increases the distances traveled to collect more wood and threatening the sustainability of the woodlands in greater areas.

Of the wood used for construction and fencing, Arntzen and Veenendaal (1986) suggest that as much as 70% of the wood is wasted after the fencing poles have been extracted. These off-cuts, however, are then made available for fuelwood collectors who have made lucrative job opportunities from the collection of the wood.

Other associated uses include manufacturing of furniture, utensils and canoes. Dug-out canoes in the Okavango Delta sustain the tourism demand for canoes. Recent trends indicate significant losses in specific woodlands due to this recreation. Also, the exportation of Mopane worms which are broken off tree branches have added to pressure on the existing woodland resource in Botswana.

Botswana's development of policy regarding forests and woodlands had been limited in the past. However, with declining resources and the necessary government support, Botswana has gained steady momentum towards reaching a sustainable management path of its woodlands. By being a signatory to international conventions like the CBD, CCD and the FCCC, as well promoting the principles outlined by Agenda 21, the Botswana government has committed itself to protecting its natural resources nationally. Several research programs have been initiated by government or relevant NGOs with a view to identifying ways to reduce the demand for woodland products and promote their long term sustainability for future generations. These research endeavors have included:

- assessing ways of improving the efficiency and acceptability of both fuelwood and coal stoves;
- assessing ways to implement a wide-scale socially equitable fuel wood harvesting levy;

- assessing the feasibility of encouraging wide scale agroforestry and community forestry; and
- assessing the feasibility of involving communities in the monitoring and management of savanna products.

Watson and Dlamini (2000) assert that Botswana's realization of its obligation to regulate the transformation of its woodlands is reflected in the culmination of the New Forest Policy which takes general responsibility for the country's forests and woodlands. The New Forest Policy has benefited from the many international experiences on forest policy such as those of the UN forestry principles and lists several objectives. Watson and Dlamini (2000) highlight the most important objectives for sustainable utilization of woodlands all of which can be used as the lessons for South Africa. These include:

- empowering local communities in rural and urban areas to manage forests and tree resources, while fostering ownership or usufruct of trees and ensuring that trees and forests are sustainably utilized for the benefit of all;
- encouraging and supporting rural people, both women and men to grow appropriate multi-purpose trees in communal woodlots or in other arrangements that are suitable to their specific needs, capacities and customs;
- promoting development of sustainable forest related activities such as nurseries and handicrafts; and
- providing communities with adequate assistance packages including establishment of nurseries at village level, education, technical training and information in order to enable them to carry out community forestry activities.

The government's capacity to conduct forest research is limited, but modest forestry research initiatives have been made by NGOs and the University of Botswana. However, the most significant realization to emerge from governments efforts thus far and is an important lesson for South Africa is that the most effective means of securing savanna products and services is not through an extensive planting scheme, but through multi-sectoral savanna management (Watson and Dlamini, 1999). There is still a need for

improved co-ordination and strengthening of existing institutions in order to improve local capacity to undertake forestry research in Botswana. The effectiveness of the new forest policy will be largely dependent on overcoming both practice and policy related activities in Botswana. With adequate training of personnel, proper funding and effective communication between government and stakeholders, Botswana may well be on the way to effective and efficient management of its natural forests and woodlands.

4.3.9.3 MOZAMBIQUE

Mozambique has an area of 801 509 km² of which 57 million hectares, almost 71% of the country's land area, is described as forest and woodlands (Cuco, 1996). The post-independence development policy of Mozambique was aimed at stimulating all productive sectors so as to achieve economic self-reliance. The government of Mozambique considered that agricultural development constitutes a fundamental base for the country's economy. Development policy also included the creation of an independent and advanced economy, with a harmonious development using the natural resources optimally. Within these key strategies, the natural forest resources played a crucial role in the process of economic development for their capability of providing continuous supply of forest and wildlife products, potential for export orientated production; and an important role in contributing to rural development. Some of the development policies, regulations and laws which have influenced the development of the forestry sector are the following:

- the nationalization policy of 1975 which revoked some property rights thereby discouraging privatisation as well as the evolution of some institutions in the private sector;
- the structural adjustment programme adopted in 1987 which was the reverse of the nationalization policy, with the aim of promoting the participation of the private sector in production and liberalization of the terms of trade;
- the legislation on land use and tenure to encourage both the national and private sector to participate in the development of the sector; and

- the Earth Summit at Rio de Janeiro also raised the level of awareness of environmental protection in the country (Agenda 21).

Since the independence of Mozambique in 1975 the government proclaimed that all forests are state property with the natural resources belonging to the people and the government acting as trustee. However, due to the war in Mozambique, the development of policies at local levels was not possible with a large number of people seeking refuge in neighbouring countries. The following factors have negatively affected effective forest policy development:

- shortage of skilled management;
- lack of co-ordinated approaches and resources;
- lack of security due to the destruction of the existing infrastructure; and
- institutional weaknesses.

Presently one of the poorest countries in the world, civil war has led to the huge economic decline and deterioration of the forests. Recognizing the need to address these issues, the government implemented the Socio-Economic Rehabilitation Programme (PRES) in 1990 which recognized that woodlands played an important role in terms of its wood as raw material and as well as providing the diversity of forest products necessary for the different uses within communities.

Since post-independence from 1977-1991, forest policy development had gained steady momentum and once more the crucial role of natural forest resources were being fully explored. Since the signing of the peace accord in 1992 the people of Mozambique returned to their lands, and governments involvement in ensuring sustainable management of its natural resources increased. Development policy to ensure the sustainability of the woodland resources included:

- a clear definition of sectoral objectives;
- the availability of means to implement forest policy; and

- the appropriate use of these means.

Government began to adopt a stable and detailed forestry policy with formal and efficient procedures of co-ordination with other socio-economic sectors. There was also a move towards the strengthening of the National Directorate of Forestry and Wildlife in areas of policy formulation, analysis and integrated planning.

Some of the recommendations for a more integrated forestry policy included:

- the efficient and sustainable utilization, effective management and conservation of forest and woodland resources;
- environmental considerations in all policies and to integrate sustainable utilization of forest resources with development needs; and
- the recognition of the value of forest resources, so that they can contribute to the welfare and development of all communities.

In order to ensure the implementation of the forestry policy, special attention was given to the creation of capacities for gathering baseline information and strengthening of institutional structures, which collectively aimed to promote:

- formulation and implementation of forestry policy;
- coordination and regulation of production, processing and trade of woodland products;
- undertaking economic and technical studies;
- managing natural woodlands, plantations, wildlife and beekeeping;
- giving technical assistance to the communities; and
- regulation of supply and demand of woodland products.

Unfortunately, none of Mozambique's forestry objectives has had the opportunity of being fully realized. This can be attributed mainly to the short time scale in which the policy changes have occurred and insufficient monitoring and evaluation of these objectives thus far. Future Mozambique forest policies will need to consider aspects such as improving collaboration between institutional structures and rooting decision making

in places where its people are motivated to manage and conserve their natural resources. Nevertheless, it seems that after years of things falling apart, Mozambique's forestry is finally beginning to fall in to place.

The lessons from the international experience in natural woodland usage and management are highlighted in the table 4.2

TABLE 4.2 Lessons from international experiences in woodland usage

LESSONS/ INDICATORS FROM INTERNATIONAL EXPERIENCES	SOUTH AFRICA	MOZAMBIQUE	BOTSWANA	ZIMBABWE
IDENTIFIABLE AGENCY	X	X	X	X
OWNERSHIP PATTERNS OF THE RESOURCE	X	X	X	X
CLEAR DEMARCATED BOUNDARIES	-	-	X	-
EFFECTIVE MONITORING SYSTEMS IN PLACE	-	-	X	-
EXTENT OF RESOURCE	X	X	X	X
RECOGNITION OF VALUE AND USE	X	X	X	X
MANAGEMENT PRIORITIES	-	-	-	-

The identified indicators/ lessons (table 4.2) have been proposed by Grundy (1995) and these have been formulated from international experiences in the management of natural forests and woodlands. It is important to note that developing nations around the world have recognized the importance of subscribing to outlined forestry principles as proposed by Agenda 21. However, one of the important points which requires attention and is a lesson for South Africa and other countries is the intimately related issues of land policy and tenure issues. Within the Southern African regions discussed in this section, there is lack of clear demarcated boundaries and secure tenure arrangements except for Botswana. This leads to ineffective and inefficient management of the woodlands as

these areas have insecure tenure arrangements and the future sustainability of the resource is uncertain. Another important lesson is the need to implement effective monitoring and evaluation systems. This is urgently required in most of the developing nations in Southern Africa including South Africa, Zimbabwe and Mozambique.

4.3.10 KEY CONCERNS/ GAPS AND CONFLICTS IN POLICIES AFFECTING WOODLANDS

An analysis of the current policies and its implications for sustainability of woodlands enables one to draw a number of key concerns about policy and the policy processes in South Africa. The analysis suggests that although developments over the last few years have made much progress there is still fragmentation within the environmental policy arena and the following key constraints still need to be addressed.

- Conceptual understanding of the resource

There is implicit lack in the understanding and importance of woodlands in South Africa. Many of South Africa's environmentally related policies do not address woodlands directly (except for forestry) and the economic, environmental and social value is often poorly recognized. This has severe implications for the achievement of sustainable management of the resource which is rapidly declining as result of pressures and changes which are not widely understood. There is an urgent need for improved understanding of the resource, which if appropriately managed will contribute significantly to sustainable economic development. Also, associated is the lack of access to information with regards to the objectives, mechanisms and intended outcomes of policy decisions to those who are supposed to implement them as well as the wider grouping of those who are affected by them. The format of policy documents which are often poorly communicated can lead to many misunderstandings, confusion and mistrust and negatively impact on the proposed aims and objectives for policy processes.

- Capacities and constraints for implementation

One of the main obstacles to implementing environmental policy in South Africa is likely to be the lack of institutional capacities. There are many institutional structures which are involved in natural resource management and these vary from national, provincial, local to private and NGOs. At national level government departments have lacked the necessary skills, expertise and training required to provide strong leadership. For example, the NFAP indicates that DWAF has strong technical but weak social capacities in state forests and almost no involvement in land outside state forests in the management of natural woodlands. At provincial level, capacities have varied as different provinces have given management issues different priorities and emphases which is reflected in how the forests have been categorized as a ministerial responsibility. At the local government level, management of forests and woodland has remained limited with a view to increase future involvement on both State and land outside State forests. The role of NGOs has been stronger on private or communally owned forests with little to no involvement on state forests. Implementation of sustainable management of woodlands is likely to be hampered by inadequate capacities at national, provincial and local government levels with little financial commitment to its development. Therefore, there is a need for capacity building to be incorporated into the policy process itself to establish an institutional framework for co-operative governance in the sustainable management of woodlands.

- Management Issues

Woodland management is closely related to both ownership and user-rights of the resource. Management of woodlands and forests is practiced by those to whom they belong or by those who have access to benefits from them. Generally, woodland ownership in South Africa can be classified as communal property, private property and government property. However, in practice woodlands in a given area generally come under a mosaic of ownership patterns, which inevitably confounds the responsibilities for overall management and results in conflicting ideas on resource usage.

A common belief in the past has been that rural people have been largely responsible for increased trends in deforestation globally and that these areas have been unsustainably managed. Contrary to this belief, indigenous peoples' dependence on woodland resources has resulted in a conservation ethic which has been built into their culture and traditions. Rural people value trees and woodlands very highly since they depend on them for their survival. As illustrated in the dissertation, examples of the needs that are met through the access to and utilization of woodlands include:

- wild foods like fruits, honey and mushrooms;
- fodder for livestock;
- fuelwood for cooking and other purposes; and
- traditional medicines to treat common ailments.

Successful and sustainable management of woodlands is of a major concern in South Africa given the critical importance of the resource in the maintenance of rural livelihoods. Therefore, management should incorporate a multi-stakeholder approach which begins to engage all sectors in the development process. This will improve relations across all levels of ownership and become a common denominator in sustainable forest management.

- Coordination Issues

The South African government makes repeated commitments toward ensuring co-ordinated approaches in all environment development processes. It calls for areas of complete competence and accountability and has embraced an ethic of co-operative governance. However, the policy structure in South Africa has led towards an arbitrary division in responsibility across a wide range of government departments and other agencies. This division in responsibility across the different sectors of government has revealed conflicts and overlaps in natural resource administration in South Africa. For example, the energy policy recognizes the need to reduce the amount of fuelwood

harvested for rural consumption, whilst the same policy calls for the production and management of woodlands for rural households. Clearly, coordination of natural resources is likely to be a major problem. There needs to be a holistic review of all policies and a clear picture of what is to be managed, by whom, and at what level in order to promote more efficient co-ordination both within and between government and other stakeholders in the future.

- Assessment, Monitoring and Research

Forestry research in South Africa has so far mainly focused on forestry production and utilization. However, there is a change towards more broader perspectives and this will require research efforts that address a wide range of forest functions including ecology, catchment management and socio-economic aspects. It is important that this research can be used for the development of guidelines for future forest management. The assessment and monitoring of forest activities is also constrained by a lack of relevant indicators, especially within the field of non-timber forest products.

4.4 ANALYSIS OF PRIMARY DATA

During the interviews, and participatory exercises with the respondents in the three villages, a number of important concerns were raised. This section focuses on the issues that are linked to the research objectives identified in chapter one. These include the issues of community perceptions regarding use of natural woodlands and woodland policy issues, roles of woodlands in rural areas and whether current policies are adequately addressing social, economic and political imperatives in African communal rural areas.

Table 4.3 Familiarity with policies regarding woodland usage (in %)

	PERCENT (n=100)
YES	19
NO	81
TOTAL	100

Table 4.3 illustrates that of the households interviewed in the study, 81% of the respondents were unaware of any laws, policies or legislation regarding the sustainable utilisation of natural woodland resources in their areas. This is believed to be indicative of many rural communities not only in KwaZulu-Natal but throughout South Africa. Only 19% of the respondents were aware of certain aspects regarding the laws and policies impacting on woodland usage. These aspects are highlighted in tables 4.4, 4.5 and 4.6 respectively.

Table 4.4 Awareness of aspects impacting on woodland usage

	PERCENT	FREQUENCY
Conservation of woodland Resources	52.00	13
Ancestral land, have rights to woodland resources	16.00	4
Need to use resources sustainably for future generations	24.00	6
None	8.00	2

Of the 19% of the respondents who indicated that they were aware of certain issues impacting on sustainable woodland usage, almost 52% of them highlighted that conservation of woodland resources was of underlying importance in most environment and development policies in effect presently.

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Another important aspect and one that is inextricably linked to rural communities is the rights to make use of ancestral land and the right to make use of woodland resources within these areas. Almost 16% of the respondents highlighted their awareness of this aspect with regard to woodland usage.

Almost 24% of the respondents indicated the need to use woodland resources more sustainably to ensure future generations have sufficient access to the resource. They also indicated that this issue is high up in most of the governments environmental policies and laws. It is important to note that a small percentage (8%) were not aware of specific aspects of the policies linked to woodlands.

Table 4.5 Aspects of positive community friendly policies and laws

	PERCENT	FREQUENCY (n=19)
Sharing of resources	22.73	5
Equal access to woodland resources	50.00	11
None	27.27	6

Table 4.5 highlights the aspects of policy documents which are believed to be community friendly policies and laws. 50% of the sample indicated that the most important aspect for developing positive community policies is the need to ensure that there is equitable access to woodland resources for every individual living in the community. This is a crucial aspect which needs to incorporated into all of the government’s developmental policies and plans. The rationale behind this is that if every member of a community is given equal rights over the woodlands, then the community can collectively plan the future of the resource to meet their own requirements presently, as well as the requirements for future generations to come. This aspect will definitely promote the long term sustainability of woodlands in South Africa.

Approximately 23% of the respondents highlighted that sharing of woodland resources is an aspect of policy which is believed to be community friendly. In theory the equitable sharing of woodland resources is featured in most of the national governments policies, for example, the NFAP has many strategic plans and enabling factors to promote community involvement by sharing natural forest products. However, in practice this proves to be a very difficult task to implement at the household and community level. Some of the major factors which contribute to this are the role of chiefs in the area, the lack of sufficient resources and also growing population pressures.

Almost 28% of the respondents who were aware of policies impacting on sustainable woodland usage indicated that there are currently no policies in South Africa which are community friendly. This was ascribed to the government’s lack of acknowledgement for more community-based policy development.

Table 4.6. Aspects of negative/ unfriendly community policies and laws: Multiple responses

	PERCENT	FREQUENCY (n=19)
Socio-Economic status determines resource usage and allocation	25.93	7
Exploitation of woodland resources by chiefs	29.63	8
Some individuals are dependant while others are not	7.41	2
Restrained from use of certain resources	14.81	4
Limitation of resources and no alternatives	22.22	6

Table 4.6 highlights the aspects which are believed to have a negative effect on communities. Twenty six percent of the respondents indicated that the socio-economic status of individuals within the community determines the allocation and access to woodlands. This is an important point considering that some environmental development policies currently in effect neglect to include socio-economic imperatives in their proposed plans. This maintains the status quo amongst rural communities by determining

the use and allocation of resources by social standing and economic status, thereby continuing to impoverish the poorest of the poor rather than improving their livelihoods.

Approximately 30% of the respondents highlighted that woodland resources are controlled, utilised and exploited by the chiefs in their areas. This aspect has stemmed from the contention arising around the role of the chieftancy and traditional authorities within rural communities in the South African context (Ntsebeza, 1999). The role of the chieftancy in providing communities with equal sharing opportunities of woodland resources needs to be examined. Local people reported feeling increasingly marginalized if they were not close relatives of the chief. This leads to the exploitation of woodland resources by a few, while for the majority, the effects are continued poverty and landlessness.

Other negative aspects highlighted by the respondents (7%) included restrictions on the use of certain woodlands and also some individuals being solely dependent on the woodlands for survival while others (who have other forms of income and livelihoods) were not completely dependent on the resource for their survival.

Lastly, 22% of the respondents indicated that there was severe limitations of woodland resources in their areas and more importantly these were not renewable on a short term basis. Furthermore, respondents were quick to highlight that although they were aware that certain resources were not renewable they have no alternate sources of ensuring their survival, and that they are solely dependent on the woodlands for their livelihoods.

Table 4.7 Devolution of information about policies impacting on woodlands

	PERCENT	FREQUENCY
YES	76.54	62
NO	23.46	19
TOTAL	100	81

Approximately 77% of the respondents indicated that they would like to be informed about the policies impacting on the sustainability of woodlands in their area. This is significant for rural communities as they need to be informed of the laws and policies impacting on the woodlands so that they can simultaneously empower themselves as well as improve their existing practices to promote more sustainable usage of woodland resources. Twenty three percent of the respondents indicated that they did not wish to be informed of policies and substantiated this response by suggesting that government’s policies and plans are highly politicised, and mostly subscribes to a “top-down” approach in development planning in their areas.

Table 4.8 Most effective mechanisms of communicating information on woodlands

	PERCENT	Frequency
Workshops	3.23	2
Meetings	96.77	60
TOTAL	100	62

Table 4.8 highlights the most effective mechanisms for communicating information on woodlands to rural communities. Ninety seven percent of the respondents were in favour of having meetings for the whole community, thereby communicating the rights of individuals and informing the community of more sustainable woodland usage and

practices. This was ascribed to the fact that in meetings, the forum for discussing issues was more open as with that of workshops. Only 3% of the respondents indicated that they would prefer to have workshops rather than meetings for communicating information to them.

Table 4.9 Participation of communities in workshops and meetings for sustainable woodland usage

	PECENTAGE	FREQUENCY
YES	69	69
NO	31	31
TOTAL	100	100

Table 4.9 highlights the willingness of communities to participate in meetings and workshops so that they could make inputs to government institutions and other organizations about sustainable woodland practices. Sixty nine percent of the respondents indicated that they would be pleased to the share their knowledge on natural woodlands with government agencies and were looking forward to communicating with the various stakeholders involved in the management of woodlands in their areas. Thirty one percent of the respondents were not willing to participate in either workshops or meetings and were sceptical of most of the government’s policies and plans for sustainable usage of woodlands.

Table 4.10 Community rights over woodland usage (%)

	FREQUENCY	PERCENT
Ownership (Title over land)	20	20
Usufruct (rights to use)	73	73
No rights	7	7
TOTAL	100	100

Table 4.10 indicated the existing rights communities believe to have over woodland resources in their areas. Twenty percent of the respondents indicated that they had ownership of the land they used and harvested woodland resources and products with ease. The majority of respondents in this category constituted the chiefs and their close relatives. The main ownership pattern for these areas was the possession of title deeds by the respondents. A large majority (73%) of the respondents indicated that they had the right to use woodlands by the virtue of living in the area. In most cases there was no formal or legally binding documentation for users of the resource in this group. This aspect can to some extent be linked to the question of land and land reform in South Africa. Land is the most important asset that a human being can possess in that social, cultural, economic and political clout and power can be determined by the status that ownership of land accords (Bob and Banoo, 2001). The communities are increasingly becoming marginalized because they do not own land themselves and in many cases there is restricted access to certain areas and woodland resources. The land reform aspect will need to be urgently addressed in South Africa. Rangan (1997) highlights, that communities who own land will have a vested interest in the long term sustainable usage of the resources on that land to not only ensure their survival but future generations to follow. Only 7% of the respondents indicated that they had no rights over woodlands in their areas. This was ascribed to the lack of equitable access and no sharing of woodlands in their areas.

Presented below are the problem ranking matrix tables for each of the three communities where problem ranking exercises were conducted.

Table 4.11: Problem Ranking Matrix: Problems associated with Woodlands – KwaNompondo

	AR	DR	H	DF	MP	HUP	DTC	TA	OSR	RC
AR	■	AR	AR	AR	AR	AR	AR	AR	AR	RC
DR	■	■	DR	DR	DR	HUP	DR	TA	DR	DR
H	■	■	■	H	MP	H	H	TA	H	H
DF	■	■	■	■	DF	HUP	DTC	TA	DF	RC
MP	■	■	■	■	■	HUP	DTC	TA	MP	MP
HUP	■	■	■	■	■	■	DTC	TA	MP	MP
DTC	■	■	■	■	■	■	■	TA	DTC	DTC
TA	■	■	■	■	■	■	■	■	TA	RC
OSR	■	■	■	■	■	■	■	■	■	RC
RC	■	■	■	■	■	■	■	■	■	■

Problems associated with woodlands	Scoring	Ranking
1. Accessing resources (AR)	8	1
2. Decreasing resources (DR)	6	3
3. Not allowed to harvest in certain areas (H)	5	4
4. Distances to far (DF)	2	9
5. Too many people use resources (MP)	3	8
6. Not allowed to use resources from Hluhluwe Umfolozi Park (HUP)	5	4
7. Deforestation by timber companies (DTC)	5	4
8. Traditional authorities monopolising resources (TA)	7	2
9. Outsiders stealing resources (OSR)	-	10
10. Resources are not being conserved (RC)	4	7

In the KwaNompondo community, the main problems associated with woodlands are accessing resources (ranked 1), traditional authorities monopolising resources (ranked 2) and decreasing resources (ranked 3). The following problems were equally ranked 4:

- Not being allowed to harvest in certain areas
- Not being allowed to use resources from Hluhluwe Umfolozi Park
- Deforestation by timber companies

Other problems identified included distances/ collection points being too far, too many people using the limited resources, resources are not being conserved and outsiders stealing woodland resources.

Table 4.12: Problem Ranking Matrix: Problems associated with Woodlands - KwaMsane

	IR	DA	LR	TR	PP	SD	RC	CN	PI	RSA
IR	■	IR	LR	IR	IR	IR	RC	IR	TR	RSA
DA	■	■	DA	DA	DA	DA	RC	DA	DA	DA
LR	■	■	■	LR	PP	LR	RC	CN	LR	LR
TR	■	■	■	■	PP	SD	RC	CN	PI	RSA
PP	■	■	■	■	■	PP	RC	CN	PP	PP
SD	■	■	■	■	■	■	RC	CN	PI	RSA
RC	■	■	■	■	■	■	■	RC	RC	RC
CN	■	■	■	■	■	■	■	■	PI	RSA
PI	■	■	■	■	■	■	■	■	■	RSA
RSA	■	■	■	■	■	■	■	■	■	■

Problems associated with woodlands	Scoring	Ranking
1. Insufficient resources (IR)	6	3
2. Decline in resource availability (DA)	7	2
3. Limited usage of resources (LR)	4	5
4. Traveling and transporting (TR)	-	10
5. Growing population pressure (PP)	1	8
6. Sometimes dangerous (SD)	1	8
7. Control of usage of resources by chiefs (RC)	9	1
8. Hluhluwe Umfolozi Park insensitive to community needs (CN)	4	5
9. Policies are not being implemented	3	7
10. Resources are scarce in communal areas (RSA)	5	4

In the KwaMsane community, the main problems associated with woodlands are control of the use of resources by chiefs (ranked 1), decline in resource availability (ranked 2) and insufficient resources (ranked 3). The scarcity of resources in communal areas was ranked 4. The following problems were equally ranked 5:

- Limited usage of resources
- Hluhluwe Umfolozi Park being insensitive to community needs

Other problems identified included policies not being effectively implemented, growing population pressures and sometimes the danger of being attacked when individuals go to harvest resources in woodland areas.

Table 4.13: Problem Ranking Matrix: Problems associated with Woodlands –

KwaMduku

	IR	DR	DU	H	TR	TA	HUP	ID	AE	PR
IR	■	DR	IR	IR	IR	IR	IR	IR	AE	PR
DR	■	■	DU	DR	TR	TA	DR	DR	DR	DR
DU	■	■	■	DU	DU	DU	HUP	ID	DU	DU
H	■	■	■	■	H	TA	HUP	ID	AE	H
TR	■	■	■	■	■	TA	HUP	ID	AE	H
TA	■	■	■	■	■	■	TA	ID	AE	TA
HUP	■	■	■	■	■	■	■	ID	AE	PR
ID	■	■	■	■	■	■	■	■	ID	ID
AE	■	■	■	■	■	■	■	■	■	AE
PR	■	■	■	■	■	■	■	■	■	■

Problems associated with woodlands	Scoring	Ranking
1. Insufficient resources (IR)	6	2
2. Decreasing resources (DR)	5	4
3. Limitations in daily usage of resources (DU)	5	4
4. Not allowed to harvest in certain areas (H)	2	9
5. Transporting resources (TR)	1	10
6. Control of usage of resources by traditional authorities (TA)	5	4
7. Hluhluwe Umfolozi Park insensitive to community needs (HUP)	3	7
8. Increased demand for resources (ID)	7	1
9. Resources are not allocated equally (AE)	6	2
10. Need to pay at times to use resources (PR)	3	7

In the KwaMduku community, the main problems associated with woodlands are increased demand for resources (ranked 1), insufficient resources and resources not being allocated equally (ranked 2). The following problems were equally ranked 4:

- Decreasing resources
- Limitations on daily usage of resources
- Control of usage of resources by traditional authorities

Furthermore, the need to sometimes pay for resources and the Hluhluwe Umfolozi Park being insensitive to community needs were ranked 7. Other problems identified included the restriction on harvesting in certain areas and the transportation of resources within the community.

The ranking exercises reinforce the findings in the questionnaire survey that show that the main problems experienced in the households and community in relation to woodlands primarily centre around issues of use, access and control. There was consensus in all the focus groups that the woodland resources are limited and many agreed that resources are diminishing. Furthermore, limited access was highlighted as a problem. In this regard, traditional authorities and the Hluhluwe Umfolozi Park were regarded as key institutions that controlled and monopolised access to the woodland resources, often disadvantaging the community and households. The timber company was also cited in one focus group.

4.5 CONCLUDING REMARKS

This research illustrates that the policy imperatives impacting on the woodlands at the community and household levels cannot be neglected or ignored. This is particularly acute in rural areas in KwaZulu-Natal where high levels of poverty persist and natural resources like woodlands are limited. Both the primary and secondary data analysed in this chapter raise concerns about the sustainability of woodlands in poor rural areas. The implications of this on the quality of life in these communities are indeed a cause for concern. Key issues raised in the research include:

- whether the strategies and policies that are used in general but especially for the poorest of the poor are appropriate and consistent;
- the lack of understanding among the respondents about the role and functioning of woodlands in their areas;
- limited, inconsistent and ineffective participation of individuals (especially women) in woodland usage and community decision-making processes; and
- land resources (agricultural land, fuelwood, water, wild foods, medicinal plants, craft materials, etc.) are critical for rural communities and households generally, despite the fact that ownership arrangements often restrict the communities access and control of these vital resources.

Additionally, this chapter illustrates that there are a range of policies, both nationally and internationally, that impact on the sustainability of natural woodlands in African communal areas in South Africa. The critique of existing policies indicate serious gaps. Some of these include the lack of definitional clarity about the woodlands, inability to identify existing as well as potential users of the woodlands, inability to develop policy frameworks that will ensure the monitoring and evaluation of the impacts of the policy more generally, the lack of focus on local capacity building, inability to outline a research agenda that will feed into the monitoring systems and the inability to integrate conservation imperatives relating to woodland use within the policy frameworks.

The key aspect of concern raised repeatedly in the analysis and reinforced by studies cited in the literature review chapter is that of implementation. Many of the policies articulate laudable intentions. However, generally there is much difficulty in translating these policies into practice on the ground. Some of the factors that impede implementation include:

- funding constraints
- lack of political will

- weak and ineffectual information dissemination strategies, especially to key stakeholders such as poor rural communities and industries whose activities have a direct impact on the woodland resource base
- lack of human resources and appropriate training of government personnel, NGOs, conservation agencies, etc.

Finally, lessons from other Southern African countries are useful in suggesting programmes and policies that can promote the sustainability of the use of woodland resources. Additionally, some of the mistakes made in other countries need to be used as signposts in the South African context. From the review of policies and research in the context of the other Southern African countries, the following emerge as key issues that need to be underscored:

- The land reformation process will impact greatly on the natural resource base. It is therefore imperative that land reform, especially land redistribution, incorporate natural resource sustainability imperatives. In fact, the effective and faster pace of land redistribution could release the pressure on woodland resources if land reform can contribute towards improving the quality of life of the rural poor, alleviating poverty and reducing the dependence on natural resources, including woodland resources. Thus, the link between sustainable woodland use and rural development is central.
- Inter-sectoral (government, NGOs, private sector, educational institutions, etc.) and inter-governmental cooperation and policy synergy is critically important. Lack of clarity and confusion about roles often leads to contradiction, confusion and inaction.
- The focus on community level empowerment and awareness is of primary importance as key resource managers and users are located at this level. When sustainable practices pertaining to woodland use are internalised by users and are not viewed as a threat to livelihoods and other social and economic benefits linked to woodland use, then only will real and long-lasting change in practices occur on the ground. An important focus on community and household dynamics

is the centralisation of local and indigenous knowledge pertaining to woodland use and management. Also, gender aspects need to be incorporated.

- Co-management, sharing of woodland benefits and partnerships emerging are important institutional aspects that need be seriously considered in the South African context.
- There is recognition that research is of paramount importance in understanding woodland resources, use patterns, management concerns as well as conflicts. Research is important for monitoring and evaluation purposes as well as reviewing policies.

CHAPTER FIVE

CONCLUSION

This section aims to sum up the issues raised in this dissertation and to examine the ways in which policy and policy processes can be improved. To start with, a short exercise in qualitative scenario development is needed. The key question here is in what direction is the current web of policies and institutional mechanisms going. Also, it is important to address whether South Africa is moving towards or away from our vision of sustainable forest management which is integrated with other land uses, focuses on equitable rural development, and ensures that forest resources are secured for future generations. This can be done by focusing on the likely changes in woodland cover and condition, changes in livelihoods linked to woodland resources and the trends in policy and legislation affecting woodlands and people in the next five to ten years.

5.1 IF BUSINESS AS USUAL CONTINUES WHAT CHANGES FOR WOODLANDS AND RURAL PEOPLE ?

5.1.1 Likely changes in woodland cover and condition

A general decline in woodland cover can be anticipated in South Africa at a national level in the next decade. In communal areas, it is expected that woodland cover will continue to decline due to needs of increasing human and animal populations. Close to one quarter of the total population of South Africa live in communal lands which are located in the regions with the lowest agriculturally productive potential. Where land is available forests will be cleared for food production. Cultivation may occur on mountain and hills slopes and other ecologically fragile terrain, thereby putting much pressure on existing woodland ecosystems.

With the conversion of woodlands to agricultural landscapes, productivity changes in woody biomass and forest products will depend on the relative degree of motivation for

local institutions and individual practices in woodland resource management. It is anticipated that some increases in cover from afforestation programmes and plantation grower schemes may be realized as direct woodland values increase in those communal areas which have already been deforested. Where communities derive incomes from woodland based activities, such as eco-tourism ventures, it is expected that both forest cover and the overall resource base will be maintained or even enhanced.

In resettlement areas woodland cover is expected to decline due to opening up of new land for agricultural purposes and heavy cutting for construction materials, fencing, etc. However, if sufficient support is given to institutions in resettlement areas, and local participation in land use plans allows them to become vehicles for communities to exercise effective responsibility and control over woodland resources, it may be possible to strike a balance between woodland cover, agricultural production and the satisfaction of woodland resource needs. The demands of surrounding communal areas will also need to be dealt with. Hence, various forms of formal and informal resource sharing mechanisms between resettlement areas and communal areas will need to be arranged. If this is not done, the situation may progressively deteriorate as resettlement areas with woodland resources are regarded as “fair game” by neighbouring communal area inhabitants.

Woodland cover is expected to decrease in small-scale commercial farm areas, since small-scale commercial farmers are generally resource poor. With the increase in prices of agricultural inputs, and poor access to credit and marketing facilities, these farmers can only increase yields through expansion of land under cultivation. A counter argument may be valid in some circumstances, that the resource poor farmers will not be able to afford to cultivate large tracts of land using draught power. Hence, the area under cultivation may remain stable in such circumstances. However, populations in small-scale commercial areas are growing and farms are being increasingly subdivided between descendants which may also lead to land clearing. In addition, the need to supplement agricultural income is realized partly through the sale of fuelwood to neighbouring communal area inhabitants.

5.1.2 Likely changes in livelihoods linked to woodland resources

It is expected that, in the short to medium term at least, the general welfare of the inhabitants of communal areas and resettlement areas and the workers in large-scale commercial farming areas and urban areas will decline. The arguments for the current state of affairs can be linked to economic adjustments, increases in population, urban-rural migrations due to lay-offs, high rates of inflation, removal of subsidies, lack of access to credit, high costs of agricultural inputs and lack of sufficient infrastructural development.

In South Africa there are increasing levels of poverty within rural communities which are leading to a greater reliance on natural resources. The bottom line is that as the numbers of people dependent of woodland resources increase, there will be more land clearing to meet survival requirements. In addition, in the absence of alternatives, the resource will become an important source of income through sale of fuelwood, crafts and other woodland products.

5.1.3 Trends in policy and legislation affecting woodlands

Land redistribution has been used to some extent as a political bargaining chip with the rural population in South Africa. When elections are imminent, some commercial farm areas are bought and redistributed. After that, redistribution activity subsides (De Klerk, 1991).

Without land redistribution some woodlands may remain intact, but the livelihoods of rural people around South Africa is likely to deteriorate. The government's policies may respond with subsidies to improve health, housing and educational facilities to address these problems but that would entail increasing government expenditure.

With comprehensive land redistribution, if settlement is not accompanied by support services and effective incentives for conservation, there is likely to be widespread stripping of woodlands as has happened in current resettlement areas in South Africa. However, this might stabilize in the longer term if livelihoods improve through increased agricultural productivity and do not rely heavily on mining the forest asset base.

Policy and legislation on woodlands is at present both restrictive and contradictory. Apart from the overlaps and interpretative differences, policy and legislation remain equivocal about the rights of communities to control the utilisation of woodland products and services. The reliance on restrictive legislation has meant that governance arrangements, particularly in communal areas are unable to deal with matters of sustainable resource use. Local authorities, which are charged with many responsibilities are inadequately financed and tend to rely on the services of central governments sectoral agencies which normally have varying agendas and this further exacerbates overlap and contradictions at the local level.

5.2 Key indicators to make policies and processes work – The way forward

It is tempting to argue that if policy processes are working then the content of policy will take care of itself. However, whilst much can be achieved by taking steps towards better policy processes, there will remain many aspects of policy content which will need to be addressed. Moreover, it is difficult to wait for a perfect process. Therefore, key indicators about policies that work are important to enhance and improve rural livelihoods in South Africa.

➤ Improve formal policy-making processes

There must be a need to share information and promote stakeholder involvement in all policy review processes in South Africa. In all policy processes the need to incorporate local knowledge systems in policy development is often recognized, but rarely practiced through mechanisms which actually allow local representation.

➤ Networking and strategic inter-sectoral collaboration

National government will need to improve on network building and development of inter-linkages across all agencies. These include international agencies, NGOs , the private sector and community-based institutions. Such networks are intended to improve information flow, avoid duplication, make efficient use of resources, enhance effectiveness and avoid contradictory approaches.

➤ Increasing capacity for control of natural resources

The wide range of existing forest and woodland management practices at local level will need to be recognized. Government agencies will need to begin working more closely to support these practices. Development programmes will need to foster training in ecological and social survey methods so that information can be used in local planning activities and for community-level monitoring and evaluation.

➤ Improve gender equality in all policy processes

There is an urgent need to improve on gender equality in access to land and distribution of resources like the woodlands in the South African context. In communal areas, there are more female-headed households than there are male-headed ones. Women are often the land managers and natural resource custodians in their communities. In general , the issues of women's access to land in their own right, access to credit and involvement of women in community decision making have yet to be seriously tackled in South African policies. It is time for a major push for this at all policy levels of governance.

➤ Focus on sharing of natural woodland benefits

Sharing of woodland resources between inhabitants in different land tenure categories, particularly in those areas sharing a border with communal lands will need to be closely looked at in South Africa. This will provide a viable way to address resource shortages,

share management responsibilities and build trust between different landholders. Government will also need to track international agreements to direct resources flowing from them to areas where resources are needed most.

5.3 RECOMMENDATIONS

It would be difficult to argue that South Africa is close to pursuing a sustainable development path for its woodlands. There is still a large majority of rural people forced to remain on inadequate land and they are directly dependent on the woodland resource base. Understandably, the negative consequences on the natural environment continue unabated. Based on the above identified key issues, it is recommended that the way forward for South Africa will be a need to address the following broad agendas. They are presented in four agendas, one for each of the main sectors or cross-sectoral groups who should lead in taking them forward.

5.3.1 Central government agenda

- Steer increased decentralisation of key industries

Rural development can be effectively promoted through the integration of rural communities in the market system. This will promote options for rural communities to engage in productive activities outside the agriculture and forest sectors. What appears to be needed is comprehensive programme of industrialisation or rural economies with deliberate efforts in creating employment through decentralisation of formal industries to rural growth points and service centres. Care needs to be taken to ensure that new industries are not geared towards exploitation of natural resources.

- Promote interim legislation and amendments pending comprehensive policy improvement

While there is a need for resolute action to stem land hunger and environmental degradation, the complexity of land and woodland issues also requires debate and consultation with stakeholder groups which would help bring about more democratic policy reform. One solution is to promote interim legislation while pending more holistic policy changes, which will prevent land speculation amongst rural communities and curb excessive concentration of woodland resources in certain areas.

- Legislate for devolved, participatory natural resource management

Current legislation is inadequate for the development of local level woodland management capabilities. Revised legislation must consider the need to:

- ensure the development of an accountable and participatory planning process;
- legislate on the principles of local proprietorship;
- abandon restrictive rules and regulations which undermine local resource use potential;
- develop flexible guidelines for management, based on technically sound information; and
- provide incentives which favour the sustainable use of resources which do not require excessive policing and regulation.

A mechanism is needed to vest proprietorship for natural resources (ownership, management, control and benefits) into one group at the local level, and to decentralise control away provincial councils. Local level resource use and management institutions must be given legal recognition. A legal mechanism should evolve to channel financial incentives for improving the management of local environments to local institutions vested with this responsibility.

5.3.2 Forest sector agencies agenda

- Commit to opening up current and future policy consultations

We have already begun to see the creation of multi-stakeholder approaches involving government agencies, NGOs, the private sector and international organisations. Therefore, government's commitment to creating conditions for joint "ownership" of policy development processes with other stakeholders would allow these stakeholders to invest their skills, insights and resources in the knowledge that such contributions will be valued and incorporated.

- Develop better information systems pertaining to natural woodland assets, values and use

Government plans will need to develop an inventory of natural resources in each region in South Africa. An inventory of resources and their condition, preferably carried out by stakeholders who are in position to manage these resources (national and provincial governance institutions, line agencies and local institutions), could provide the basis for natural resource accounting and systems for monitoring woodland resource supply, demand and use.

- Support adaptive research on negotiating processes, policy instruments and prediction of policy impacts

Research is needed on how the value of woodland products can be captured in local and national planning. Another key research need is on the siviculture of indigenous woodlands. Capacity for cross-sectoral policy analysis, particularly for consultative processes, choice of policy instruments and tools for predicting policy impacts, should be built upon at local and central government levels.

- Allow some State land in reserves to be used for resettlement

The major reason why the land reform program has been very slow to date is the government's lack of finance to purchase land for redistribution. Yet government holds onto a lot of State land, including State forests where conflicts with rural populations are common. Particular efforts could be made in certain areas to foster institutions and consider agricultural and forestry options which maintain the status of woodland resources.

5.3.3 Land and agricultural agencies agenda

- Develop participatory working methods amongst land and resource agencies

Government agencies need to sensitise and train their personnel, especially those with responsibilities for land use planning, in participatory methodologies and conflict resolution skills. In turn, such personnel may then encourage genuine community contributions to planning and management of woodland resources.

- Incorporate consideration of natural resources in redistributed areas

Redistribution planning and management efforts need to be fused with consideration for natural resources. The local governance structures should contribute to generating the know-how and enthusiasm amongst rural populations in redistributed land.

- Fully assess the scope for land and water tax

A land tax should not be introduced simply as a punitive measure against commercial farmers. Careful design is required such that it becomes an effective policy instrument for limiting land concentration, under-utilisation and speculation. A water tax offers another potential instrument for creating and an additional market supply for land, since the productivity of large estates is heavily dependent on the exploitation of irrigation water.

5.3.4 Multi-sectoral agenda

- Promote accountability through enabling civil society initiatives

NGOs and other civil society organisations can perform stronger roles as watchdogs to ensure that government is challenged to deliver its commitments. Strategies to increase public awareness of the issues and direct lobbying of government might make for quicker follow through. Government could strengthen the legitimacy of policy reforms by supporting the creation of a representative non-governmental body to deal with all major issues impacting on the environment.

- Install processes within and between stakeholder groups on land and natural resource management issues.

The variance in opinions and the resulting conflict in natural resource management may simply be because stakeholders have not had the forum and the time to explore issues in an open manner.

- Support capacity of local institutions to deal with others and manage resources

Local institutions will require support, particularly for their ability to make binding agreements and to ensure their rights to manage and realise returns from natural resources. Development of business analysis and marketing skills is key at community level so that local groups can optimise the value of their resources

- Increase investment in infrastructure, extension and marketing

Market liberalisation, budget cuts, removal of subsidies, privatisation and reduction in the civil service has resulted in many worker retrenchments and an increase in the population dependent on natural resources. Government should create conditions which can lead to

an increase in investment in all the sectors by way of infrastructure, research, extension and marketing services.

Moreover, the sustainable use and management of the woodlands in South Africa will need to take the following critical issues into consideration for rural development planning in the country. Firstly, there is need for increased cross-sectoral collaboration on issues concerning woodland management, including improved collaboration between the State and other stakeholders in joint ventures and smart partnerships for natural resource management. Secondly, increased levels of understanding of the resource, combined with practical experiences in working with multiple perspectives in forest management, especially incorporating the issues of sustainability and conservation is needed. Thirdly, capacities need to be developed in forestry departments and other relevant agencies in the field of community forestry so as to involve local communities in management of forests and woodlands.

Based on the above recommendations the following is an overall proposed strategy for achieving sustainable forest management and promoting sustainability of woodlands in South Africa. It has been synthesized into five broad headings and are as follows:

➤ International treaties and conventions:

- Preparations and undertaking of regional workshops and studies (for example, on financial mechanisms) which directly deal with international negotiations relevant to forestry and woodlands
- Management of all forest types which are designated and protected with specific reference from international conventions like CBD and CITES.

➤ Policy and legislation:

- Assistance needs to be provided for the legal as well as practical implementation of the national agricultural and forest policies with particular emphasis placed on aspects of biodiversity, ecology as well as economic and social development.

➤ Integrated Management:

- An integrated approach will require enhanced and institutionalized inter-sectoral co-operation and co-ordination between DWAF and other departments like agriculture, land affairs and minerals and energy.
- Training needs to be provided to facilitate integrated management. Training should be targeted at government extension agencies who should recognize the wide range of existing woodland management practices at local level and begin to work more closely with communities to support these practices.

➤ Local participation and awareness:

- Enhance awareness of the communities and key audiences, such as policy-makers and planners, of the needs and mechanisms for developing capacities at household levels, as policy outcomes will generally be more positive when those who are to implement them and those who are to be affected by them contribute to their development and implementation.
- Foster stronger NGO and government partnerships. NGOs can play an important role in communities in that they are directly involved with them, and they are also pivotal role players in bridging the gap between higher level administrators and local people.
- Identify what mechanisms need to set in place to create enabling conditions for communities and commercial land owners to sustainably manage their woodlands.
- Encourage commercial land owners to engage in joint management partnerships with surrounding communities. As an example, land owners with bush encroachment or invasive alien plant problems could have a partnership with surrounding communities, where the communities come in and cut the encroaching shrubs and in return the farmer transports the wood to where they need it or helps finance a charcoal kiln and facilitates the marketing of the charcoal.

➤ Assessment, monitoring and research:

- Further development of criteria and indicators which highlight the multiple uses of forests and which can be used in future woodland management schemes.
- Maintaining and developing relevant updated databases so as to build sufficient and coherent inventories and all woodland related issues.

5.4 Special Issues

The Land reform programme will require special attention in South Africa. Thus far, the slow progress of the programme and the inability of the state to deliver on its promises of land has resulted in many claimants losing faith in the process and are now viewing land invasion as the only option available to get government's attention.

Unless steps are taken to follow through on the land reform process the condition of the people and the natural resource base will continue to deteriorate. There is urgent need for a much more comprehensive land redistribution programme. Government needs to provide continued financial assistance to buy land. However, in the absence of adequate funds the State will then have to devise creative and innovative ideas of persuading large-scale commercial farmers to give up land. One way of doing this may be the introduction of an agricultural land tax which can be solely directed towards buying of land. Attention should also be given to determine if the land will be able to ensure productive livelihoods with sustainable resource use.

Another special issue which needs to be noted is that of the fire regimes and fire policies in South Africa. Previous national fire policies, driven predominantly through the agricultural and forestry sectors, have modified that natural fire regime of woodlands. This has encouraged bush encroachment over large areas of the country. With the woodland biome now included in the current forest policy, future policy developments will need to rethink the role of fire as a positive tool in woodland management.

The above recommendations are by no means a finite plan of action which will effectively deal with all the complex issues surrounding woodland resources in South Africa. A process of expanding and networking these suggestions with an aim to stimulate future debate around woodland resource use is still required.

5.5 CONCLUDING REMARKS

When the new government came into power in 1994 it was faced with a number of problems from the apartheid era, including an ineffective environmental management system. South Africa has since embarked on developing an array of environmental policies and processes to reflect the new dominant democratic culture.

The country may have been over-ambitious in development of its numerous policies. There are still gaps and overlaps which can be identified in the policies. For example the policy for land use and development is conflictual. The Development Facilitation Act - Act 67 of 1995, which was formulated from this policy aims to promote land development whilst it has also adopted regulations for EIAs to be carried out to determine the impacts of development. Furthermore, the future of land tenure around South Africa is still unknown. There are approximately 55 000 claims which have not been resolved yet, the impact this will have on the natural resource base will be determined by the proceedings and protocols on the rate of delivery of the land claims commission and it would be difficult to predict the land use options which will dominate on these redistributed lands.

The woodlands are an important natural resource in South Africa. They are home to our rich biodiversity as well as many rural communities who are directly dependent on them for their survival. The sustainable management of woodlands requires urgent attention as the resource is currently under threat from over-utilization. There is need for future policy developments to make forests and people mutually supportive. This can be achieved through improved co-ordination and orchestration across all levels of governance with increased levels of capacity building combined with the practical involvement of all

relevant stakeholders involved in the forestry sector. The combined efforts of individuals and communities, together with a holistic approach towards sustainable management of woodlands will result in a strong move towards claiming back desertified land, reducing losses in biodiversity as well as promoting an economically, environmentally and socially sound forestry sector now and in the future.

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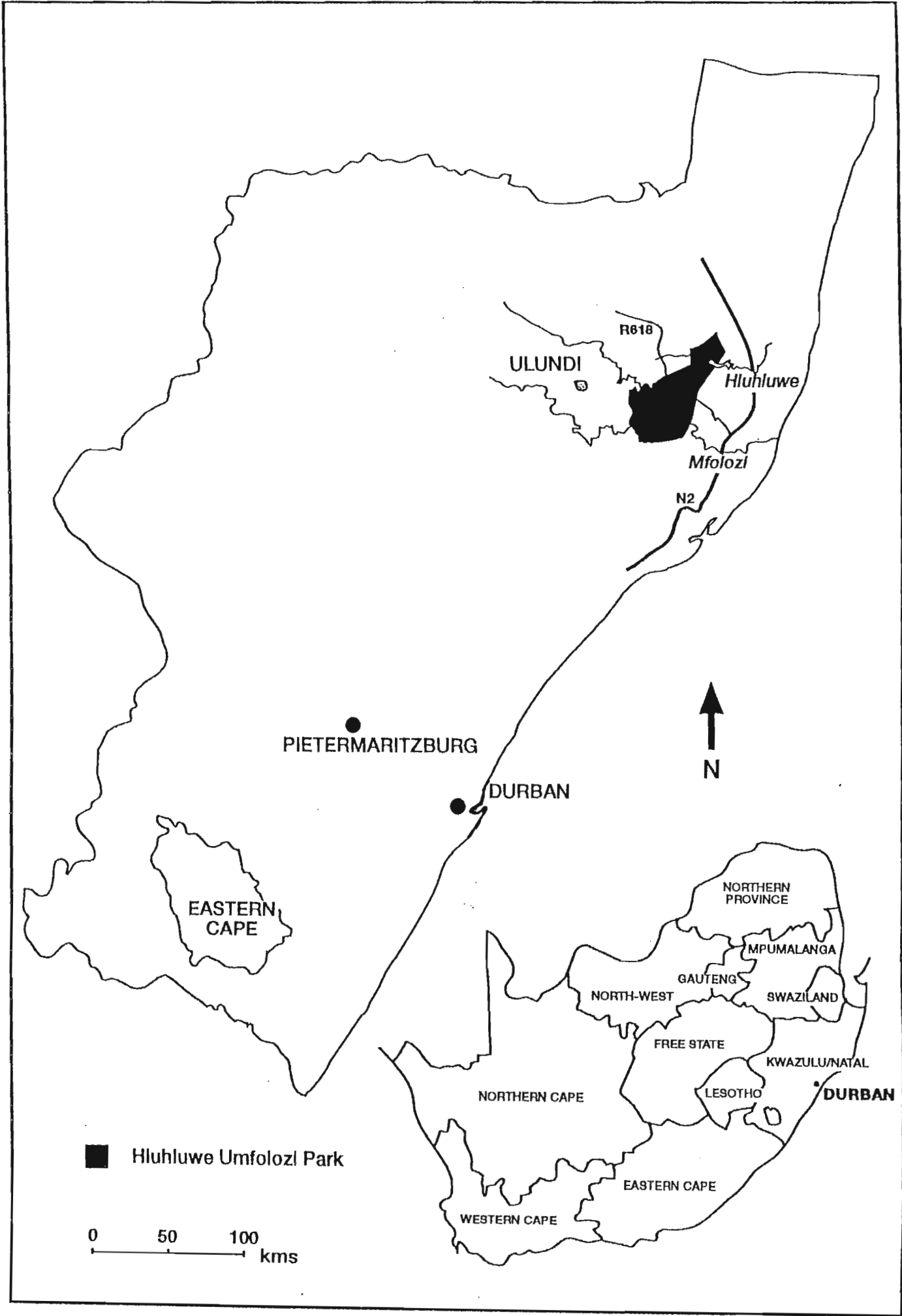
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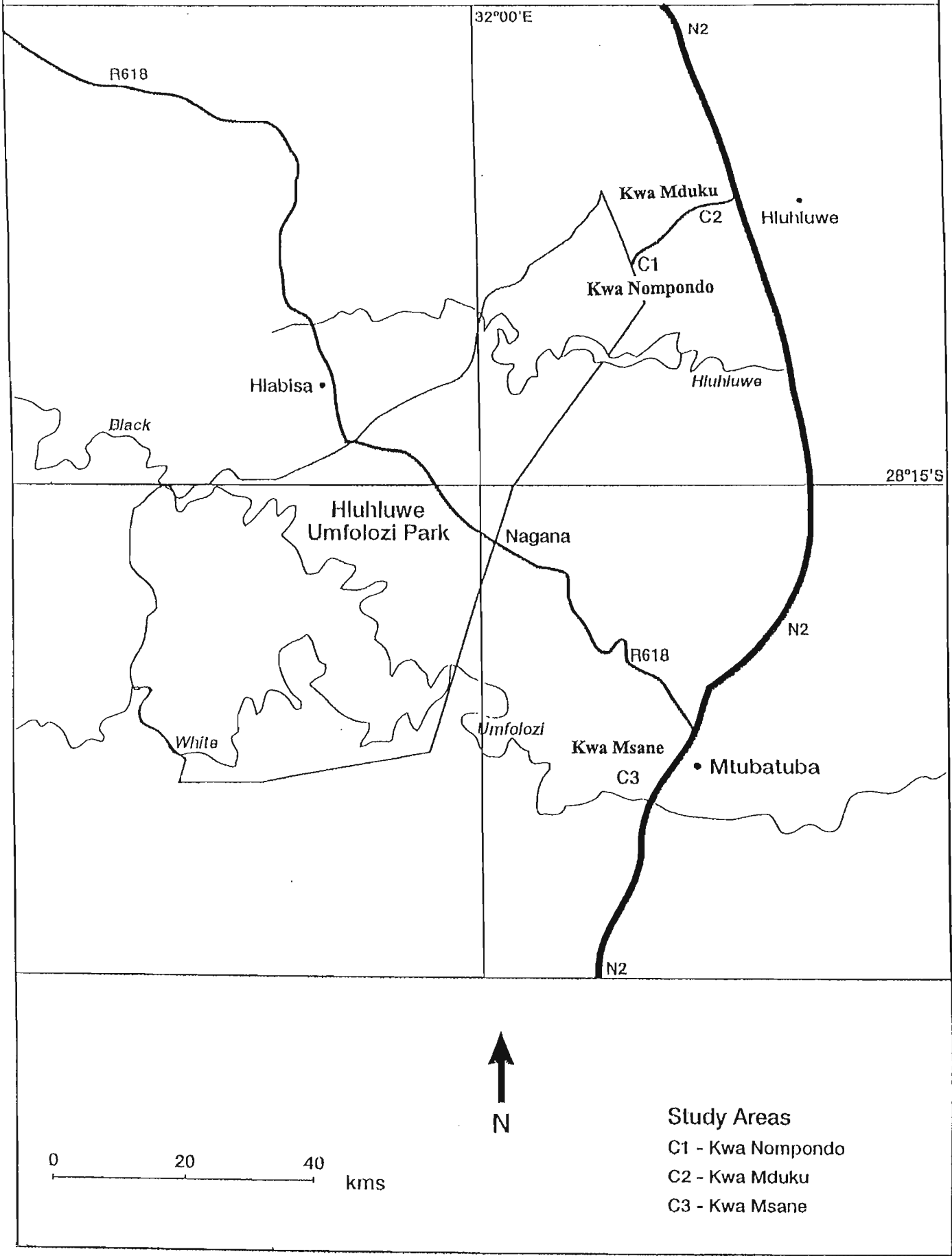
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APPENDIX B – LOCATION OF THE THREE STUDY AREAS



APPENDIX C – QUESTIONNAIRE

ADDITIONAL QUESTIONS: WOODLANDS SURVEY

1. Are you familiar with the laws /policies regarding the use of woodland resources in South Africa ?

Yes	No
-----	----

2. If **YES**,

2.1. What aspects are you aware of?

2.2. What aspects of the laws/ policies do you think are community friendly?

2.3. What aspects do you think are not community friendly?

3. If **NO**,

3.1. Would you like to be informed about the laws/policies regarding woodlands in South Africa?

YES	NO
-----	----

3.2. If yes, what are the best ways to communicate information to you?

Workshops	
Pamphlets/posters/booklets	
Meetings	
Other (specify)	

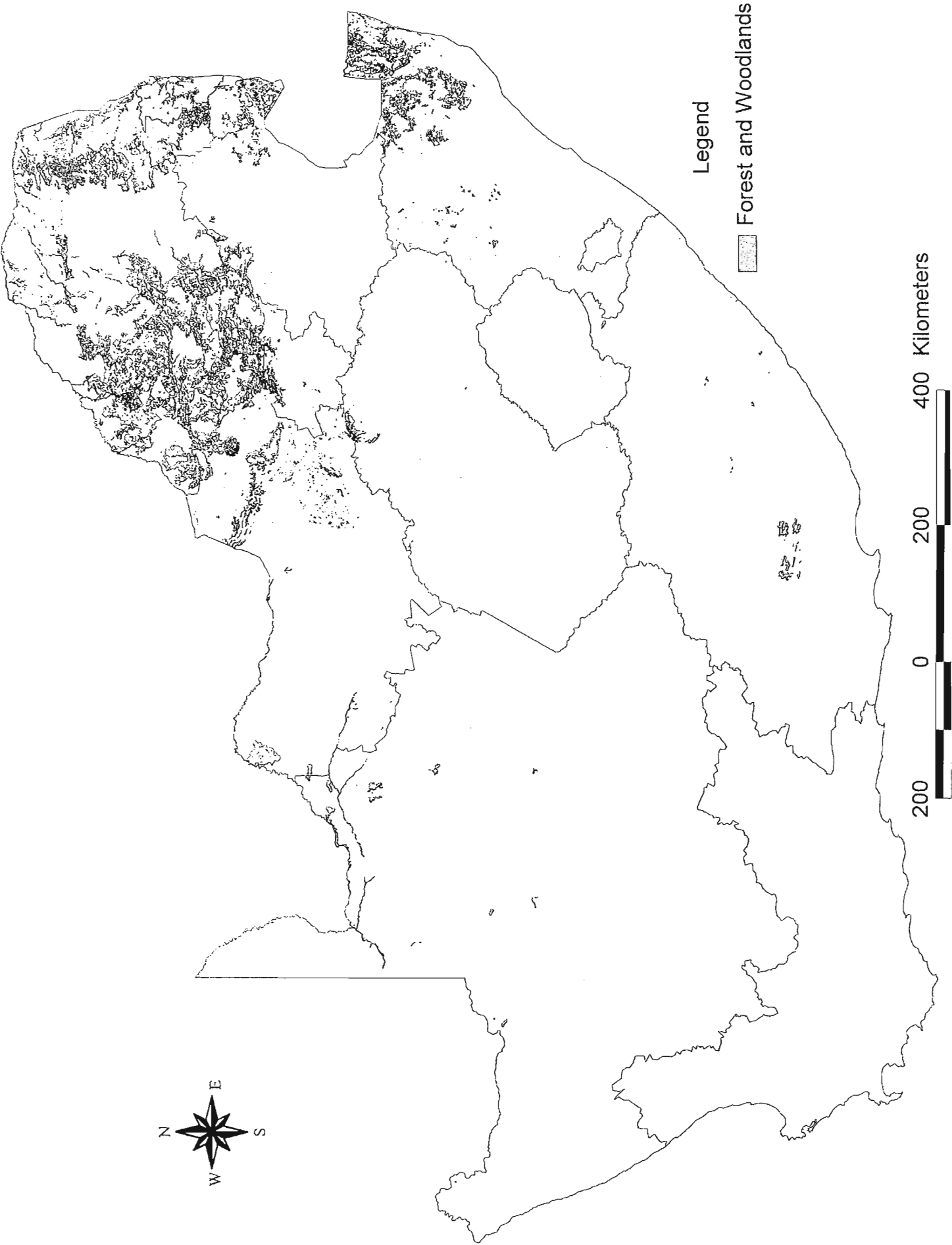
4. Would you participate in workshops/ meetings held so that local communities can make inputs to government about woodlands?

YES	NO
-----	----

5. What rights do you have to the woodland resource you use?

Ownership (title over land)	
Usufruct (rights to use)	
No rights	

6. What problems do you experience in terms of using woodland resources generally in your area?



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