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People and parks: implications for sustainable development in the Thukela biosphere reserve, KwaZulu /Natal

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Preface

The increasing destruction of the world's natural resources and the steady loss of biodiversity has prompted conservationists to seek new and more innovative ways of conserving natural resources It is not only the loss of biodiversity which is of concern, however but also the hardship which this loss inflicts on the lives of the rural poor So often in the past the people who most depended on natural resources for their survival were excluded from these same natural resources by the construction of protected areas"

In recognition of these facts the research for this dissertation was motivated by the following concerns

- the need to create a more equitable distribution of land and natural resources in South Africa
- the need to promote the conservation of biodiversity within South Africa and to prevent the extinction of certain plant and animal life.
- the need to create opportunities for the upliftment of the many rural residents whose lives are centred around the desperate struggle for existence on a vastly depleted resource base
- the necessity of creating a land use situation which will prove to be more equitable than that of the past but which at the same time will ensure that natural resources are not degraded and depleted to such an extent that future generations will suffer their loss

The recognition that the conservation of biodiversity entails not only an assessment of ecological impacts but also of economic cultural and social impacts requires a research approach which moves away from traditional "scientific" approaches This study therefore employed a more holistic, integrated and participative research approach

The research has been made possible by a number of organizations who provided both financial and logistical support and to whom thanks are due

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Abstract

South Africa has recently begun a number of conservation initiatives which link conservation with the development of people This follows a worldwide trend in which it is acknowledged that conservation cannot be undertaken without the participation of local communities who are most affected by the establishment of protected areas The Thukela Biosphere Reserve in KwaZulu/Natal South Africa is such an initiative This research provides an assessment of the potential of the TBR to successfully introduce a sustainable land use strategy in the region This assessment is achieved through an investigation of the historical situation as well as local communities perceptions and attitudes toward the TBR and environmental degradation These attitudes are compared to a more scientific analysis of land degradation The research made use of participatory methodologies to assess these perceptions Findings indicate that local African communities are intensely aware of environmental degradation in the TBR A number of factors, however, prevent them from accepting the TBR as an effective land use option These include oppressive historical policies leading to inequitable distribution of land and natural resources as well as political and cultural factors The findings of this study indicate that the TBR should be regarded as a positive contribution to new and sustainable forms of land use in South Africa however its success depends on effective mechanisms which will encourage the participation and co-operation of local communities

Declaration

I declare that this thesis is my own unaided work. It is being submitted for the degree of Master of Science in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other university

(signature of candidate)

_____ day of _____ 1997

PEOPLE AND PARKS: IMPLICATIONS FOR SUSTAINABLE DEVELOPMENT IN THE THUKELA BIOSPHERE RESERVE, KWAZULU/NATAL

by

Thérèse Anne Brinkcate

A dissertation submitted to the faculty of Science, University of the Witwatersrand, in fulfilment of the requirements for the degree of Master of Science

Johannesburg 1997

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studies on people-parks problems throughout South Africa have been completed by numerous writers (CORD, 1991, Ramphele, 1991, Fourie, 1994, Grossman and Liebenberg, 1994, Koch, 1994, Loader, 1994, Venter *et al*., 1994, Meintjes, 1995, Wells, 1996)

An important study was completed in the Hluhluwe/Umfolozi Corridor Complex game reserve where the attitudes of rural community in Natal toward the Complex were ascertained by means of a set questionnaire and cross-tabulating with various demographic variables (Infield, 1988). The study concluded that while most households were in favour of the concept of conservation they were not at all in favour of the the conservation area and its managers.

It is clear therefore that while generalized literature and theoretical concepts exist, there is a paucity of detailed case studies and policy frameworks for people and parks problems within South Africa. The validity of this study lies in its attempt to redress the gap in the literature and to provide a greater understanding of the problems involving the conservation of natural resources from the perspective of the local communities. Chapter 2 of this dissertation will provide an overview of the various analytical frameworks which have been used to understand the interactions between local communities and conservation initiatives and which inform the current study, while chapter 3 describes the participatory methodologies used to gain community perspectives. The level of environmental degradation is assessed through an outline of the physical characteristics of the region from a scientific perspective in chapter 4. This overview of the scientific perspective forms a context from which to evaluate the results of participatory investigations into local people's perceptions of land degradation which are presented in chapter 5.

whose benefit and at whose cost over what area and measured by what criteria Answering these questions is difficult as it means assessing and trading off beliefs (Pretty 1995) The undecidability theorem proved by the logician Alan Turing becomes relevant here this theorem argues that no matter how clever we think we are there will always be algorithms (sets of rules) that do things we cannot predict in advance and often the only way in which we are able to really find out what will happen is to run them (in Waldrop 1992) Thus it becomes impossible to provide a perfect "scientific" model for people/parks initiatives - we have to let them run to see if they are successful Similiarly arguments for new "sustainable development" initiatives can only really be thoroughly tested once they have been implemented This implies that we may only see if the TBR is a truly sustainable land use option once it has been operating for some time The worldwide move toward Integrated Conservation and Development Projects (ICDPs) has been lauded as the most effective means of fulfilling the objectives of sustainable development and biodiversity conservation (Wells *et al* 1992) Despite the relative newness of many ICDPs, however they have already been criticized from a number of sources who claim that they these ICDPs often fail in their goals of socio-economic development and biodiversity conservation (Ghimire 1991 Barrett and Arcese 1995, Gibson and Marks 1995) These criticisms of ICDP projects (which include Biosphere Reserves) are of immediate concern within South Africa since such projects are being uncritically promoted and implemented within the country There is therefore a need to complete critical investigations of these projects within South Africa and to assess how relevant and practical such programmes are for conservation and development in the subcontinent

Close and critical analyses of these projects in the South African situation are relatively scarce as limited work has been completed which looks at particular case studies between people and reserves in South Africa The studies which have been undertaken include documentation of community struggles to obtain equal participation in the management of the Richtersveld National Park in the northern Cape (Fig and Archer 1993) More general

as well as opportunities for the economic improvement of poor rural dwellers The TBR promises to provide just such a land use option but as this research will show it is not always perceived as such by the local communities most dependent on its resources

Assessments of what is sustainable and what is not are inevitably socially constructed Among the critical issues therefore that need to be explored in the context of this study are

1. **Where does the balance of responsibility and power lie in managing the local environment?**
2. **What interests does the rural population have in intergenerational equity?** In other words what are the perceptions of the rural poor toward environmental sustainability?

Equitable access to resources and the satisfaction of basic needs are therefore central to realising the goal of sustainable development In seeking to integrate the use of resources to meet the needs of the present and the future sustainable development is based on the wider sharing of responsibilities for the impacts of public decisions greater access to information and increased participation by ordinary people in the decisions that affect the environment (Kantey 1992) 'Development' itself is generally regarded to be the result of a series of components such as increased economic growth equity distribution of the fruits of that growth and control by the population of its own destiny It is thus best defined in terms of the aspirations and values of people within their own social context (Taylor 1992) It follows therefore that in seeking to implement a sustainable development policy in any area it becomes necessary to seek information pertaining to the opinions perceptions needs and aspirations of the people which these policies will directly affect as has been attempted in this study

There have been numerous attempts at defining the concept of sustainable development (see for example Redclift 1992 Murdoch and Clark 1994 Pimbert and Pretty 1995 Cline-Cole 1996) In any definition of sustainability it is necessary to clarify what is being sustained for how long for

Sustainable Development

For the purposes of this dissertation we accept the definition of the World Commission on Environment and Development (WCED, 1987) which states that sustainable development is development which meets the needs of the present without compromising the ability of future generations to meet their own needs. This definition contains within it two fundamental concepts:

- the concept of 'needs' in particular the essential needs of the world's poor to which overriding priority should be given; and
- the idea of limitations imposed by the state of technology and social organisation on the environment's ability to meet future and present needs.

Sustainable development seeks to integrate the use of resources, the direction of investments and the orientation of technological developments to create means to meet the needs of the present and the future. The incorporation of criteria relating to sustainability within the management framework of development projects in rural areas has enormous potential for policy intervention but cannot work successfully unless it is matched by much greater local involvement in decisions affecting environmental management. Any serious discussion of participation and local empowerment in managing the environment, in turn, needs to consider the framework of demands which are formulated by the rural poor themselves (Redclift and Sage, 1994). It becomes clear therefore that ultimately *sustainable development is only practicable when it is endorsed by local communities and groups*. This underlying principle is fundamental to this study as is reflected in the use of a participatory approach for data gathering (see chapter 3).

The need to redistribute resources more equitably in the country is constantly emphasized by the present government (ANC, 1994). Proposals for restructuring social and economic patterns in South Africa which ignore environmental concerns however are very short sighted. There is therefore a need to look for models which propose both a more sustainable land use option

training and was committed to the idea that local populations should play a constructive role in the management of the reserves and should not be excluded from the biosphere reserve (UNESCO 1984) The ideals of the MAB programme thus appear to suit the changes in conservation initiatives in South Africa

South Africa has, until recently, been excluded from UNESCO s network of biosphere reserves because of international sanctions against the country The Natal Parks Board had however started a number of its own so-called "biosphere reserves" modelled on the UNESCO version (Cook, 1993) although these were not officially recognized by UNESCO Since these "biosphere reserves" still operated under the auspices of the *Apartheid* regime and land was owned by whites only the interests of local African communities were often not reflected in the management of these reserves Changes in the country and the introduction of a new political dispensation has meant that rural African communities can no longer be ignored in the management of conservation areas New land use options have to be identified which will grant equity to all affected parties South Africa presents incredible challenges in the initiation of participation and equity in conservation since there are so many past injustices to correct This challenge exhibits itself particularly well in the conflicts over land and natural resources that have manifested themselves in Thukela Biosphere Reserve (TBR)

The driving force behind the various conservation paradigms and an important rationale for this research, is the need for sustaining the natural resources of the planet or in other words conserving the world's biodiversity The concepts of "sustainable development" and the "conservation of biodiversity" are thus important underlying principles in this research These concepts however are subject to a variety of interpretations and semantic debates surrounding them are too numerous and complex to fall within the scope of this dissertation The following sections deal with the concept as it will be understood in this study

2 Documentation of the existing situation based on historical events leading up to the current social conflict surrrounding the planning and management of the Thukela Biosphere Reserve

3 To evaluate the effectiveness of participatory methods in gathering data for the study

4 To provide an overview of the region from a scientific perspective outlining the physical attributes of the area and the state of degradation as presented by the scientific data available

5 Investigation through the use of participatory rural appraisal of local African communities

- attitudes towards the TBR and the factors which affect these perceptions
- mechanisms of coping with socio-economic change and environmental degradation.
- perceptions of environmental degradation and of sustainable land usages

The following section provides a brief introduction to the concept of biosphere reser es worldwide and in South Africa, providing an insight into the rationale for the research

Biosphere Reserves and the South African Context

UNESCO's Man and the Biosphere (MAB) programme was launched in 1971 with one of its aims being to develop a basis for the rational use and conservation of the resources of the biosphere and for the improvement of the global relationship between humans and the environment (Golley 1981) Part of the MAB programme was the creation of a global network of protected areas which demonstrated conservation of biotic communities provided areas for ecological and environmental research provided facilities for education and

The TBR is one of the first true biospheres according to the UNESCO definition in southern Africa and as such it is important to investigate its viability in the southern African context The TBR has the potential to provide a new type of conservation and development-oriented land use and its success in providing equitable solutions to the struggles for land and resources will herald an important step in land use management for South Africa as a whole The TBR is therefore a *test of the relevance of the biosphere concept in South Africa* This dissertation attempts to contribute to an assessment of its relevance through an investigation of how local communities perceive and understand their participation in the management of the conservation area based on the premise that sustainable use cannot be achieved without the participation of local communities

Aims

The aims of this research are twofold

1 To establish why and under what conditions possibilities exist for the success of the Thukela Biosphere Reserve as a strategy for sustainable development in the region.
2 To assess the importance of participation by local communities in ensuring biodiversity conservation together with social development in the Thukela Biosphere Reserve

Objectives

In considering the aims as outlined above the research has the following objectives

1 To provide an overview of people and parks initiatives worldwide and in particular an assessment of the biosphere reserve concept and its relevance to the Thukela Biosphere Reserve and to South Africa as a whole as reflected in the TBR situation

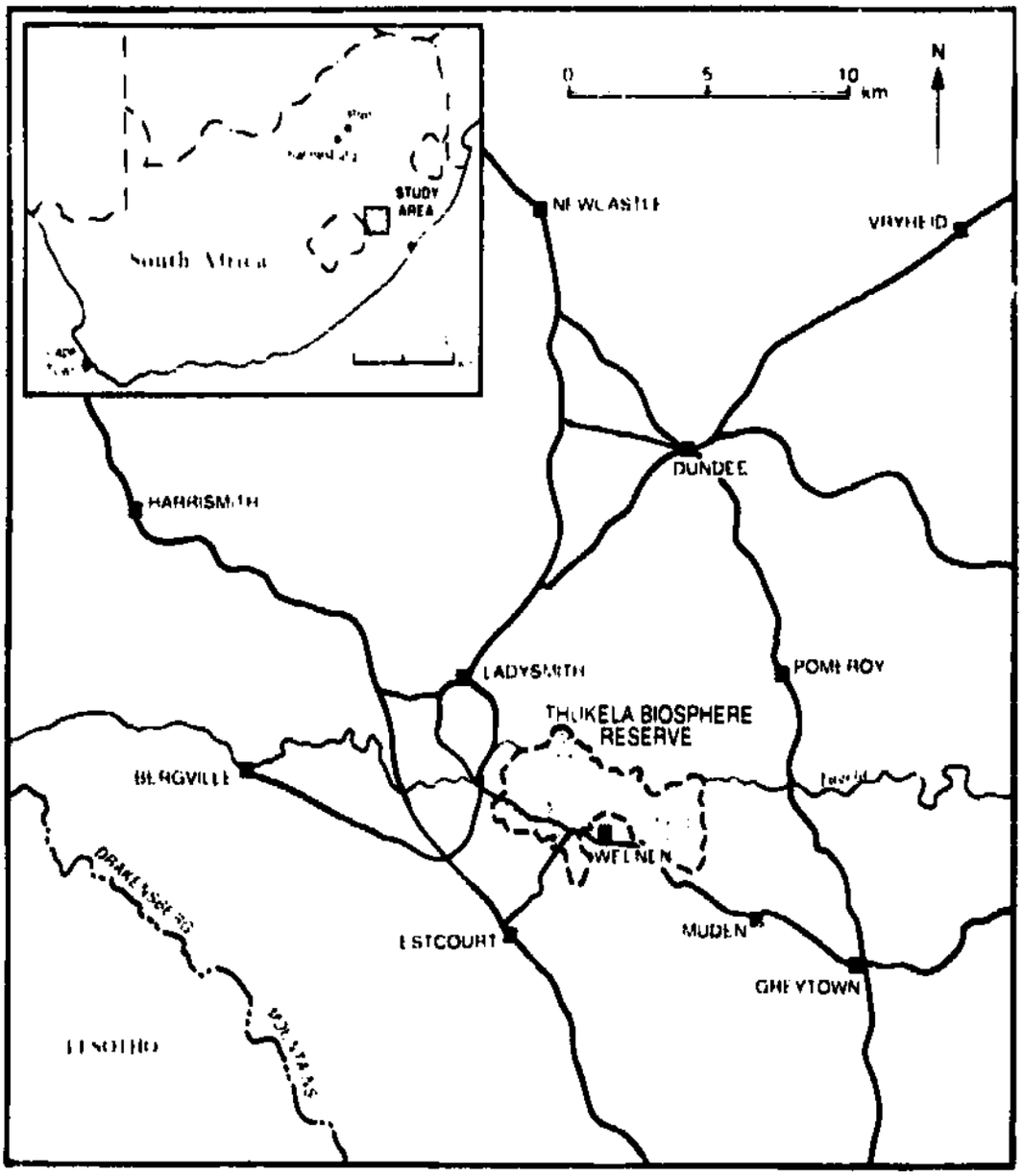


Figure 1.1: Situation Map of the Thukela Biosphere Reserve

The Research Study

Study Area

The Thukela Biosphere Reserve (TBR) in KwaZulu-Natal is an attempt to create an integrated land use option in South Africa which will benefit both conservation as well as the economic development of local communities It will be the first time that a biosphere reserve, as envisaged by UNESCO's Man And the Biosphere (MAB) programme (UNESCO 1995b), will be initiated within the sub-continent The TBR is situated in the midlands area of KwaZulu/Natal in South Africa (Fig 1 1) The reserve had its origins early in 1991 when white landowners in the Weenen and Estcourt districts began discussions with the Natal Parks Board (NPB) a provincial conservation agency The plan was to involve about 30 farmers in a biosphere reserve encompassing about 50 000 Ha of thornveld and including part of the Tugela and Bushmans rivers The area is ecologically extremely sensitive and is in a state of steady environmental degradation (Camp 1995a, Camp 1995b) mostly due to overgrazing In order for cattle ranching concerns to be economically viable vast tracts of land are required and the temptation for smaller farms to overstock is great Game ranching and ecotourism therefore are perceived to be more sustainable land use options Local communities however, are distrustful of the promises of economic upliftment and of greater employment opportunities provided through the biosphere reserve They believe that the reserve will create strong pressure on them to reduce livestock and that possible land evictions will occur as a result of the reserve (AFRA 1993a) The area is also the site of one of the presidential Pilot Projects for land reform and tensions over the redistribution of land are rife between white landowners and African communities

involvement and participation in conservation (Burch 1988, Hough 1988, Pearl 1989, Child 1991, Clay 1991, Driver 1991, West and Brechin 1991, Hough 1991, Gadgil 1992, Mountain 1992, McCabe *et al* 1992, Colchester 1994, Pimbert and Pretty 1995). These models promote policies which encourage closer co-operation between local communities and protected areas. In most instances policies have been introduced which allow communities controlled harvesting of certain natural resources such as thatching grass within the parks (Lehmkuhl *et al* 1988), and in some instances communities are encouraged as partners in the co-operative management of the park (Morgan 1993, Yamamoto 1993, Archer *et al* 1995). Since land use is often the most contentious issue in conflicts between people and parks, conservation models which involve multiple land use strategies have been seen as the panacea for development and conservation (Lusigi 1984). The Biosphere Reserves of UNESCO's Man and the Biosphere (MAB) programme are examples of this multiple use paradigm. Several zones of land use are envisaged in biosphere reserves, these include untouched areas which are protected by limited use buffer zones from intensively used areas.

The purpose of the research for this study was to assess how the sustainability of such a conservation model within the South African context might be achieved, particularly from the perspective of the communities affected. This dissertation is situated within the burgeoning literature surrounding the involvement of local communities with conservation initiatives and, as such, does not promote a new conceptual model but uses existing concepts of people and park interactions to explore the dynamics of a community-based conservation endeavour in South Africa. The main concern within the dissertation is the role which local communities play in the sustainability of a biosphere reserve in South Africa. The study area, as well as the aims and objectives of the study are outlined in the following section.

Chapter 1

SUSTAINABLE LAND USE AND BIODIVERSITY CONSERVATION

The notion that conservation areas should be free of human intervention is fast becoming regarded as an outdated concept (Abel and Blaikie 1986 Bell 1987) Conservationists are now beginning to realise that the strategy of trying to preserve biodiversity by enclosing it within small parks while ignoring the wider social and political realities has been an ineffective one (Harris and Eisenberg 1989 Colchester 1994 Blaikie and Jeanrenaud 1996) These issues are exceptionally relevant to the South African situation particularly since the dawning of a new political dispensation and the demise of *Apartheid* Rural African communities previously denied most access to the natural resources within parks and conservation areas in South Africa now demand a share of these resources (GEM 1995) Local indigenous communities kept out of protected areas by huge fences and armed guards lost not only an important source of food from hunting or gathering but also other important resources such as wood thatching grass and medicinal plants In addition the imposition of protected areas has often meant the displacement of people from their traditional lands leading to a complete disruption of the social and cultural fabric of these communities Resentment on the part of these local communities has manifested itself in vandalism against park property and an increase in poaching levels (Armstrong 1991)

The governmental policies of redistribution of resources and land reform occurring within South Africa at present are part of a wider international movement which calls for greater equity and participation from local people in the management and preservation of biodiversity Thus we see the emergence of a new theme within the development and conservation literature which calls attention to the necessity of devising conservation models which allow for local

Acronyms / Abbreviations

AFRA	-	Association For Rural Advancement
ANC	-	African National Congress
CCWR	-	Computing Centre for Water Research
CDO	-	Community Development Officer
CLC	-	Community Law Centre
CORD	-	Centre for Community Organization Research and Development
CWD	-	Conservation With Development
GEM	-	Group for Environmental Monitoring
ICDP	-	Integrated Conservation and Development Programme
IUCN	-	International Union for the Conservation of Nature and Natural Resources
LAPC	-	Land and Agricultural Policy Centre
MAB	-	Man and the Biosphere programme
NPA	-	Natal Provincial Administration
NPB	-	Natal Parks Board
PRA	-	Participatory Rural Appraisal
RRA	-	Rapid Rural Appraisal
UNESCO	-	United Nations Educational, Scientific and Cultural Organization
UNEP	-	United Nations Environmental Programme
WCED	-	World Commission on Environment and Development
WWF	-	World Wildlife Fund

The landscape approach to biodiversity conservation

A flaw with the classic approach to conservation was that it tried to preserve biodiversity in fenced off "pristine" areas The neo-populist approach outlined above has to some extent moved away from this by allowing that people should have limited access to protected areas although the idea of preserving pristine areas "untouched" by humans still remains a priority for many conservationists Indeed many of the landowners in the TBR hold the perception of an unspoilt land where only wild animals are able to roam and humans are removed from the landscape The idea of unspoilt natural regions has been challenged in recent literature, however (Bell 1987 Kiss 1991 Guyer and Richards 1996 Little 1996) The emphasis here is not with the notion of habitats and pristine areas but with the concepts of landscape which show land shaped by human management as well as land as understood in and through the human imagination a subject already familiar to geographers through the influential works of Yi-Fu Tuan (1974 1979 1989)

Landscapes which had previously been considered to be pristine and untouched examples of natural habitats have proven to be on closer examination landscapes with a long history of human involvement For example, the apparently "pristine" submontane forests of the East Usambara Mountains in Tanzania show evidence of human occupation from very early in the African Iron Age (Schmidt 1989) The savanna landscapes of East Africa have also been significantly influenced by long-standing human involvement (Bell 1987 Little 1996) Thus, there is increasing recognition that human activity is an integral part of all landscapes and that attempts at conserving biodiversity which remove all human influence are in fact "unnatural" constructs We can conclude therefore that it would be quite natural to include human activities and interventions in the development of protected areas

The Neo-Liberal Approach

Neo-liberalism is effectively a counter-revolution to the perceived naivete of the populist approach The approach is strongly rooted in the traditions of environmental economics market policies and Pareto optimality (see Pearce *et al* 1989. Binswanger 1991 Winpenny. 1991 and Wells 1992) Two streams are dominant in the economic approach the Meade-Pigou approach to externalities and the Coasian tradition based on the internalization of externalities through the establishment of appropriate property rights (Biot *et al*. 1995) The resurgence of the economic approach to conservation and development issues has arisen primarily in response to the perceived environmental problems of developed industrialized countries (Biot *et al*. 1995) It is therefore beyond the scope of this dissertation

participatory approaches must not only look towards creating a compromise between an outside agency and local communities, but also between local people themselves. The literature is full of examples where rural development projects have been 'tacked on' to the conservation programmes on an ad hoc basis and as a result have not been very effective (see for example, Ghimire, 1991; Brandon and Wells, 1992; Colchester, 1994; Pimbert and Pretty, 1995).

These caveats to the uncritical adoption of participatory approaches must be considered seriously in South Africa where Integrated Conservation and Development Projects have begun to gain prominence since 1990, as is evident from the proliferation of recent South African literature dealing with this topic (Fourie, 1991; Koch, 1994; Grossman and Liebenberg, 1994; Shackleton, 1996). The importance of the issue is also becoming evident with the involvement of several non-governmental organizations in conservation and development issues, most notably GEM (Group for Environmental Monitoring) who hold an annual People and Parks conference (GEM, 1995); LAPC (Land and Agricultural Policy Centre) (Meintjes, 1995; Wells, 1996); and AFRA (Association For Rural Advancement). Established conservation agencies who have in the past been associated with the dominant paradigm of discrimination and oppression have also made substantial moves forward to more participatory approaches. For example, the National Parks Board has established the first contractual national park in the Richtersveld - exhibiting fundamental policy changes (Fig and Archer, 1993; Archer *et al*., 1995); and the Kruger National Park has been active in creating participatory forums with its neighbours (Venter, pers comm). The Natal Parks Board has also been actively promoting the concept of 'positive neighbour relations' policies in recent years.

The general argument for the initiation of ICDPs is that by providing economic goods such as employment and development projects, the would-be poacher is transformed into an individual with a sense of proprietorship over wildlife (Gibson and Marks 1995) The key assumption here is that conservation policies will only work if communities receive sufficient benefits to change their behaviour from taking wildlife to conserving it Three broad categories of benefits are envisioned

1 The first is related directly to the wildlife where the locals receive jobs as scouts or as workers with tourist and safari companies whose activities depend on the wildlife
2 The second type of benefits is that of development aid in the form of clinics, schools and water reticulation systems
3 The last category of benefits relates to the empowerment of local residents, where people are allowed a greater degree of participation (Gibson and Marks, 1995)

Such strategies are not always effective however as a study of parks in Zambia revealed Here local people continued to hunt although their tactics and prey had changed The vast majority of residents around parks in Zambia receive little benefits from the program - instead the benefits were played into the hands of local chiefs Zambia's programme fails to acknowledge the different values which individuals place on development projects and that people may not secure the same level of utility from a particular project (Gibson and Marks 1995)

As the above case proves, the ideals of participatory conservation are not always successfully implemented Indeed,

> " participatory conservation requires a high degree of skilled inputs, sensitive handling of the political issues and a long planning horizon" (Blaikie and Jeanrenaud 1996 p 63)

Moreover, issues of co-option between local elites and government are often hampered by bureaucratization and corruption Further complications arise since there is usually competition within communities for the resources which comprise biodiversity at the regional and local level Thus it becomes apparent that

To achieve this behaviour incentives are offered to local people The recipients of such schemes are essentially passive - neither participating in decision-making nor enjoying the direct aesthetic benefits associated with the personal use of wildlife and resources. Instead they are being treated as a nuisance that is being bribed to keep quiet (Bell 1987) The World Conservation Strategy bypasses the complexities of the socio-economic problems facing conservation It is not an effective tool for developing integrated conservation and development policies although it has created a greater awareness of this issue amongst the international community

Pursuing the new paradigm of combining conservation with development the World Bank promoted the concept of Integrated Conservation and Development Projects (ICDPs) (Wells *et al* 1992) The core objective of these approaches is to conserve protected areas by promoting the socio-economic development of local communities The aim is to provide alternative sources of income for local people which do not threaten the depletion of natural resources within the protected areas The rhetoric of ICDP approaches is typified by words such as 'community-based', 'participatory' and empowerment' ICDPs often fail, however to deliver the promised infrastructure or services to local communities While initial funding provides an opportunity to create these services, lack of funding later leads to their downfall and unsustainability Under such circumstances the credibility of ICDP managers is largely damaged with rural populations, partly because of a history of confrontation and partly because of unfulfilled expectations The success of these ICDPs depends ultimately on rural resident's perception of park officials' committment to human development These problems with ICDPs mean that it becomes necessary to,

> " question the administrative and financial capacity of conservation agencies, especially local ones, to add rural development interventions to a potentially overwhelming portfolio of current responsibilities" (Barrett and Arcese 1995, p 1080)

Serious consideration should be given to the efficacy with which conservation agencies are able to singlehandedly initiate development projects

towards any conservation initiatives, as has been documented in the Pilanesberg National Park (Munnik 1991a Matlala 1991) and several reserves in Maputaland (AFRA 1991 Koch 1994)

The "Neo-Populist" Approach

A growing awareness of the problems associated with the classic approach to conservation resulted in the development of the "neo-populist" approach as a reaction to the exclusionary policies of traditional western conservation methods Ideas for co-operative management and more people-oriented conservation came to the fore Growing awareness of the links between environment development and poverty generated the World Conservation Strategy in 1980 a joint venture of the IUCN the United Nations Environmental Programme (UNEP) and the World Wildlife Fund (WWF) The three main objectives of the strategy were

- to maintain essential ecological processes and life-supporting systems,
- to preserve genetic diversity and to
- ensure sustainable utilization of species and ecosystems (Talbot 1980)

Despite the WWF and IUCN s arguments that "conservation is for people" (de Haes 1990, p 76) however the World Conservation Strategy has been heavily criticized because it implies that the conservationists view of society must dominate, and it does not even begin to examine the social and political changes that would be necessary to meet its conservation goals (Redclift 1984) The Strategy implies a large amount of social manipulation which Anderson and Grove (1987) argue goes beyond even the most dramatic social engineering ambitions of the colonial state after 1945 An example of this social manipulation is the IUCN s argument that

> "To the extent that resource exploitation is governed by the *perceived self-interest* of various individuals or groups, behaviour affecting maintenance of biological diversity can best be changed by providing new approaches to conservation which *alter people's perceptions* of what behaviour is in their self-interest" (emphasis added) (McNeely 1988 p 9)

or compensation of the affected peoples and as a result local people often resent the parks near to them (Crush, 1980 Armstrong 1991)

Criticisms of the classic approach to conservation have focussed largely on its colonial origins in developing countries (see for example Anderson and Grove 1987 Bell 1987 Colchester, 1994) Focussing on the South African situation, writers have shown how the politics and myths of the colonial mind impacted on conservation in South Africa (Carruthers 1988 Beinart 1989 Khan 1990 Koch 1991, Carruthers 1993 and Ellis, 1994) These critiques reveal that conservation in the past was not the purely objective science with concerns for preserving the ecological balance which its progenitors claimed it to be Rather, conservation was closely related to the values of the society at the time and most often reflected the concerns of elitest groups (Blaikie and Jeanrenaud 1996) It is thus recognized that conservation is not a purely objective and positivist science, but has widespread implications in the socio-political fabric of society The state plays a dominant role in defining and implementing classic conservation models and in imposing punitive measures to protect its own "scientific" interpretation of environmental problems (Blaikie and Jeanrenaud, 1996) This leads to the conclusion that we cannot consider conservation and biodiversity issues without considering social cultural and political aspects - a crucial underlying principle in the research for this dissertation

The wider social and political implications of conservation policies is most apparent in South Africa where conservation has been inextricably linked to the *Apartheid* legacy of forced removals, discriminatory allocation of resources and rural segregation (Beinart, 1989 Cock, 1991, Koch 1991, Breen *et al*, 1992) Many conservation areas in South Africa were created by the forced removal of local communities an example being the Kruger National Park (Carruthers 1988 Beinart 1989) Africans have been steadily alienated from the environment beginning with the process of European colonization and exacerbated by the pass system and other segregationist mechanisms of Apartheid (Khan 1990) As a result African people who have had their land taken away from them to create game reserves are often bitter and antagonistic

Table 2 1 Three conservation paradigms (adapted from Biot *et al*. 1995)

Variable	Classic	Populist	Neo-liberal
Peasant Behaviour	ignorant irrational	virtuous rational community-minded	rational egocentric
Diagnosis of Environmental Problem	Environmental solutions	socio-political solutions	economic solutions
Immediate causes of environmental problems	Mismanagement by users	mismanagement by state capitalists transnational corporations big business	economic solutions
Structural causes of degradation	over-population backwardness lack of foresight ignorance	resource distribution	inappropriate technologies
Institutional prescription	top-down centralized decision-making	bottom-up participation	"market" policies property rights resource pricing self-targeting safety nets
Academic discipline' profession	science bureaucrat	social scientists activists NGOs	economics development professionals
Gender orientation	gender blind	virtuous but victimized women	gender myopia
Research framework	systematic empiricism	Participant Rural Appraisal community as the unit of analysis	methodological individualism
Orientation to market	not considered	exploitation	Pareto optimality and externalities
Model of Peasant Society	Conservative paternalistic	egalitarian	democratic/liberal
View of Collective action	Deficient	essential and unproblematic	conditional rationality political entrepeneurs
Technology	"fortress conservation"	agronomic techniques of conservation	not specified

The "Classic" Approach

The classic approach to conservation is largely exemplified through the traditional idea of national parks and protected areas as exclusionary areas which had to be protected from people in order to "preserve" the wildlife The creation of national parks and other conservation areas has often led to the prohibition of local people from the natural regions which traditionally provided them with food and natural resources by the creation of national parks and other conservation areas Such exclusions have been undertaken without consultation

degradation If a successful and sustainable land use management strategy is to be implemented in the TBR, it becomes necessary to understand these perceptions and the historical situations which may have created them

Analytical Frameworks

Co-operative conservation models, or Integrated Conservation and Development Projects (ICDPs) between conservation agencies and native peoples are being actively pursued in the more developed countries such as Canada (Morgan, 1993, Yamamoto 1993), the United States Australia and New Zealand (Wall *et al* 1995) In less developed countries the move towards these partnership approaches is no less apparent for example in Madagascar (see Ghimire 1991 Durbin and Ralambo, 1994), Nepal (see Lehmkuhl *et al* 1988 Heinen, 1993), India (see Gadgil, 1992) and various countries in Africa (see Lusigi, 1981 Kiss 1990 Stocking and Perkin 1991, Barnes, 1995, Barrett and Arcese, 1995, Gibson and Marks, 1995, Tamuhla, 1996)

Blaikie and Jeanrenaud (1996) provide an interesting and useful method of analysing the various and changing approaches to conservation They divide these into three categories

- The "Classic" Approach,
- The "Neo-Populist" Approach,
- The "Neo-liberal Economic" Approach

These categorisations will be used here as a tool for understanding conservation and development projects worldwide and within South Africa Table 2 1 offers a useful introductory framework to these approaches

framework in which to study the relationships between access rights, local struggle and political transformation (Blaikie and Brookfield 1987, Swift, 1993) The constraints and opportunities facing socially disadvantaged groups in struggles to protect the environmental foundations of their livelihood need to be addressed both historical and contemporary (Bryant, 1992) since an appreciation of the historical dimensions of conflict over access is essential to the understanding of contemporary struggles The complexity of conflict over access needs to be appreciated - showing the multiple and overlapping rights which combine with formal and informal tenure to create a complex web of interdependencies

Environmental problems are increasingly looked upon as scientific problems able to be solved by "scientific" answers However as Blaikie (1995) points out our interpretation of the landscape and associated environmental problems is laden with the experiential, technical and cultural values at our disposal Scientific understanding of the environment is now no longer accepted uncritically In other words there has been a shift from a structural to an interactionist way of studying and understanding society and environment and an acknowledgement of the plurality of knowledge (Arce and Long, 1992, Redclift and Woodgate, 1994 Redclift, 1994, Blaikie 1995) Culturally defined normative statements about nature and land use which derive from the European experience cannot be unthinkingly imposed on different cultural situations For example the concept of land degradation implies a scientific and cultural view of a set of biological and physical processes which are interpreted on the basis of implicit views about how the environment should be used in terms of specific management objectives In a conventional view land degradation is described in a scientific way which again implies objective truth and a rational non-political basis for policy making (Blaikie 1995) In the Thukela Biosphere Reserve replacing cattle ranching with game and ecotourism is justified in terms of the extreme environmental degradation which cattle grazing has caused However local rural communities in the Thukela Biosphere Reserve have a very different perception of what causes land degradation and of the severity of that

Chapter 2

NEW PARADIGMS IN CONSERVATION: PEOPLE AND PARKS

Since the 1980s the Newtonian vision of parks and conservation areas as being separate and removed from human intervention has been consistently attacked in the literature (Crush, 1980, Abel and Blaikie 1986 Bell, 1987, McCracken 1987 Zube and Busch, 1990, Colchester 1994, Blaikie and Jeanrenaud 1996) The recognition that humans are an integral part of the natural landscape has informed new conservation principles which stress the need for participation with local people (Garratt 1984, Fletcher 1990 Bidol and Crowfoot, 1991) Rapid transformation of conservation agencies is apparent worldwide as people are now considered partners in the process of conservation (Folke *et al* 1993 Blaikie and Jeanrenaud 1996) Interest in these issues stretches across a wide array of academic disciplines, including sociologists (Machlis, 1992), anthropologists (Kandoh and Richards, 1996), environmental scientists (Kellert 1986) biologists and ecologists (Agee and Johnson, 1988, McNeely, 1993, Gadgil, 1992, as well as economists (Wells 1992) Geographers too have made notable contributions to the literature (Hart, 1992, Stocking and Perkin, 1992, Taylor, 1992, Bryant 1992 and Solecki 1994 and Blaikie, 1995) The fact that it is such a multidisciplinary field of interest makes it apt for a geographical field of study since it involves a new postmodern use of the landscape - one which is concerned with the dynamic interaction between both the physical nature of the environment as well as the cultural political and economic nature of the human system

The increasing awareness that biodiversity conservation cannot be considered separately from the wider socio-political context has been accompanied by the emerging paradigm of political ecology to increase our understanding of people-environment interactions Political ecology provides a

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The increasing necessity to conserve biodiversity is also accompanied by the obligation to improve the livelihoods of the rural people who depend on these natural resources for survival New conservation models have been proposed which pay greater attention to the social and development aspect of protected areas The Biosphere Reserve concept is an example of such a conservation model The purpose of this study is to assess why and under what conditions the Thukela Biosphere Reserve may prove to be an option for sustainable development The research also aims to assess the importance of participation by local communities in the success of the TBR as a sustainable development option

The concept of sustainable development fulfills both the objectives of conservation and development and thus forms an important underlying principle for the research The increasing demand by rural African communities in South Africa for access to the land and natural resources previously denied to them lends urgency to the implementation of sustainable land use strategies in this country One such land use option is to be found in UNESCO's concept of Biosphere reserves which emphasizes close co-operation between local communities and the protected area The Thukela Biosphere Reserve in KwaZulu-Natal is the first true attempt to implement a biosphere reserve within South Africa and it is necessary to critically assess the TBR to see whether or not it will prove to be a sustainable land use option which will combine both the objectives of conservation and development Chapter 2 will outline in more detail the various paradigms which inform these changing ideas of land use and conservation and within which the present study is situated

interpretation, all the actors have uniquely different perspectives on a problem and on what constitutes improvement Multiple perspectives emerge from the fact that knowledge and understanding are socially constructed and therefore what any one person knows and understands is a function of their own unique context (Pretty 1995) In the complex and changing world there can never be an ultimate truth and solution since problems are endemic to the situation Systems of learning and action are required to seek the multiple perspectives of the various interested parties It is accepted that knowledge and understanding are socially constructed that they are functions of each individual's context and past (Blaikie 1995) From this contention it follows that all the stakeholders involved in any interaction will have uniquely different perspectives on what a problem is and on what constitutes improvement There is, therefore no single "correct" understanding (Pimbert and Pretty 1995) and as a result quantitative methods are not the most effective means of gaining a true reflection of the situation In recognition of this a more qualitative method of data gathering was followed in this study making use of participatory methodologies

It is essential to seek multiple perspectives on a problem situation by ensuring that a diverse group of actors and stakeholders participate (Swift 1993 Pimbert and Pretty 1995) Since societal relations are so unequal with the poor and illiterate often made powerless by having no means of articulation, participatory methods have been devised to provide these communities with a means by which to voice their concerns and ideas Participatory methodologies are therefore seen to be the most appropriate way of data gathering in the mostly illiterate rural communities surrounding the Thukela Biosphere Reserve

Diverse participatory learning systems have the following in common

- **A defined methodology and systemic learning process** - the focus is on cumulative learning by all participants

Participatory Methodologies:

alternative paradigms for research

The necessity for involving people in their development is becoming a more popular concept (*The Star, 14/09/96)* and as such participatory research methods have proven successful in a variety of contexts worldwide (Van Vlaenderen and Nkwinti 1993 Bergdall, 1994. Chambers 1994a Chambers 1994b Chambers 1994c May 1996) These methods are increasingly being used as research tools in the management of natural resources and in the understanding of the links between poor people and their environments (Davis-Case, 1989 Brace 1995 Chambers and Guijt, 1995 and Pretty *et al* 1995) One of the most successful applications of participatory research methods has been for the successful management of natural resources for sustainable agriculture and livestock (Kirsopp-Reed 1993 Pretty 1995) In Mongolia for example, PRA was used to map grazing resources and the seasonal stresses placed on these resources (Mearns *et al*., 1993) while in Sub-Saharan Africa PRA has been effectively used to increase planning and participation with pastoralists (Waters-Bayer and Bayer 1994) In Kenya, participatory methods were used to assess community attitudes to soil and water conservation and the results were used to improve these natural resource conservation programmes (Pretty *et al*., 1995) In South Africa participatory methods have been used in natural disaster mitigation (Von Kotze and Holloway 1996) as well as poverty relief programmes (May 1996) There is thus increasing scope for the use of PRA in investigating the relationships between people and natural resources and this is no less true of people and parks problems

Within complex socio-political systems such as that acting within and around the Thukela Biosphere Reserve alternative paradigms for research need to be sought which move away from the dominant positivist scientific paradigm since the scientific method is not competent to predict or prescribe for the complex open systems which matter most Problems are always open to

Chapter 3

PARTICIPATORY RESEARCH METHODS

In any development initiative such as the Thukela Biosphere Reserve actors enter into social interactions on the development interface Local people politicians scientists and development experts each have their 'projects' which they pursue by persuading others through appeals to reason science, democracy self-interest and through coercion evasion or struggle (Blaikie 1995) The analytical approach used in this study recognizes the plural truths and interests of actors coming together in social relations of unequal power Recognizing the spatial, technological and informational differentiation between actors in the TBR region is but a preliminary step towards understanding the contemporary dynamics of conflict over access It is important to remember that local communities are not an undifferentiated mass united in their destitution They are also caught up in differentiated relations with the powerful and with each other as is the case in the hierarchical and patriarchal communities surrounding the Thukela Biosphere Reserve

The political ecology approach outlined in chapter 2 introduces many of the principles which underlie Participatory Rural Appraisal The data for this study was obtained mostly through the use of participatory interviews and exercises with communities within and surrounding the TBR The ensuing sections offer a more detailed and in-depth discussion of the participatory methods used

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The failure of the classic conservation approach with its emphasis on the 'scientific' pursuit of conservation biology and ecology has led to a variety of more holistic and socially based approaches to conservation Political ecology for instance recognizes the complex interactions between local people s access rights political transformation and environmental degradation Classic conservation models emphasized the exclusion of humans from parts of the landscape in an effort to preserve the apparently "pristine" environment These conservation models often required the use of punitive measures to keep local people out and resulted in increasing bitterness toward the parks on the part of local communities In recognition of these problems and realization that humans are an integral part of the landscape new approaches to conservation such as Neo-populism and the landscape approach to biodiversity conservation have emerged

The new approaches have sought increased participation by local communities in the management of protected areas Integrated Conservation and Development Projects (ICDPs) were instituted as part of these new approaches to conservation These projects emphasized the protection of natural resources through the socio-economic development of communities surrounding protected areas The participation and socio-economic development of rural communities is of major concern in contemporary South Africa Conservation endeavours within the country are increasingly being directed toward including local participation and development Conservation-with-development projects however are often complicated and difficult to implement in practice Despite the numerous problems with these approaches alternatives to biodiversity conservation are limited It is important therefore that continued research on people s participation in environmentally sustainable land usages is undertaken The following chapter outlines the methods used in this particular study to contribute to this stated research need

environmental degradation Thus it is important that these perceptions are investigated if the viability of any ICDP is to be assessed

The issues outlined here form important underlying principles for this research In particular the point made above that the success of ICDPs depends on the attitudes and perceptions of local people informs the participative approach of the research for this dissertation The participatory methods used are outlined in the ensuing chapter

The literature review presented here is not comprehensive but provides an overview of the major debates and paradigms which have been associated with the people and parks debate The review has revealed a number of issues which are pertinent to the present study

1. Conservation issues are inseparable from the wider socio-political cultural and historical situation Any analysis of conservation issues therefore requires an investigation of these factors

2. The "scientific" and objective nature of conservation studies has been called into question and been shown to be closely tied to the political ideologies prevalent at any one time The approach used in this study tries to remedy this by recognizing the multiple realities present in the diverse socio-economic fabric of the TBR and does not claim "objectivity" on any one side

3. The need for conservation areas which incorporate both development and conservation has resulted in the development of numerous models such as biosphere reserves and ICDPs Analyses of many of these projects however have revealed that they are complex and difficult to implement Common problems include
   - lack of finance and failure to deliver promised services to the local community This leads to scepticism and antagonism on the part of the community
   - political bureaucracy and corruption which prevent benefits from filtering to the grass roots level
   - lack of feasibility studies and basic socio-economic data leading to project failure

4. In most cases the success of any conservation and development initiative is dependant on local peoples perceptions attitudes and responses to

4. The participation of local people in planning, decision-making and responsibility for conservation.

The project emphasis on local participation fostered a good attitude of rapport and trust Large amounts of time and money however were spent on non-conservation activities as demanded by local villagers The study showed therefore the danger of participatory approaches which meant the loss of focus on development-conservation activities

The evaluation of this CWD programme concluded that conservation-with-development is complicated and requires a large number of skills because of the many factors involved It is therefore a risky initiative difficult to transfer from paper to reality and subject to failure Despite these inherent difficulties however, there is no viable alternative to CWD projects if biodiversity is to be conserved and if the relationship between local people and conservation areas are to be mutually supportive (Stocking and Perkin 1992) It is therefore important to continue extensive research on the functioning of projects of this nature and this forms an important rationale for the present study

Research into local people's perceptions and responses to environmental degradation was completed in Ghana (Nsiah-Gyabaah 1994) In this study two exploratory questions were asked the first relating to whether local people perceive environmental degradation in their villages and region and secondly, whether they understood the magnitude or severity of the desertification problem in their region Research on the perceptions, beliefs and attitudes of people in this study area showed that local people, far from being ignorant about what occurs in the environment are conscious and knowledgeable about the changes occurring on the landscape (Nsiah-Gyabaah 1994) A central point to emerge from the above research is that planners and natural resource managers should look first at what rural people do examine their existing practices and perceptions and see how these can be improved before recommending development interventions

and food The forests are however currently experiencing unsustainable exploitation with continued logging as well as the cultivation of cash crops such as cardamom spice Cardamom cultivation requires the clearing of the forest undergrowth and the resultant depletion of soil nutrients In an effort to introduce sustainable development into the area the late 1980s saw the commencement of a conservation-based rural development programme A critical analysis of the project was based on the key fundamentals of CWD programmes as outlined below

1. **A focus on the linkages between conservation and development programmes:** Inappropriate agricultural practices were regarded as the fundamental link to forest degradation Policies were implemented which called for a move away from cardamom cultivation to other more appropriate crops The ease with which cardamom is cultivated however meant little change on the part of the people A lesson for other CWD programmes emerges in that even when the important conservation-development linkages are found it is often unclear how a project should intervene in order to achieve its objectives This is particularly true if baseline agricultural and socio-economic data are lacking

2. **An emphasis on maintaining biodiversity:** the prohibition of industrial logging and a temporary moratorium on pit-sawing operations were put into place In flagrant defiance of this moratorium illegal pit-sawing operations began to flourish This is an excellent example of the difficulty of enforcing new regulations which withdraw previous rights of access

3. **The need to address the social and economic base of communities who might otherwise threaten the resource base:**
   Some modest programmes such as the establishment of shops and sewing groups were initiated The projects were slow and reflected little success mostly due to lack of expertise and feasibility studies leading to scepticism on the part of locals as to the actual benefit of the programme

subtle and abstract ideologies and concepts In order to cope simultaneously with remotely acting political-economic processes and place-based ecological relationships requires the combination of two contrasting approaches - the natural scientific with strong positivist traditions and the social scientific where logical positivism has serious drawbacks (Abel and Blaikie 1986) Social science as is argued strongly throughout this dissertation has found it useful to acknowledge that value judgements do affect the choice of subject and the interpretation of results

A more rigid "scientific' approach was used in a study of the attitudes of local people toward Kosi Tappu Wildlife Reserve in Nepal (Heinen 1993) This study made use of three statistical surveys an attitudinal survey a survey of economic costs and benefits and corroborative surveys The attitudinal surveys revealed that most of the local rural residents were not in favour of the reserve because of restrictions placed on grazing and collecting fuel-wood Those in favour of the reserve said that permission to gather thatch was the main reason The study showed that despite benefits from the reserve most people still reacted negatively towards it and most people overestimated the costs which the reserve burdened them with An interesting find was that the best predictors of attitudes to the Reserve were the caste or ethnic group and the literacy rate of the family suggesting that attitudes were not directly related to physical cost but to religious inculcation societal discrimination and education (Heinen 1993) This serves to indicate once again the importance of social and cultural factors in the investigation of people-parks issues

A more critical study of the concept of conservation-with-development (another name for an ICDP) was completed in the East-Usambara Mountains of Tanzania (Stocking and Perkin 1992) Here the high degree of species endemism and diversity in the lush submontane forests of the East-Usambara Mountains lends itself to their conservation The biological importance of these mountains is also matched by their ability to provide a direct number of economic benefits both locally and nationally An estimated 40 000 people live in the East-Usambara and all rely on the forests for fuelwood building material medicines

1995a) The Seville conference emphasized that the development function of reserves through local community participation and planning should become a focal point of all biosphere reserves and recognized that the establishment of a biosphere reserve should be seen as the beginning of a socio-economic experiment which required time to build up an evolving social relationship based on trust and commitment between the biosphere reserve management and the local people (Zu Hulshoff, 1984 UNESCO 1995a)

It is not only biosphere reserves which have encouraged this type of relationship however, as the following section testifies

People and Parks: the International Scenario

A landmark case study dealing with people and park issues in the Luangwa Valley of Zambia introduced some important methodological breakthroughs Three major problems in the methodology with which wildlife and rural development issues were being pursued were recognized

1 the inaccurate idea of conservation issues being "apolitical" especially considering that most of the issues were charged with social conflict.
2 the lack of historical analyses of contemporary problems of resource use and
3 that the problems of resource use were being forced into the mould determined by the disciplinary background of the professional studying them (Abel and Blaikie, 1986)

The Luangwa Valley study attempted to remedy these shortcomings by examining the role of the Luangwa National Parks in the context of the Zambian political economy In addition social groups which compete for resources in the parks were identified and the historical origins of present ecological changes traced The study recognized that social and environmental interrelationships are of two very different types those which are "place based" and those which are not of a geographical nature The former involves physical-biological interactions such as herbivore-plant relationships while the latter involves more

Man and the Biosphere (MAB)

The Man and the Biosphere programme (MAB) initiated by UNESCO in the early 1970s has made substantial contributions to the establishment and management of conservation areas through its biosphere reserve network (Kellert, 1986, Gilbert 1988) Three important objectives are envisaged for biosphere reserves (Batisse, 1986), these include

1. A **development function** in which efforts are directed towards finding practical and sustainable strategie for dealing with complex and interrelated environmental, land use and socio-economic problems affecting a particular area
2. A **research function** for monitoring changes in the physical and biological components of the biosphere and
3. A **conservation function** to preserve ecosystems and genetic diversity

Until recently most research on biosphere reserves, however, has been dedicated towards biological and ecological systems with limited concentration on social issues (Gregg, 1991) Delegates to UNESCO's conference on biosphere reserves (Seville Spain, 20-25 March 1995) recognized that it was becoming imperative to pursue research on the social and cultural implications of biosphere reserves on surrounding communities (UNESCO 1995a) The conference also brought to the fore the recognition that the development function of biosphere reserves should become a focal point, especially since sustainable development is a current global issue The conference report reiterates that monitoring research and education remain key interdisciplinary aspects of the logistic function but now must be extended beyond the traditional scope of the biological sciences to include socio-economic factors as well These findings provide an added motivation for the research undertaken in this study on the social dimensions of the establishment of the Thukela Biosphere Reserve

UNESCO has reinforced the perceived value of biosphere reserves as tools for obtaining a positive dialectic between local people and parks (UNESCO

The landscape approach concentrates on redefining concepts of biodiversity For example, the kinds of knowledge claims implicit in the use of the term "biodiversity" are examined Ways are sought in which the specialist knowledge claims of biological researchers can be reconciled with the competing knowledge claims of those members of rural communities who are often the direct custodians of biodiversity (Guyer and Richards 1996) Conflicts between the "scientific" ideas of resource managers and local communities has been one of the points of contention with ICDP approaches where it is assumed by scientists that "National parks and reserves represent the single most important method of conserving biological diversity world-wide" (Brandon and Wells 1992, p 557) Such an assertion is questionable since there are other competing means and sound ecological reasons which enable one to argue that biological diversity world-wide is best promoted by environmental management regimes in the 90% plus of the earth's surface where the ordinary lives of people are lived (Murphree 1992) The idea that landscapes have to be preserved in fenced off conservation areas is linked to the perception of Africa as a continent in crisis and on the brink of human-induced ecological collapse (see for example Curry-Lindahl 1974) but this perception has been strenuously contested by a variety of sources (Bell 1987 Roe 1995 Guyer and Richards 1996) This 'Africa in crisis" paradigm precludes the protection of natural resources in areas which are occupied by people

The landscape approach to biodiversity conservation thus in essence recognizes that people are an integral part of the natural landscape system and that any attempts at resource conservation should as a matter of priority acknowledge this fact The biosphere reserve concept of UNESCO's MAB programme has been a definite attempt to move towards this concept but still retains many of the classic notions of conservation

Attempts to limit rural development tourism biases (Chambers 1983) during the completion of this research included actively seeking out people living away from main roads (walking for an hour to reach them) actively seeking out women and actively seeking poorer less articulate members of the communities rather than only interviewing the dominant elite

One of the most valuable aspects of PRA is that the subjects to be investigated are never predetermined The PRA facilitators and the people with whom they are doing the analysis planning and evaluation are not bound by rigidly described methods and sequences and so discussions and other interactions can raise unexpected issues which may prove central to the study In this way PRA also supports the decentralization of effort and embraces diversity allowing and enabling people to determine what fits their specific needs (Waters-Bayer and Bayer 1994) The strength of the methodological approach used for the participatory research in this study lies in its open flexible and non-threatening approach This enabled the researcher to adapt the style of interviewing/ exercises to suit the various diverse groups surrounding the TBR For example some groups were not happy about drawing maps but preferred to have an oral discussion around a map which the researcher had drawn

In addition to the participatory data pertaining to the perceptions of environmental degradation and sustainability in the area more traditional methods were used to gain information on the physical environment as reflected in chapter 4

methods were used these included semi-structured interviews group interviews, participatory mapping exercises transect walks time lines, oral histories livelihood analysis and Venn diagramming All of these were undertaken with the PRA s stress on relaxed rapport and flexibility

Time schedule

Two months were spent in the Weenen area amongst the communities between 15 October and 15 December 1995 Some in depth interviews with key informants had however been completed between 5 - 15 July 1995 during a prior visit to the area

Interviewing Methods:

Interviews were completed with the aid of a Zulu interpreter a woman from one of the communities who was therefore familiar with the customs and context of the area The interpreter was fully briefed and trained before the interviews and exercises When requesting to complete interviews with local people the research for this study was introduced as follows as cleared by the Ethics Committee of the University of the Witwatersrand

> I am conducting a study of people s opinions about the Thukela Biosphere Reserve
> I am an independent researcher from the University of the Witwatersrand in Johannesburg and I have no connections with either the government or with white farmers in the area
> I would like to ask you to answer some questions Please note that you are not required to answer and if you do you may stop at any time Also, I can stress that I do not require your name for the study and nobody will be able to connect you with what you say here "

Five communities affected by the TBR were investigated namely Tugela Estates eMchunweni Thembalihle Cornfields and various farmworker communities scattered throughout the biosphere

Understanding between rural and non-rural people can be improved by bringing them into direct contact and discussion as opposed to rural tourist situations Data accumulated by relative ranking and scoring is also easier to obtain than absolute values of for example the number of animals in a herd There is also less likely to be misunderstanding between the researcher and the people if this method is used

Research Approaches in the TBR

The research approach undertaken in this study consisted of the following steps

1. The completion of a literature survey on PRA in South Africa and abroad In addition, a comprehensive review of background literature for the communities of the area was undertaken Important sources of information for the social background of the area included newspaper reports newsletters from various non-government organizations (e g AFRA FSG) published research reports by these same NGOs as well as reports by government agencies such as the KwaZulu/Natal Provincial Administration Some in-depth interviews with key people familiar with the area and its people were also completed
2. Introduction into the communities either through community development organizations or the local *induna* or in some cases the *Nkosi*
3. The completion of participatory interviews and exercises with both pre-arranged groups as well as random individuals The paucity of demographic data on these communities means that it would be impossible to do a statistically representative sample however every effort was made to find the most marginal members of the community and not only those who lived along the main thoroughfares or were the most vocal A variety of PRA

Positive aspects of using PRA

PRA presents a more equitable and less extractive manner of researching within communities particularly in the disenfranchised rural African communities which exist in South Africa It has however been argued that "PRA methods should begin to question the ways in which people interpret their reality and how researchers in turn represent this" (Stadler. 1995 p 806) Criticisms of PRA as a populist and unquestioning are valid but this can be avoided if it is used in such a manner that the researcher is continually questioning both the responses and her own attitude to those responses In this way much knowledge can be gained from PRA as a self-aware process in contrast with statistical questionnaire techniques which preclude critiques regarding the attitudes of either the researcher or those being researched The methods of PRA have many positive aspects which make it a very useful means of gathering data In this study the most favourable aspects of PRA were that it enabled

1 local control
2 better rapport and understanding and
3 an openness of approach in communities filled with suspicion and animosity toward outsiders

PRA can give local people control over the type of information being recorded and disseminated to the whole world Locals feel empowered since they are an integral part of the research process and not mere subjects of a study This aspect is particularly important in the TBR since local rural communities have been denied a voice for so long and it is important for them that they are listened to PRA also provides more enjoyable methods for research rather than long boring questionnaires which confine thinking to preconceived ideas and moreover leave the locals with nothing

Table 3.1: Methods and tools for particular information purposes (adapted from Waters-Bayer and Bayer, 1994)

Situation Analysis Resource use Economic livelihoods Social organization Institutional Links Wealth differences Conflict analysis Problem analysis	seasonal resource mapping. bioresource flow diagramming resource use mapping. seasonal calendars Livelihood analysis proportional piling Venn diagram Social mapping Venn diagramming Wealth ranking Venn diagram. Flow diagram. Critical incident Problem tree. Causal diagram
History of area general information on area and production conditions general information on people and relationships	Timelines oral history transect walks. participating in daily tasks taking photographs and giving and discussing prints

Other concepts which are integral to PRA are "handing over the stick" and "they can do it" - passing the initiative onto locals and having confidence in their abilities "Embracing error" means welcoming and sharing mistakes as opportunities to learn (Chambers 1994b) While these participatory methods are most often referred to by the name of **Participatory Rural Appraisal (PRA)** there are certain problems with the name which it is necessary to be aware of The "rural" label contains within it the implicit idea that rural communities are homogenous Within the South African context for example, rural people can immediately be split into the landed white rural dwellers and the generally more poverty-stricken disenfranchised rural African dwellers In this study, PRA undertaken with "rural" communities should be understood to refer specifically to poor African communities and farmworkers within and around the TBR

1 using secondary sources to gain familiarity with problems in the area
2 semi-structured interviews with key informants
3 group interviews
4 do it yourself - asking to be taught how to perform tasks
5 participatory analysis of secondary sources
6 participatory mapping and modelling
7 transect walks.
8 time lines and trend change and analysis
9 oral histories
10 seasonal calendars
11 daily time use analysis
12 livelihood analysis
13 Venn diagramming.
14 wealth group ranking.
15 analysis of difference
16 matrix scoring and ranking.
17 estimates and quantification.
18 key probes and
19 stories portraits and case studies

Validity and reliability of PRA

PRA constitutes a reversal of traditional academic frames a reversal from knowledge categories and values of an outsider professional to those of locals a reversal from the individual to the group from the verbal to the visual and from measuring and quantifying to comparing (Chambers. 1994b) The challenge is to introduce and use PRA so that the weaker members of a community are identified and empowered and equity is served PRA affirms and celebrates multiple realities and local diversity Sensitive interviewing and dialogue are important elements of participatory learning The process should not be extractive and intimidating rather it appears as a structured conversation

A common assertion about participatory methods is that they are undisciplined and sloppy (Pretty 1995) but there will never be any final correct answers and trustworthiness is never absolute As external conditions change so do values and judging criteria

The Methods of PRA

A raging debate exists amongst PRA practitioners regarding the use of manuals and methods in PRA Many argue that by providing manuals for PRA practitioners PRA may become a static and rigid methodology which is precisely what it tries to avoid (PRA training workshop 1993 Waters-Bayer and Bayer. 1994 Stadler 1995) Some practitioners of PRA reject the use of any manuals or methods but promote only one rule Use your own best judgement at all times' (Chambers 1994b) Despite these arguments however it remains true that certain methods have been tried in rural communities and have proven successful These methods should not be followed rigidly but rather used as a guide and adapted to local circumstances Methods include

their capability PRA and RRA also collectively stress the idea of learning rapidly and progressively of offsetting biases of optimizing trade-offs of triangulating and seeking diversity PRA however further stresses self-critical awareness and the personal responsibility of the researcher allowing local people to take over and also a sharing of the knowledge In PRA the researcher must have good facilitation skills which aims to enable local people to do more or all of the investigation mapping and analysis (Chambers and Guijt 1995) Knowledge is therefore not the sole property of one person or group but becomes accessible to everyone

The differences between traditional data gathering methods PRA and RRA lie in the behaviour and attitudes of the person collecting the data In traditional data gathering the outsiders dominate and gather and analyse the information which automatically becomes their property and no longer belongs to local people In contrast PRA allows outsiders to act as facilitators and convenors and not only as gatherers of information although the information remains the property of the local people The lack of blueprint and the improvization characteristic of PRA are in direct contrast to the rigid structure of questionnaires and methods so favoured by traditional social science PRA's main impetus is an acceptance that local people have a greater capacity to map, model observe and quantify than has been given them credit in the past

Rapid rural appraisal (RRA)

The precursor of PRA RRA emerged in the late 1970s amidst growing discontentment with rigid and time-consuming survey questionnaires RRA in fact had three main origins (Chambers 1994a)

(i) dissatisfaction with biases of rural development "tourism" (see Chambers 1983),

(ii) disillusion with the normal processes of questionnaire surveys and their results and

(iii) seeking of more cost effective methods and the recognition of indigenous technical knowledge (ITK)

RRA began and continues as a better way for outsiders to learn it sought to gain insight and information on local people and conditions RRA however still remained in the hands of outsiders, making use of costly and time-consuming surveys and the production of vast amounts of statistics What was really needed was research by the people for the people, resulting in the development of the PRA approach

The move from RRA to PRA

Although sometimes used indiscriminately as interchangeable terms RRA and PRA are distinct from each other on a number of levels PRA is intended to enable local people to conduct their own analysis of a problem to plan and then to take action PRA and RRA both stress the idea of a reversal of learning instead of "knowledgeable and learned" outsiders imposing ideas on local people outsiders learn from the local people what their lives are like and what their need are There is thus the imparting of trust to local people and a belief in

- outsiders with primarily technical skills should relinquish control and serve as catalysts or facilitators in a process of indigenous development rather than as managers of technical innovation (Waters-Bayer and Bayer 1994)

PRA essentially has its origins in rural settings in the developing world Research methodologies which have given rise to PRA include participatory action research agroecosystem analysis, applied anthropology field research on farming systems and rapid rural appraisal (RRA) The diverse origins of PRA illustrate its flexibility and use in a wide variety of rural contexts PRA is therefore the best means for investigating people-environment interactions in the highly diverse and often volatile communities of the TBR where a flexible approach is a prerequisite

Participatory Action Research

Emerging from the increasing conscientization in Latin America in the 1970's and Paulo Freire's idea that poor and exploited people can and should be enabled to conduct their own analysis of their own reality

Agroecosystem analysis

This combined the analysis of systems and system properties with pattern analysis of space, time flows and relationships and decisions

Applied anthropology

This subdiscipline gave PRA practitioners the notion of field learning as a flexible art rather than a rigid science It inculcated the value of unhurried participant observation and the importance of attitudes, behaviour and rapport

Field research on farming systems

Field research on farming systems increased understanding of the complexity diversity and rationality of local farming systems

- **multiple perspectives** - a central objective is to seek diversity It is assumed that different groups make different evaluations of different situations which lead to different actions
- **context specific** - the approaches are flexible enough to be adapted to suit each new set of conditions and actors
- **facilitating experts and stakeholders** and
- **leading to sustained action** - the learning process leads to debate about change including confronting the constructions of others This debate in turn changes the perceptions of actors and their readiness to contemplate action It also leads to more sophisticated and informed constructions about the world The debate thus seeks to motivate people to take action which would bring about change

Participatory Approaches - their evolution and use

Participatory Rural Appraisal (PRA) is not a new approach but has its origins in numerous other methodologies which have so evolved to create

> " a family of approaches and methods to enable rural people to share enhance and analyze their knowledge of life and conditions to plan and to act (Chambers 1994a p 953)

PRA is not a *set* methodology but is continuing to evolve and develop Although it has its origins in numerous other methodologies the approach to rural development participation emerged out of the continuing realization that

- it is generally not possible for outsiders to identify the needs of rural poor these can be identified only with active involvement of the local people themselves
- the primary responsibility for implementing solutions to rural people s problems has to lie with the people themselves in order to achieve a sense of ownership and the sustainability of any activities and

interpretation, all the actors have uniquely different perspectives on a problem and on what constitutes improvement Multiple perspectives emerge from the fact that knowledge and understanding are socially constructed and therefore what any one person knows and understands is a function of their own unique context (Pretty, 1995) In the complex and changing world there can never be an ultimate truth and solution since problems are endemic to the situation Systems of learning and action are required to seek the multiple perspectives of the various interested parties It is accepted that knowledge and understanding are socially constructed, that they are functions of each individual's context and past (Blaikie 1995) From this contention it follows that all the stakeholders involved in any interaction will have uniquely different perspectives on what a problem is, and on what constitutes improvement There is therefore no single "correct" understanding (Pimbert and Pretty 1995) and as a result quantitative methods are not the most effective means of gaining a true reflection of the situation In recognition of this a more qualitative method of data gathering was followed in this study making use of participatory methodologies

It is essential to seek multiple perspectives on a problem situation by ensuring that a diverse group of actors and stakeholders participate (Swift 1993, Pimbert and Pretty, 1995) Since societal relations are so unequal with the poor and illiterate often made powerless by having no means of articulation, participatory methods have been devised to provide these communities with a means by which to voice their concerns and ideas Participatory methodologies are therefore seen to be the most appropriate way of data gathering in the mostly illiterate rural communities surrounding the Thukela Biosphere Reserve

Diverse participatory learning systems have the following in common

- **A defined methodology and systemic learning process** the focus is on cumulative learning by all participants

Tab.e 4.2: Main Vegetation types and climax species in the 1BR (source: Acocks, 1988; Camp, 1995a and Camp, 1995b).

Semi deciduous Bush and Euphorbia thicket	***Acacia karroo - Acacia nilotica thornveld***	***Open grassland***
Tree species.	**Tree species.**	**Grass species:**
Schotia brachypetala	Acacia karroo	Hyparrhenia hirta
Olea europeae	Acacia nilotica	Sporobolis
Pappea capensis	Acacia tortilis	Aristida
Boscia albitrunca	Acacia robusta	Themeda triandra
Boscia foetida		
Acacia robusta		
Shrub species:		
Blepharis natalensis		
Felicia filifolia		
Euphorbia triangularis		
Euphorbia tirucalli		
Aloe rupestris		
Pseudocactus		
Coddia ruddis		
Lippia javanica		
Asparagus sp		
Grasses:		
Themeda triandra		
Eustachys paspaloides		
Digitaria eriantha		
Cymbopogon Plurinodes		

Figure 4.2 Vegetation map of the study area

Figure 4 7 depicts the distribution of the major vegetation types in the TBR region These can largely be classified into three main types (Camp 1995b)

1. Semi-deciduous bush and ***Euphorbia*** thicket,
2. ***Acacia karroo - Acacia nilotica*** thornveld and
3. Open grassland

The most important plant community in the region is the semi-deciduous bush Trees common to this vegetation type often occur as relict species on termite mounds The reduced distribution of these trees is evidence of the degraded condition of the veld (Camp, 1995a, 1995b) Grassland is becoming a more and more scarce resource as bush encroachment takes over and the thornveld begins to become more dominant The shrinking of grassland resources is a cause of major concern since these areas provide important grazing Grass species such as ***Hyparrhenia hirta*** also form an important resource for local communities who use it for thatching

Biogeography and Ecology

The TBR falls within the savanna biome of southern Africa (Rutherford and Westfall, 1994) and the vegetation of the area is typically known as Weenen Valley Bushveld (Edwards, 1967, Camp, 1995a and 1995b) The Valley Bushveld is a relict vegetation which has become seriously degraded (Acocks, 1988). It contains a rich variety of flora with a high degree of endemism It is also a habitat capable of supporting a diversity of wildlife, in particular it is the ideal habitat for the Black (Hook-lipped) rhinoceros (***Diceros bicornis)*** The Weenen Nature Reserve is in fact used to "farm" four very important and endangered species Black rhinoceros (***Diceros bicornis)***, White (square-lipped) rhinoceros ***(Ceratotherium simum)***, buffalo ***(Syncerus caffer)*** and roan antelope ***(Hippotragus equinus)*** (Marchant, pers comm) The TBR therefore has a very important role to play in the long term conservation status of some rare and endangered mammal species (see Table 4 1)

Table 4.1: Rare and endangered mammal species occurring in the TBR

White Rhinoceros	***Ceratotherium simum***
Black Rhinoceros	***Diceros bicornis***
Cape Buffalo	***Syncerus caffer***
African Elephant	***Loxodonta africana***
Leopard	***Panthera pardus***
Roan antelope	***Hippotragus equinus***
Oribi	***Ourebia ourebi***
Cape clawless otter	***Aonyx capensis***
Aardwolf	***Proteles cristatus***
Spotted hyena	***Crocuta crocuta***

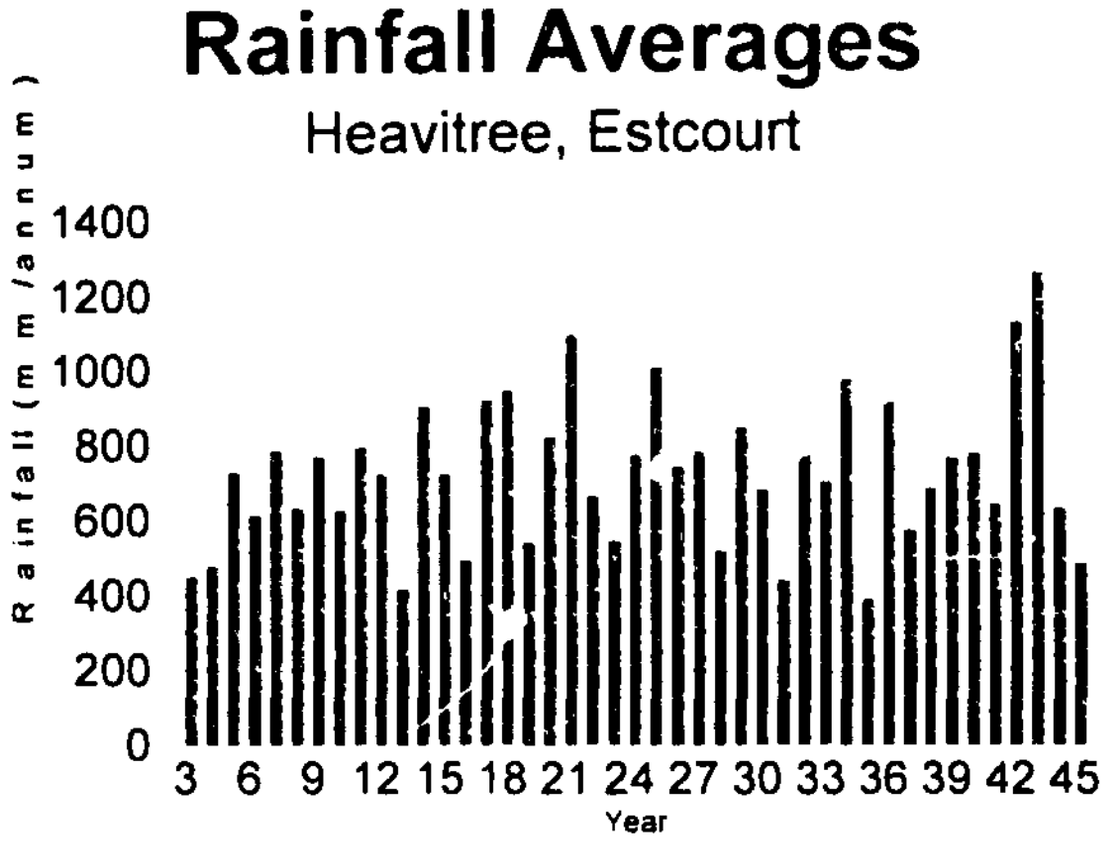


Figure 4.6: Annual rainfall averages for Heavitree, Estcourt, 1903-1945 (source: CCWR, 1996

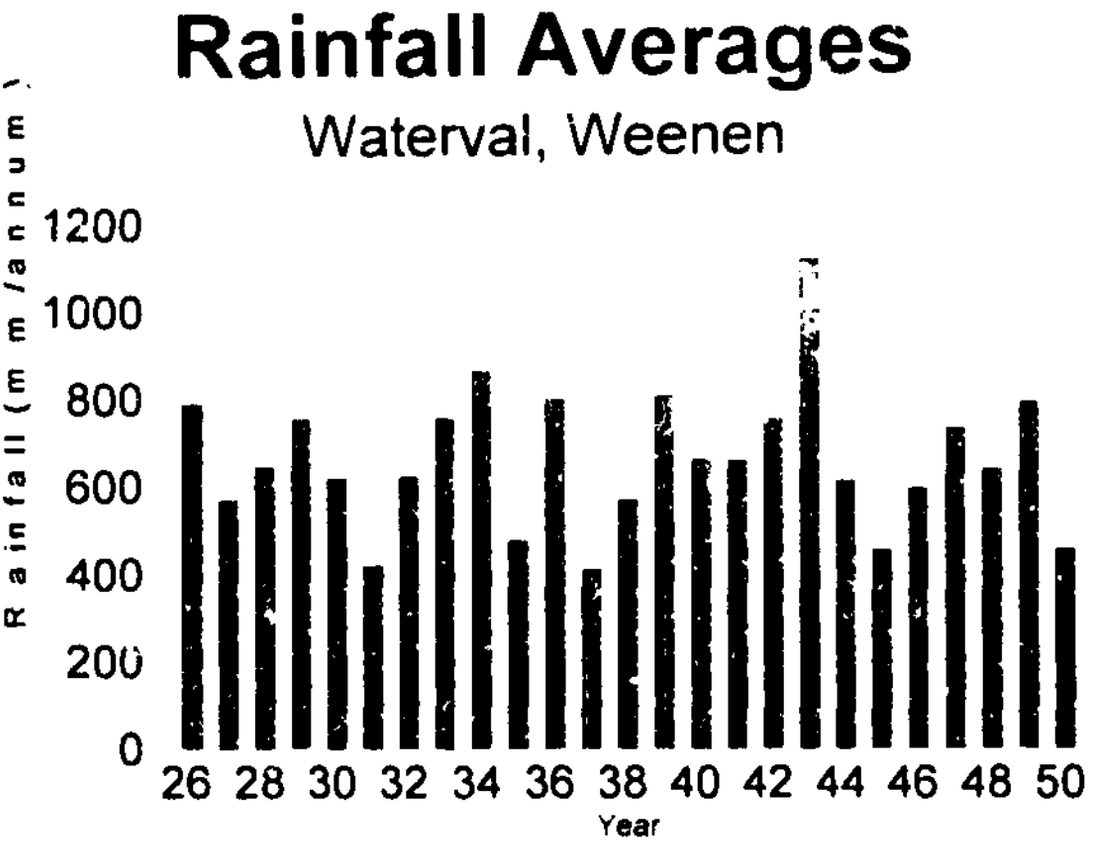


Figure 4.5: **Annual rainfall averages for Waterval, Weenen, 1926 - 1950 (source: CCWR, 1996)**

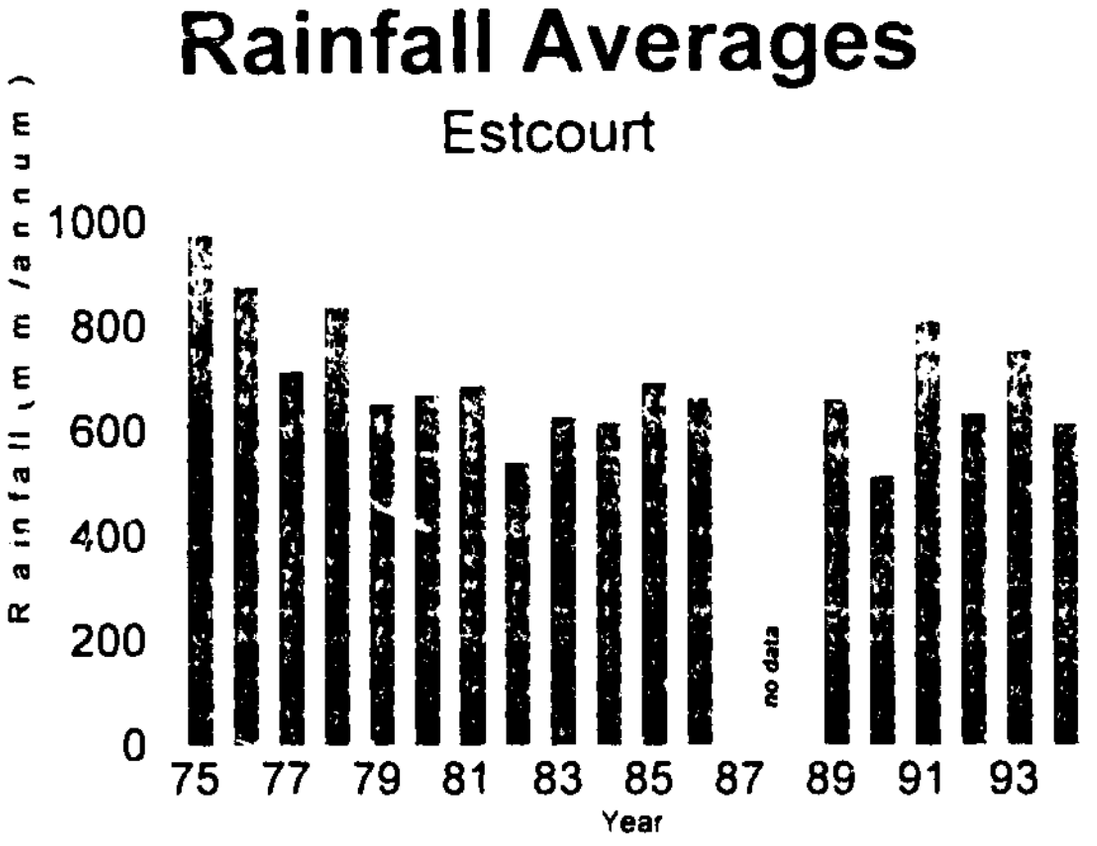


Figure 4.4: Annual rainfall averages for Estcourt, 1975 - 1994 (source: CCWR, 1996)

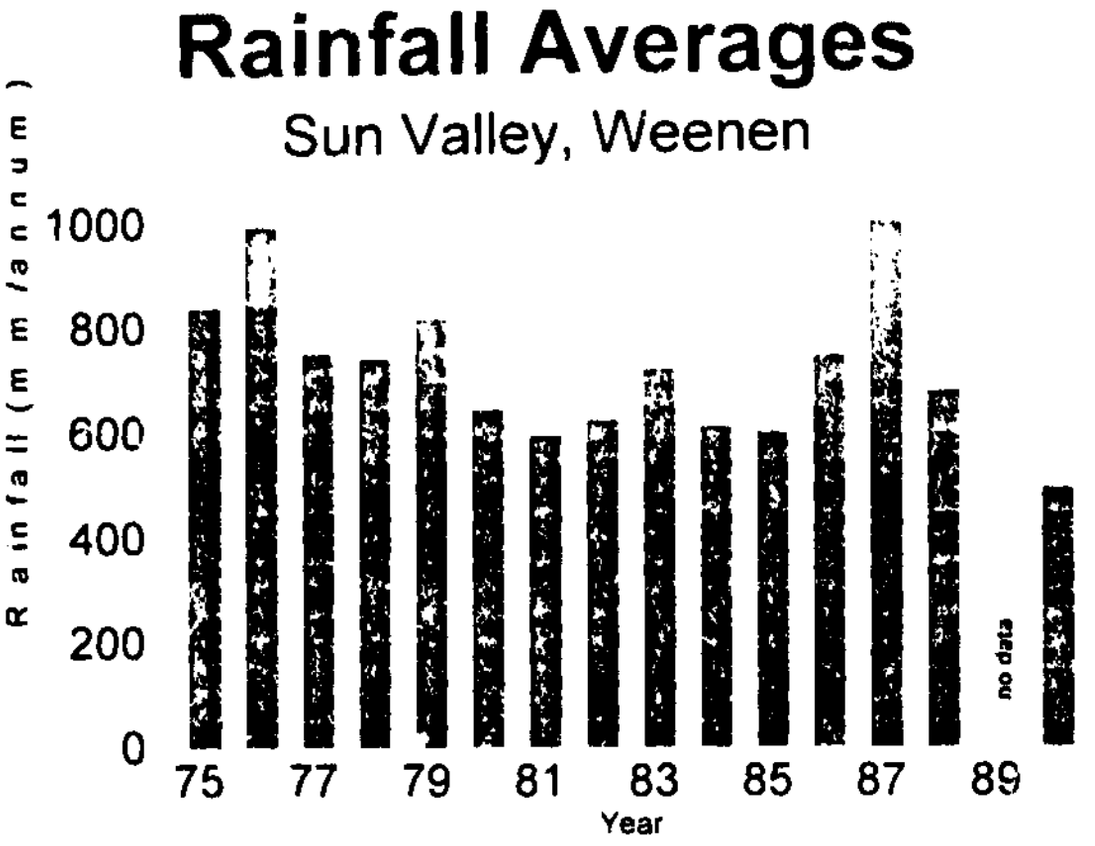


Figure 4.3: **Annual rainfall averages for Sun Valley, Weenen, 1975 - 1994 (source: CCWR, 1996)**

TBR area are notably shallow, poor in nutrients and prone to erosion and the erosivity of these soils is particularly high because of their duplex nature

Climate

The region experiences notable extremes of temperature The average January temperature is 31 C, while the maximum high recorded is 42,8°C. The average July temperature is 18 C, while the minimum recorded is - 6,7°C (Computing Centre for Water Research (CCWR) 1996).

Rainfall statistics from the two stations of Estcourt and Sun Valley depict a variable rainfall over the last twenty years with an annual average of 720 mm but ranging from 510,3mm to 996,2 mm per annum (Figs 4 3 and 4 4). The erratic rainfall means that the region is often subjected to drought. However, rainfall statistics from the turn of the century from the Waterval station in Weenen and the Heavitree station in Estcourt (Figs 4 5 and 4 6) also show a highly variable rainfall regime. From these statistics it can be concluded that drought is not a new feature of the area but has perhaps been more severely felt in recent years because of the increasing ecological degradation of the area

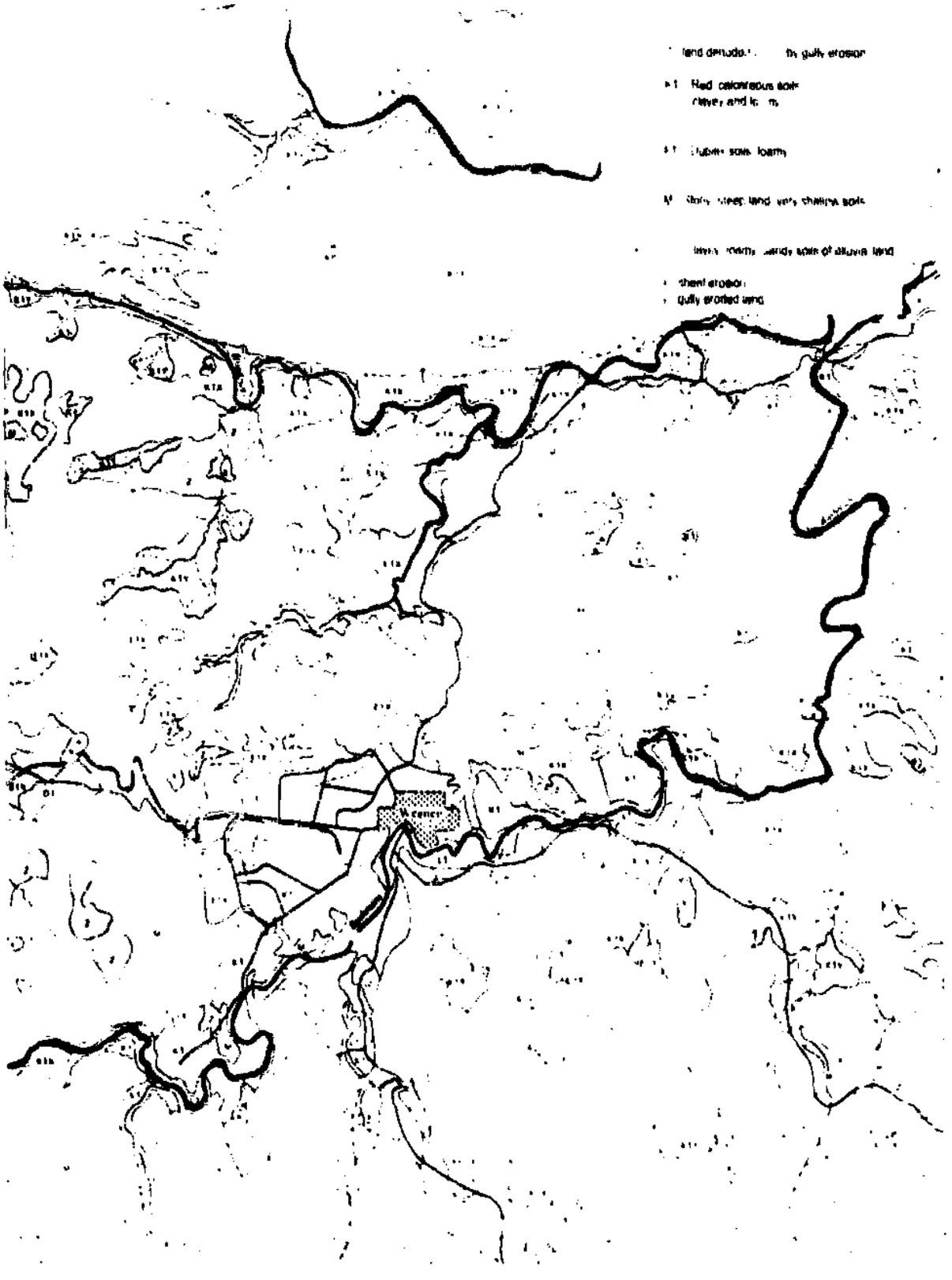


Figure 3 : Soil map of Weenen region showing extent of gully erosion. Scale 1 100 000 (source Town and Regional Planning Commission, 1968).

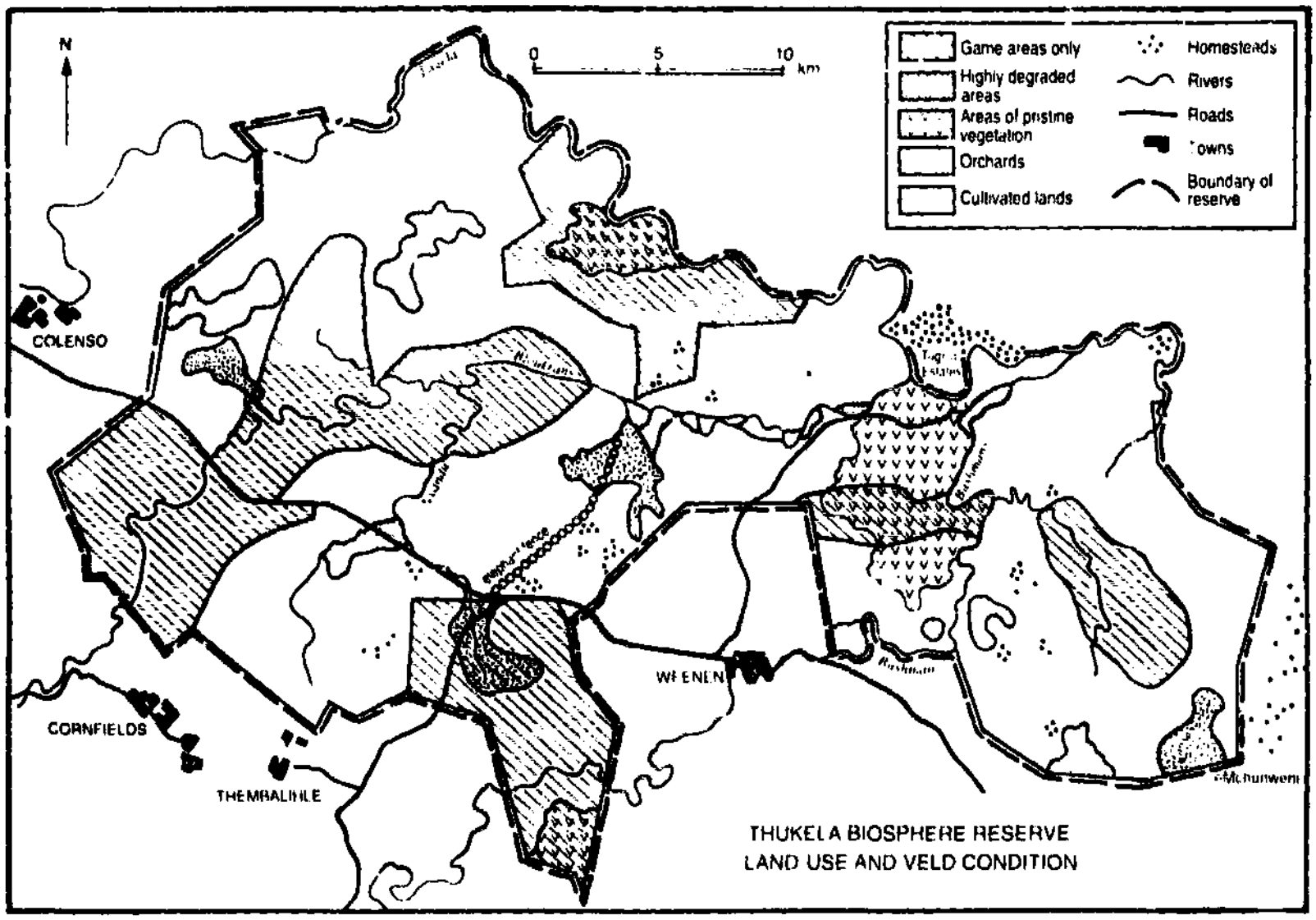


Figure 4.1: **Map of the Thukela Biosphere Reserve showing land use, veld condition and surrounding communities.**

Chapter 4

LAND USE AND DEGRADATION IN THE THUKELA BIOSPHERE RESERVE

While the participatory approach outlined in chapter 3 forms the core of this research a comparison needs to be made between what the people perceive and what is indicated by the scientific data available on the area A more "scientific" background to the environmental situation existent in the TBR is therefore provided in this chapter and provides a context in which to assess the results provided in chapter 5

Physical Background

The rough hilly terrain of the Thukela Biosphere Reserve is bounded by three important rivers the Tugela River The Bushmans River and the Blaaukrans River (Fig 4 1) All of these are perennial river systems, but there are also numerous non-perennial streams which run through the area When flooding occurs, as it did in December 1995 the poor state of the veld means that these rivers are able to carry much sediment away from them and severe undercutting and bank erosion is a common phenomenon

The geology of the TBR is typified by numerous Dolerite intrusions into the sandstones of the Ecca and Beaufort series of the Karoo system (Edwards 1967) giving the area its characteristic dolerite and sandstone hills sandstone and shale terraces and valley floors composed of highly erodible sediments The hillsides have stony and shallow soils derived from dolerite Ecca shales and sandstones while deep alluvial soils are found in the valley soils The soils of the interior river valleys are red calcareous soils which are clayey and loamy and highly erodible

The shift away from an objective science' approach is exhibited in the move towards participatory research methods which recognize the plural truths of all the actors involved Participatory Rural Appraisal provides a system of learning and action which enable researchers to seek the multiple perspectives and perceptions of the involved groups PRA has been successfully used in a number of diverse contexts and dealing with the interactions between humans and natural resources

The usefulness of PRA in this study was enhanced because of PRA s adaptability in any context openness of approach and the fact that it offers local control of the process rather than being merely extractive and top-down The results of the PRA exercises are provided in chapter 5 The above participatory approaches were also used in combination with more traditional methods to gain information on the physical environment as reflected in the ensuing chapter

The spate of evictions in the Weenen area prompted the call in 1990 for the urbanisation of evicted communities The relevant authorities increasingly began to search for more viable and socially supportive development options for actual and potential evictees (Todes and Krone 1990) No real solution, however has been implemented in the area and evicted tenants continue to pour into the already overcrowded communities of Cornfields Thembalihle and Tugela Estates placing increasing strain on the areas already degraded natural resources

In 1990 there were 335 families living in emergency camps outside Weenen (Todes and Krone 1990) - a number which had only been slightly reduced by 1995 Surveys recommended that the established community network in the region should be disrupted as little as possible in order to maintain social stability. In other words evictions should be stopped (Natal Provincial Administration 1990) This call has not been heeded by local landowners however and the social disruption caused by evictions continues Absentee landownership creates severe social and environmental problems in the region Without adequate management or supervision labour tenants on farms with absentee landowners proliferate and overstocking leads to extreme land degradation (N P A 1990) Landowners then try to rectify the degradation of the land by evicting large numbers of tenants Evictions are thus often justified by the concern for environmental degradation

Despite the changes in the country relations between local communities and farmers have not ceased to be fraught with tension Witness the outcry caused by the impounding of former labour tenants cattle in the Weenen area (AFRA 1991 AFRA 1992 Kockott 1993) The political changes which have swept the country have given people new hope for access to the resources which they have been denied for so long they are not about to give them up to some "white man s trick" of so-called ecotourism and game The central issue in the conflict is therefore ownership and use of natural resources such as soil water grazing land and firewood

property was at the whim of the latter and so ensured good behaviour on the part of the tenants Despite its susceptibility to exploitation black people continued to endure land tenancy since this was the only means whereby the land resources essential for a homestead could be secured during the *Apartheid* rule

The Apartheid years: 1950s to 1990

In an attempt to remove as many black people as possible from white-owned land the state introduced a ban on labour tenancy in the 1960s When the labour tenancy ban was extended to Weenen in 1969 all unauthorised families working on any particular farm had to leave to be resettled in what was then the KwaZulu "homeland" Mass evictions followed and it is estimated that more than 10 000 families were forced to leave Weenen (AFRA 1988 Clacey 1989)

Post-Apartheid and new initiatives: 1990 to the present

Despite the government ban on labour tenancy introduced in the 1960s the labour tenancy system continued to operate illegally in the Weenen area right up to the present day (AFRA 1991 AFRA 1992 Gibson 1995) It exists in an even more exploitative form as the system no longer operates within the bounds of the law tenants face arbitrary eviction and high levels of exploitation with little or no recourse Reasons for evictions vary but many include disputes between landowners and tenants over stock reductions Land owners argue that the proliferation of labour tenants and their livestock causes severe soil erosion Conflict over natural resources and their conservation is thus an important factor in the eviction struggle In the absence of adequate wages however stock represents a major source of social security and an important source of income for tenants (AFRA 1987) In general labour tenants derive most of their income from their use of the land and their assets are concentrated in livestock (Kockott 1993 Marcus 1995)

necessary for vast numbers of homesteaders to seek involvement in wage-labour This was found in two forms

1 Migrant Labour The discovery of gold on the Reef towards the end of the 19th century meant that the inhabitants of the Weenen area became progressively more integrated into the regional economy centred on mineral exploitation at the Reef This meant that many young African men left to seek employment and their prolonged absence from the homestead placed increasing burdens on the women and children

2 Labour Tenancy Loss of access to land and other resources undermined the economic independence of African homesteads - thereby "freeing" labour power to be absorbed by the emerging settler-dominated economy From as early as 1858 labour tenancy was the predominant form of labour organization in the Weenen area This "labour service in lieu-of-rent" allowed Africans right of cultivation and pasture in exchange for labour A crucial feature of this labour tenancy was that labour was paid for at a lower rate than average wages in the area In some cases labourers received no cash wage at all and employer justification of this was based on an assessment of "hidden" remuneration embodied in the stock-keeping and cultivation privileges enjoyed by the tenant homestead These privileges were often overestimated by the landlord (Burton-Clark 1985 Clacey 1989 Kockott 1993 Van Onselen 1996)

The thornveld region around Weenen village occupied a notable role in the organization of labour tenancy in the country (Burton-Clark 1985, AFRA 1988, Kockott 1993) During the 1870s settler employers based in the higher-lying parts of the county began to acquire Crown land in the area for the sole purpose of drawing a supply of labour from the Africans that were living there By having all or part of the workers remuneration take the form of cultivation and grazing privileges labour-tenancy preserved the cash resources of the employers Evidence suggests that institutionalized indebtedness became a key factor in assuring both the supply and control of African workers (Burton-Clark 1985 Kockott 1993 Van Onselen 1996) A tenant's presence on a landlord's

Chapter 5

LOCAL COMMUNITIES AND THE THUKELA BIOSPHERE RESERVE

An analysis of the historical context of the Thukela Biosphere Reserve is crucial in an understanding of the current issues affecting the successful implementation of a sustainable land use option within the region. The Weenen region is scarred by the history of its oppressive past which includes the exploitative labour tenancy system, evictions of communities from farms into the KwaZulu "homeland" and the social and environmental disintegration which accompanied these practices. These historical factors inform the current state of environmental degradation as it is recognised by the scientific community and is outlined in chapter 4 as well as the contemporary community reaction to the establishment of the TBR.

Historical development and Social Demography

The procursor to labour tenancy: the late 19th century and early 20th century

African people in South Africa have effectively been prevented from owning land since 1913 by the land acts of 1913, 1927 and 1936. They have systematically been relocated into "homelands" or bantustans where 80% of South Africa's population was forced to live on only 13% of the land area (Marcus, 1989). The old KwaZulu "homeland" for the Zulu people was one of the most densely populated areas and as a result huge strain was placed on its natural resources.

Traditionally, Zulu people were organized into homesteads which were largely self supporting. As the homestead-economy began to decline it became

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The Thukela Biosphere Reserve is situated within a fragile physical environment with easily erodible soils and a variable climate susceptible to frequent droughts Land suitable for cultivation occurs only in certain low-lying areas along the major rivers and most farming activity in the region takes the form of cattle ranching A century of intensive cattle grazing has taken its toll and region has been severely overgrazed resulting in vast extents of serious soil erosion The degradation of the land is also manifested in the increasing encroachment of the ***Acacia karroo - Acacia nilotica*** thornveld with decreasing palatable grasslands for grazing The rapid degradation of the veld lends urgency to the necessity of finding more sustainable land usages in the region Possibilities for this include ecotourism and game farming The region forms the ideal habitats for a number of endangered mammal and bird species and so opportunities exist for increased farming of these animals with the development of an associated ecotourism industry Despite its potential however ecotourism is at present only a limited activity in the area since it requires enormous capital input to be truly successful

Other alternatives for income generation that would be environmentally sustainable include the carefully monitored harvesting and processing of secondary products such as wood thatch and medicinal herbs Decision-making regarding the sustainable use of resources however can only be attained through the participation of all the users of those resources It is therefore necessary to include all the actors perceptions and needs of land degradation and resource use This chapter provides a context within which to explore these issues in Chapter 5

Medicinal plants are a further resource which local communities require As far as interviews could ascertain there appears to be little harvesting of these resources but farmers complain of severe ring barking Again surveys would be necessary to ascertain the extent of these resources as well as their sustainable utilisation

Stimulation of the local rural economy could occur through the harvesting and proce·.sing of natural indigenous resources These secondary products might include fuelwood thatch grass and carving timber A study completed in the Mpumulanga Lowveld suggests that there is considerable value tied up in these resources with great potential for the development of local processing centres for the raw materials providing the basis for significant employment opportunities (Shackleton 1996) More work needs to be undertaken in the TBR region to assess the extent of the resources and the possibilities that ex r their sustainable exploitation

This chapter has provided a more traditional scientific approach to the question of land degradation and sustainability in the TBR This provides a backgr·.·nd with which to compare the perceptions of local communities Chapter 5 provides the results of participatory interviews that detail local communities perceptions of the environmental degradation of the Weenen region These perceptions are placed in the context of an historical framework of the area

with the biosphere since they had anticipated quick economic returns from game and ecotourism, however these have not yet come to fruition

Soil and Water Conservation

The periodic droughts to which the Weenen region is subject means that water is a precious and highly demanded resource Most rural black communities interviewed prioritised access to fresh potable water as their most important need At present most communities including farmworkers obtain water from dams or rivers - often up to 5 kilometres away To their credit the TBR has initiated some projects within communities which aim to provide access to water These should remain high priorities A further concern is that there will be an increased need for water with the development of an ecotourism infrastructure (for example hotels and lodges)

Secondary Products

Wood is an important fuel resource for black communities Many white farmers express concern that hardwoods are rapidly disappearing A survey would need to be instituted to find out if this was indeed the case Many farmers allow labour tenants c ily to use dead wood for fuel

Grass resources for grazing are highly sought after because of the high densities of cattle in the area The problems associated with overgrazing have already been discussed Certain grass and sedge species are also utilised by local communities for example the grass ***Hyparrhenia hirta*** is used for thatching and the sedge ***Juncus krausii*** or *iNcema* is used to weave mats and baskets The Weenen Nature Reserves allows some women from the nearby communities of Cornfields and Thembalihle to harvest grass once a year In 1995 approximately 80-90 women collected 3000-4000 bundles (Pullen pers comm)

and camping sites hiking trails white-water rafting horse trails as well as 4x4 vehicle trails However, these ecotourism facilities are as yet extremely limited

Table 4.4: Land Use in the Thukela Biosphere Reserve (adapted from: Sandwith, 1993)

LAND USE TYPE	% OF TOTAL (57 000 HA)
Nature Conservation and Game Farming	35%
Cattle Ranching	47%
Subsistence Agriculture	10%
Commercial cultivated lands	8%

Ecotourism and Game Farming

A report by the Natal Parks Board (Sandwith, 1993) indicates that the following industries are likely to experience multiplier effects of eco-tourism developments

- food supplies for staff and visitors
- construction opportunities
- processing and sale of game products.
- the development of a local crafts industry
- transport (fuel spares and repairs) and
- game capture operations

There is thus vast potential for increased economic activities and income-generating opportunities For the majority of members in the TBR however game at present provides only a supplementary form of income and most members do not believe that they will turn to the exclusive farming of game animals in the near future if ever Many of the members are also disillusioned

"The arid conditions of the bushveld generally preclude any line of farming other than livestock production that is based on the veld It is essential, therefore, that the process of deterioration of the natural resources be stopped and if possible, reversed, if the future of farming in this veld type is to be ensured" (Camp, 1995a p 25)

Sustainable Resource Use - Possibilities and Precautions

The sustainable use of natural resources is one of the more important ideals of the MAB biosphere programme - fitting in with the world-wide concern with sustainable development As has already been shown, natural resources have been severely degraded in the TBR region and as such are relatively scarce The natural resources in the area are also under the stress of a great deal of competition

Present Land Use

The 50 000 plus hectares of the Thukela Biosphere Reserve are divided into four blocks to facilitate a more flexible management system The Weenen Nature Reserve forms the whole of Block A and is exclusively owned and managed by the Natal Parks Board, Blocks B C and D are all privately owned farms and managed by their owners The TBR steering committee is not prescriptive in the management techniques which individual farmers use so only the Weenen Nature Reserve follows a strictly monitored regime of close ecological management

The land is used predominantly for cattle ranching with game ranching becoming increasingly dominant (Table 4 2) Most members have introduced game but have maintained their herds of cattle Few of the landowners have only game on their land the reasons being mostly economic, since benefits from game have yet to be realised and cattle are still a sure option Some of the landowners do have tourist facilities on their land for example caravan parks

Table 4.3: Stocking rates in the Muden-Greytown area (source: Camp, 1995a; Camp, 1995b)

CENSUS DETAILS	STOCKING RATE (Ha per AU)
large stock census winter 1955	2 62
goat count 1966	2 01
large stock census summer 1970	4 17
Combination of 1966 goat count and 1970 large stock census	3 95
large stock census summer 1971	3 44

Overstocking results in severe overgrazing of the palatable grass species and the resultant domination of unpalatable species and the deterioration of the veld as grazing for livestock Observations in the field revealed that in many areas severe overgrazing has left the soil exposed - resulting in increased runoff erosion and capping of the soil surface Capping occurs when fine soil particles settle on the surface creating a fine cement-like paste baked hard by the sun and resulting in less infiltration and increased runoff The alluvial soils in the valleys have also been subject to intensive agricultural production that has disrupted the natural processes and has resulted in decreased soil nutrient value Soil erosion in the area is extremely severe as visual observation can testify

The valley bushveld is often referred to as the "thornveld" because of the abundance of *Acacia* species in the bush component (Camp 1995a) In fact however the abundance of shrub and bush species is a reflection on the degradation of the veld As palatable grass species become reduced through overgrazing bush species are able to encroach and become dominant It has been estimated that at least 60% of the thornveld has invaded during this century alone (Edwards 1967)

The Extent of Land Degradation

A soils map of the Tugela basin completed by the Town and Regional Planning Commission in 1968 (Fig 4 8) shows a large extent of land denuded by gully erosion around Weenen Indeed, concern surrounding the extreme degradation of the Weenen Valley bushveld became manifest as early as 1950 by the Muden Mooi Soil Conservation Committee who blamed the degradation largely on labour farms (Camp, 1995b). In 1967 it was observed that.

> "Though most of the area is covered by dry valley vegetation, much secondary disturbance of the vegetation is evident. In many cases the deterioration of vegetation and soils represents nearly the maximum possible almost completely bare rock has been exposed". (Edwards, 1967, p.35)

Today, the Valley bushveld of the Weenen region is considered one of the most seriously degraded veld types in KwaZulu-Natal (Broderick, 1987; Garland *et al.*, 1994; Camp, 1995a). Studies carried out in the Weenen-Muden area in 1986/87 produced the following statistics.

In an area of 86 245 ha

- 18,3% of the veld was in **extremely poor condition** with all the topsoil and much of the subsoil lost through erosion;
- 22,6% of the veld was in **poor condition** with active sheet erosion, poor species composition, and low basal cover;
- 54.2% of the veld was in **reasonable to good condition** (Camp, 1995a).

The stock-census figures for the Muden area show the extreme grazing pressure to which the area was subjected (Table 4 1) The figures below should be compared to the recommended average stocking rate of 6,5ha/ animal unit (AU) (Twiddy, pers comm.)

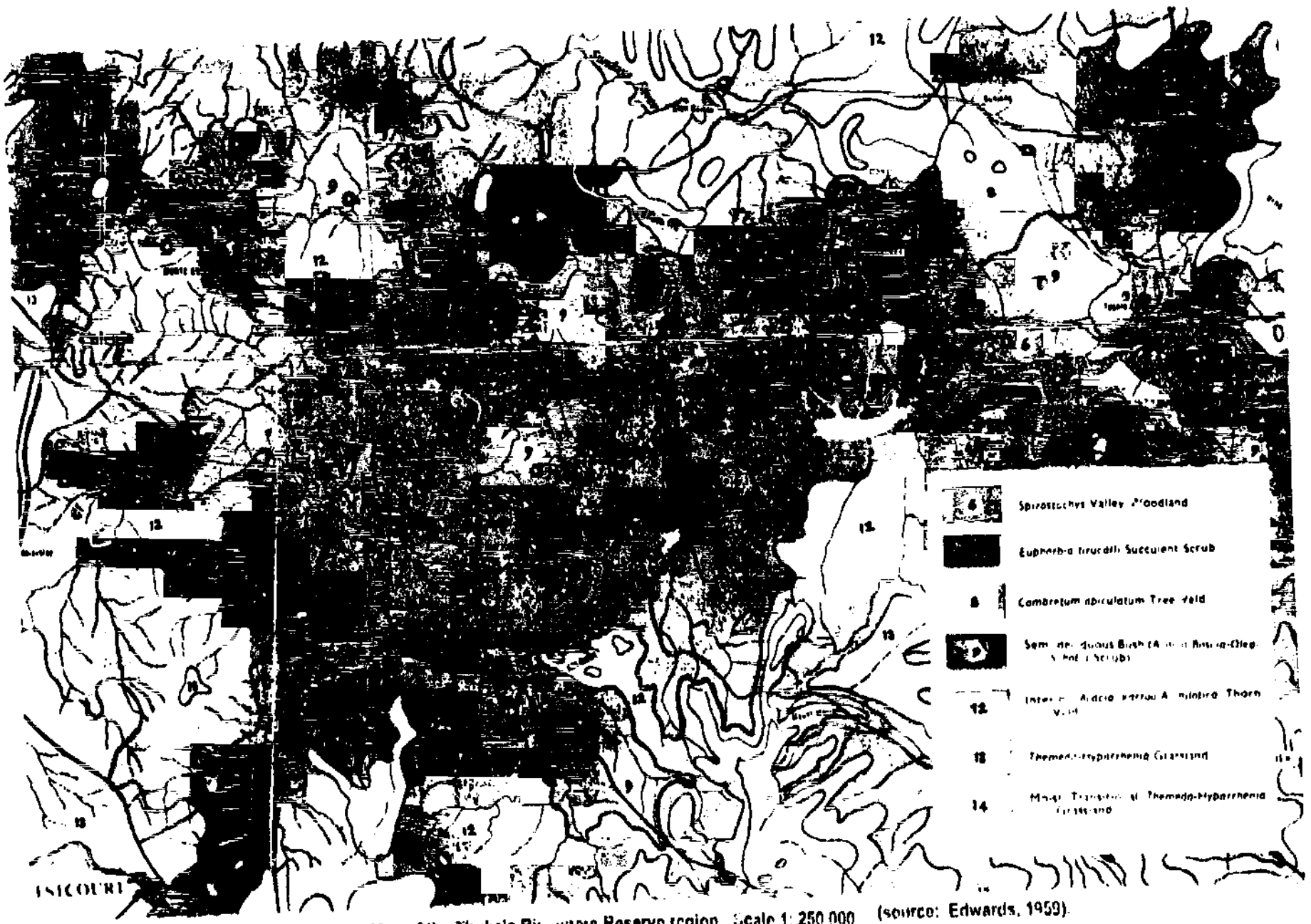


Figure 4: Vegetation Map of the Thukela Biosphere Reserve region. Scale 1: 250 000 (source: Edwards, 1989).

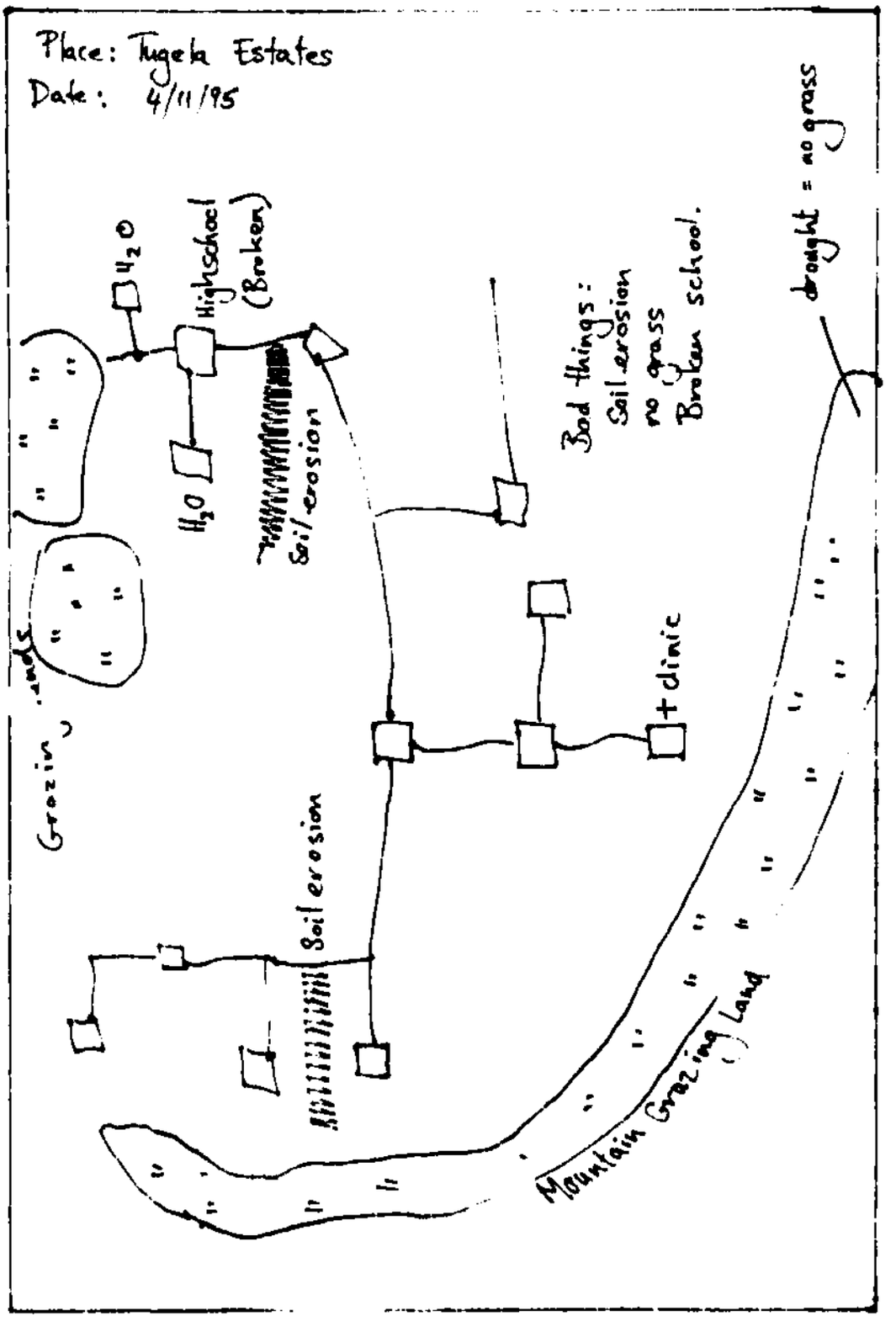


Figure 5.3. Map completed by members of Tugela Estates community showing concern with environmental degradation manifested by soil erosion (4/11/1995)

enormous social impact of the evictions The emphasis on evictions should also be seen in the context of land reform and communities hopes for gaining ownership of land in the TBR as the fact that they were forcibly removed could lend legitimacy to any land claims which they may have This is not to denigrate any of the negative effects which the 1969 evictions created An interesting comparison with community perceptions in Tugela Estates can be made with the white landowners who struggle to recall the date of the evictions when prompted to do so White landowners also always add that 'people wanted to move' to Tugela Estates and were not forced to do so

Perceptions of environmental degradation:

People in Tugela Estates directly blame the landowners of the TBR for the deterioration of their environment The reason that the land is degraded they state is because it is overcrowded and overgrazed and that the overcrowding must be blamed on the evictions off white owned land in 1969 Whereas white landowners attribute the degradation in Tugela Estates to ignorance and poor management on the parts of the inhabitants the inhabitants themselves attribute environmental degradation to much wider ranging issues of politics and power struggles Community recognition of the degradation of their environment is clearly illustrated by the map of Tugela Estates (Fig 5 3) where soil erosion and the decrease in vegetation are clearly perceived as major problems

eMchunweni (Msinga)

As with the other communities eMchunweni is characterised by high rates of employment poverty and sickness Many households survive on what they manage to cultivate in their gardens and on pension money received by older members of the household Drought is perceived as a major obstacle to survival as are the faction fights predominant in the area

Place: Tugela Estates
Date: 6/11/95

TIMELINE:

1969: Evicted from farms
At the time of the evictions, we weren't told why we were moved We need a meeting about why we were moved.

1990: Thukela Biosphere Reserve started creating more trouble.

Present: Need to move back to the old land. Tugela Estates a terrible place to live.

Figure 5.2 Timeline exercise completed by members of Tugela Estates community (6/11/1995)

Place : Tugela Estates
Date : 7/11/95

TIMELINE :

May 1969 : Farmers began to irritate us telling us we had to move off the land.

August 1969 : We were put in jail in Weenen.

October 1969 : We were moved by Trucks to Tugela E. Our cattle and goats were taken by the whites.

Before we came here, they promised we would stay here for only three years before going back - we are still waiting.

1970 - 1990 : More and more people moved onto the land The land used to be rich but more people means more trees are destroyed.

The Thukela Biosphere has forced more people to move onto this land, therefore destroying it.

Figure 5 1 Timeline exercise completed by members of Tugela Estates community (7 11/ 995)

bureaucratic approaches with little community participation A complaint emerged that there is also little co-operation from landowners in the TBR and the committee felt angered that when land had been made available from a farmer other prominent members of the TBR had stepped in and bought the farm

PRA exercises - timelines

The literature surrounding participatory methods often stresses the use of visual and diagrammatic methods over writing exercises (Chambers, 1994b) However in the interviews completed during this research it was found that people were far more comfortable listening and talking than drawing maps Most groups were keen that things be written down usually by a literate member of the group Groups were also insistent that the researcher take these written testimonies away with her - in contrast to the literature on PRA which suggests that communities would wish to keep copies so that they could maintain ownership of the information The communities interviewed in this research were insistent that what they had written be made known and for this reason wished the researcher to take it away with her

Participatory interviews with groups in the local community revealed the intense land hunger which the people experience Two separate groups were asked on different occassions to prepare a time line of the most important events which they felt the community had experienced in their lifetime (Fig 5 1 and Fig 5 2) Both of the groups spontaneously began with the year 1969 the year in which labour tenancy was outlawed in Weenen and large-scale evictions forced many people to move to Tugela Estates The time-lines shown below clearly illustrate the importance of this event in the lives of the inhabitants of Tugela Estates and the tremendous impact which this event has had on the lives of the people The fact that two separate groups both immediately and spontaneously chose the date 1969 when asked to complete the time line is witness to the

and white landowners complain of illegal grazing of cattle poaching of wood water and game Cattle are regularly impounded by the farmers when they are found grazing on their land - a fact which results in increasing tension between the communities and the farmers in the Thukela Biosphere Reserve

Communities Surrounding the Thukela Biosphere Reserve:

Tugela Estates

This community exhibits the most negative reactions to the TBR It is locally regarded as the most lawless and violence-stricken community - a fact proven by the assassination of a local *induna* the day after he was interviewed for this research One of the major sources of income for many members of Tugela Estates is the illegal cultivation of "dagga (*Cannabis*) a subject about which they are understandably extremely reticent and covert The continual necessity for subterfuge and avoidance of the law obviously contributes to the lawless nature of this community It is also true that many perceive that this important source of income may disappear if the TBR becomes a high profile area and this most certainly contributes to the animosity toward the TBR which is apparent within Tugela Estates

Attitudes toward the TBR

In-depth interviews with local community leaders revealed a deep-seated distrust of the landowners of the TBR although the community is not opposed to the concept of the biosphere as such in fact they have discussed the idea of a community game reserve in order to generate income for the commmunity They remain bitter however towards the powerful white landowners who are the major force behind the TBR because of past injustices such as evictions and the continuing impoundment of cattle Bitterness against the TBR landowners was also exacerbated by the frustration felt by the perceived inadequacy of the Land Reform Pilot Project which was still subject to government delays and top-down

controlled sustainable land usages Sustainable land use therefore lies entirely in the hands of the local communities

Local Communities: Perceptions and Power Struggles

The social profile of most households in the TBR region is one in which extended families are common The high percentage of youth indicates a significant dependency burden on wage earners and pensioners Levels of migrancy are generally lower than encountered elsewhere in Natal reflecting a high degree of economic ties within the area (Todes and Krone 1990) About 85% of people in the Weenen region are born on the farm on which they are living or from which they were evicted signifying a notable attachment to the land (Todes and Krone 1990) Incomes in this region are extremely low with a monthly average of R212.00 (Todes and Krone 1990) This is significantly lower when compared to income levels amongst rural households within the wider KwaZulu area where mean monthly household incomes are R788 00 (Marcus 1995) Some of the households interviewed for this research obtained a wage income of only R50 a month Rising unemployment severely impacts on rural household income, with 'migrant' household members and rural households increasingly having to rely on informal sector activities for income Scope for entrepeneurial activities is limited and so many people seek employment in the illegal trade in "dagga" (*Cannabis*)

For purposes of clarification the communities are discussed here as five distinct groups four existing outside of the boundaries of the Biosphere Reserve and the last within the boundaries (see Fig 4 1) The communities are Tugela Estates, eMchunweni, Thembalihle Cornfields and farmworker communities scattered on farms throughout the TBR All the communities exist in the most abject poverty with high rates of unemployment and the accompanying social ills of alcoholism and theft Violence is rife in the form of continued faction fights which leave a few dead each week (community interviews) The communities surrounding the biosphere rely heavily on it for certain basic needs - grazing water, firewood and thatching grass Almost all of these are obtained illegally

Programmes The district pilot project will aim to ensure that there are at least five transfers of state and private land back to black rural communities who will get support with planning and development This has important implications for the Thukela Biosphere Reserve because it means that some land within the biosphere will be reallocated to communities who may not support the main concept of the biosphere It is also important because it is a source of great conflict amongst the landed white population and the black rural population who desire land White farmers acknowledge the need and demand for land, but also immediately erect the inviolability of the *status quo* - particularly for the commercially used land - and the limited opportunities which it offers for redistributive *reform* (Marcus 1995)

According to the KwaZulu-Natal Provincial Land Reform Steering Committee (1995) the land reform process should conform to the following RDP principles among others

- community participation must be encouraged through transparent decision-making, project partnerships and local project planning committees
- sustainable and integrated development must be achieved by combining cross-sectoral local level planning with the delivery of basic needs and infrastructure and
- environmental sustainability must be integrated into the projects

These principles are very important in light of the current research The indications are that communities want land mostly for arable use or for grazing of cattle (Marcus 1995) It has already been shown that too many cattle are causing severe degradation in the TBR region (Camp 1995a, Camp 1995b) and one must question whether redistribution of land in this region will prove sustainable It is argued that land reform alone will achieve little because it merely reallocates land to people who lack the skill and resources to use the land sustainably (Erskine 1992) The short-term delivery which is part of the aims of the Pilot Project also means that there is little time in which to implement

The Natal Parks Board has undertaken to

> " encourage community participation in conservation activities and to foster the economic and social development of neighbouring communities " (N P B 1991,p 4)

The TBR Constitution (Appendix A) and Mission Statement (Appendix B) state similiar aims but whether these ideals are being effectively achieved is a dubious contention A critical examination of the TBR constitution in relation to the objectives and action plan of biosphere reserves in general reveals that while the constitution promoted ideals of conservation research and development, a number of problems exist (Bill 1995) These problems include

- a lack of clarity as to who is encompassed in the word "community" and "balanced community life
- the use of vague terminology
- the use of the word "liason" implying discussion with the parties affected by the TBR but not meaningful negotiation
- a lack of clarity as to how "fairness and justness between employer and employee were to be promoted

While these criticisms of the constitution may be regarded as a mere fastidious preoccupation with semantics they do raise important concerns as to the real meanings and plans of the TBR It is easy to produce rhetoric and jargon to placate communities, but at the end it is praxis and not policy which will create real success

Land Reform

There exists a highly articulated demand for land (86%) in the Weenen-Estcourt area (Marcus 1989) The area within and around the Thukela Biosphere Reserve falls within the Estcourt and Weenen magisterial districts which have been designated one of the Government s Land Reform District Pilot

The TBR did not only receive negative reactions from communities outside of the actual reserve but also from communities within the reserve - notably labour tenants and farmworkers This constituency has slightly different concerns to the outside communities who are more concerned with obtaining extra land resources Farmworker communities were concerned with dangerous wild animals, with the possibility of their being evicted from the land and of the loss of their livestock (Minutes of meeting between Farmworkers and TBR 9/10/1993) A study of labour tenants perceptions toward the TBR in 1994 revealed that most people were extremely negative about the reserve (Pitout 1994) This negativity was manifested in the murder of a farm manager which was linked to his construction of a game fence for the TBR (*Natal Witness*, 22/08/1994)

TBR members began to recognise that these conflicts between communities were becoming greater than they themselves could manage A non-government organization the Rural Foundation (RF) was called in to assist and a Community Development Officer was appointed by the RF early in 1994 (TBR Newsletter 03/1994) The Community Development Officer (CDO) instituted a representative committee of farmworkers in May 1994 (TBR Newsletter, 05/1994) Initially however farmworkers were suspicious of the new CDO and the idea of a farmworkers committee The committee also encountered problems because farmers were reluctant to give their workers time off to attend meetings (Sibiya, pers comm) which brings into question the committment which TBR members had toward community development

In August 1994 communities became so antagonistic toward the reserve that they threatened to undertake a land invasion into the TBR (*Natal Witness* 17/09/1994) The Minister of Land Affairs Derek Hanekom, was called into the area and it was declared a Pilot Land Reform Project for the province in an attempt to speedily resolve the crisis (TBR Newsletter 12/1994) The area was troubled with violence which hindered peaceful settling of the problems - a war between rival taxi groups in early 1995 disrupted a planned participatory workshop for Farmworkers (TBR Newsletter 01/1995)

- a means of removing livestock from the communities.
- a means of decreasing black peoples access to land and of reinforcing *apartheid* (Minutes of meeting between TBR and Cornfields/Thembalihle. 03/04/1993)

Communities also perceived the Natal Parks Board and the Dept of Agriculture as having the same agenda (Minutes of Cornfields/Thembalihle meeting 19/07/1993) The interviews completed amongst communities during this research will reveal that these attitudes have changed little over thre years. which calls into question the effectiveness of the TBR s alleged committment to local communities

The communities of Cornfields and Thembalihle were most aggravated at the idea that land which they felt was vital to their survival would be used for wild animals The help of AFRA and the CLC was called upon and after lengthy negotiations the state agreed to assist the communities with an 80% government grant to buy portions of previously white-owned farms and farmers in the Thukela Biosphere Reserve finally agreed to sell land to the communities While the government paid 80% of the total purchase price of R5.5 million each family in the community had to pay a downpayment of between R469 and R322 per family and thereafter a yearly instalment of R289 for five years (CLC Community News. 1993) A potentially negative situation was therefore seemingly well resolved As the results show however Cornfields and Thembalihle are no less open to the TBR and the new land which they have acquired is not being used sustainably

Three quarters of the 5 3 million people living in the rural areas of KwaZulu-Natal are concentrated in the former KwaZulu districts The population of these rural areas is set to increase and projections are that by the year 2000 the rural population will reach just over 6 million

> "Th is rural areas will make up the largest category of settlement in the province and density levels and pressures on resources especially land will intensify" (Marcus 1995 p 9)

Increased demand for land as reflected in the above statement provides a important case for the creation of more sustainable land-use options

The Thukela Biosphere Reserve:

Policy and Problems

Proposals for the establishment of the TBR were initiated as early as 1990 but it was only in 1992 and early 1993 that negotiations came to fruition (*Daily News* 15/04/1993) Already however the discontent amongst local rural communities had begun to make itself known (*Natal Witness* 13/04/1993) The TBR was established in May 1993 without proper consultation with local rural communities by seven founder members The number of members has been increased to approximately thirty in 1996

The TBR met with much animosity from the surrounding communities of Cornfields and Thembalihle when it was first launched and meetings were facilitated by AFRA and CLC (Community Law ntre) between these communities and the TBR Despite the TBR s claims that the new reserve would create employment opportunities through the initiation of ecotourism the communities instead developed the attitude that the TBR was

- a plot to remove black people from their place of settlement
- a means of further dividing black communities

Farmworker Communities within the TBR

Attitudes toward the TBR

Farmworker communities initially rebelled against the TBR concept but since the introduction of a community liason officer and the initiation of a farmworker committee tensions have been somewhat appeased Most farmworkers however still harbour a fair amount of bitterness towards landowners The bitterness stems mostly from past and present injustices for example evictions low wages and lack of adequate health care and basic needs

Discussions with the communities surrounding the proposed benefits of the TBR were on the whole greeted with scepticism Most people could not believe the stories about tourists coming to visit the TBR "It sounds like a dream" They questioned the ability of the TBR to provide greater employment opportunities since they did not know how to make crafts and this appeared to be the only employment which would be provided The resentment toward the TBR was summed up in the statement of one of the interviewees

> "They do not have the people's permission to build a biosphere"

The concept of the Biosphere Reserve is associated with that of Weenen Nature Reserve and there is on the whole a very negative perception towards the Natal Parks Board Numerous people spoke about all the families which were "tricked" into leaving the farm which became Weenen Nature Reserve This factor is an important part of communities rejection of the TBR associated with fear of what they do not know and a fear of being moved off their land

> "We always talk about the wild animals because we need to have more cows in order to get more money and now our cattle are being replaced by wild animals"

The concern with cattle being replaced with wild animals was central in the minds of all the people interviewed and informed their overall negativity toward the TBR Many admitted however that the creation of the farmworkers committee has helped them greatly since they have been able to ask for schools and clinics Interestingly some farmworkers were not aware of the name "Thukela Biosphere Reserve" but did speak vehemently of the Weenen Nature Reserve They

Community leaders proudly cite the fact that they "fought the TBR for land which was initially going to be used for game The fact that this land was going to be used for wild animals and not cattle is looked upon scornfully and uncomprehendingly by the community

Land resources and management

People in Cornfields are generally aware of the severe degradation of their environment and many agree that the new land will become just as poor because it is being overutilized There is obviously no management strategy for the new land and the tensions within the community are such that there is no effective leadership which can insist on the implementation of such a strategy

Again as in most other communities there is a recognition that overpopulation and overcrowding has destroyed the trees grass and soil A concern for the sustainability of the new land is shown by the communities call for money to build camps on the land so that their cattle can graze effectively

Land for farming is perceived largely as the solution to the problems of the community There is a large community of tenants within Cornfields and while doing a PRA exercise on the attainment of basic needs with them it emerged that although they don't farm at the moment (due to a lack of land) - farming would be their most important source of income This is the context which informs the disbelief with which these communities regard the use of land for game Interviews with older members of the community reveal that in the past (1930s-1950s) everybody on Cornfields used to farm but now hardly anybody does

> "Before the land was rich there were few houses now with many people it has become poor The new land will become just as poor as this now because everyone will move there At the moment there are so many cattle grazing there and the land is too small Too many people in Cornfields has destroyed the land and this is our biggest problem "

Similiar sentiments were expressed by different members of the community There is obviously no management plan within the community for the new land and anyone can graze their cattle anywhere

Cornfields

Cornfields has a large community of about 4000 people with 1500 cattle and 2200 goats The community of Cornfields exhibits an altogether different dynamic to that of Thembalihle This is a pertinent point because the two communities are often discussed together in the NGO literature since they are physically so close together as other authors have recognized (Pile 1996) This has serious implications for the development and application of policy within these two communities

Attitudes toward the TBR

The community of Cornfields is much more hostile towards the TBR than Thembalihle and are sceptical as to whether it would have any benefits for them They have the perception that

> " the white farmers want the biosphere as a place for animals to be free and not Africans"

A neighbouring white farmer one of the TBR members recently took some community representatives on a visit to Hluhluwe in an attempt to show the community the benefits of ecotourism The community representatives revealed that they were not impressed by the park - it appeared to them that visitors were more interested in the people there than the wild animals They still believe that the TBR is being created so that they can move people off the land Again, communities harped on the point of evictions recalling the many people who were moved off white-owned farms and just dumped at the gate to Cornfields They are sceptical that the TBR will bring any economic prosperity to the region they argue that the promises that they will have jobs with the TBR is a lie since there are very few people with jobs at the Weenen Nature Reserve However they admit that they don't fully understand how the TBR will work They are extremely suspicious of attempts by one of the farmers in the biosphere s misguided attempts to "educate" them and bring them round to his way of thinking

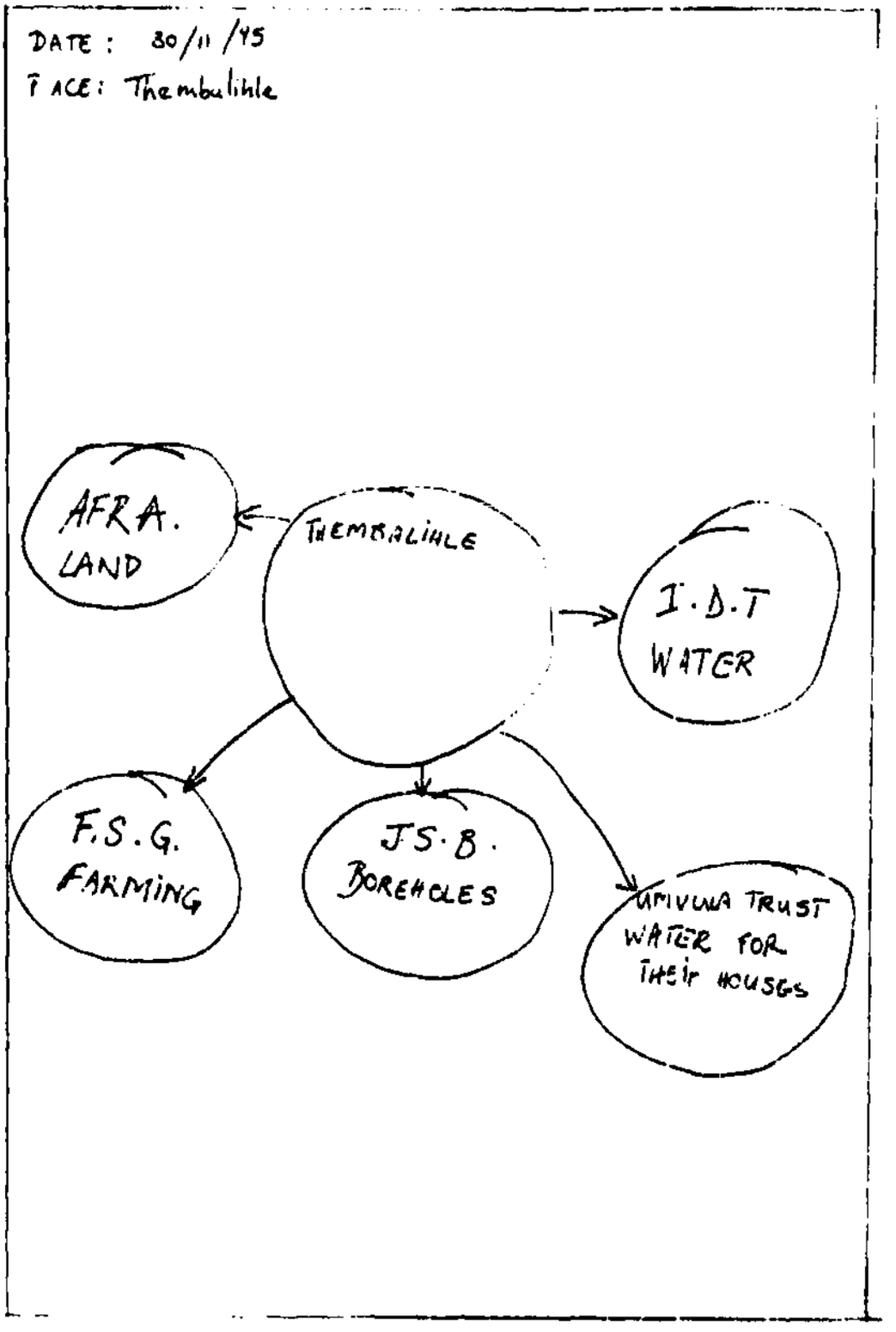


Figure 5.7 Participatory Venn diagram exercise completed by members of Thembalihle community depicting community relations with various institutions (30/11/1995)

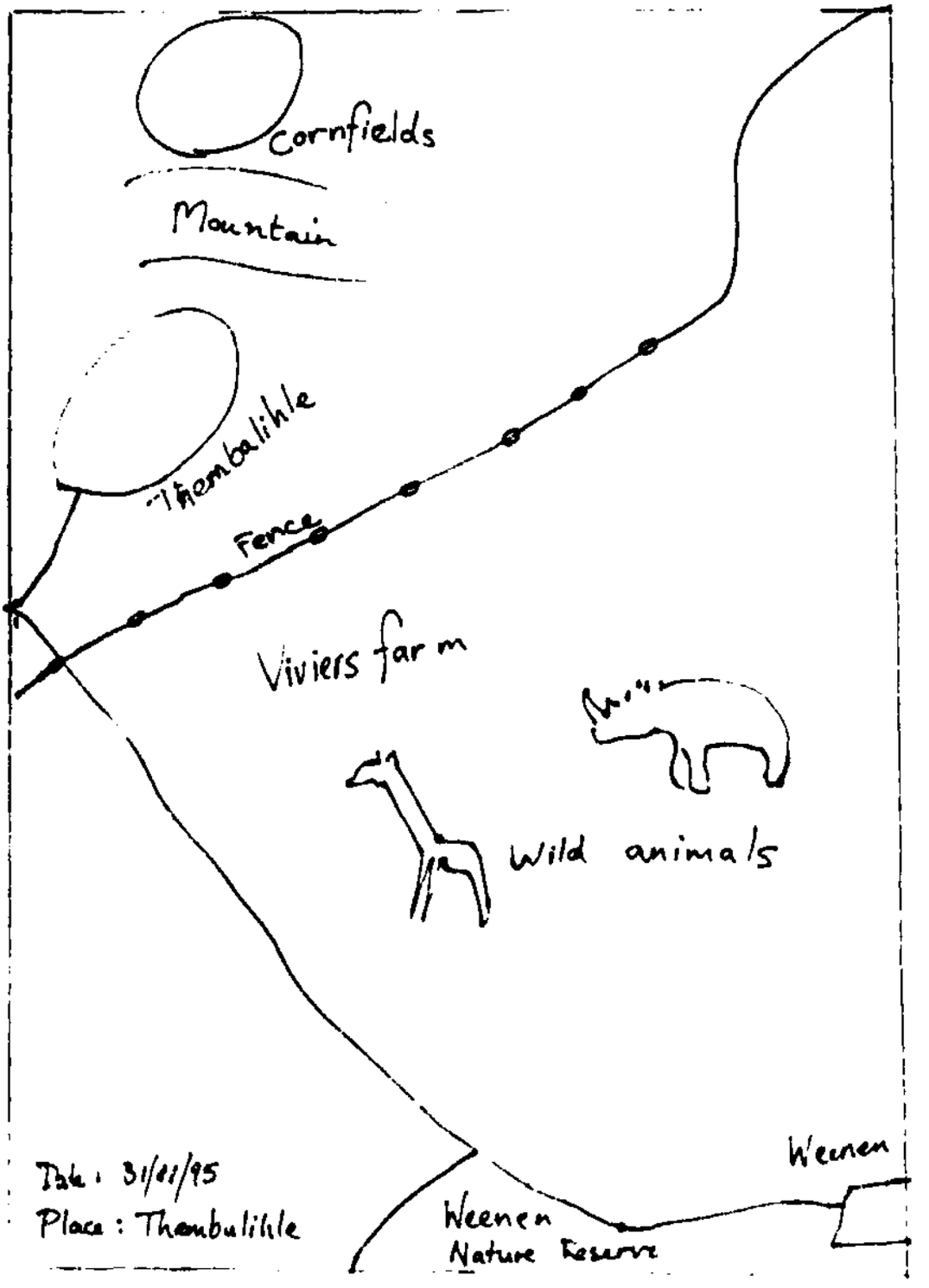


Figure 5 6 Map completed by members of the Thembalihle community depicting perceived boundaries of the Thukela Biosphere Reserve (31/11/1995)

discussions that the community did not really understand the concept of the TBR Some ten members of the community participated in a group exercise in which they were asked to draw a map on a large sheet of paper showing the communities of Cornfields and Thembalihle in relation to the TBR The map which they produced reveals a very vague concept of the TBR instead the community associates their neighbour who is a biosphere member with the whole reserve (Fig 5 6)

Environmental degradation

Communities perceptions regarding environmental degradation are often much more astute than white landowners credit them with for example some groups of older people recognized that there are no trees "because we don't have electricity" This statement reflects the understanding that people are destroying trees because they have no alternative energy source

Institutional links

During a second Venn diagramming exercise a group was asked to illustrate all the communities with which they were involved (in either a negative or positive manner) (Fig 5 7) Significantly both the TBR and the Natal Parks Board were omitted showing that communities do not really consider them to be important AFRA was perceived as important as was the FSG - the former because of help in gaining the extra land for Cornfields and Thembalihle and the latter because of assistance with soil erosion and farming techniques This is significant because it shows that the community is concerned with the degradation of their immediate environment In fact the community has already begun to implement soil erosion prevention techniques with the help of the FSG and the importance with which they obviously regard these efforts are proof of an inherent environmental ethic

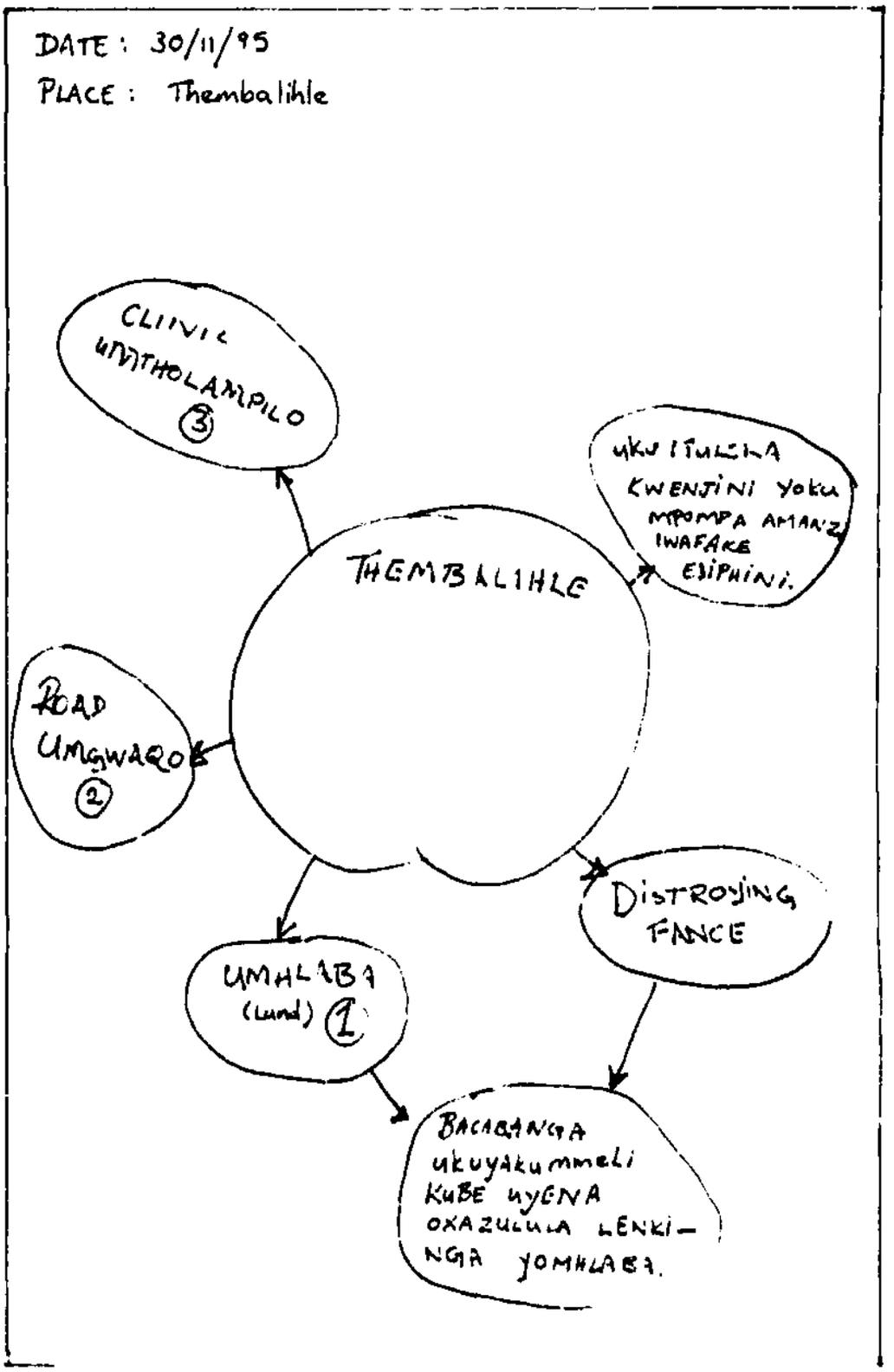


Figure 5.5: Participatory Venn diagram exercise completed by members of Thembalihle community showing perceived problems affecting the community (30/11/1995)

The ownership of the land is a very problematic issue in the community Many people resent the fact that they have to pay for it - even though in market terms they are paying a minimal amount Whilst the land was purchased in conjunction with the community (more specifically the committee) half of the community now refuse to pay for the land Ideals of "grassroots" participation are therefore hindered by the fact that the community is not an amorphous entity but is fragmented and disparate (Pimbert and Pretty 1995) Those members of the community who were tenants but are now able to own land because of the AFRA scheme are much happier The community makes it clear that the land will be used for cattle and ploughing A participatory Venn diagram exercise with a central group in the community revealed the community s concern with land (Fig 5 5) This particular group believed that the solution lay in approaching a lawyer They recognized that because cattle are allowed to graze anywhere and people can collect wood anywhere in a few years time the land will become degraded and eroded Overcrowding was recognized as another problem because there were not enough resources for the people

Attitudes toward the TBR

Thembalihle is one of the least hostile communities towards the TBR and direct questioning about the TBR reveals that the community is not overly concerned with it However some members of the community expressed the concern that good grazing land was being wastefully given to wild animals The researcher was told that they (the community) had bought the extra land with the help of AFRA because the owner wanted to put wild animals on it and they bought the land to prevent this happening They are worried that the land "will become too small and will belong to wild animals " They are thus concerned with use to which the land in the area is put regarding wild animals as a useless and wasteful taking up of space Despite this sentiment however they also admitted that they considered an equity scheme with neighbouring TBR farmers a good option The equity scheme would involve co-ownership of game and sharing of the profits through the consumptive use of this game It became obvious during

Thembalihle

Thembalihle has a community of approximately 2700 people with approximately 900 cattle and 1300 goats The community together with neighbouring Cornfields have recently acquired new land through the efforts of the Association For Rural Advancement (AFRA) The way in which the new land is being managed has important implications for sustainable land use in the region because more and more communities will be gaining land in a similiar manner under the new Pilot Land Project

Land Resources and their management.

In Cornfields and Thembalihle dual institutional arrangements have been developed with a resident's association responsible for the original land and a trust in charge of managing newly acquired land Problems have evolved however because the objectives of the two are not the same Thus while the trust wants to regulate the in-migration of people onto the newly acquired land the resident s association cannot restrict freeholders from shack renting and the consequent intensifying population pressure is threatening to swamp the freehold land Land therefore acquired to reduce population pressure and regain production land for the community is being foiled by unsustainable community policies

AFRA and the Farmer Support Group (FSG) have completed participatory land evaluations together with the community in an effort to create an effective management plan for the new land (AFRA 1994) Already however there is strife within the communities as to how the land ought to be managed and many people are allowing their cattle to graze lawlessly on the land Perceptions of environmental degradation and the most appropriate and sustainable use of the land varies Some recognise the severity of the soil erosion and are working together with FSG in amending the issue although others are just using the new land indiscriminately Many people interviewed recognised that in a few years time the land would become degraded and eroded

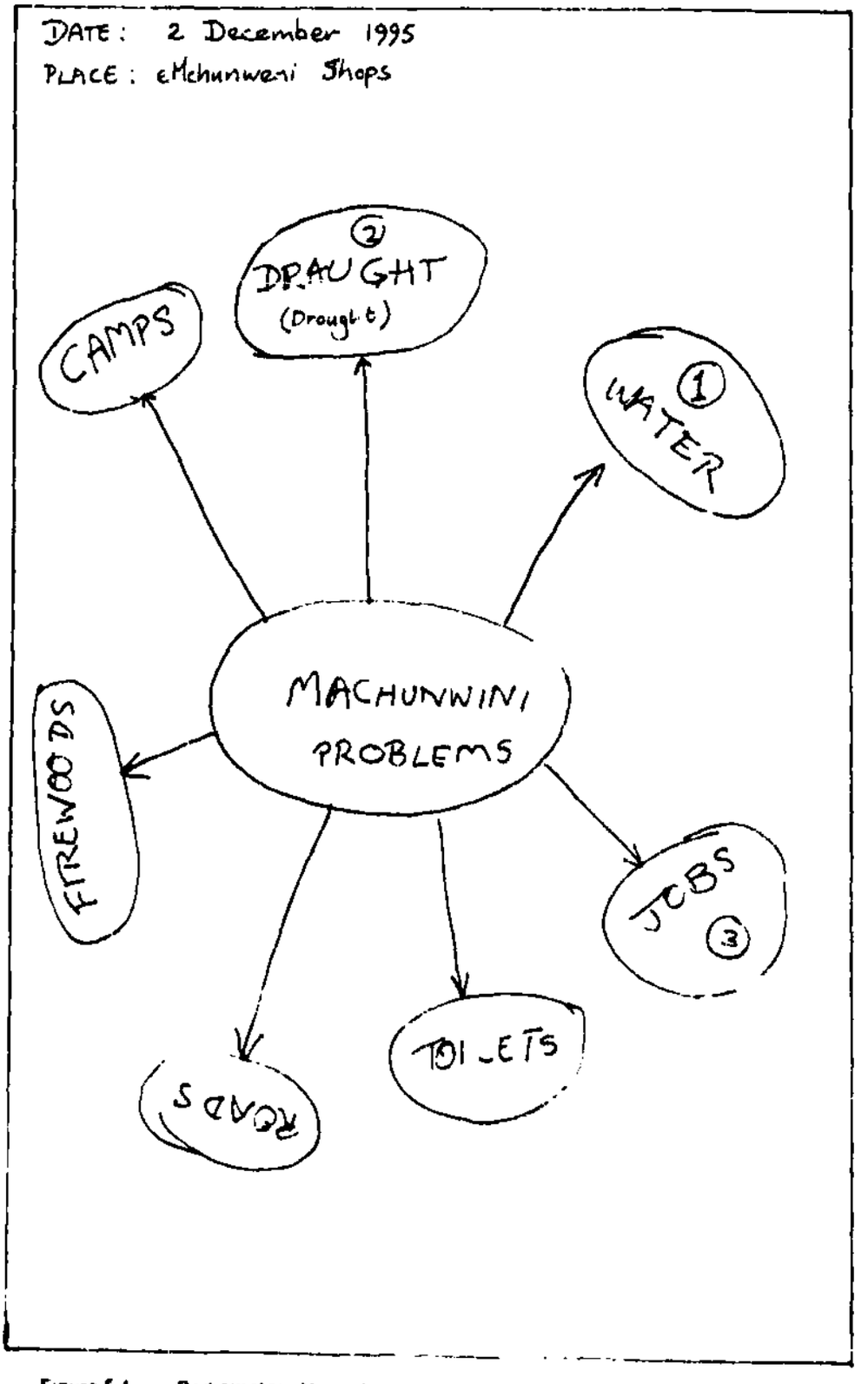


Figure 5 4 Participatory Venn diagram exercise showing perceived problems experienced by the eMchunwini community (2/12/1995)

is too bad now". The loss of cattle and goats because of the lack of grazing was an overall concern and most attributed it to increasing population and too many cattle on the land

> "The land has become worse because of drought and because of too many people on the land People started moving to eMchunweni since 1970 Before this there was nothing wrong with the land "

Problems and coping strategies

A participatory Venn diagram exercise with a large group of people dealt with the problems which the community of eMchunweni dealt with (Fig 5 4) The most important problems which were identified were drought and the lack of water Unemployment was also ranked highly as a problem while the lack of infrastructure such as adequate roads and sanitary systems were also mentioned Significantly the TBR was not mentioned as a major problem but the lack of firewood and adequate grazing camps were again manifesting the communities desire for adequate environmental management strategies to replace the no longer tenable traditional ones A discussion on the ways of coping with these strategies revealed that most people resort to selling livestock in order to get money For some people however, this was not an option since all their livestock had died in the drought or had been stolen and these people were in an extremely vulnerable position The use of livestock as a form of livelihood security provides another reason why livestock are of such paramount importance to the communities in the region

Perceptions of environmental degradation

Informal interviews revealed that most of the members of this community are unaware of the Thukela Biosphere Reserve, unlike all the other communities investigated where people have at least heard of it. This can most probably be ascribed to the less politicized nature of the community which has a clearly defined hierarchy with a powerful elite headed by the chief or *iNkosi*. The community are ruled entirely by the chief and decisions are in no way democratic. The chief has decreed that no trees are to be chopped down in the villages and people are so fearful of him that they obey him, but they do not for the most part appear to understand his reasoning for this. Some suggested that it provided a place for people to hide during faction fights, although others did recognise that it was to prevent soil erosion.

The increasing soil erosion and degradation of the natural environment was largely attributed to increasing dryness, although local rainfall records show that rainfall is no more variable than it has been in the past (see Figs 4.2, 4.3, 4.4 and 4.5). In other words - droughts occur no more frequently and are no worse than in the past. Some do recognise that the increasing poverty of the land is directly attributable to overcrowding and mention in this context the date 1970, when so many more people arrived to settle at eMchunweni - having been evicted off white-owned farms. Some people pointed out that the land had become more degraded since the demise of the KwaZulu government, since before there had been some kind of control, now people grazed where they wanted to. This proves that many see the necessity for some clear policy of resource management, since traditional methods are no longer effective. Obtaining natural resources such as wood and thatch was a problem for many people who had to buy it from neighbouring farms or even from as far afield as Mooi River. Many people said that they were forced to use cow dung as a source of fuel because they could not afford to buy wood.

There was clearly an understanding amongst the people that the quality of the land had deteriorated. A large proportion of the community have land which they could plough but do not because "ploughing is no longer as easy as before - the land

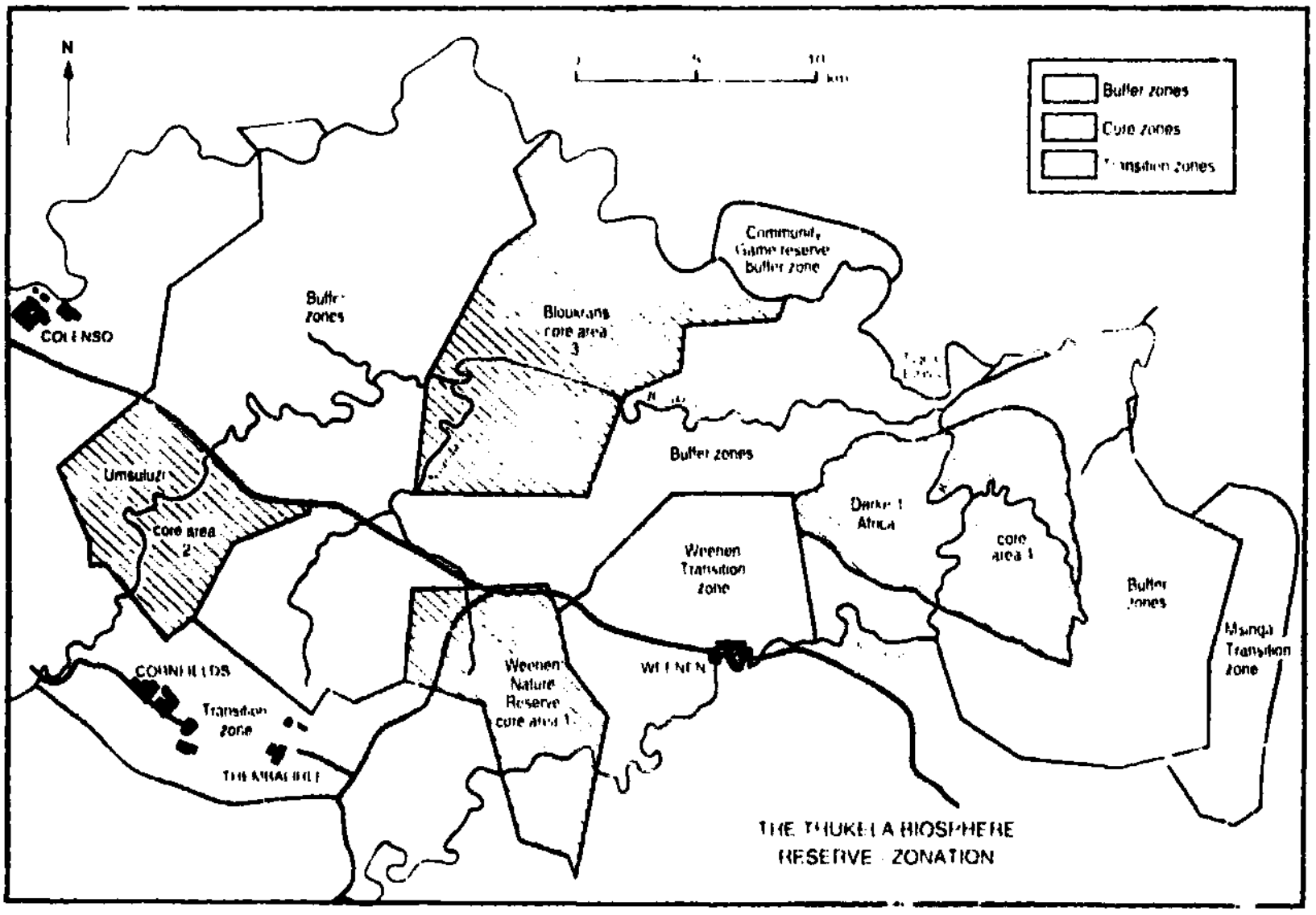


Figure 6 1: **Map of the Thukela Biosphere Reserve showing core zones, transition zones and buffer zones.**

Thukela Biosphere Reserve - land use zones

According to the UNESCO definition (Batisse 1986) the basic idea of a biosphere reserve is to create multiple zones which cater for different land usages The ideal biosphere reserve should have a central core which is an undisturbed ecosystem where human intervention is kept to a minimum Surrounding this core are one or more buffer zones which contain human-modified ecosystems It has been emphasized repeatedly that this core buffer zonation is flexible and can be adapted to different ecological conditions and socio-economic contexts (Batisse 1986 UNESCO 1995) The Biosphere Nomination Form (UNESCO 1994) has been criticized however because it places little emphasis on management planning and the objective setting of biosphere reserves and more on the description and justification of the various zones (Thwaites and de Lacy 1996) The Thukela Biosphere Reserve has only one fully protected core area i e the Weenen Nature Reserve The other core zones form part of privately owned land and are not free from human intervention but are all areas which are in a relatively pristine ecological condition The maintenance of untouched core areas is most definitely not a priority at present in the TBR The more pressing issues are rather the cultural and political factors inhibiting sustainable land use in the area UNESCO s preoccupation with pristine core areas is therefore an outdated "classicist" conservation view not applicable in the TBR

UNESCO (1983) defines several characteristics which should exist in a biosphere these include

- representative examples of natural biomes
- unique communities or areas with unusual features of exceptional interest
- examples of harmonious landscape resulting from traditional patterns of land use and/or examples of modified or degraded ecosystems that are capable of being restored to more-or-less natural conditions It is as the latter example that the Thukela Biosphere Reserve will best fit UNESCO s definition

implications of the concepts behind UNESCO s MAB programme and its biosphere reserves had not however been considered by the landowners Part of MAB s biosphere reserve concept was the committment to the idea that local populations should play a constructive role and should not be excluded from biosphere reserves (UNESCO 1983) That the design and management of a biosphere reserve should be the product of complicity among all the social actors concerned has been learned the hard way by the landowner members of the Thukela Biosphere Reserve

The reserve floundered in the initial stages of its development due to strenuous resistance from local communities and as a result white landowners were forced to recognize the need to involve local rural communities in the biosphere plans Despite arguments that the biosphere promises a new approach to conservation resolving conflict between labour tenants and farmworkers is proving to be extremely difficult Tensions over land are an overriding factor in negotiations since communities believe that the Thukela Biosphere Reserve is an attempt to stop the land reform process The initiation of a sustainable ecotourism economy in the area is therefore proving extremely problematic because of resource conflicts which have their roots in the history of the Weenen area and of the extreme deprivation and desperation of African communities

It is important to note that UNESCO s Biosphere Reserve concept has had its problems elsewhere The Mananara Biosphere Reserve in Madagascar has severely impacted on the subsistence livelihoods of the local people and has resulted in a steadily declining standard of living The rural development programmes of the biosphere are regarded to be ineffectual and piecemeal and the needs and aspirations of the local people are not taken into account because of the generally negative attitude of Biosphere officials who see them as a menace to the reserve (Ghimire 1991) The attitude of officials in Mananara is similar to that of many of the landowners of the TBR and rural development programmes in the TBR are also in danger of a piecemeal and undedicated approach which will lead to ineffectual projects and the collapse of the biosphere

People, Parks and Biosphere Reserves

The first objective of the research entailed an overview of people and parks initiatives worldwide and in particular an assessment of the biosphere reserve concept and its relevance to South Africa as a whole as reflected in the Thukela Biosphere Reserve situation An examination of people and parks initiatives in chapter 2 revealed some important points which are relevant to the current study

- Community participation is imperative for the success of the projects
- Conservation issues cannot be considered separately from the wider socio-political and cultural implications
- Conservation-with-development is extremely difficult to put into practice because of the multiple factors involved

The second part of the objective entailed an assessment of the biosphere concept and its relevance to the TBR and South Africa as a whole The biosphere reserve concept, as put forward by UNESCO has been regarded as one of the means by which conservation and development might be successfully undertaken In the following section the biosphere concept and the way in which it has been interpreted in the TBR is explored This is closely linked to a discussion of the second objective of the research which sought to document the existing situation based on historical events related to the planning and management of the Thukela Biosphere Reserve

The ideals of MAB - a culture shock!

Landowners in the TBR originally wished to designate the area a biosphere reserve since it seemed to allow for the multiple land use in the area and it had the marketable advantage of being linked with UNESCO s international network of reserves Also implicit in many of the white landowners endorsement of the reserve was that it would offer some security from the feared land invasion which many projected would occur under the country s new government The full

Chapter 6

IMPLICATIONS FOR SUSTAINABLE DEVELOPMENT

Conventional wildlife conservation policies have been shown to be inadequate throughout Africa and new community-based approaches are being sought Whether these new approaches are really successful has also been heavily contested however (cf Stocking and Perkins 1993 Barrett and Arcese 1995 Gibson and Marks 1995 Blaikie and Jeanrenaud 1996) It is a central concern of the research for this dissertation to question how and under what conditions the TBR could effectively create and sustain just such a community-based approach to the conservation of biodiversity **This research has tried to demonstrate the critical role which needs to be played by popular participation in the maintenance of sustainable natural resource management in the TBR.** How people participate through local institutions or how these local institutions hamper participation is central to issues of control and management of natural resources It is also important to investigate how the movement toward political democracy in the country as a whole translates on the ground to issues of resource management control and utilisation

Focus must remain on the fact that essentially conservation-with-development initiatives such as biosphere reserves are based on the rationale of mutual compatibility between conservation and development In other words ecological goals must be balanced with the socio-economic needs of the community who might otherwise threaten the resource base This research has tried to establish whether it is possible to achieve this balance in the TBR at least in the near future even though it may not presently be the case In order to more closely examine this we return to the objectives outlined in chapter 1

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The communities of the Tweenen region have been scarred by the history of an oppressive *apartheid* past which includes the exploitative labour tenancy system Labour tenancy has proved to be both socially and environmentally destructive Absentee landownership allowed for the proliferation of labour tenants and their livestock on many farms and resulted in large-scale overgrazing and land degradation Social fragmentation occurred when these labour tenants were ultimately evicted and forced to move to the already overcrowded freehold areas of Cornfields and Thembalihle or to the KwaZulu homeland These historical factors lend understanding as to why land reform and land use is such a contested issue in the region today The evictions of labour tenants and the impoundment of their cattle still continues and is a major factor in the bitterness expressed by local black communities towards the landowner members of the TBR

From its inception in 1991 the TBR initiative has been regarded by communities as a plot to remove black people from their land, to confiscate their livestock and further divide the communities The results of this study show that these attitudes still largely remain

In most cases communities were keenly aware of environmental degradation and the role which overcrowding played in the destruction of the environment Perceptions as to the problems were therefore not dissimilar to the scientific di n the area Solutions to these problems however were less obvious and most people argued that more land was required rather than an actual change in the way in which the land is used These responses were closely linked to the importance which cattle play in the livelihoods and the coping strategies of communities Constraints to community resource management included economics the "commons" syndrome historical factors and lack of enforced policy Suggestions as to how these communities may be integrated into the TBR and what effects this will have on environmental sustainability are explored in the following chapter

This chapter has revealed the many factors which influence the negative community reactions toward the TBR and which inform community perceptions of environmental degradation The wider ranging implications which these attitudes and perceptions have for the success of the TBR will be dealt with in chapter 6

Constraints on Local Resource Management Strategies

Emerging from PRA exercises within communities as well as in-depth interviews with community leaders landowners and NGO workers it becomes clear that local resource management is often hampered by the following factors

- **economics** - communities are often desperately poor with no tenure to the land on which they live Attempts to pull themselves out of their desperate poverty include increasing the amount of their livestock with the associated environmental degradation
- **"commons" syndrome** - other members of the community lay claim to what some conserve for example the new land obtained by Cornfields and Thembalihle which is already being used unsustainably by lawless members of the community
- **lack of enforced policy** - the lack of any enforceable resource management policy within communities results in increasing degradation Partly a problem of communities which are divided politically and culturally It is hoped that the local government elections which took place in March 1996 will set in place effective institutions to set such structures in place

Coping Strategies:

Participatory exercises and interviews revealed that there are a number of strategies which communities employ in order to cope with an increasingly degraded resource base

- **selling livestock** - livestock is used as a form of security for most people and livestock is sold off when they need to buy clothes or food This is particularly true of farm tenants who do not earn sufficient wages to cater for these needs - livestock is thus an essential form of income
- **out-migration** - this is becoming an increasingly limited option with the rise of unemployment in towns and cities (cf Vogel 1994)
- **cultivation of "dagga"** - an important hidden economy in the area

deep-seated feeling of panic that they will be left destitute and forced to change to an unknown form of lifestyle There is a dread of change As Khan (1990) has pointed out black communities in South Africa have been steadily alienated from wildlife through colonialization and the destruction of traditional ways of life This alienation is exhibited by farmworker communitie through the fear with which people regard wild animals and their belief that wild animals and humans cannot live together The community understands about tourists coming to view animals but are dubious about the benefits filtering towards them

One farmworker group argued that if they owned the land they would "put stones to fix the soil erosion" When asked why they didn t already do so they replied

> " It is not our land anymore In the past the land was beautiful · peopk knew how to stop the soil from moving · not anymore What we owned has been taken from us "

This exhibits the sense that people feel of a need for ownership as well as a sense of loss and alienation from the land as a direct result of deprivatory historical policies

It is clear that there is much demand for natural resources such as firewood and thatching grass The feasibility of providing these natural resources is presently being explored in other studies and is beyond the scope of this dissertation

wealth Others say that they have heard that it is a government law but disbelieve this The reduction of livestock is regarded as a huge problem for the following reasons

- there are fewer animals to slaughter as an alternative source of food and they now have to spend money on meat which they can little afford
- there are fewer animals to sell as an alternative source of income for buying clothes and food
- culturally - the impact is great since they are no longer able to pay as big a "*lobola*" for their wives as before

Perceptions of environmental degradation

Most people have a keen sense of the degradation of their environment. and of the necessity for conserving trees and the land They are keenly aware of problems such as bush encroachment and soil erosion They refuse. however to openly acknowledge the role that overstocking plays in causing soil erosion. using excuses such as "there is less rain than before" or "the land is becoming old" It became apparent through other participatory exercises and interviews however. that many people are aware that too many cattle does cause degradation For example. in a timeline exercise in which the landscape of the farm was discussed from the past to the present it was agreed that now

> "The land is better than before because there are less people on the land Many people used to live here and many cattle led to overgrazing therefore when the people left with their cattle the land became better"

And on another farm elderly farmworkers admitted that in the 1940s there were many people on the farm (35 kraals with approximately 15 household members) and there was no grass or trees because so many people were living on the farm Now they pointed out the land is much better the trees and grass have come back

Refusal to openly admit that too many cattle cause a deterioration of the environment is linked to the fear that such an admission will legitimate livestock being taken away Livestock is intrinsically linked to the acceptance of wildlife since most people perceive that wildlife is replacing their cattle This creates a

remembered that there were lots of houses there and that bulldozers destroyed the houses The more militant members of the communities would argue that

> "We don't want nature reserves because they are too big - they take up too much land "

They recall that many people were moved from the Weenen Nature Reserve to Tugela Estates They remember all the people who lived in the Weenen Nature Reserve a long time ago They admit that the land does look better there now than it did before -

> "but it is not our land anymore so how does more grass and trees there help us when we are still hungry and poor here on the other side of the fence?"

They argue that the creation of the Weenen Nature Reserve only brought suffering to the people living there since they were "tricked" into moving to Tugela Estates This bitterness toward the Weenen Nature Reserve has been transferred onto the TBR even though people are not exactly sure of the differences between the two

In certain instances animosity toward the TBR is directly the result of bad treatment by farm owners Farm owners often laud the benefits of conservation to communities but do not provide them with any tangible benefits For example some farmworkers are not allowed to collect wood and thatch from the farms they are also not allowed to keep cattle and goats - but there has been no compensation for the loss of these two livelihoods So in effect farmers have made communities poorer and are then surprised when those communities are not enamoured of the concept of the TBR Farmworkers on such farms have the attitude that

> "wildlife conservation is not right - while they keep animals they kill the Africans"

Livelihood problems

During participatory exercises to determine problems which farmworkers experienced the loss of livestock repeatedly came out as the most prominent problem Forced destocking by farmers is regarded with resentment and extreme bitterness Communities perceive that farmers want them to destock because they want them to remain poor and prevent them from accumulating

Community Based Resource Management

Community based resource management is a much discussed concept in recent development literature and the assertion is continuously made that indigenous local communities do in fact know how to manage their natural resources sustainably (Archer *et al* 1996 Critchley and Reij 1996 Turner 1996) Communities within and around the TBR are very aware of the ecological degradation which surrounds them - a contention which is not supported by the landed white farmers of the TBR who regard the black communities as ecologically ignorant and irresponsible Despite their recognition of the degradation of the environment however local communities do not effectively manage these resources The reasons for this are partly to blame on historical disenfranchisement and partly on present institutional factors

Perceptions of Environmental Degradation:

- Communities are clearly aware of the increased degradation of natural resources For example the older members of a farmworker community who recognized that the grass and trees had recovered dramatically since the eviction of large amounts of people from the land in the 1970s Whereas white landowners attribute degradation to the ignorance and laziness of African communities these same communities attribute environmental degradation the much wider ranging issues of politics and power struggles
- Solutions to the increasing degradation are perceived to be the attainment of more land rather than changing present land use Many recognize however that this is unsustainable For example some predict that the new land obtained by Cornfields and Thembalihle will be a desert in three years

Communities therefore recognize that natural resources are being degraded Recognition however is a far cry from change and we need to question why communities fail to achieve successful natural resource management

(for example see Ntshalintshali and McGurk 1991) but may also reinforce and even exacerbate class and gender inequities The research reveals that the tribal power structures in the TBR region offer just such a danger There is too much corruption and it becomes easy for local elites to monopolize any of the benefits which the TBR may offer as has been documented in the Mananara Biosphere Reserve in Madagascar (Ghimire 1991) The sectoral nature of institutions and the diversity of the stakeholder groups in the TBR creates numerous difficulties The split is not simply between wealthy white landowners and poor black communities - communities are divided into numerous political groups Communities themselves do not function democratically and so it is difficult to institute participatory ideals amongst them

We need to dispel the myth that there is an undifferentiated immobile rural peasantry through whom a strategy of grass roots initiatives and community self-management may be glibly promoted (Mackenzie 1992) Thus

> "To call for the empowerment of people is to challenge social structure Profoundly, one is dealing with politics not policies with struggle and not strategy" (Mackenzie 1992 p 1)

The enormous diversity which occurs in rural Africa in economic ecological sociological and political terms is such that development can be effectively addressed only at the local level (Taylor 1992) The TBR thus has an enormously important role to play in terms of the promotion of local level development In particular economically sound 'sustainable development' has unique meaning at the local level and in local contexts such as that of the Weenen district The TBR has a significant role to play in the decentralization of power and of providing local communities with a means of controlling their own destiny

Table 6.2: Levels and elements in natural resource decision-making in the TBR (adapted from Biot *et al.*, 1995 and PRA results 1995/1996).

Elements in decision-making	Local rural communities	Landed white farmers (members of the TBR)	State/ scientific/ official
1 **Perception of symptoms**	Perceive soil erosion and decreasing grazing Mostly concerned because of starvation of livestock	Perceive soil erosion bush encroachment less productivity of the veld for farming	Perceive severe soil erosion and deteriorating veld condition manifested in the increasing dominance of thornveld
2. **Diagnosis of Causes**	Blame decreasing rainfall and whites for forcing them to live in small areas of land	Blame land degradation on black communities overstocking and general misuse of the land	Blame past agrarian practices of 'abour tenancy and current overstocking by both black and white farmers
3. **Prioritization of Needs**	Need to obtain permanent access to land and resources such as water and grazing	Need to limit livestock of labour tenants	Need to institute land use policies which cater for land redistribution in a sustainable manner
4 **Identification of solutions**	Gaining access to more land	Maintaining the status quo – but instituting policies to prevent environmental degr .dation by black communities	Redistribution of land through pro active land reform institute widespread agricultural extension
5. **Assess technical feasibility of solutions**	Technically easy – land reform process to deliver land	Technically difficult – because of new government and resistance by communities	Technically difficult because of opposition from landed white farmers
6. **Assess need for collaboration**	Distrustful of white landowners and NPB and therefore do not wish to collaborate	Sense of arrogance and superiority above black communities but to some extent realise the necessity of collaboration	Argue that collaboration is essential for the success of the projects but sometimes use coercive methods

The facile advice that conservationists should respect local systems of decision-making may obscure the fact that traditional decision-making is sometimes vested in leadership structures which marginalize women and lower castes or classes or lower status ethnic groups (Colchester 1994) Top down projects which work through local elites may sometimes be very successful in conservation terms

The need to study perceptions of environmental degradation as an important element to decision making has been emphasized by numerous authors within the literature as outlined in chapter 2 Planners and natural resource managers should look first at what rural people do examine their existing practices and perceptions and see how these can be improved before recommending development interventions (Nsiah Gyabaah 1994) Actors perceptions also play a central role in the bargaining and legitimation of decisions (Biot *et al* 1995)

Table 6 2 details the perceptions levels and elements involved in decision-making amongst the various actors involved in the TBR The data gathered from PRA exercises is easily compared here with the scientific perspective which is presented in chapter 4 The table shows that communities do perceive and are aware of environmental degradation and that their diagnosis of what causes land degradation is in fact not dissimilar to the scientific and official perspectives It is in the identification of solutions and the assessment of the ease with which problems can be solved that differences become apparent These differences mean that communities are less inclined to collaborate in any projects for land management and severely hamper the future and continued success of initiatives Results from chapter 5 show that rural people in the TBR are interested in intergenerational equity and sustainability but not at the cost of realising their own basic needs Long-term sustainability is therefore threatened by the differences in perception regarding the solutions to the problem rather than differences in perceiving the problems themselves

Over the last few years in which the TBR has been functioning marked changes have taken place and participatory workshops for decision-making are becoming more common The need for widespread participation has been affirmed by numerous management authorities of biosphere reserves (Halffter 1981 Castello I Vidal and Lopez Lillo 1993 Ramangason 1993 Santiso 1993 and Watson 1993) There are many difficulties inherent in the concept of local participation however and it is not always easy to find and define the most appropriate structures as chapter 5 reflects

There is a danger that participatory methods be used by outsiders to obtain information for decision making in which the local people are not involved PRA can easily become a manipulative process in which planners obtain and disseminate selective information from communities All methods can be used in a more extractive or empowering manner the key is the type of dialogue which takes place when these methods are applied Despite its shortcomings PRA was a very useful tool for research and its flexibility and adaptability were particularly useful in the diverse rural communities surrounding the TBR

Perceptions and Policy

The fifth objective of the research reflected in chapter 5 aimed to investigate through the use of participatory rural appraisal local black communities

1. attitudes towards the TBR and the factors which affect these perceptions
2. mechanisms of coping with socio-economic change and environmental degradation and
3. perceptions of environmental degradation and of sustainable land usages

The results from chapter 5 reveal that local communities perceive the TBR negatively largely as a result of past and continuing oppressive practices Coping strategies revolve around livestock in the form of cattle and goats Livestock are a form of economic security in that they can be sold in times of need to buy food and clothing Cattle are also important for social status and as payment for *lobola* - they are therefore culturally important Most people perceive that the solution to their economic impoverishment lies in increasing the amount of livestock which they own Unfortunately continued overcrowding and overgrazing in most communal areas combined with the region's propensity for drought has led to the death of many cattle and many people no longer have the security of livestock assets These people often resort to theft or the cultivation of *dagga* as a means of sustaining themselves

recognition of how different people in the area see things differently - thus facilitating further analysis People with a strong verbal culture may experience difficulties in expressing themselves in diagrams and charts It was found that this was the case amongst most of the groups interviewed in the TBR region Although it varied from group to group most people preferred speaking about their problems The Zulu culture is a very oral one and this would explain their hesitancy in completing maps and diagrams It became necessary to rethink exercises during the course of this research One of the ways in which verbal discussion was promoted however was if the researcher herself drew a diagram and then the people would discuss and provide comment on it

Certain ethical questions may also be raised by PRA activities for example who controls the information? The local people have the right to know and influence in what way the information they provide and the ideas they generate are used Many PRA practitioners advocate leaving the sheets of paper on which activities have been completed with the community and just making a copy to take with (Waters-Bayer and Bayer 1994, Chambers 1994) In the course of the research for this study however communities were often insistent that the researcher take the written material away with her or continuously checked that she was writing the information down This aspect appeared to be very important to the people involved in the interviews and exercises People wanted the researcher to take the paper on which they had written with her to make sure that she had the correct facts with which to disseminate her research The people appeared to feel that they were able to contribute something useful and important rather than just being asked questions The positive response from communities regarding this aspect was a very satisfying and important part of the PRA used in this study

are involved and PRA facilitators are in danger of being pawns not only on local but on national levels In the present study the researcher soon became aware that each group would try to foist their view as the dominant one This in fact actually became a positive and interesting source of information and access into local power dynamics - as long as the researcher remained aware of them

Gender differences define how men and women in a specific social and cultural context interact and how it is appropriate for them to act thus determining their respective development options and constraints An intrinsic gender bias in PRA/RRA methods is the fact that the exercises take so long to complete and interfere in the normal routine of women as they have less free time than men In the Zulu culture within which this study was conducted gender takes on an added dimension in that women are sometimes not allowed to participate in PRA exercises For example while facilitating an exercise with a group of ten rural women who all appeared interested and keen in the exercise the researcher was disrupted by a very angry *induna* (chief) who kicked away the map we had made in the dust and ordered the women away The *induna* was apparently angered by the fact that women were being involved in something regarding decision-making which he regarded as a male domain Such attitudes create a gender bias which it is impossible to avoid if one is to remain sensitive to the customs of the community

PRAs often focus on only one or two villages ignoring the perspective of other villages and resource users (Waters-Bayer and Bayer 1994) It may be regarded as a strength of this study that no less than four village communities and ten *kraal* homesteads were interviewed Thus providing a very broad and general picture of resource users in the TBR region

PRAs tend to stop at describing the activities and physical surroundings of a community and often fail to probe more deeply to understand strategic decisions that underlie the observed patterns of activities or to see how these strategies have evolved over time (Schoonmaker Freudenberger 1994) It is easy for maps and diagrams to degenerate into ends in themselves rather than as visual tools for generating discussion and reflection by the local people - also

framework The PRA for this study was facilitated and undertaken by the researcher alone (with the aid of an interpreter) and there are numerous difficulties with a solitary approach For example a teamwork approach can make access into the communities much easier and more legitimate as communities will be more open to a group of people who are interested in their problems If more facilitators are involved it enables the facilitation of more complex and effective exercises Groups of facilitators could also lessen personal bias

When working in areas where the researcher does not speak the language and requires the services of an interpreter as was the case in this study there is the danger that the interpreter will filter the information and influence the communication with the local community This is not an uncommon problem of doing rural research in South Africa however and there are ways of limiting the impact In the case of this study the interpreter was made fully aware of the way in which the study would be conducted and what she should or should not say or do The advantage of using different methods is that it provides means of "checking up" on the interpreter and the respondents to ensure that bias and misinterpretation are not occurring For example, a question on the most important source area for firewood could be asked verbally after which the answer to the verbal question could be "checked" through the drawing of participatory maps or diagrams

A further problem associated with communication is that although the visualization methods used in PRA can overcome the barrier of different language differences in the interpretation of the images and symbols will still remain Different interpretation of symbols on the other hand may also provide valuable input on people's perceptions and differences The information presented by different groups represents their own opinion and normally cannot be separated from personal and group interests Projects often try to reinforce local organizations as a "participation tool" This approach can easily give local power groups the chance to dominate For this reason participatory processes should be preceded by an analysis of differences by social groups Power issues

Participatory Methods: Strengths and Weaknesses

As reflected in chapter 3 PRA has emerged out of the recognition of various shortcomings on the part of traditional modernist methods of data gathering (Van Vlaenderen and Nkwinti 1993) However it does not claim to be an instant panacea for development and research problems - it has many faults and shortcomings The following sections deal with both the positive and negative aspects of using PRA for research which were encountered in the present study

Participatory approaches are not infallible they contain many inherent difficulties in their implementation and in the way in which information is ultimately produced Despite their improvements on old methods they still require sensitivity and skill in their implementation Some of the more problematic issues which arise from using participatory approaches are

- the need for communication skills
- power issues
- gender issues
- confined views on location and time
- superficial data and
- the imposition of foreign concepts

Participatory methods require skills in listening and in the ability to ask relevant questions Outsiders need to be open to local knowledge and competence and be prepared to admit their own ignorance Outsiders also need to critically assess and openly question the information which is presented to them, indeed an important aspect of communication is interpretation The ultimate success of the PRA therefore depends on the researcher/facilitator as a fallible human being Since people are not automatons there cannot be any accurate reproduction of situations and statistically correct samples For this reason PRA is undoubtedly more effective as a team effort working within a larger project

histories lay down a record and create a discourse which favours their claim rendering invisible inconvenient bits of history and trying to deceive the listener about what is at issue They claim rights to the stewardship of natural resources on the grounds that the other stakeholders have misused them (Fortmann 1995. Roe. 1995) Like white commercial farmers in Zimbabwe (Fortmann 1995). farmers in Weenen use narratives surrounding ecological stewardship to legitimate their claim to the land Their stories follow two main themes one proclaiming their own ecological stewardship and the second to show the lack of such stewardship amongst local rural communities White farmers in the TBR continuously assert that the black people cannot look after the land in a sustainable manner and they use as evidence the highly degraded and squalid settlements around the TBR Landowners hold the attitude typified by the following quote

> "The poor farming methods and soil depleting practices prevalent among (African) peasant cultivators stem from ignorance custom and lethargy the main obstacle to overcome is the native's lack of understanding of the need for the prevention of soil erosion " (Clayton 1964 p 12)

This attitude also extends to the issues surrounding the conservation of wildlife and has resulted in some misguided attempts by some landowners to "educate the blacks" of the neighbouring communities of Cornfields and Thembalihle by taking representatives of these communities on trips to other game reserves The idea of sustainability is manipulated by the white farmers so that they may cling on to what they fear they may lose They claim rights to stewardship over the land and the resources on the basis that they will be able to manage these better than the other groups (Roe. 1995)

> " crisis narratives are the primary means whereby development experts and the institutions for which they work claim rights to stewardship over land and resources they do not own " (Roe 1995 p 1066)

In order to grant a voice to the less powerful and articulate stakeholders in the TBR the research used the methodology of Participatory Rural Appraisal The third objective of the research was to evaluate PRA as a research tool the findings of which are presented in the following section

really understand them They blame the farmworkers for the overstocking and overgrazing most often with reason and force them to limit the amount of livestock they have They do not in general however recompense these people for the loss of their stock causing severe economic and social pressures to their abour tenants of which the white landowners appear unaware *Farmers place environmental responsibility on their labour tenants but do not grant them the power to achieve this* African farmworkers are most often paid extremely low salaries and are thus forced to remain in their destitute conditions - farmers do not regard this as an injustice merely that "people are happy where they are" White farmers thus entrench the poor land use management which they so criticize These factors are a severe obstacle to the success of the TBR and its hope for equitable and sustainable land usage

Whose Land?

The underlying contention in the TBR is the struggle for land and the use of natural resources Zimbabwe is experiencing a similiar land wrangle where impoverished communal lands lie cheek by jowl with wealthy commercial farms It has been shown that in Zimbabwe

> "the state, elites and local residents have all been found to construct, reconstruct and selectively use history and custom in struggles over property" (Fortmann 1995 p 1055)

In the TBR white commercial farmers contend, for example, that labour tenants moved of their own volition from the farms to other black settlements such as Tugela Estates in 1969, while the labour tenants claim that they were forced to move by brutal and inhumane methods Thus we see the telling of claims by the poor and dispossessed and by the powerful to preempt the discourse of the powerless

As in the Thukela Biosphere the greatest land struggles in Zimbabwe centre on commercial farms which have many resources in comparison to the impoverished rural communities which surround them The tellers of the various

environment are severely skewed and that power relations need to change if more environmental responsibility is to be given to those lower on the power scale

Table 6.1: Stakeholder groups in the TBR (adapted from Abel and Blaikie, 1986 and PRA exercises, 1995/1996)

GROUP	POSITION IN THE POLITICAL ECONOMY	SOURCE OF POWER	INTEREST/AIMS WITH REGARD TO TBR AND WILDLIFE	DIRECT MEANS TO REACH AIMS
LABOUR TENANTS	Marginalized and excluded from land ownership by Apartheid Exploited for labour	Limited but based on the fact that farmers require their labour Help through NGO CAP	Dislike wildlife because they perceive that it is replacing their cattle Fear eviction off the land and want permanent tenure	Riots and violent protest
SURROUNDING RURAL COMMUNITIES eg. Cornfields, Thembalihle, Tugela Estates and eMchunweni	Marginalized and excluded from land ownership by *Apartheid* Have only recently gained land tenure	Limited but chiefs and community leaders retain some influence Help through NGOs such as CAP and AFRA	Require land to extend grazing and cultivation See game farming as a "waste" of good land Desire more land	Illegal poaching of thatch, firewood and animals Illegal grazing of cattle
CONSERVATION GROUP **ie. Natal Parks Board**	Traditionally supported by the government	Legal and administrative Use of science as legitimation - development of "rational" policies based on sound "knowledge"	Concern with the maintenance of biodiversity and the conservation of rare species	Legislation Backed by the powers of the state
LANDOWNERS AND BIOSPHERE MEMBERS	Own vast tracts of land Have financial resources to back themselves	Astute informal negotiations profitability - funds for lobbying etc	Concern with making profit - also some concern with the preservation of the land	Financial resources Capacity for negotiation – informed and organized

White farmers are not all hostile and vindictive as farmworkers perceive them to be, but they do in general exhibit a marked lack of empathy with the plight of farmworkers and so often cause them harm simply because they do not

The above discussion reveals that the TBR does not fit into the archetype of biosphere reserves as outlined by UNESCO Many of the community-based concepts underlying biosphere reserves however are valid to the TBR and to the South African situation White landowners in the TBR would most likely have retained ideas of "fenced off" conservation areas without community participation if it had not been for the underlying community concepts of biosphere reserves The *biosphere concept*, despite its shortcomings *has therefore proved to be a valuable catalyst to the initiation of a sustainable, community-based, natural resource management strategy in the region* In a sense, therefore the success of the Thukela Biosphere Reserve as a sustainable development initiative depends upon it remaining a biosphere and being recognized as such by UNESCO and the South African conservation authorities

While the zonation specifications as laid down by UNESCO are important, socio-political issues remain the most pressing pertaining to the successful implementation of land use management with sound ecological principles This fits in with the second objective of the study namely a documentation of the existing situation based on historical events leading up to the current social conflict surrounding the planning and management of the reserve An historical overview was presented in chapter 5 and the following sections explore the current situation in more detail

Stakeholders and Struggle

The table below delineates the various groups in the TBR their sources of power and their interaction with the reserve (Table 6 1) The table shows four main stakeholder groups labour tenants who are resident on the biosphere land local communities on the outskirts of the TBR conservationists (scientists) and landowners Each of the stakeholder groups occupies a different level in the political economy of the region which affects the source of their power and the means at their disposal to change the various developments which occur Table 6 1 shows that the balance of power and the responsibility of managing the

aware of environmental degradation and the role which overcrowding played in the destruction of the environment and their perceptions here correlated to the scientific data presented on the area **Communities most often were aware of the complex political-economic causes of degradation** as opposed to white landowners who recognized merely that it was too many cattle on the land Solutions to the problems of land degradation however were perceived by communities to lie in obtaining more land as opposed to the science and conservation view which holds that a change in the land use is required **Communities, therefore, do not recognize the idea of maintaining a carrying capacity for the land which they already own.** These responses were closely linked to the importance which cattle play in the livelihoods and coping strategies of communities as well as the frustration which the communities feel because of their powerlessness Constraints to community resource management included extreme poverty the "commons" syndrome, historical factors and lack of enforced policy

5. There are many **factors which will inhibit the success of the TBR** these include historical factors access and ownership of resources (land reform) political and social factors and unsustainable land use practices The success of the TBR depends on overcoming these obstacles as well as on the establishment of clear and precise objectives long-term commitment and concentration on a small number of defined objectives **The research indicates that the establishment of local participatory linkages will be crucial to sustaining the TBR since the prevention of further land degradation will prove impossible without the co-operative management between landowners, scientists and communities.** The research also indicates that communities will become more positive toward the TBR when they perceive tangible benefits and are able to participate in these benefits At present the balance of power and the responsibility of managing the environment is severely skewed and results indicate that communities are not inclined to take responsibility for the management of the land until they have a

2. **The biosphere reserve concept** as initiated by UNESCO offers an important new land use strategy for South Africa because it emphasizes the maintenance of biodiversity through close co-operation with local communities The Thukela Biosphere Reserve offers the first true example of a MAB biosphere reserve in South Africa but is also unique in many respects and different from its contemporaries elsewhere in the world The movement of landowners toward more participatory community-based conservation ideals has been catalysed by the status of the area as a biosphere reserve

3. The communities of the Weenen region have been scarred by the history of an oppressive *apartheid* past which includes the **exploitative labour tenancy system**. Labour tenancy has proved to be both socially and environmentally destructive Absentee landownership allowed for the proliferation of labour tenants and their livestock on many farms and resulted in large-scale overgrazing and land degradation Social fragmentation occurred when these labour tenants were ultimately evicted and forced to move to the already overcrowded freehold areas of Cornfields and Thembalihle or to the KwaZulu homeland These historical facts lend understanding as to why land reform and land use is such a contested issue in the region today The evictions of labour tenants and the impoundment of their cattle still continues and is a major factor in the bitterness expressed by local black communities towards the landowner members of the TBR

4. Five communities affected by the reserve were investigated **Tugela Estates, eMchunweni, Thembalihle and Cornfields** surrounding the reserve and **farmworker communities** living on farms within the TBR Each of the communities exhibits a unique dynamic but some results are held in common **Community attitudes and perceptions** toward environmental degradation were investigated In most cases communities were keenly

Chapter 7

CONCLUSION

In the Thukela Biosphere Reserve the successful conservation of endangered mammal species is inextricably linked to the political economic and social needs of the communities within and around the reserve The development of a sustainable land use strategy in the region is imperative not only for ecological reasons but also for maintaining the livelihoods of thousands of rural people in the region The primary aims of this research have been to establish why and under what conditions possibilities exist for the success of the Thukela Biosphere Reserve as strategy for sustainable development and to assess the importance of local communities in maintaining its role for the conservation of biodiversity These primary research aims have been achieved by using participatory methodologies to gather data within local communities The findings of the study are summarised below

1. **Participatory Rural Appraisal** was a useful approach for data gathering in the diverse often illiterate and suspicious communities of the study area because of its adaptability openness of approach and the fact that it enabled local control Participants were more eager to participate because the process was not an extractive and top-down one but rather offered a chance for group learning Despite its improvements on more traditional extractive methods however the study revealed several limitations of PRA the predominantly visual exercises used in most PRA were found to be unsuitable for the oral Zulu culture where it was preferred to speak rather than write or draw exercises still maintained a gender bias against women which was difficult to overcome because of the patriarchal nature of the communities and facilitation of the exercises by a single researcher as opposed to a group was limiting

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Evidence gathered for this study suggests that the attainment of a sustainable land use strategy in the TBR will prove impossible without the consent and participation of local communities

Defining appropriate structures for participation is difficult as the PRA investigations used in this study reveal Communities are not an undifferentiated mass there are many internal power struggles and oppressive patriarchal hierarchies The underlying contention surrounds the use of land and natural resources in the TBR White landowners and black communities use divergent narratives to legitimate their claims to the land and to blame land degradation on the other party

Investigations of community coping mechanisms revealed the importance of livestock as a form of both economic and social security Since traditional *Nguni* cattle are not incompatible with game, livestock need not be excluded from the TBR Perceptions of environmental degradation are important in decision making surrounding the management of natural resources Communities perceive environmental degradation but see the solution as the acquisition of more land - not a change in land use Participation is a difficult concept because not all communities are democratic

Factors hindering the success of the TBR include historical factors access and ownership of resources, political and social factors and unsustainable land use practices Success depends on the establishment of clear and precise objectives long-term committment, concentration on a small number of defined objectives and most importantly the establishment of local participatory linkages

already proven a successful participatory innovation allowing communities a greater part in the sharing of knowledge and in decision making

The complexity of issues within the TBR makes the task of instituting a sustainable land use strategy appear daunting There is no alternative however if we wish to improve the livelihoods of the local people and prevent further environmental degradation

miscellany of one-off inputs many of which are doomed to failure because of corruption a lack of skill and inadequate committment on the part of local people

The success of the TBR is dependent on a number of factors but there are a few key lessons which need to be learnt based on the experience of other ICDPs and adapted to the TBR context

1 **The establishment of clear and precise objectives**: the TBR is operating under a crisis management mentality at present with fairly ad hoc project implementation Clear and defined goals and structured guidelines for projects need to be formulated

2 **Long-term committment**: The TBR will not prove an overnight success it requires dedicated long-term committment with foresight for future success This also requires a steady amount of funding The state has an important role to play in maintaining this long-term committment particularly in the light of the Reconstruction and Development Programme currently underway It is recommended that both National and Local Government structures become involved but this may also prove problematic since much of the land is privately owned

3 **Concentration on a small number of defined objectives**: the inexorable pull into multiple-activity rural development projects should be avoided and the focus on sustainability maintained For example in the TBR projects aimed at providing agricultural extension to local communities and black farmers who obtain land within the TBR could provide for greater trustbuilding linkages and a more cohesive land management strategy

4 **Establishment of local, participatory linkages**: the importance of local participation cannot be overemphasized The research results show that the greatest source of conflict lies in perceptions of how the land should be managed Local communities are antagonistic toward the idea of the land being used for wildlife, even if land degradation is halted because they have no share in the land If greater equity and power sharing is achieved communities will have an increased share in the benefits but also greater responsibility for land management The Farmworkers Committee has

people and which provides essential needs such as water education and health care to improve people s quality of life " (Marcus 1995 p 27)

It is potentially within the capacity of the Thukela Biosphere Reserve to provide an institutional structure within which this may occur However there are several factors which hinder this process

1 **Historical Factors:** the exploitative labour tenancy system and the systematic disenfranchisement and social disruption of African communities through *Apartheid* which has led to widespread distrust and violence The research indicates that much of the local communities negative perceptions of the TBR stems from a history of oppression
2 **Access, ownership and control of natural resources:** as a result of historical factors the distribution of the control of natural resources is unequal leading to distress and anger amongst disenfranchised African communities who are denied resources Results show that communities perceive the degradation of the land but because they are powerless they are also deprived of responsibility for the management of the land
3 ***Political and Social Factors:*** related again to the history of the area and the country as a whole - the political and social upheaval in the area has led to increasing strife and violence creating a climate which is not conducive to negotiation and trust building The move to political democracy in the country as a whole has not translated on the ground to the management of natural resources in the Weenen region
4 **Unsustainable Land Use Practices:** Both black and white farmers have been responsible for overstocking the area which has resulted in overgrazing soil erosion and bush encroachment

Integrated conservation and development projects are under the best of circumstances complicated procedures requiring a large degree of co-ordination and huge inputs of skill and capital In the highly diverse and troubled situation in which the TBR finds itself this complexity is multiplied It becomes difficult to maintain a clear focus and not to allow the project to degenerate into a

and supply to the KNP The KNP project suffered initially because of the lack of variety of curios poor quality poor supply and marketing and a lack of interest of KNP staff (Venter *et al* 1995) A specific project aimed at combatting these problems has significantly increased curio production and the associated economic benefits to these communities While the Natal Parks Board has started a curio industry at Weenen Nature Reserve it is on a limited scale and most probably only benefits a small sector of the population None of the people interviewed for this research reported being involved

A third option for improving the economic well-being of rural communities is the harvesting of secondary products as has been shown in the Lowveld region of Mpumulanga (Shackleton 1996) Secondary products are regarded as natural indigenous products available from a given piece of land In the Lowveld vast quantities of secondary products remain unharvested and the development of local processing centres for raw materials can provide the basis for significant employment opportunities and stimulation of the local rural economy (Shackleton 1996) More research would have to be undertaken but it is a possibility that such an endeavour may be successful in the TBR

Key Lessons and the Way Forward

The primary aims of this research have been to assess under what conditions the Thukela Biosphere Reserve might be able to institute a sustainable land use management strategy for the reason and to assess the importance of participation by local communities in achieving this The generally weak state of organisation and resource amongst traditional authorities is a major concern for the success of the TBR As Marcus (1995) points out most areas do have sets of rules and established practices about the use of land but these are almost impossible to administer because of overcrowding and overstocking and weak administrative capacity

> "The most appropriate restructuring strategy for creating viable rural livelihoods is one that is broad based that alleviates poverty by productively engaging rural

and the local communities a step which the reserve management has gone some way towards achieving

Future Land Use Options

Tourism in South Africa increased by 52% between 1994 and 1995 (Chadwick, 1996) Thus the initiation of an ecotourism economy holds great promise in the TBR region The implementation of ecotourism needs to benefit local communities however if it is to succeed Reactions by the communities surrrounding the TBR are generally negative toward ecotourism - the main reason being scepticism that any of the benefits will accrue to them A study in the Kosi-Tappu reserve of Nepal also revealed that local populations were not in favour of ecotourism because they could not perceive any benefits from it (Heinen 1993) Analyses of the distribution of economic costs and benefits of protected areas has shown that economic benefits from biodiversity conservation are limited on a local scale but are more likely to accrue on a national scale and are substantial on a global scale with economic costs following an opposite trend (Wells 1992) It is evident that there are generally few local incentives for the conservation of biodiversity (Wells, 1992) This implies that efforts must be made to introduce positive benefits from biodiversity conservation and ecotourism to local communities in the TBR

An investigation into the economic characteristics and potential for wildlife utilization on communal land in Botswana indicated that small-scale cropping of wildlife was successful (Barnes, 1995) Here communities have common property management and use rights over the wildlife resource but the success of such projects depended on good management and the existence of high enough densities of wildlife Such a scheme is possible for the TBR but only in the long term when wildlife densities are stable enough

There are other potential ways of increasing the economic livelihoods of rural people For example the Kruger National Park is attempting to stimulate small businesses in its bordering communities mainly through curio production

concerns or to assert any rights conflict will be lacking Changing processes in the TBR which accompany the democratization in South Africa will allow such groups to gain decision-making power or access to productive resources or benefits from production It is almost certainly true that present land use in the TBR is unsustainable and that ecotourism presents a viable alternative It is impossible however to go forward with this initiative without understanding historical exploitations and situations Understanding the impact of these on the local community will go some way toward aiding the resolution of the conflicts which plague the Thukela Biosphere Reserve

Sustainable Development?

Present Land use and Environmental Degradation

As indicated in chapter 4 it is clear that overgrazing through livestock is degrading the environment of the Thukela Biosphere Reserve and that destocking needs to occur Cattle however are extremely important both economically and culturally to the Zulu people who live in the area The perception that their livestock will be replaced with game is the source of much bitterness and animosity towards the reserve A similiar situation occurs in the Xilingol Biosphere Reserve in China where traditional ways of land use management are becoming unsustainable and overstocking because of increased commercial pressure is causing the degradation of the grassland (Thwaites *et al* 1996) Cattle especially the indigenous *Nguni* cattle are not incompatible with game in the TBR and care needs to be taken that the traditional cattle culture of the local communities is preserved and that their herds are integrated into the reserve This can only be achieved through the initiation of close co-operation and the sharing of knowledge between white landowners

The TBR - channeling social change

It is ironic that the white farmers who formed the biosphere to protect their own interests find themselves now in a development initiative which if successful will benefit the whole community a fact which a farmer member decried when he stated that

> " We started this reserve for wildlife and nature and now we have not involved with all this rural development nonsense!"

Despite the fact that such sentiments still prevail it is true that major changes have occurred in the conceptual workings of a traditionally conservative area struggling to release the shackles of an *Apartheid* past Change does not however come easily and there is still a long way to go before a sustainable land use strategy such as ecotourism is able to be implemented While criticisms of the TBR may be entirely valid, it is important to remember that some change has already taken place and that without the TBR as an institution the change would probably not have been as constructive

In the end it is up to communities to mobilise themselves given the opportunities and structures to do so Developmental workshops enabling capacity building are one step in the right direction The landowner members of the TBR and the communities surrounding it come from completely different world views On both sides attitudes of "bringing them round to our way of thinking" prevail These attitudes need to be replaced with more tolerant and open ones A more beneficial and sustainable land use will only succeed if all parties recognise it as their goal Entrenched conservatism and misguided individual actions are often the cause of increasing bitterness Conflicts are unavoidable with flexible and multiple landuse strategies (Waters-Bayer and Bayer 1994) A participatory process can help identify potential and existing local level conflicts Efforts to strengthen the position of disadvantaged groups (eg farmworkers and communities in the TBR) will lead to more conflict and not less therefore increased conflict is inevitable and is a sign of progress (Waters-Bayer and Bayer 1994) Where certain groups are unable to voice their

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Santiso,C . 1993 The Maya Biosphere Reserve an alternative for the sustainable use of resources. *Nature and Resources* 17(2). 3 - 6

SARRCUS. 1981 *A System for the Classification of Soil Erosion in the SARRCUS region*. Dept of Agriculture and Fisheries Pretoria

Schmidt,P R . 1989 Early exploitation and settlement in the Usambara Mountains. in A C Hamilton and R Bensted-Smith (eds); *Forest Conservation in the East Usambara Mountains Tanzania*. IUCN Gland

Schoonmaker Freudenberger K . 1994 Challenges in the collection and use of information on livelihood strategies and natural resource management in I Scoones and J Thompson (eds), *Beyond Farmer First* Intermediate Technology Publications. London. 124-133

Shackleton,C M . 1996 Potential stimulation of local rural economies by harvesting secondary products a case study of the central transvaal lowveld South Africa. *Ambio*. 25(1). 33 - 38

Solecki,W D . 1994 Putting the biosphere reserve concept into practice some evidence of impacts in rural communities in the United States. *Environmental Conservation*. 21(3). 242-247

Stadler,J., 1995 Development, research and participation towards a critique of participatory rural appraisal methods *Development Southern Africa*. 12(6). 805 - 814

Stocking,M and Perkin,S., 1992 Conservation-with-development an application of the concept in the Usambara mountains. Tanzania. *Trans Inst Br Geog* 17. 337-349

Swift,A . 1993 *Global Political Ecology the crisis in Economy and Government* Pluto. London

Talbot,L M , 1980 The World's conservation strategy. *Environmental Conservation*. 7(4). 259-268

Tamuhla A B., 1996 Factors influencing community participation in sustainable wildlife utilisation a case of the Chobe enclave Conservation Trust Botswana. Unpublished Master of Environmental Planning dissertation, University of Botswana

Taylor,D R F 1992 Development from within and survival in rural Africa a synthesis of theory and practice, in D R F Taylor and Mackenzie F (eds). *Development from Within Survival in Rural Africa*. Routledge. London, p 214-258

Thwaites,R , DeLacy,T and Yong Long,L . 1996 Property rights, social change and grassland degradation in Xilingol Biosphere Reserve. Inner Mongolia. China. Unpublished paper presented at the Sixth International Symposium on Society and Natural Resources, Pennsylvania

Thwaites, R and DeLacy, T . 1996 Linking development and conservation through biosphere reserves promoting sustainable grazing in Xilingol Biosphere Reserve. Inner Mongolia China In press

Todes,A and Krone A , 1990 *The Case for a Landed Development Strategy for Weenen Households Affected by Removals* Built Environment Support Group, University of Natal Durban

Tuan Y . 1974 *Topophilia A Study of Environmental Perception Attitudes and Values*. Prentice-Hall Englewood Cliffs

Tuan Y . 1979 *Landscapes of Fear* Blackwell. Oxford

Nyerges A E . 1996 Ethnography and the reconstruction of African land use histories a Sierra Leone example. *Africa*. 66(1). 122-144

Pearce.D . Markandya A and Barbier E 1989 *Blueprint for a Green Economy*. Earthscan. London

Pearl M C . 1989 The human side of conservation. in D Western and M C Pearl(eds). *Conservation for the Twenty-First Century* OUP Oxford 221-240

Pimbert.M P and Pretty.J N . 1995 *Parks. People and Professionals Putting 'participation' into Prote. ted Area Management.* UNRISD Discussion Paper 57 UNRISD. Geneva

Pile K G . 1996 Soil erosion policy and people s perceptions in a rural community in KwaZulu-Natal South Africa. *GeoJournal* in press

Pitout.C 1994 The fields of wrath Weenen labour tenant commu :y s perceptions of the Thukela Biosphere Reserve Unpublished Honours dissertation. University of Natal. Durban

Pollet. E A and Hearn G . 1993 *A Summary Report on the Establishment of the Sabi Sand Phunanani Project* INR Working paper 97. University of Natal Pietermantzburg

Pretty.J N . 1995 Participatory learning for sustainable agriculture. *World Development* 23(8) 1247-1263

Pretty.J N Thompson.J and Kiara J K . 1995 Agricultural regeneration in Kenya the catchment approach to soil and water conservation. *Ambio*. 24(1) 7-15

Ramangason.G S . 1993 The Mananara-Nord Biosphere Reserve *Nature and Resources*. 29(1). 17 - 23

Ramphele.M , 1991 New day rising. in M Ramphele(ed). *Restoring the Land Environment and Change in Post-Apartheid South Africa* Panos Institute. London. 1-12

Redclift.M 1984 *Development and the Environmental Crisis Red or Green Alternatives* Methuen. London

Redclift M 1992 The meaning of sustainable development *Geoforum*. 23(3). 395-403

Redclift.M . 1994 Sustainable development economics and the environment. in M Reuclift and C Sage (eds). *Strategies for Sustainable Development Local Agendas for the Southern Hemisphere* Wiley London. 17-34

Redclift.M and Sage C 1994 Introduction. in M Redclift and C Sage (eds). *Strategies for Sustainable Development Local Agendas for the Southern Hemisphere* Wiley. London. 1-16

Redclift.M and Woodgate.G . 1994 Sociology and the environment discordant discourse? in M Redclift and T Benton (eds) *Social Theory and the Global Environment* Routledge London. 51-66

Roe. E M 1995 Except-Africa *Wor' Development*. 23(6) p 1065-1069

Rutherford.M C and Westfall.R H . 1994 Biomes of Southern Africa an objective classification. *Botanical Survey of South Africa Memoirs* 63

Mackenzie F 1992 Development from within: the struggle to survive. In D R F Taylor and F Mackenzie (eds). *Development From Within: Survival in Rural Africa*. Routledge. London. p 1-32

Marchand M H and Parpart J L (eds) 1995 *Feminism Postmodernism Development*. Routledge. London

Marcus T. 1989 *Modernising Super-Exploitation: Restructuring South African Agriculture*. Zed Books. London

Marcus T. 1995 KwaZulu-Natal Provincial Synthesis Report. LAPC Land Reform Research Programme. Johannesburg

Matlala P. 1991 The lifestyle we lost. *New Ground* 6: 10-11

McCabe J T, Perkin S and Schofield C 1992 Can conservation and development be coupled among pastoral people? An examination of the Masaai of the Ngorongoro Conservation Area, Tanzania. *Human Organization*. 51(4). 353-366

McCracken J. 1987 Conservation priorities and rural communities. In D Anderson and R Grove (eds). *Conservation in Africa: People, Policies and Practice*. Cambridge University Press. Cambridge. 169-186

McNeely J A., 1988 *Economics and Biodiversity: Developing and Using Economic Incentives to Conserve Biological Resources*. IUCN. Gland

McNeely J A. 1993 Economic incentives for conserving biodiversity: lessons for Africa. *Ambio*. 22(2-3). 144-150

Meintjes H, 1995 *Trends in Natural Resource Management: Policy and Practice in Southern Africa*. Working Paper 25. Land and Agricultural Policy Centre (LAPC). Johannesburg

Morgan J P. 1993 Cooperative management of wildlife in northern Canadian national parks. unpublished Master of Environmental Design project. University of Calgary. Canada

Munnik V. 1991a Pilanesberg park: the volcano still rumbles. *New Ground*. 6: 6-9

Munnik V. 1991b Living with lions: conservation in KaNgwane. *New Ground*. 6. 16-18

Murdoch J and Clark J. 1994 Sustainable knowledge. *Geoforum*. 25(2). 115-132

Naughton-Treves L and Sanderson S. 1995 Property, politics and wildlife conservation. *World Development*. 23(8). 1265-1275

Nel E and Hill T. 1996 Community-based rural development in Hertzog, South Africa. *Geography*. 81(3). 273-275

Nsiah-Gyabaah K. 1994 Land degradation and society in northern Ghana. In M Redclift and C Sage (eds). *Strategies for Sustainable Development: Local Agendas for the Southern Hemisphere*. Wiley. London. 97-132

Ntshalintshali C and McGurk C. 1991 Resident peoples and Swaziland's Malolotja National Park: a success story. In P C West and S R Brechin (eds). *Resident Peoples and National Parks*. University of Arizona Press. Tucson. 61-67

Mackenzie F 1992 Development from within the struggle to survive in D R F Taylor and F Mackenzie (eds). *Development From Within Survival in Rural Africa* Routledge London p 1-32

Marchand M H and Parpart J L (eds). 1995 *Feminism Postmodernism Development* Routledge London

Marcus,T . 1989 *Modernising Super-Exploitation Restructuring South African Agriculture* Zed Books. London

Marcus T . 1995 KwaZulu-Natal Provincial Synthesis Report LAPC Land Reform Research Programme. Johannesburg

Matiala P . 1991 The lifestyle we lost *New Ground* 6. 10-11

McCabe,J T Perkin S and Schofield C 1992 Can conservation and development be coupled among pastoral people? An examination of the Masaai of the Ngorongoro Conservation Area, Tanzania *Human Organization* 51(4). 353-366

McCracken,J . 1987 Conservation priorities and rural communities. in D Anderson and R Grove (eds). *Conservation in Africa People Policies and Practice* Cambridge University Press. Cambridge 169-186

McNeely,J A . 1988 *Economics and Biodiversity Developing and Using Economic Incentives to Conserve Biological Resources*. IUCN Gland

McNeely,J A . 1993 Economic incentives for conserving biodiversity lessons for Africa *Ambio* 22(7-3). 144-150

Meintjes,H . 1995 *Trends in Natural Resource Management Policy and Practice in Southern Africa*. Working Paper 25 Land and Agricultural Policy Centre (LAPC). Johannesburg

Morgan,J P . 1993 Cooperative management of wildlife in northern Canadian national parks. unpublished Master of Environmental Design project. University of Calgary Canada

Munnik,V . 1991a Pilanesberg park the volcano still rumbles. *New Ground*. 6 6-9

Munnik,V . 1991b Living with lions conservation in KaNgwane. *New Ground*. 6. 16-18

Murdoch,J and Clark,J 1994 Sustainable knowledge. *Geoforum* 25(2). 115-132

Naughton-Treves,L and Sanderson,S . 1995 Property politics and wildlife conservation. *World Development*. 23(8). 1265-1275

Nel,E and Hill,T 1996 Community-based rural development in Hertzog. South Africa *Geography* 81(3). 273-275

Nsiah-Gyabaah K . 1994 Land degradation and society in northern Ghana in M Redclift and C Sage (eds). *Strategies for Sustainable Development Local Agendas for the Southern Hemisphere* Wiley. London 97-132

Ntshalintshali,C and McGurk C . 1991 Resident peoples and Swaziland's Malolotja National Park a success story. in P C West and S R Brechin(eds). *Resident Peoples and National Parks* University of Arizona Press.Tucson. 61-67

Harris,L and Eisenberg,J . 1989 Enhanced linkages necessary steps for success in conservation of faunal diversity in D Western and M C Pearl (eds). *Conservation for the Twenty-First Century*. OUP Oxford. 166-181

Heinen,J T . 1993 Park-people relations in Kosi Tappu Wildlife Reserve Nepal a socio-economic analysis. *Environmental Conservation*. 20(1). 25-34

Hough,J L . 1988 Obstacles to effective management of conflicts between national parks and surrounding human communities in developing countries. *Environmental Conservation*. 15(2). 129-136

Hough,J L . 1991 Social impact assessment its role in protected area planning and management. in P C West and S R Brechin (eds). *Resident Peoples and National Parks* University of Arizona Press Tucson 274-283

Infield M 1988 Attitudes of a rural community towards conservation and a local conservation area in Natal South Africa. *Biological Conservation* 45. 21-46

Kanduh,H B S and Richards P 1996 Rural people as conservationists querying neo-Malthusian assumptions about biodiversity in Sierra Leone. *Africa* 66(1). 90-103

Kantey M . 1992 *Towards Sustainable Development in South Africa*. Environmental Monitoring Group. Cape Town

Kellert S R., 1986 Public understanding and appreciation of the biosphere reserve concept. *Environmental Conservation*. 13(2). 101-105

Khan,F . 1990 *Looking back to find a way forward* Earthyear 90 14-16

Kiss,A (ed). 1990 *Living with Wildlife Wildlife Resource Management with Local Participation in Africa* World Bank Washington D C

Koch,E . 1991 Rainbow alliances community struggles and ecological problems. In J Cock and E Koch (eds). *Going Green People. Politics and the Environment in South Africa*. OUP. Oxford. 20-32

Koch,E 1994 *Reality or Rhetoric? Ecotourism and Rural Reconstruction in South Africa*. UNRISD Discussion Paper 54 UNRISD. Geneva

Kockott,F . 1993 *The Fields of Wrath Cattle impounding in Weenen*. AFRA and the Church Agricultural Project (CAP). Special Report No 8 Pietermaritzburg

Lehmkuhl,J F . Upreti,R J and Sharma. U R . 1988 National parks and local development grasses and people in Royal Chitwan National Park. Nepal. *Environmental Conservation*. 15(20). 143-148

Little,P D . 1996 Pastoralism. biodiversity and the shaping of savanna landscapes in East Africa. *Africa*. 66(1). 37-51

Loader,J A 1994 National parks and social involvement - an argument. *Koedoe*. 37(1). 1, 7-148

Lusigi,W J . 1981 New approaches to wildlife conservation in Kenya. *Ambio*. 10(2- 3). 87-92

Machlis,G E . 1992 The contribution of sociology to biodiversity research and management *Biological Conservation* 62. 161-170

Erskine,J M . 1992 *Integrated Development An appropriate means of eliminating poverty and conserving the environment in less developed rural areas* INR occasional paper 116. University of Natal Pietermaritzburg

Fletcher,S A . 1990 Parks, protected areas and local populations new international issues and imperatives. *Landscape and Urban Planning* 19 197-201

Folke,C , Perrings,C , McNeely,J A and Myers N . 1993 Biodiversity conservation with a human face ecology, economics and policy. *Ambio* 22(2) 62-63

Fortmann L . 1995 Talking claims discursive strategies in contesting property *World Development* 23(6). 1053-1063

Foune,J , 1994 Comments on national parks and future relations with neighbouring communities *Koedoe*. 37(1). 123-136

Gadgil M , 1992 Conserving biodiversity as if people matter a case study from India. *Ambio* 21(3). 266-270

Garland,G G , Robinson,J D and Pile,K G . 1994 *Policy, Perception and Soil Conservation a Case Study from Cornfields Natal*. Human Needs Resources and Environment Report. HSRC. Pretoria

Garratt,K . 1984 The relationship between adjacent lands and protected areas issues of concern for the protected area manager, in J A McNeely and K R Miller (eds). *National Parks, Conservation and Development*. Smithsonian Institution Press Washington D C , 65-71

Ghimire,K . 1991 *Parks and People Livelihood Issues in National Parks Management in Thailand and Madagascar*. UNRISD Discussion Paper 29. UNRISD Geneva

Gibson,C L and Marks,S A . 1995 Transforming rural hunters into conservationists an assessment of community-based wildlife programs in Africa. *World Development* 23(6). 941-957

Gibson H , 1995 A war for land. *New Ground*. 19. 10-14

Gilbert,V C . 1988 Co-operation in ecosystem management in J K Agee and D R Johnson (eds). *Ecosystem Management for Parks and Wilderness* University of Washington Press. Seattle. 180-192

Golley,F B , 1981 Ten years of MAB establishing the balance sheet. *Nature and Resources*. 17(2). 3-6

Gregg,W P , 1991 MAB Biosphere reserves and conservation of traditional land use systems in M Oldfield and J B Alcorn (eds). *Biodiversity Culture Conservation and Ecodevelopment* Westview Press Boulder. 274-294

Guyer J I and Richards P 1996 The invention of biodiversity social perspectives on the management of biological variety in Africa. *Africa* 66(1). 1-13

Halffter,G . 1981 The Mapimi Biosphere Reserve local participation in conservation and development *Ambio* 10(2-3) 93-96

Hart,T . 1992 Socio-political factors, in R F Fuggle and M A Rabie(eds). *Environmental Management in South Africa* Tafelberg. 53 - 65

Chambers,R . 1994a The origins and practice of participatory rural appraisal *World Development* 22(7). 953-969

Chambers R 1994b Participatory Rural Appraisal analysis of experience *World Development* 22(9). 1253-1268

Chambers R . 1994c Participatory Rural Appraisal challenges potentials and paradigm. *World Development* 22(10). 1437- 1454

Child,G S . 1991 People's participation in wildlife utilization in Africa *Landscape and Urban Planning*. 20. 159-162

Clacey R 1989 *Weenen Farm Evictions* AFRA Pietermaritzburg

Clay,J . 1991 Cultural survival and conservation lessons from the past twenty years in M Oldfield and J B Alcorn (eds). *Biodiversity Culture Conservation and Ecodevelopment*. Westview press. Boulder. 248-273

Clayton,E S . 1964 *Agrarian Development in Peasant Economies*. London

Cline-Cole,R A . 1996 African and Africanist biodiversity research in a neo-liberal context *Africa*. 66(1).145-158

Cock,J 1991 The politics of ecology. in M Ramphele(ed). *Restoring the Land Environment and Change in Post-Apartheid South Africa* Panos Institute. London 13-20

Colchester,M . 1994 *Salvaging Nature Indigenous peoples,Protected Areas and Biodiversity Conservation*. UNRISD (United Nations Research Institute Social Development) Discussion paper 55. UNRISD. Geneva

CORD(Centre for Community Organisation Research and Development) . 1991 Regaining control, in M Ramphele(ed). *Restoring the Land Environment and Change in Post-Apartheid South Africa*. Panos Institute London. 65-78

Crush,J., 1980 National parks in Africa a note on the problem of indigenization. *African Studies Review*. 25(3). 21-32

Curry-Lindahl, K . 1974 The conservation story in Africa during the 1960s. *Biological Conservation*. 6(3). 170-177

Dijver,C A , 1991 People's participation in environmental projects in developing countries. *Landscape and Urban Planning*. 20. 129-139

Davis-Case,D . 1989 *Community Forestry Participatory Assessment. Monitoring and Evaluation* Food and Agriculture Organization (FAO) Rome

de Haes,C . 1990 People and parks (letter to the editor) *New Scientist* 126(1720). 76

Durbin,J C and Ralambo,J A . 1994 The role of local people in the successful maintenance of protected areas in Madagascar. *Environmental Conservation*. 21(2). 115-120

Edwards,D . 1967 *A Plant Ecological Survey of the Tugela River Basin* Botanical Survey of South Africa Memoir No 36. Natal Town and Regional Planning Reports Vol 10

Ellis,S , 1994 Of elephants and men politics and nature conservation in South Africa *Journal of Southern African Studies* 20(1). 53-71

Biot,Y , Blaikie P M Jackson,C and Palmer-Jones R 1995 *Rethinking Research on Land Degradation in Developing Countries*. World Bank Discussion Paper 289. The World Bank Washington. D C

Blaikie,P M and Brookfield,H 1987 *Land Degradation and Society* Methuen London

Blaikie P M 1995 Changing environments or changing views a political ecology for developing countries. *Geography* 80(3). 203-214

Blaikie,P M and Jeanrenaud S , 1996 *Biodiversity and Social Welfare*. UNRISD Discussion paper DP72. UNRISD. Geneva

Brace,S , 1995 Participatory rural appraisal - a significant step forward in understanding relationships between poor people and their environments. in T Binns (ed). *People and Environment in Africa* Wiley, London. 39-46

Brandon,K E and Wells M , 1992 Planning for people and parks design dilemmas *World Development* 20(4). 557-570

Breen,C , Mander,M A'Bear D , Little,T and Pollett,T , 1992 *Social Conceptions of the Roles and Benefits of National Parks in a Changing South Africa*. Institute for Natural Resources Occassional Paper 119. University of Natal. Pietermaritzburg

Bryant,R L , 1992 Political ecology an emerging research agenda in third-world studies. *Political Geography*. 11(2). 12-36

Broderick. D M 1987 *An Examination of the extent of Erosion in Agricultural Areas in the Tugela Basin*. Unpublished M A Thesis, University of Natal. Durban

Burch,W R , 1988 Human ecology and environmental management. in J K Agee and D R Johnson (eds). *Ecosystem Management for Parks and Wilderness*. University of Washington Press. Seattle. 145-159

Burto, -Clark,I , 1985 *Land and Labour in Weenen County. Natal c 1880-1910*. Unpublished M Soc Sc dissertation. University of Natal. Durban

Camp,K , 1995a *Valley Bushveld of KwaZulu-Natal Natural Resources and Management*. Cedara. Pietermaritzburg

Camp,K., 1995b *The Conservation Status of the Weenen Valley Bushveld*. Cedara. Pietermaritzburg

Carruthers,J., 1988 Game protectionism in the Transvaal. 1900-1910. *South African Historical Journal*. 20.33-56

Carruthers,J , 1993 'Police boys and poachers Africans wildlife protection and national parks the Transvaal 1902-1950. *Koedoe*. 36(2). 11-22

Castello I Vidal,J I and Lopez Lillo,A , 1993 Co-ordination mechanisms in the Spanish biosphere reserves *Nature and Resources*. 29(1-4) 12-16

Chadwick,D H 1996 A place for parks in the new South Africa *National Geographic*. 190(1). 2-41

Chambers R 1983 *Rural Development Putting the Last First* Longman Harlow

SECONDARY SOURCES:

Abel,N and Blaikie,P , 1986 Elephants, people, parks and development the case of the Luangwa valley, Zambia. *Environmental Management* 10(6), 735-751

Acocks,J P H , 1988 *Veld Types of South Africa*. Memoirs of the Botanical survey of South Africa No 57 Botanical Research Institute, Pretoria

Agee,J K and Johnson,D R (eds), 1988 *Ecosystem Management for Parks and Wilderness* University of Washington Press, Seattle

ANC (African National Congress), 1994 *The Reconstruction and Development Programme (RDP)* Umanyano Publications, Johannesburg

Anderson,D and Grove,R , 1987 The scramble for Eden past present and future in African Conservation, in D Anderson and R Grove (eds), *Conservation in Africa People, Policies and Practice*. Cambridge University Press Cambridge

Arce,A and Long,N , 1992 The dynamics of knowledge in N Long and A Long(eds), *Battlefields of Knowledge the interlocking of theory and practice in Social Research and Development* Routledge, London, 211-246

Armstrong,S., 1991 The people who want their parks back. *New Scientist*, 131(1776), 54-55

Barnes,J.I., 1995 Economic analysis of community-based wildlife initiatives in Botswana. *Development Southern Africa* 12(6), 783-803

Barrett,C B and Arcese, P , 1995 Are integrated conservation-development projects (ICDPs) sustainable? On the conservation of large mammals in sub-saharan Africa. *World Development*, 23(7), 1073-1084

Batisse,M , 1986 Developing and focusing the biosphere reserve concept *Nature and Resources*, 22(3), 2-10

Beinart,W , 1989 Introduction the politics of colonial conservation, *Journal of Southern African Studies*, 15(2), 143-162

Bell R H V., 1987 Conservation with a human face conflict and resolution in African land use planning, in D Anderson and R Grove(eds), *Conservation in Africa People, Policies and Practice*, Cambridge University Press, Cambridge, 79-101

Bergdall,T D., 1994 *The Map Facilitators Handbook for Promoting Rural Participation* Swedish Cooperative Centre, Uppsala

Bidol,P and Crowfoot,J E., 1991 Toward and interactive process for siting National Parks in developing nations, in P C West and S R Brechin, *Resident Peoples and National Parks*, University of Arizona Press Tucson, 283-300

Bill,C , 1995 Sustainable development and the biosphere reserve concept the Thukela Biosphere Reserve, Unpublished Honours dissertation, University of Natal Durban

Binswanger, H P , 1991 *Brazilian Policies that Encourage Deforestation in the Amazon*, World Bank Environment Department Working Paper 16 World Bank Washington D C

GEM(Group for Environmental Monitoring) 1995 *People and Parks conference proceedings.* GEM, Johannesburg

Grossman,D and Liebenberg,L , 1994 Conservation of natural resources unpublished draft discussion document, LAPC (Land and Agricultural Policy Centre), Johannesburg

KwaZulu-Natal Provincial Land Reform Steering Committee 1995 A guide to the new RDP land reform programmes unpublished document

Kirsopp-Reed,K , 1993 A review of PRA methods for livestock research and development. RRA notes. 20

Marchant,A , 1995 Natal Parks Board, Personal Communication

Mearns,R , Shombodon,D , Narangerel,U , Tuul,U , Enkhamgalan,B , Myagmarzhav,B Bayanjargal,A and Bekhsuren,B , 1993 Natural resource mapping and seasonal variations and stresses in Mongolia. RRA notes. 20

Murphree,M W , 1992 Participation or proprietorship the central issue. unpublished paper presented to World Wildlife Fund workshop "people, parks and participation creating effective linkages, Bellagio

Mountain,A G , 1992 New international principles that stress the need for nature protection programmes to include rural development and community participation unpublished paper presented at GEM conference Johannesburg

Natal Witness. Daily newspaper, Pietermaritzburg

NPA (Natal Provincial Administration), 1990 Weenen Development Strategy, Unpublished report, NPA

PRA training workshop, 1993 Toward partnership in development a handbook for PRA practitioners. Bulwer, Natal

Pullen, C , 1995 Warden of Weenen Nature Reserve, Personal Communication

Sibiya,C , 1995 Community Development Officer, TBR, Personal Communication

Thukela Biosphere Reserve newsletters

The Star, Daily Newspaper, Johannesburg

Twiddy,D , 1995 Agricultural Extension Officer Estcourt, Personal Communication

References

References have been divided into three main categories

1 Primary Sources - including newspapers unpublished official reports, newsletters and personal interviews

2 Secondary Sources - including published books, journal articles, theses dissertations and published offficial reports

3 Maps and Photographs

PRIMARY SOURCES:

Agenda TV Programme, 1991 Cagga in South Africa, SABC

AFRA (Association For Rural Advancement), 1987 Report 29 Focus on Farm Evictions

AFRA, 1988 AFRA Newsletter (1)

AFRA, 1991. AFRA Newsletter (14)

AFRA, 1992 AFRA Newsletter (16)

AFRA, 1993a AFRA News, No 21

AFRA, 1993b AFRA News No 22

AFRA, 1994 Cornfields Participatory Land Use Planning Report, unpublished document, AFRA Pietermaritzburg

Beckett's Trek, 1995 Television Programme, South African Broadcast Corporation (SABC), Johannesburg

CCWR (Computing Centre for Water Research), 1996 rainfall and temperature statistics for Weenen region 1902 - 1996

Chambers R and Guijt,I , 1995 PRA - five years later where are we now?, *Forests,Trees and People Newsletter* 26/27, 4-14

CLC (Community La[illegible] 1993 Thukela Biosphere Communities get governmen[illegible]ant to buy more land *unity News*, 3(3), 26-27

Cook,D J , 1993. Guidelines for application of the biosphere concept in Natal, Unpublished Natal Parks Board document

Daily News, daily newspaper, Pietermaritzburg

Fig,D and Archer,F , 1993 Empowerment and the environment towards effective community participation in the management of the Richtersveld National Park Unpublished GEM (Group for Environmental Monitoring) document

greater share of power and access It is important that the TBR serves to decentralize power so that responsibility for development and the environment does not remain in the hands of the elite and so that equitable distribution of the benefits from the reserve may be maintained

6. **Future land use options** open to the include ecotourism and harvesting of secondary products

7. Although the process of implementing the TBR has not been easy and will most certainly still continue to be fraught with conflict effectively **it has created a means by which sound ecological management and environmental conservation processes can be implemented together with important development initiatives.** It has thus provided the necessary means for channelling both social change and land use change and has **catalysed important conceptual changes** which have allowed for greater participation by all those who have a stake in the land The increased conflict in the area is paradoxically a positive step forward because it means that more and more previously ignored and suppressed communities are able to voice their concerns Conflicts are thus inevitable as more people become involved in the process Despite potential problems and inadequacies therefore the biosphere concept should be regarded as a positive contribution to new and sustainable forms of land use in South Africa

MISSION STATEMENT

*The **Thukela Biosphere** is a unique conservation initiative set in a highly dynamic society, which it recognises as disoriented by past apartheid laws*

The establishment of the ***Thukela Biosphere*** represents the full commitment of all stakeholders in the area to the attainment and fostering of sustainable development through the utilisation of both its human and natural resources for this and future generations within a peaceful and nurturing environment

Accordingly the ***Thukela Biosphere*** recognises the value of conservation for the preservation of the diversity and integrity of biotic systems within natural ecosystems and shall strive to redress the balance of genetic diversity of species within the region

Recognising that meaningful human social institutional and economic development is necessary to ensure that sustainable development is secured and maintained in perpetuity

Committed to true participative democratic principles ensuring that all participants are consulted represented and given due consideration in decision making processes

Eager to cooperate and share experiences with all interested parties locally nationally and internationally recognising that dynamic development and education especially environmental education is fundamental to long term sustainable development

The ***Thukela Biosphere*** the interests of its participants represented by duly elected or appointed members of the community shall take guidance from and be directed by the spirit and contents of this Mission Statement in all its activities The administrative body shall be known as the Thukela Biosphere Steering Committee

The Thukela Biosphere - Principles of participation

1 The ***Thukela Biosphere*** recognises the need for proactive land reform and related development It is committed to working in conjunction with existing and future private and public initiatives The ***Thukela Biosphere*** will not obstruct land reform

2 The ***Thukela Biosphere*** recognises that sustainable development should be encouraged within the limits of both human and natural resources and available technology

3 The ***Thukela Biosphere*** is sensitive to the needs of local communities to express and realise their development potential

4 The ***Thukela Biosphere*** will continually engage with all levels of government and other agencies to promote delivery of basic infrastructure and services

5 Through its activities the ***Thukela Biosphere*** will strive to improve the quality of life for all

APPENDIX B

Thukela Biosphere Reserve

Development Principles and Mission Statement

convened for the purpose of considering the matter, a poll majority decision (as defined in clause 8.5) are in favour of dissolution. Unless all members have waived notice, not less than 30 days notice shall be given of such meeting and such notice shall clearly state that the question of dissolution and disposal of the assets of the Reserve shall be considered. Upon dissolution of the Reserve, its net assets after payment of all liabilities shall be shared pro rata between members in accordance with the area of land held by each member within the Reserve, unless the meeting agrees otherwise through a poll majority decision (as defined in Clause 8.5).

12. COMMERCIAL DEVELOPMENT

12.1 No hotel, timeshare, shareblock, commercial game lodge, resort or scheme of any nature for the commercial exploitation of the properties falling within the Reserve may be established without the prior consent of the Reserve Committee, which consent shall not be unreasonably withheld. This restriction will not apply to any existing commercial usage of the properties or any reasonable extention thereof.

12.2 Notwithstanding the aforegoing nothing herein shall be construed so as to prevent the owner of any property within the Reserve from conducting hunting safaris on such property or from letting the hunting rights on the properties to a professional hunter or to local hunters.

13. RULES

Members of the Reserve shall:

13.1 not erect a fence on the boundary of their Property (save that portion of the boundary of the Property on which the perimeter game fence will be erected), that will exceed 1,5 m in height and that will consist of more than five strands of wire. The Natal Parks board shall be exempt from such provision;

13.2 maintain the roads on their Properties in good repair, other than public roads;

13.3 not build any structures on their Properties other than in accordance with a specification issued and approved by the Reserve Committee;

13.4 adhere to good veld and game management practices and in so doing:

13.4.1 provide adequate water for domestic and stock watering purposes;

13.4.2 not deposit on or allow any rubbish, debris, dirt or refuse to be left anywhere on their Properties except in areas specifically provided for this purpose.

13.4.3 not cause or permit any disorderly conduct of whatsoever nature on their Properties or do or permit any act, matter or thing which shall constitute or cause a nuisance to any other owner or damage or destroy any flora or fauna on the Properties.

9.1.4 that, in acceptance of the Reserves policies on the enhancement of the wildlife resources within the Reserves area, he/she/it shall restrict the number of residents on his/her/its land (due regard being had of reasonable requirements for staff);

9.1.5 that any structures or equipment constructed, installed or otherwise located on his/her/its land by the Reserve or at the expense of the Reserve shall be maintained by him/her/it in good and serviceable condition, and any such structures or items of equipment that are damaged, lost stolen or otherwise rendered faulty, inoperative or unavailable to the Reserve through improper or negligent action on the part of the member or persons under his/her/its supervision or control shall be repaired, replaced or paid for by the member in accordance with the requirements of the Reserve Committee;

9.1.6 that he/she/it shall not permit vehicular or pedestrian traffic into or out of the Reserve except via public roads;

9.1.7 that, apart from fencing along the perimeter of the Reserve and fencing required for protection of crops or other property or people, no further game fencing shall be constructed on his/her/its land unless specific written permission for such game fencing is granted by the Reserve Committee in accordance with relevant professional advice on wildlife management, on any section of his/her/its land that might thus be enclosed within game fencing shall still be regarded as part of the Reserve, unless the Reserve Committee decides otherwise. Game Fencing shall be deemed to include any fence that exceeds 1,5 m in height and/or consists of more than five strands of fencing wire. This provision shall not apply to the Natal Parks Board;

9.1.8 that any existing internal game fencing other than contemplated in clause 9.1.7 shall be removed by the owner once the Reserve Committee has, in its opinion, obtained adequate evidence to suggest that the member will not suffer an unreasonable loss of wildlife from his/her/its land through dispersal as a consequence of the removal of such fencing, but the owner may remove such fencing at any earlier time if he/she/it so desired;

9.1.9 that burning of the veld, or any other practices that, in the opinion of the Reserve Committee, might result in significant temporary or permanent alteration of any wildlife habitats or in significant damage to the environment within the Reserve, shall not be permitted on his/her/its land unless he/she/it has obtained the prior written approval of the Reserve Committee for each specific action of such type;

9.1.10 to be bound to sell or otherwise trade such animals to any member who is prepared to match or better the price or trade arrangements agreed to by any non member, any such offers for such wildlife shall be made in writing by both members and non members;

10. CONSTITUTION

10.1 AMENDMENTS

This Constitution may be amended, whether by way of delegation,

imposed only if agreed to by a majority decision (as defined in Clause 8.8) at a General Meeting and provided notice of such resolution is given to members in the Notice of the Meeting. In case of emergency, the Reserve Committee may submit the resolution for a special levy together with all information relevant thereto to the members for their decision by postal vote in such manner as the Reserve Committee may prescribe and in such event the resolution shall be binding if agreed to by a poll majority decision.

7.4 ACCOUNTS

The Reserve Committee shall ensure that books of account are kept which shall be audited annually to 31st March of each year by auditors appointed by the Reserve members in General Meeting who shall also prepare an annual balance sheet and statement of income and expenditure. Such books of account shall be open for inspection by members at such reasonable times and in such reasonable manner as may be determined by the Reserve Committee.

8. MEETINGS

8.1 The Annual General Meeting shall be held in May and 21 days written notice shall be given to all members of such meeting.

8.2 Notice of each Annual General Meeting shall be accompanied by a copy of the Reserve's audited accounts for the preceding year to 31st March and a report by the Chairman on the affairs of the Reserve. The notice shall also include any resolutions to be moved at the meeting.

8.3 The Annual General Meeting may by a simple majority of members present, and entitled to vote, agree to a resolution for which notice has not been given, being moved and voted on, provided such resolution, if adopted, shall not increase the members' financial liability to the Reserve or result in the alteration of this Constitution.

8.4 Special General Meetings of the Reserve may be called by the Chairman at any time and shall be called by him/her on the written request of not less than five members, or on the written request of a single member exercising his/her/its right to appeal against expulsion. Unless all members have waived notice, at least 21 days notice of a Special General Meeting shall be given to all members specifying the reason for the meeting and any resolutions to be moved at such meeting.

8.5 A quorum for Annual general Meetings and Special General Meetings of the Reserve shall not be less than one half of the number of members entitled to vote.

8.6 Any member entitle to vote at a meeting may appoint in writing another member as his/her/its proxy to represent him/her/it and vote on his her/its behalf at such meeting.

8.7 Voting at an Annual General Meeting and Special General Meeting shall be by show of hands of those present and entitled to vote, and a simple majority decision shall prevail, unless a poll is required. A poll shall be

General Meeting and shall then consist of seven(7) elected members.

6.1.2 The Reserve Committee shall include a Chairman, Vice-Chairman and Secretary, and any other officer that may be deemed necessary by an Annual General Meeting. All officers shall be elected annually at the Annual General Meeting of the Reserve, shall hold office until the election of their successors and shall be eligible for re-election.

6.2 POWERS AND DUTIES OF CHAIRMAN AND VICE CHAIRMAN

6.2.1 The Chairman shall preside at all meetings of the Reserve and the Reserve Committee at which he/she is presiding and generally exercise supervision over the affairs of the Reserve and perform such duties as by usage and custom pertain to the office. The Chairman shall have a casting vote at meetings of the Reserve Committee.

6.2.2 The Vice-Chairman shall exercise the powers and perform the duties of the Chairman in the absence of the Chairman or when called upon to do so by the Chairman.

6.3 POWERS AND DUTIES OF THE RESERVE COMMITTEE

6.3.1 The Reserve Committee shall have the power to co opt any member, either specially or generally, to the Committee, and may fill any vacancy which occurs in the office of Chairman, Vice-Chairman, Secretary or in its membership.

6.3.2 Subject to the direction and control of the General Meetings of the Reserve and any limitation imposed by this Constitution, the Reserve Committee may exercise all such powers, functions and duties as may be necessary in the functioning of the Reserve and the furtherance of interests of members and shall exercise all the powers admissible by the Reserve.

6.3.3 The Reserve Committee shall not impinge unreasonably on the land use and wildlife management policies of the member, but shall be empowered to decide what wildlife may be hunted swopped, captured or otherwise utilised by members or their properties within the Reserve during each year and shall inform members by 1st November of the preceding year of the annual limitation that have been agreed to in this regard, provided, however, that members shall accept subsequent rations to such off take quotas if the Committee decides that such allocations become necessary owing to rainfall or other conditions that were not contemplated by the Committee or its advisors. Similarly, the Reserve Committee may decide annually upon maximum stocking rates for cattle and other indicated livestock within the Reserve. In making such decisions, the Reserve Committee may seek relevant unbiased specialist advice and may make arrangements for regular monitoring of wildlife populations, veld condition and other relevant factors within the Reserve.

6.3.4 Notwithstanding the provisions of this clause, the Reserve Committee shall be empowered to consider and make rulings on any matter related to the effective management and control of the Reserve.

5.2 The two Founder Areas referred to above shall constitute the Reserve.

5.3 NEW MEMBERS

The registered owner of any property which is contiguous to any of the Founder Areas referred to in Clause 5.1 above shall be eligible for membership and if such registered owner should apply for and be granted membership of the Reserve then such property will henceforth be deemed to form part of the Reserve.

5.4 HONORARY MEMBERS

5.4.1 The registered owners of any property which is not contiguous to any Founder Area but which property may ultimately become contiguous to any Founder Area as a result of the expansion of such Founder Area shall be eligible for Honorary Membership of the Reserve.

5.4.2 Honorary Members shall have such limited rights as the Reserve may determine when granting such membership but shall in any event not have any voting rights. All references in this Constitution shall be deemed to exclude honorary members unless the context clearly indicates the contrary.

5.5 NEW AND CONDITIONAL MEMBERS

5.5.1 Candidates for membership of the Reserve shall be proposed by a Founder member and seconded by a Founder member. The proposer and/or the seconde. shall be the registered owner of property in the Reserve contiguous to that of the Applicant for membership. Application for membership shall be made to the Reserve Committee and applicants shall supply such information regarding their suitability for membership as the Reserve Committee may require.

5.5.2 The Reserve Committee may, at its discretion, grant, refuse, defer or refer any application for membership to a General Meeting of the Reserve, and may attach any conditions to such decision, including restrictions on voting rights. All members admitted to membership shall pay such admission fee as the Reserve Committee may determine. As soon as possible after reaching any decision on an application for membership, the Reserve Committee shall notify all members of the Reserve accordingly.

5.5.3 Any person, company, association, institution, statutory or other body, or partnership, who has purchased, otherwise acquired, or leased, or is contemplating purchasing, otherwise acquiring, or leasing land in the Reserve may apply for and may be granted membership in accordance with Clause 5.4 conditional upon such land being transferred into their name, or the relevant lease agreement coming into effect.

5.6 REPRESENTATION OF MEMBERS

5.6.1 In the case of members not being a natural person (ie. being a company, institution, etc) they shall nominate [illegible] as provided in [illegible], the provisions of

apply to the Natal Parks Board.

4.9 employ an Anti-Poaching Unit consisting of not less than 5 trained personnel, whose responsibility shall be to patrol the Reserve to counter poaching activities and act as security managers for the area.

4.10 invite the patronage of any persons to such honorary positions as the Reserve members consider advisable;

4.11 include parts of the territory of KwaZulu into the area of the Reserve.

5. MEMBERSHIP

5.1 FOUNDER MEMBERS

The Founder Members of the Reserve shall be:

5.1.1 The NATAL PARKS BOARD who are the registered owners of the following properties:

5.1.1.1 The farm Onderwacht No 911 Weenen, Administrative District of Natal ;

5.1.1.2 The farm Bosman Riviespoort No 1286 Weenen, Administrative District of Natal ;

(which properties are hereinafter referred to as "the First Founder Area");

5.1.2 CHRISTOPHER JOHN WILKINSON who is the registered owner of the following properties:

5.1.2.1 The farm Yatton No 7647 Weenen, Administrative District of Natal, in extent SEVEN NINE ONE comma ONE FIVE THREE FOUR hectares ;

5.1.2.2 Sub 1 of the farm Osaka No 12977 Weenen, Administrative District of Natal, in extent TWO NINE comma NOUGHT ONE THREE NINE hectares ;

5.1.2.3 Sub 6 of the farm Middel Plaats No 1281 Weenen, Administrative District of Natal, in extent FOUR EIGHT TWO comma THREE SEVEN NOUGHT TWO hectares ;

5.1.2.4 The farm Kalsta No 14719 situate in the County of Weenen, Province of Natal, in extent FIVE THREE SEVEN comma NINE TWO EIGHT NINE hectares.

5.1.3 COENRAAD MARTHINUS VERMAAK who is the registered owner of the following properties:

5.1.3.1 Sub 1 of the farm Klip Berg No 2158, Administrative District of Natal, in extent ONE FOUR ONE comma FOUR THREE NOUGHT TWO hectares ;

5.1.3.2 The Remainder of the farm Klip Berg No 2158, Administrative District of

CONSTITUTION

THUKELA BIOSPHERE RESERVE

1. NAME

The name of the Biosphere Reserve shall be The Thukela Biosphere Reserve (hereinafter referred to as "the Reserve").

2. INCORPORATION

The Reserve shall be a voluntary organisation and incorporated with the objects and powers hereinafter set forth and may exercise all the powers of a corporate body including the owning of movable and immovable assets and the right to conduct legal proceedings in its own name.

3 OBJECTS

3.1 The objects of the Reserve shall be :

3.1.1 to promote, develop and maintain the sustainable utilisation of all natural resources in the Reserve area, through co-operative management action between landowners

3.1.2 to ensure the strict adherence to sound ecological management policies aimed at preventing :

3.1.2.1 the degradation of the natural resources by any users, at the expense of other users.

3.1.3 to re-introduce wildlife species that have either been eradicated or reduced to low numbers within the Reserve area, provided:

3.1.3.1 these species are compatible with acceptable game management activities;

3.1.3.2 their founder populations can be made large enough to constitute viable breeding groups;

3.1.4 the construction and maintenance of a perimeter game fence eventually around the whole Reserve. The game fences shall be constructed to a specified standard, while limiting game fencing within the Reserve and its Founder Areas to the minimum amount required for protection of crops, construction of holding bomas, or other basic management needs, thereby ensuring that:

3.1.5 the promotion of mutually beneficial schemes for deriving economic returns from wildlife, through either consumptive means (eg. game cropping and safari hunting) or non consumptive means (eg tourism);

3.1.6 the development of an effective anti-poaching system together with a programme to obtain co-operation from,

APPENDIX A

Constitution of the Thukela Biosphere Reserve

Wells,M . Brandon,K and Hannah L 1992 *People and Parks Linking Protected Area Management with Local Communities* World Bank. Washington

Wells,M and Brandon,K . 1993 The principles and practice of buffer zones and local participation in biodiversity conservation *Ambio* 22(2) 157-162

West P C and Brechin,S R 1991 National parks, protected areas and resident peoples a comparative assessment and integration. in P C West and S R Brechin(eds) *Resident Peoples and National Parks* University of Arizona Press. Tucson 363 - 400

WCED (World Commission on Environment and Development) 1987 *Our Common Future*. OUP Oxford

Winpenny,J T , 1991 *Values for the Environment a Guide to Economic Appraisal* HMSO. London

World Bank. 1991 *World Development Report 1991 The Challenge of Development*. OUP. New York

World Bank. 1992 *World Development Report 1992 Development and the Environment* OUP. New York

Yamamoto,W E . 1993 The nature and evolution of cooperative management at Kluane National Park Reserve a case study. unpublished MA thesis in Recreation and Leisure studies. University of Waterloo. Canada

Zube,E H and Busch M L . 1990 Park-people relationships an international overview. *Landscape and Urban Planning*. 19.117-131

zu Hulshoff, B . 1984 How UNESCO's man and the biosphere programme is contributing to human welfare. in J A McNeely and K R Miller (eds) *National Parks, Conservation and Development*. Smithsonian Institute Washington D C

MAPS

Edwards,D . 1959 *Vegetation of the Tugela Basin* Map. Pietermaritzburg Natal

Topographical Map 1 50 000 *2829DB Ladysmith*. Chief director of Surveys and Mapping. Pretoria

Topographical Map 1 50 000 *2829CD Frere* Chief director of Surveys and Mapping. Pretoria

Topographical Map 1 50 000 *2830CC Weenen*. Chief director of Surveys and Mapping. Pretoria

Topographical Map 1 50 000 *2830 CD Muden* Chief director of Surveys and Mapping. Pretoria

Town and Regional Planning Commission 1968 *Soils of the Tugela Basin - Map* Pietermaritzburg

Tuan,Y . 1989 *Morality and the Imagination Paradoxes of Progress*. University of Wisconsin Press. Wisconsin

UNESCO. 1983 Looking at biosphere reserves - a 1993 perspective *Nature and Resources*. 19(2). 22-25

UNESCO. 1984 Action plan for biosphere reserves *Nature and Resources*. 20(4). 11-22

UNESCO. 1994 *Biosphere Nomination Form* Unesco. Paris

UNESCO. 1995a Report of the international conference on biosphere reserves (Seville. Spain. 20-25 March 1995). unpublished document. Unesco. Paris

UNESCO. 1995b The Seville strategy for biosphere reserves unpublished document. Unesco Paris

Van Onselen C . 1996 *The Seed is Mine The Life of Kas Maine a South African Sharecropper 1894-1985*. D Phillips. Cape Town

Van Vlaenderen,H and Nkwiti,G . 1993 Participatory research as a tool for community development *Development Southern Africa*. 10(2).

Venter,A K . Marais,C P and Breen,C M 1994 *Managing for the Future Integrating the Goals of Conservation and the Development of Neighbouring Communities*. INR Occasional Paper 149. University of Natal. Pietermaritzburg

Venter,A K . Venter,A J and Botha,J . 1995 *One small step the Kruger National Parks Small Business Development Project*. INR occasional paper 157. University of Natal. Pietermaritzburg

Vogel. C H . 1994 Consequences of droughts in southern Africa. 1960 - 1992. Unpublished PhD thesis. University of the Witwatersrand. Johannesburg

Waldrop,M M . 1992 *Complexity and the Emerging Science at the edge of order and Chaos*. Simon and Shuter. New York

Wall,G . Hallman,S and Skibicki,A . 1995 Shared and co-operative management models of national parks and national historic sites between governments and aboriginal peoples an international comparitive review. unpublished report by the Dept Geography . University of Waterloo for the Dept of Canadian Heritage

Waters-Bayer,A and Bayer,W . 1994 *Planning with Pastoralists PRA and more - a Review of Methods focused on Africa*. German Agency for Technical Cooperation (GTZ). Division 422 Working Paper. Druckerei Kinzel. Gottingen

Watson J . 1993 Fostering community support for the Fitzgerald River Biosphere River. Western Australia. *Nature and Resources* 31(2). 2-10

Wells,M . 1992 Biodiversity conservation. affluence and poverty mismatched costs and benefits and efforts to remedy them. *Ambio* 21(3) 237-243

Wells M 1996 *The Economic and Social Role of Protected Areas in the New South Africa*. Policy paper 26 Land and Agricultural Policy Centre (LAPC) Johannesburg



THUKELA
Biosphere Reserve

THUKELA BIOSPHERE RESERVE- HUMAN RESOURCES DEVELOPMENT

The Thukela Biosphere Reserve (TBR) is committed to develop all it's resources in a sustainable way. The human resources forms one of the primary categories which are concern for, and point of focus of the TBR. To ensure an appropriate approach for human resources development, the TBR is committed to development principles which form the assumptions of all projects, programmes and processes in this regard.

DEVELOPMENT PRINCIPLES

The principles identified are drawn from an implicit definition of development which is:

> a dynamic process through which people develop the will and obtain skills to influence their own future towards improved life quality through access to, and control of, resources.

This definition implies that all human resource development initiatives will be driven by the following principles:

-a community driven process which is 'people centred' and is based on capacity, skills and needs of the community and result in a balanced community life.

-as a process must be inclusive, involving all interest groups
- be owned by the community
- be sustainable both financially and to enhance existing organisational capacity to manage initiative
- promote peace and justice among all people involved in the process

- is holistic and therefore address both social and physical issues

- must ensure a balance between the delivery of products and the process of development

-should enhance existing capacity of communities, funders and authorities through exchange and interaction within the TBR. While not being prescriptive ('blue print') the principles should be guidelines insights so that the process can be facilitated and managed properly.

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