

**THE BIOSPHERE AS AN INSTRUMENT
OF SUSTAINABLE TOURISM
AND COMMUNITY DEVELOPMENT**

by

Neville Moran

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CHAPTER 1

THE CONTEXT OF THE STUDY

1.1 Introduction

This chapter sets the context, which underpins the purpose for which the research was undertaken. Background to the present situation will be sketched, in which the research problem is defined; the research questions are put forward as a basis of motivation for the study, and the general context for the study is set.

1.2 Background

The international tourism industry has grown rapidly since the early 1960s. Moreover, projections to the year 2010 indicate that the industry will continue to grow, albeit less quickly than previously. International arrivals in Southern Africa grew by 17 percent annually from 1988 to 1993 (World Trade Organisation (WTO), 1994).

In sub-Saharan Africa, growth in tourism is particularly crucial for future economic health. Africa generally accounts for less than 4 percent of world arrivals and about 2 percent of world receipts, most of which are concentrated in North Africa. However, given the difficult situation prevailing throughout the continent, a rapid improvement in the tourism sector would indeed be helpful.

Post apartheid South Africa is a striking example of the hopes that countries' attach to

tourism, particularly given that tourism everywhere is relatively labour-intensive. South Africa also offers tremendous and outstanding diversity in scenery and wildlife. Therefore logically, the government has accorded a high priority to tourism as it attempts to restructure and improve the country's economy. Consequently the South African Tourist Board (SATOUR) aims to attract millions of international visitors to the country and create in excess of 200 000 additional jobs by the year 2000(Koch, 1994).

Clearly, in conventional economic terms, the outlook of global tourism appears very promising due to increasing demand and the fact that some countries appear to need substantial earnings over short and a medium term. However, it's widely acknowledged that conventional tourism is capable of destroying its own resource base. Hence, even the casual observer may question whether tourism is sustainable on the scale suggested by past trends and projected for the future. However, it will be shown that sustainable tourism, as a concept, is strategically located at the intersection of globalisation, the environment and community development.

1.2.1 Research problem

South Africa, as a result of the apartheid years, is experiencing restructuring problems in most areas of the society but particularly in the most disadvantaged areas. Tourism is mooted as a potential opportunity in rural areas of South Africa that have few economic possibilities. The fragmented nature and conflict ridden social context that exists makes it difficult for people in rural areas to sustain any form of economic viability. The Biosphere reserve concept presents an opportunity, through co-operative management, to create an environment that brings together development, conservation and people in such a way that a sustainable future is possible. The recent past has, in most cases, seen a strong emphasis either on development or conservation of an area, but very few have achieved an acceptable balance between the two. Biosphere reserves have been developed with a view to creating a sustainable balance between conservation and development.

Sustainable tourism forms an integral part in this endeavour to achieve a sustained balanced between conservation and development. However, research within the Thukela Biosphere and Biosphere's internationally has indicated that LED, in the form of tourism, is not providing the sustained benefits to local communities and landowners as anticipated. This in turn is affecting not only the residents of the area but is creating an undesirable scenario for land use planning in the region. Thus study will set out to investigate to what degree a Biosphere Reserve can/does contribute to sustainable tourism within an area, through co-operative management, with specific reference to how this impacts on land use planning.

1.2.2 Research question

Can a Biosphere Reserve provide for sustainable tourism even though recent evidence suggests that biosphere reserves in South Africa have not yet achieved this ?

- * Communities/land owner's perception of a biosphere - Is it a question of land protection by stakeholders or do the real interests of the landowners lie in conservation and community development ?
- * What positive and negative impacts does a biosphere reserve have on tourism and tourism's contribution to LED?
- * What implications does a biosphere reserve have for land use planning - where does this fit with regional and sub-regional planning policy ? How do biosphere's link/interact with planning principles ?
- * How does a Biosphere Reserve benefit tourism and what obstacles are constraining tourism ?
- * How does the Biosphere Reserve compare with the Special Case Area Plan (in terms of the new planning legislation) ?
- * To what degree does a Biosphere Reserve act as an effective tool for land management ?

1.2.3 Hypothesis

Conservation and development have traditionally been separated conceptually, managerially and spatially. The Biosphere Reserve concept serves to integrate land uses in a sustainable and resourceful way.

A key ingredient in the Biosphere Reserve is tourism, particularly eco-tourism. Whilst it has been shown in recent case studies that some Biosphere Reserves have not promoted sustainable tourism, this study will show that a Biosphere Reserve can act as an instrument for sustainable tourism.

As in other aspects of economic development and resource exploitation, it has not been tourism per se that is causing the problems. Rather, unplanned and mismanaged tourism that lacks policy direction and comprehensive development strategies represent the root cause (Mill and Morrison, 1985).

In recognition of the above, the study was further motivated by the following concerns:

- * 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.

1.2.4 Methodology

For the purpose of the survey the study area was divided into sectors. The first sector are the communities that are currently involved in one or another land reform project (ie redistribution projects) residing in and around the TBR. The second sector are the communities presently residing on the farms within the TBR. The third sector are the tourist operators and farmers who are currently active within the TBR. Within the above sectors four groups of respondents were targeted for the open ended and structured questionnaire.

A total of one week was spent in the study area amongst the residents between the 5 and 9 October 1998. Interviews were completed with the aid of a interpreter. A person from Lima, an NGO active in the area, arranged the interviews with the help of some community members in the area.

The interviews served to gain an understanding of, inter alia, the present source of income of the resident population, the degree of communication between various role players, the impact the biosphere has had on tourism, other forms of local economic development generated as a result of the Biosphere reserve, opportunities that the Biosphere reserve has presented to tourism, economic upliftment/development and the future that the reserve holds for the resident population from a tourism view point.

1.3 Biosphere Reserves in the South African Context

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). Professionals are now beginning to realise that the strategy of trying to preserve biodiversity by enclosing it within reserves, while ignoring the wider social and political realities, has been an

ineffective one (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 grazing, but also other important resources such as wood, thatching grass and medical 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 government policies of distribution of resources and land reform occurring within the South Africa at present are part of a wider international movement which calls for greater equity and participation of local people in the management of sustainable environments. 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 involvement and participation in conservation (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). Since land use is often the most contentious issue in conflicts between conservation and development, a sustainable concept which involve multiple land -use strategies have been seen as the panacea for development and conservation (Lusigi, 1981). 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.

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 for the improvement of the global relationship between humans and the environment (Golley, 1981). Part of the MAB programme was the creation of global network of protected areas which demonstrated conservation of biotic communities, provided areas for ecological and environmental research, provided facilities for education and 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 reserves (UNESCO, 1984). The ideals for the MAB programme thus appear to suit the changes in conservation, development and tourism initiatives in South Africa and thus provide an framework from which to examine the degree to which a biosphere reserve can act as an instrument of sustainable tourism.

1.3.1 What is a Biosphere Reserve ?

A Biosphere Reserve allows both people and nature a rightful place in the environment. It is a conservation strategy for the total environment and makes provision for both conservation and development. In short, it implies the maintenance of existing conservation areas and the application of conservation principles by bioregional planning in the surrounding areas.

Biosphere reserves are zoned and may include strictly conserved areas and even intense agricultural areas as transition zones. Biosphere reserves are recognised by, the United Nations Education, Scientific and Cultural Organisation(UNESCO) and are included in the World Network of Biosphere Reserves MAB (Man and the Biosphere) programme with the objective of promoting sustainable development.

Biosphere reserves are usually managed according to three zones.

- * The core area: a pristine natural area of high biological diversity and scientific importance. Core areas are legally protected and only certain activities are permitted.
- * The buffer zone: a zone, which borders on the core and which is managed to the benefit of the core area and the surrounding communities.
- * The transitional zone: this is a dynamic zone of co-operation, where a combination of development and natural areas may be found.

From 1976 to March 1995, 324 biosphere reserves have been established in 82 countries. No biosphere reserve has to date been registered in South Africa although there are some non-statutory reserves. Biosphere's have been established primarily as a result of changing trends in conservation from the strictly preservation 'locking away' attitude to one which realised the benefit that conservation can offer for the development of society.

1.3.2 Case Study - Thukela Biosphere Reserve (see map 1)

The Thukela Biosphere Reserve is a joint venture between the Natal Parks Board and the cattle farmers in the Weenen Magisterial District, making it one of the largest biosphere reserves in Southern Africa to be established, although as indicated, it has no statutory recognition. The Biosphere at present extends over an area of approximately 96 000 ha in extent. The Weenen Nature Reserve forms the core area of the Thukela Biosphere Reserve.

Whilst the biosphere brings a potential promising future for tourism in the area the impact and effect on the local community is somewhat less exciting. It becomes clear that the possibilities that tourism could afford these communities have not yet been fully realised.

Its questions such as this that need to be studied together with the issue of sustainability of Biosphere reserves for the generations to come. Present questions of how best the land within the Biosphere can be utilised and by whom remains unanswered.

Thus the aims of this dissertation in relation to this particular case study is twofold:

- * To establish whether the Thukela Biosphere Reserve is the appropriate vehicle to implement a sustainable natural resource management strategy for the region;
- * To assess the importance of co-operative management by all parties in ensuring that the Thukela Biosphere Reserve is able to promote sustainable tourism and social development in the region.

CHAPTER 2

THE BIOSPHERE RESERVE CONCEPT

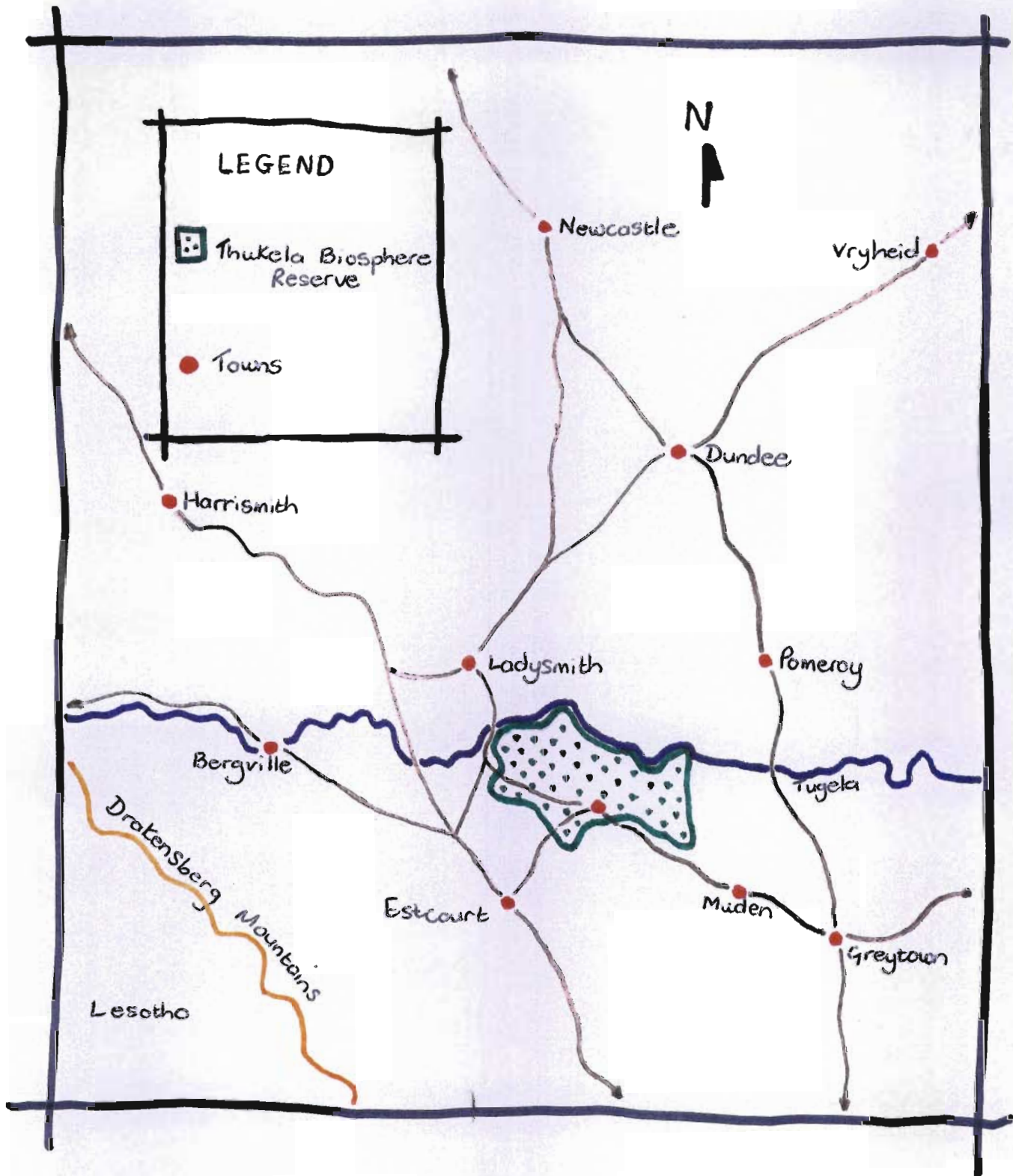
2.1 Introduction

Biosphere reserves are designed to deal with one of the most important questions the world faces today: How can we reconcile conservation of biodiversity and biological resources with their sustainable use without compromising the future of the resident communities? An effective biosphere reserve involves natural and social scientists; conservation and development groups; management authorities and local communities - all working together on this complex issue.

This chapter will discuss the history of the biosphere concept and expand on the principles that have developed the concept of the biosphere reserve within the international fold and its position in Africa.

2.2 Historical background

One of the first international organisations recognising the global challenges of environmental policy as early as the mid-sixties, the United Nations Educational, Scientific and Cultural Organisation (UNESCO) convened an Intergovernmental Conference of Experts on the Rational Use and Conservation of the Biosphere, which was held in Paris from 4 to 13 September 1968. Among the participants at this international environmental conference, known as the "Biosphere Conference", were the United Nations Organisation (UNO), the Food and Agriculture Organisation of the United Nations (FAO) and the World



MAP 1 : The Thukela Biosphere Reserve

Health Organisation (WHO), assisted by the International Union for Conservation of Nature and Natural Resources (IUCN) and the International Biological Programme (IBP). The aim of this conference was "to assess the state of scientific knowledge about nature's potential and its interaction with human society and to find out in how far data and methods are available or must be elaborated to enable the necessary use of the potential of natural areas to be made in a rational manner while conserving their integrity" (UNESCO, 1983). The contributions of the participating nations and organisations made it very clear that there were indications of an alarming increase in environmental problems. As a result of the meeting, a recommendation was submitted to UNESCO requesting the establishment of an inter-governmental programme on global ecological issues.

Only a short time after the conclusion of the Conference on the Biosphere, UNESCO presented a new, interdisciplinary draft programme which was submitted for decision at its 16th General Conference on 23 October 1970. The adoption of Resolution 2.313 marked the beginning of the programme "Man and the Biosphere" (MAB). It explicitly builds on the experience gained during MAB's scientific forerunner programme, the International Biological Programme (IBP), carried out between 1964 and 1974 (UNESCO, 1983).

The concept of biosphere reserves was initiated by a Task Force of UNESCO's Man and the Biosphere (MAB) Programme in 1974. The biosphere reserve network was launched in 1976 and, as of March 1995, had grown to include 324 reserves in 82 countries. The network is a key component in MAB's objective for achieving a sustainable balance between the sometimes conflicting goals of conserving biological diversity, promoting economic development and maintaining associated cultural values. Biosphere reserves are sites where this objective is tested, refined, demonstrated and implemented.

In 1983, UNESCO and the United Nations Environment Programme (UNEP) convened jointly the First International Biosphere Reserve Congress in Minsk (Belarus), in co-operation with the Food and Agriculture Organisation of the United Nations (FAO) and

the World Conservation Union (IUCN). The Congress's activities gave rise in 1984 to an "Action Plan for Biosphere Reserves", which was formally endorsed by the UNESCO General Conference and by the Governing Council of UNEP. While much of this Action Plan remains valid today, the context in which biosphere reserves operate has changed considerably, as was shown by the United Nations Conference on Environment and Development (UNCED) process and, in particular, the Convention on Biological Diversity. The Convention was signed at the "Earth Summit", in Rio de Janeiro, in June 1992, entered into force in December 1993 and has now been ratified by more than 100 countries. The major objectives of the Convention are: conservation of biological diversity; sustainable use of its components; and fair and equitable sharing of benefits, arising from the utilisation of genetic resources. Biosphere reserves promote this integrated approach and are thus well-placed to contribute to the implementation of the Convention.

In the decade since the Minsk Congress, thinking about protected areas as a whole and about the biosphere reserves, has been developing along parallel lines. Most importantly, the link between conservation of biodiversity and the development needs of local communities - a central component of the biosphere reserve approach - is now recognised as a key feature of the successful management of most national parks, nature reserves and other protected areas. At the Fourth World Congress on National Parks and Protected Areas, held in Caracas, Venezuela, in February 1992, the world's protected-area planners and managers adopted many of the ideas (community involvement, the links between conservation and development, the importance of international collaboration) that are essential aspects of biosphere reserves. The Congress also approved a resolution in support of biosphere reserves.

There have also been important innovations in the management of biosphere reserves themselves. New methodologies for involving stakeholders in decision-making processes and resolving conflicts have been developed, and increased attention has been given to the need to use regional approaches. New kinds of biosphere reserves, such as cluster

and transboundary reserves, have been devised and many biosphere reserves have evolved considerably, from a primary focus on conservation to a greater integration of conservation and development, through increasing co-operation among stakeholders. New international networks, fuelled by technological advances, including more powerful computers and Internet, have greatly facilitated communication and co-operation between biosphere reserves in different countries.

In this context, the Executive Board of UNESCO decided, in 1991, to establish an Advisory Committee for Biosphere Reserves. This Advisory Committee considered that it was time to evaluate the effectiveness of the 1984 Action Plan, to analyse its implementation and to develop a strategy for biosphere reserves as we move into the 21st Century.

To this end, and in accordance with Resolution 27/C/2.3 of the General Conference, UNESCO organised, at the invitation of the Spanish authorities, the International Conference on Biosphere Reserves, held in Seville (Spain), from 20 to 25 March 1995. This Conference was attended by some 400 experts, from 102 countries, and 15 international and regional organisations. The Conference was organised to enable an evaluation of the experience in implementing the 1984 Action Plan, a reflection on the role for biosphere reserves in the context of the 21st century (which gave rise to the vision statement) and the elaboration of a draft Statutory Framework for the World Network. The Conference drew up the Seville Strategy, which is presented below. The International Co-ordinating Council of the Man and the Biosphere (MAB) Programme, meeting for its 13th session (12-16 June 1995), gave its strong support to the Seville Strategy.

2.3 Organisation and implementation of the MAB programme

The body responsible for organising the MAB programme is the International Co-ordinating Council (ICC) consisting of representatives of 30 elected member states of UNESCO. It

is elected every four years at UNESCO General Conferences, meets every two years and has its own secretariat - the MAB Secretariat - at UNESCO House in Paris. Between the meetings of the Co-ordinating Council, the MAB Bureau as the executive board of the ICC is responsible for implementing and organising the MAR programme. This Bureau consists of one representative from each of the UNESCO regions - Africa, Arabia, Asia/Australia, Eastern Europe, Western Europe (with North America) as well as South America - and meets twice a year.

The Programme's backbone at national level are the national committees nominated by the respective governments. In co-operation with the MAB Secretariat, they give shape to the international programme and the national priorities and plan and advise on research projects. The widespread international response given to the MAB programme is reflected inter alia in the establishment of more than 120 national committees in UNESCO member states.

2.4 The biosphere reserve concept

Biosphere reserves are "areas of terrestrial and coastal/marine ecosystems, or a combination thereof, which are internationally recognised within the framework of UNESCO's Programme on Man and the Biosphere (MAB)" (Statutory Framework of the World Network of Biosphere Reserves). Reserves are nominated by national governments; each reserve must meet a minimal set of criteria and adhere to a minimal set of conditions before being admitted to the Network. Each biosphere reserve is intended to fulfil three complementary functions: a conservation function, to preserve genetic resources, species, ecosystems and landscapes; a development function, to foster sustainable economic and human development, and a logistic support function, to support demonstration projects, environmental education and training, and research and monitoring related to local, national and global issues of conservation and sustainable development.

Physically, each biosphere reserve should contain three elements: one or more core areas, which are securely protected sites for conserving biological diversity, monitoring minimally disturbed ecosystems, and undertaking non-destructive research and other low-impact uses (such as education); a clearly identified buffer zone, which usually surrounds or adjoins the core areas and is used for co-operative activities compatible with sound ecological practices, including environmental education, recreation, ecotourism, and applied and basic research; and a flexible transition area, or area of co-operation, which may contain a variety of agricultural activities, settlements and other uses, and in which local communities, management agencies, scientists, non-governmental organisations (NGO), cultural groups, economic interests and other stakeholders work together to manage and sustainably develop the area's resources. Although originally envisioned as a series of concentric rings, the three zones have been implemented in many different ways in order to meet local needs and conditions. In fact, one of the greatest strengths of the biosphere reserve concept has been the flexibility and creativity with which it has been carried out in various situations.

Some countries have enacted legislation specifically to establish biosphere reserves. In many others, the core areas and buffer zones are designated (in whole or in part) as protected areas under national law. A large number of biosphere reserves simultaneously belong to other national systems of protected areas (such as national parks or nature reserves) and/or other international networks (such as World Heritage or Ramsar sites).

Ownership arrangements may vary too. The core areas of biosphere reserves are mostly public land but can also be privately owned, or belong to non-governmental organisations. In many cases, the buffer zone is in private or community ownership and this is generally the case for the transition area. The Seville Strategy for Biosphere Reserves reflects this wide range of circumstances.

2.4.1 Functions

Biosphere reserves are devised as model areas whose purpose, apart from the protection and maintenance of specific ecosystems, is to develop sustainable land-use practices jointly with the people living and working in them. Natural and near-natural ecosystems in the conservation and maintenance zones are surrounded by areas used for the development of sustainable land-use practices, which support the long-term conservation of the ecosystems and resources of the cultural landscape. In this connection, the term "biosphere reserve" stands for a representative landscape whose gradient of use may range from the undisturbed conservation area to the intensively yet sustainably used development area. Of particular importance in this connection is the conservation of the natural balance, i.e. the protection of resources such as land, water and air and the communities performing these protective functions within the balance of nature. The conservation of the balance of nature, of the appearance of the landscape and its genetic resources as well as the development of sustainable patterns of use are closely interlinked.(internet).

The development of sustainable forms of land use (including inland waters and coastal zones) is a major task of biosphere reserves. It emanates directly from the main objective of the MAB programme, i.e. conservation and sustainable use of natural resources. A basic prerequisite for the long-term conservation of cultural landscapes is that uses are compatible with the conservation of the natural basis of life. This is why people and their activities are not excluded from the biosphere reserve; instead, they are encouraged to participate in its management.(internet).

Another important function of biosphere reserves is to conserve those forms of land use which gave rise to the diversity of the cultural landscape in the first place and to develop them in a manner that is sustainable. These use practices often reflect centuries of human experience in dealing with nature and the environment and can provide valuable

information for the ecological and economic assessment of land uses. Uses are not static but may vary according to the underlying regional, national and global economic situation.

The actual development goals depend on the situation and the characteristic features of the biosphere reserve in question and its population. To ensure compatibility of conservation and user interests, the local population, users, administrators and decision-makers in the public field have to co-operate closely in the management of the biosphere reserve. The aim is to apply sustainable land-use concepts, which may serve as models for transfer to areas outside the biosphere reserves.

2.4.2 Zonation

In view of their divergent objectives and tasks, biosphere reserves are divided into different zones. These zones are vested with different responsibilities depending on the level of human activity: core area, buffer zone and flexible transition area. This zoning does not imply any order of rank; each of the zones has to fulfil its specific function, which is reflected in its name. The surface area of the individual reserve zones may vary considerably because of the specific conditions prevailing in the cultural landscape.(internet).

Definition of "core area"

Every biosphere reserve contains a core area where nature can, as far as possible, develop without disturbance by man. The aim is to ban all human activities from the core area. The core area must be large enough for ecosystem processes to unfold their dynamics. It may consist of several sub-areas. The conservation of natural and near-natural ecosystems has absolute priority. Research and integrated monitoring activities must be carried out in such a way that they do not affect the ecosystems. Core areas must be legally protected as national parks or nature reserves.(internet).

Definition of "buffer zone"

The buffer zone serves to conserve and maintain ecosystems created or influenced by human activities. It should guard the core area against disturbance. The aim is, in particular, to conserve cultural landscapes comprising a wide variety of habitats for a large number of characteristic - including endangered - animal and plant species. This is to be achieved above all by landscape management measures. Recreation and environmental education programmes have to be tailored to the conservation purpose. The buffer zone is used to investigate structure and functions of ecosystems and nature's balance and to carry out integrated monitoring activities. Buffer zones should be legally protected as national parks or nature reserves. Where this has not yet been achieved, an appropriate legal protection is to be sought. The protective status of areas already designated as protected areas must not be impaired.(internet).

Definition of "flexible transition area"

The flexible transition area serves as a living, economic and recreational area for the population. Its aim is to develop site-appropriate economic practices, which satisfy the needs of both man and nature. Socially tolerable production and marketing of goods produced in an environmentally compatible manner contribute to sustainable development. The landscape of the flexible transition area is characterised by particularly sustainable patterns of use. This is the area, which offers opportunities for the development of environmentally and socially tolerable tourism. The flexible transition zone is primarily used for research into the relationship between man and his environment. Investigations of the structure and function of ecosystems and of the balance of nature as well as integrated monitoring and environmental education activities also take place in the flexible transition area. Seriously degraded zones may be included in the flexible transition area as regeneration areas. The focus of action in these areas lies on the repair of landscape

damage. Zones worthy of protection within the development area are to be placed under legal protection by being designated as protected areas and, in addition, by applying the instruments of urban development planning and landscape planning. (internet).

2.5 Biosphere reserves in Africa

2.5.1 Biosphere Reserves for Biodiversity Conservation and Sustainable Development in Anglophone Africa (BRAAF)

The network of African Biosphere Reserves (BRAAF-Project) Environmental conservation, research on human-environment interactions and exploring ways of promoting sustainable development are the objectives of the African network "BRAAF". BRAAF is the short form for the UNESCO project "Biosphere Reserves for Biodiversity Conservation and Sustainable Development in Anglophone Africa". Through the project, five African countries can share information on biodiversity inventorying, environmental management and research, and the generation of income for people living in or around biosphere reserves based on the concept of sustainable development. At each site, one or several initiatives are supported which demonstrate that environmental conservation can also provide an income for people.

The network was launched at its first meeting in Kenya in 1995 at the occasion of a UNESCO/UNEP workshop on "Ethnobotany, medicinal plants and wild food crops". The second BRAAF meeting took place at the Queen Elizabeth Biosphere Reserve in Uganda in February 1996 and was coupled with a scientific seminar on the topic "Utilisation of Wetland Resources". In March 1997, Ghana hosted the third BRAAF meeting around a seminar on "Biodiversity conservation: modern concepts and traditional knowledge". The fourth BRAAF seminar was held in Arusha, Tanzania, in early April 1998 and focused on the topic "Land use planning and management for biodiversity conservation

and sustainable development". A record number of over 70 participants took part in this meeting which included observer delegations from MAB-South Africa, MAB-USA and the World Conservation Monitoring Centre (WCMC). During each seminar and meeting, field trips are carried out to the respective biosphere reserve so that African MAB scientists and biosphere reserve manager can get first hand information of the specific problems and challenges of each site.

To date, the following are members of BRAAF: The Bia Biosphere Reserve in Ghana, the Amboseli Biosphere Reserve in Kenya, the Omo Biosphere Reserve in Nigeria, the Lake Manyara Biosphere Reserve in Tanzania and the Queen Elizabeth Biosphere Reserve in Uganda.

The following is a list of participating reserves which are registered in terms of the MAB programme as discussed above:

The Dimonika Reserve in Congo, the Luki reserve in the Democratic Republic of Congo (Zaire), the Tan reserve in Cote d'Ivoire, the Monts Nimba reserve in Guinea, the Mananara and Ankarafantsika reserves in Madagascar and the Koba reserve in Senegal. (webmaster@conservation.org.)

2.6 Seville strategy for biosphere reserves

2.6.1 The vision from Seville for the 21st century

What future does the world face as we move towards the 21st century? Current trends in population growth and distribution, increasing demands for energy and natural resources, globalisation of the economy and the effects of trade patterns on rural areas, the erosion of cultural distinctiveness, centralisation and difficulty of access to relevant information,

and uneven spread of technological innovations - all these paint a sobering picture of environment and development prospects in the near future.

The UNCED process laid out the alternative of working towards sustainable development, incorporating care of the environment and greater social equity, including respect for rural communities and their accumulated wisdom. Agenda 21, the Conventions on Biological Diversity, Climate Change and Desertification, and other multi-lateral agreements, show the way forward at the international level.(internet)

But the global community also needs working examples that encapsulate the ideas of UNCED for promoting both conservation and sustainable development. These examples can only work if they express all the social, cultural, spiritual and economic needs of society and are also based on sound science.

Biosphere reserves offer such models. Rather than forming islands in a world increasingly affected by severe human impacts, they can become theatres for reconciling people and nature; they can bring knowledge of the past to the needs of the future; and they can demonstrate how to overcome the problems of the sectoral nature of our institutions. In short, biosphere reserves are much more than just protected areas.

Thus, biosphere reserves are poised to take on a new role. Not only will they be a means for the people who live and work within and around them to attain a balanced relationship with the natural world, they will also contribute to the needs of society, as a whole, by showing a way to a more sustainable future. This is at the heart of our vision for biosphere reserves in the 21st century.

The International Conference on Biosphere Reserves, organised by UNESCO, in Seville (Spain), from 20-25 March 1995, adopted a two-pronged approach:

- * To examine past experience in implementing the innovative concept of the biosphere reserve;
- * To look to the future to identify what emphases should now be given to their three functions of conservation, development and logistical support.(internet).

The Seville Conference concluded that, in spite of the problems and limitations encountered with the establishment of biosphere reserves, the programme, as a whole, had been innovative and had had much success. In particular, the three basic functions would be as valid as ever in the coming years. In the implementation of these functions and in the light of the analysis undertaken, the following ten key directions were identified by the Conference and are the foundations of the new Seville Strategy.

1. Strengthen the contribution that biosphere reserves make to the implementation of international agreements promoting conservation and sustainable development, especially to the Convention on Biological Diversity and other agreements, such as those on climate change, desertification and forests.
2. Develop biosphere reserves that include a wide variety of environmental, biological, economic and cultural situations, going from largely undisturbed regions and spreading towards cities. There is a particular potential and need to apply the biosphere reserve concept in the coastal and marine environment.
3. Strengthen the emerging regional, inter-regional and thematic networks of biosphere reserves as components within the World Network of Biosphere Reserves.
4. Reinforce scientific research, monitoring, training and education in biosphere reserves, since conservation and the rational use of resources in these areas require a sound base in the natural and social sciences, as well as the humanities. This need is particularly acute in countries where biosphere reserves lack human and financial resources, and should receive priority attention.

5. Ensure that all zones of biosphere reserves contribute appropriately to conservation, sustainable development and scientific understanding.
6. Extend the transition area to embrace large areas suitable for approaches, such as ecosystem management, and use biosphere reserves to explore and demonstrate approaches to sustainable development at the regional scale. For this, more attention should be given to the transition area.
7. Reflect more fully the human dimensions of biosphere reserves. Connections should be made between cultural and biological diversity. Traditional knowledge and genetic resources should be conserved, and their role in sustainable development should be recognised and encouraged.
8. Promote the management of each biosphere reserve essentially as a "pact" between the local community and society, as a whole. Management should be open, evolving and adaptive. Such an approach will help ensure that biosphere reserves - and their local communities - are better placed to respond to external political, economic and social pressures.
9. Bring together all interested groups and sectors in a partnership approach to biosphere reserves, both at site and network levels. Information should flow freely among all concerned.
10. Invest in the future. Biosphere reserves should be used to further our understanding of humanity's relationship with the natural world, through programmes of public awareness, information, formal and informal education, based on a long-term, inter-generational perspective. (internet)

In sum, biosphere reserves should preserve and generate natural and cultural values, through management that is scientifically correct, culturally creative and operationally sustainable. The World Network of Biosphere Reserves, as implemented through the Seville Strategy, is thus an integrating tool, which can help to create greater solidarity among peoples and nations of the world.

2.6.2 The Strategy

The Strategy, attached as Appendix A, provides recommendations for developing effective biosphere reserves and for setting out the conditions for the appropriate functioning of the World Network of Biosphere Reserves. It does not repeat the general principles of the Convention on Biological Diversity, nor Agenda 21, but instead identifies the specific role of biosphere reserves in developing a new vision of the relationship between conservation and development. Thus, the document is deliberately focused on a few priorities.

The Strategy suggests the level (international, national, individual biosphere reserve) at which each recommendation will be most effective. However, given the large variety of different national and local management situations, these recommended levels of actions should be seen merely as guidelines and adapted to fit the situation at hand. Note especially that the "national" level should be interpreted to include other governmental levels higher than the individual reserve (e.g., provincial, state, county, etc.). In some countries, national or local NGOs may also be appropriate substitutes for this level. Similarly, the "international" level often includes regional and inter-regional activities.

The Strategy also includes recommended Implementation Indicators, i.e. a check-list of actions that will enable all involved to follow and evaluate the implementation of the Strategy. Criteria used in developing the Indicators were: availability (Can the information be gathered relatively easily?), simplicity (Are the data unambiguous?), and usefulness (Will the information be useful to reserve managers, National Committees, and/or the network at large?). One role of the Implementation Indicators is to assemble a database of successful implementation mechanisms and to exchange this information among all members of the network.

The Goals and objectives of the biosphere reserve strategy are summarised below:

Goal 1: Use biosphere reserves to conserve natural and cultural diversity

Objective 1.1: Improve the coverage of natural and cultural biodiversity by means of the World Network of Biosphere Reserves.

Objective 1.2: Integrate biosphere reserves into conservation planning

Goal 2: Utilise biosphere reserves as models of land management and of approaches to sustainable development

Objective 2.1: Secure the support and involvement of local people

Objective 2.2: Ensure better harmonisation and interaction among the different biosphere reserve zones

Objective 2.3: Integrate biosphere reserves into regional planning

Goal 3: Use biosphere reserves for research, monitoring, education, and training

Objective 3.1: Improve knowledge of the interactions between humans and the biosphere

Objective 3.2: Improve monitoring activities

Objective 3.3: Improve education, public awareness and involvement

Objective 3.4: Improve training for specialists and managers

Goal 4: Implement the biosphere reserve concept

Objective 4.1: Integrate the functions of biosphere reserves

Objective 4.2: Strengthen the World Biosphere Reserve Network

2.7 Policy

To date no biosphere reserve has been registered in South Africa.

Special Case Area(SCA)

Planning in KwaZulu-Natal has undergone substantial change since the establishment of a new democratic government in 1994. Changes in legislation which affect the implementation of planning and development in the Province are still underway. These changes are attempting to replace the wide range of legislation which affected development in the past, and which are still being used to varying degrees in the present, with one overarching piece of legislation, the Planning and Development Act, 1998, No 5 of 1998.

Section 31 of the Act provides for the Minister to prescribe areas or features as special case areas or features, and in relation to such areas or features may prescribe:

- * activities which will have a detrimental effect on the environment, in those areas or features;
- * any special procedures which will have to be followed either in place of or in addition to existing procedures for the development or activities;
- * which authorities shall be responsible for granting approval for such developments or activities;
- * such advisory or management bodies considered necessary to ensure the conservation, protection or preservation of the area or feature concerned; and
- * the powers and functions of any management body established and the procedures to be adopted. (PDA, 1998).

The option to declare an area a Special Case Area has been legislated in the new Planning Act. The main criteria being that an area should be unique i.e. environmental sensitive, historical attributes etc. If it meets the requirements as defined by the Act an area can then be declare a SCA. The SCAP for the Natal Drakensberg area is the first of its kind to be submitted for approval as an SCA. A study for the area is currently being undertaken by consultants. What is of interest it is anticipated that the SCA will be given use zones areas i.e. buffer area, wilderness area, recreational area etc. similar to that as utilised within Biosphere Reserves.

It is quite possible that a biosphere reserve could be declared a SCA. This would of course be based on the merit that the reserve is indeed a unique area and worth declaring a SCA. However before such an application could be considered the institutional framework of the biosphere reserve will need to be sound. As of to date this has not been achieved due to the lack of collaboration between the role players. Until there is a shared vision amongst the role players issues such as the consideration of the biosphere as a SCA, the need to develop tourism as a sustainable venture will be impossible to achieve. The implication is continued impoverishment for rural communities and the opportunities to develop the biosphere effectively is lost.

2.8 Conclusion

Biosphere reserves are representative parts of natural and cultural landscapes extending over large areas most of which have been placed under legislative protection. The aim is to formulate model concepts for protection, maintenance and development (in the sense of "sustainable development") for implementation by the people living and working in these areas. While in natural landscapes uses are largely excluded, their compatibility with the conservation of the natural basis of life is a decisive factor for the lasting conservation of cultural landscapes. This is why patterns of use are needed that are both economically

viable and sustainable. In view of this fact, people are encouraged to participate in the management and ecologically oriented regional development of the biosphere reserve.

The question of use plays a key role in the protection, maintenance and development of South African biosphere reserves. The conservation objectives and the success of the biosphere reserve concept are seriously threatened unless it is possible to preserve and further develop those types of uses that are vital for the species and ecosystems typical of the respective natural area. Therefore, the aim of the biosphere reserves in South Africa, apart from the conservation of the remaining natural and near-natural landscapes, must be conservation and development of sustainable land-use practices. Of particular importance in this connection is the protection of the balance of nature, i.e. the conservation of abiotic resources such as land, water and air and the communities performing this protective functions within the balance of nature. The conservation of the balance of nature and the development of sustainable patterns of use are closely interlinked. This is the only way to safeguard the basis of life, economic activity and recreation of the population living within the biosphere reserve on a long-term basis while ensuring that the reserve can perform its model function.

CHAPTER 3

THE CONCEPTS OF SUSTAINABLE DEVELOPMENT, SUSTAINABLE TOURISM AND COLLABORATIVE PLANNING

3.1 Introduction

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 recognised 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 reserve 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 sustainable tourism 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).

An important rationale for this study, is the need for sustaining the natural and cultural resources of the earth or, and the biosphere concept is an important instrument in achieving this goal. The concepts of "sustainable development", "sustainable tourism" and "collaborative planning" are thus important underlying principles in this study. The

common themes that are prescribed by the biosphere concept are also implicit in the aforementioned concepts. To gain a clearer understanding the following section deals more fully with the contentions surrounding the meanings of these terms.

3.2 Sustainable Development

For the purposes of this study, 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 (Red cliff 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 co-operative management practices.

The need to redistribute resources more equitably in the country is constantly emphasised by the present government (ANC, 1994). Proposals for restructuring social and economic patterns in South Africa, which ignore social concerns, however, are very short sighted. There is therefore a need to look for models, which propose both a more sustainable land use option as well as opportunities for the economic improvement of poor rural dwellers. The Tugela Biosphere Reserve (TBR) promises to provide just such a land use option. Assessments of what is sustainable and what is not are inevitably socially constructions. Among the critical issues, therefore, that need to be explored in the context of this study are:

- * Where does the balance of responsibility and power lie in managing the local environment ?
- * What are the attitudes of the rural poor toward 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 collaboration by ordinary people in the decisions that affect their 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, 1991). 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.

There have been numerous attempts at defining the concept of sustainable development (see for example, 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 whose benefit and at whose cost, over what area, and measurement by what criteria. Answering these questions is difficult, as it means assessing and trading off beliefs and priorities (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 carry them out (Waldrop, 1992). Thus, it becomes impossible to provide a perfect "scientific" model for sustainable development - we have to let them run to see if they are successful. Similarly, arguments for new sustainable tourism initiatives can only really be thoroughly tested once they have been implemented. Experimental knowledge is thus key to our understanding of the possibilities for sustainable development. 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 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 sustainable 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 model, which emphasises close co-operation between local communities and the protected area. With the understanding of what sustainable development entails it is now necessary to draw the link to sustainable tourism.

3.3 Sustainable Tourism Development

Sustainable tourism involves the managing of resources in such a way that we can fulfil economic, social and aesthetic needs while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems (Murphy, 1994). Sustainability in reserve regions that support local populations is a complex issue, which should be based on a management approach that integrates ecological, economic, social and cultural parameters and that balances the needs and objectives of both residences and visitors alike.

The concept of sustainable tourism development has ostensibly caught the attention of both government and industry. Yet, what this means in practice is not always clear. Common phrasing and terminology such as 'appropriate', 'responsible', and 'alternative' have been used interchangeably to describe this new industry paradigm. To some sustainable tourism development is all about new 'green' products or 'ecofriendly' tourists; to others its is a guiding principle to which all tourism should aspire.

Tourism planning has evolved through a number of stages during the latter half of the twentieth century, more or less in response to the global increase in visitor numbers. Originally, facilitating travel was the primary concern, often focussing on tourism promotion. Subsequently, policies broadened to include spatial planning, but the emphasis remained on maximising economic development (Getz, 1986). While government and industry continued their active support of tourism development, they did so in relative isolation, virtually excluding any cost recognition. Little attention was paid to the more qualitative and less tangible socio-economic and environmental impacts.

Recently, this singular emphasis on economics has come under close scrutiny. With increasing evidence highlighting tourism's adverse effects. The awakening of a global environmental conscience, spurred on by pollution and the loss of pristine resources, has

begun to change the once conventional wisdom. Ever since the World Commission on Environment and Development (WCED, 1987), 'sustainability' has become the order of the day, and many now argue that without a significant change towards a more sustainable approach to development, severe damage to cultural and natural resources will accelerate. If this is allowed to continue, the very resources upon which tourism is based will be lost.

Yet while tourism may have entered into a new phase of sensibility, with many tolerant in principle or even actively supportive of the concept, this has generally been without a full understanding of its meaning or its implications for planning and development (Butler, 1989).

As mentioned above, the WECD described sustainable development simply as paths of human progress that satisfy the needs and aspirations of present generations without compromising the ability of future generations to meet their needs (WECD, 1987). The concept challenges the conventional wisdom behind economic growth and seeks to shift the debate away from 'development versus conservation' to 'development in harmony with the environment'. It puts emphasis on meeting the basic needs of society's poorer members, cultural sensitivity, and 'grassroots' participation in the development process, and it also looks to a general improvement in the quality of life of all people (Barbier, 1987). Nonetheless, what this means in practice is not always apparent and, given that one is attempting to describe environmental, economic, social and political features of an ongoing development process, obvious problems emerge.

Sustainability is essentially about resource management. It recognises that if the earth's resources are used, this will inevitably bring about some form of change, with the objective being to manage this change within acceptable limits. However, how this will actually be achieved remains the subject of much discussion and what may have appeared simple at first becomes more complex and controversial upon closer inspection. Despite this problem, sustainability has achieved buzzword status in virtually all areas of discussion

concerning economic activity and the environment. The tourism industry has not been immune to this trend and while the WCED report does not actually mention tourism, this concept has seemingly been endorsed as the new ideal to arrest the industries damaging effects.

The idea of sustainable tourism development has achieved virtual global endorsement as the new industry paradigm since the late 1980s. However, this has been achieved at the expense of almost becoming a platitude. Ironically, it is this aspect of universal acceptance that casts doubts on the validity of the concept, representing both its strength and weakness as the new environmental ethos. As a strength, sustainability has become a general issue and represents a catalyst for change, but as a weakness, it is used by both governments and industry to justify or legitimise current activities and policies (Godfrey, 1996).

Much of the confusion surrounding sustainable tourism is based primarily on the preoccupation of some to avoid the mass tourism label which functions in the context as a repulsive point of reference (Cazes, 1989). In trying to be different, common phrasing and synonyms such as "soft post-industrial", "alternative", "responsible", "appropriate", "green", "rural", "low impact", "eco- and nature based" have all been applied (Godfrey, 1996). To some, sustainable tourism is all about new products or market segments. To others it is a process of development, while to still others it represents a guiding principle to which all tourism should aspire.

Thus, like the general concept of sustainable development, what is really meant by sustainable tourism development is also the subject of some discussion. While there exists a number of definitions, the key objectives and rationale underpinning these many different terms have been similar and generally can be placed within one of two broad schools of thought (Godfrey, 1995). One school tends to support sustainability as representing an alternative to, or replacement of, conventional mass tourism with new

green products (the product approach). The other argues that mass tourism is inevitable due to sheer tourist demand, and what is needed is a way to make all tourism more sustainable (the industry approach).

Much of what has transpired in the literature exemplifies the product approach, resulting in an examination of either/or choices. Frequent reference is made to issues concerning concentration versus dispersion of development, the scale of development, degree of control and ownership, rate of development, types of tourists and the type of interaction taking place within the destination area.

Alternatively, the industry approach suggests that, while there is nothing intrinsically wrong with the development of new small scale 'green' products, this alone fails to address a number of inherent aspects of tourism such as diversity, scale, and ownership, none of which operates in isolation (Godfrey, 1995). Instead it is suggested that while there are many positive qualities associated with the product approach that are endorsed by the industry wide view, this somewhat shallow comparison between green products as good and different from traditional or conventional leisure is naive and misleading (Butler, 1989). Butler argues that the real value of this softer outlook does not lie in replacing mass tourism, which it could not in any case, but rather in helping to reform the tourist establishment and mass tourism from within.

Key points of the industry approach suggest planning for sustainable tourism requires development to take place within the context of all local socio-economic development and be considered as an element of land use planning alongside other development options. Its long term goal is to enable a comprehensive development process where products draw from and add to the quality of local resources based on a sound understanding of market demand motivations. It should also communicate with and involve the local population in planning and management decisions, while offering a fair distribution of the benefits and costs among tourism business, promoters and the host community.

These principles, however, are not necessarily new and have been promoted since the early 1980s. As Taylor (1991) suggests, despite this new thinking, little has actually been done to come to grips with the problems and develop practical and acceptable solutions. The fundamental problem has been the lack of ability or willingness to undertake both qualitative and structural changes in the way tourism is planned and managed overall.

While precise definition may remain somewhat elusive between these two broad views, the general concept suggest that sustainable tourism development is essentially an issue of tourism asset management, where development activity guarantees the integrity of the resource on which the industry is based, while maintaining economic viability (Godfrey, 1995). Both demand and supply components of tourism are balanced within a framework of maintaining social and environmental objectives (Inskip, 1991). Therefore, planning for sustainable tourism development is not an end in itself, but rather one of several tools of national and local resource management. In a broader context, this suggests that tourism planning should be undertaken with the understanding that it is not a unique or isolated procedure, but an interdependent function of a wider and permanent socio-economic development process.

According to Hunter and Green(1996) sustainable tourism recognises the interdependency between economic investment in the tourism projects, programmes and policies and the successful management of the human, built and natural resource base. Sustainable tourism must seek to enhance the quality of life and the quality of the tourist experience, at destination areas through the promotion of economic developments which conserve local natural, built and cultural resources.

Lane(1991) defines sustainable tourism as providing: satisfying jobs without dominating the local economy. It must not abuse the natural environment, and should be architecturally respectable.... The benefits of tourism should be diffused through many

communities... (Lane 1991:2).

Middleton(1998) who has a managerial view defines sustainable tourism as being: Sustainable tourism that meets the needs of present visitors, tourism business and host destinations while protecting and where possible enhancing opportunities for the future. It is envisaged as leading to the management of resources in such a way that social, economic, and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity, and life support systems. (Middleton 1998:247).

Hunter and Green (1996) suggest that in Developing Countries it is in the long term best interests of local communities, people involved in the tourism industry and decision makers to agree on principles, policies and management tools that allow the development of tourism as an engine of economic growth and the conservation of environmental resources. The aim of sustainable tourism is therefore to strike a balance between the above two issues. It is about conserving, maintaining and enhancing environmental resources, the quality of life of the local community and the quality of the tourist experience.

Cronin(1990) defines the challenge of sustainable tourism: "to develop tourism capacity and the quality of its products without adversely affecting the quality of the physical and human environment that sustains and nurtures them"(Cronin 1990:13).

In order that tourism conforms to the principles of sustainable tourism, Cronin (1990) suggests that development:

- * follow ethical principles that respect the culture and the environment of the destination area, the economy and the traditional way of life, the indigenous behaviour, and the leadership and political patterns;
- * involve the local population, proceed only with their approval and provide for a

degree of local control;

- * be undertaken with (intra-generational) equity in mind, i.e. with the idea of access to a fair distribution of benefits and costs among tourist promoters and host peoples and areas, not only now but in the future;
- * be planned and managed with regard for the protection of the natural environment for future generations;
- * be planned in an integrated manner with other economic sectors; and,
- * be assessed on an ongoing basis to evaluate impacts and permit action to counter any negative effects.

Cronin (1990) emphasises the intra-generational factors of sustainable tourism. Sustainable tourism should recognise the contribution that local communities and cultures make to the experience of tourists and that local people should share in the benefits of tourism developments. For sustainable tourism to develop into reality, local people and governmental authorities must participate, and be allowed to participate, in the shaping of the local tourism industry. Local communities access to the benefits of tourism development is a critical step, especially in Developing Countries such as South Africa, as the concept of sustainable development recognises the need for economic growth in these areas to enhance the quality of life and to satisfy human aspirations.

Concern for the protection of natural resources, Cronin (1990) continues, could be taken to the point where innovation and appropriate tourism development is stifled, removing the opportunity for the poor to benefit from tourism development. A balance between the benefits for current generations and the protection of wealth-generating resources for future generations is at the centre of sustainable tourism.

Hawkins in Pearce (1996) identifies nineteen major issues, which are shaping global tourism policy. Of these, two have specific reference to sustainable tourism.

Firstly tourism must strive to develop as a socially responsible industry in a proactive manner rather than responding to pressures as they arise. Secondly, that community demands for active participation in development, management and planning cannot be ignored.

In *Tourism: A Community Approach*, Murphy (1985) argues for a framework in which to develop tourism's potential and its contribution to the well-being of the host communities. Top-down centralised tourism planning has led to rapid growth and development whilst sidelining the host communities. As a result, tourism development failed to live up to the expectations of the communities and resulted in negative attitudes. Tourism relies heavily on the goodwill and co-operation of the community involved as they are part of the product and attraction to an area. "Where development and planning does not fit in with local aspirations and capacities, resistance and hostility can raise the cost of business or destroy the industry's potential altogether" (Murphy 1985: 53).

Murphy (1998) continues to add that if tourism is to become sustainable it needs to be planned and managed as a resource industry based on local capacity and community decision making. More collaboration at the planning stage gives communities an interest in the industry and result in more responsive partnerships.

The concepts of sustainable tourism development and conservation are increasingly being linked to public participation and decentralised decision making. They have evolved as a result of an educated society's increased emphasis on preserving cultural and natural resources, particularly when development occurs near their place of residence.

Sustainable tourism development relates to the interdependency among tourism industry developers, community authorities, and environmentalists who work in tandem to ensure an improved quality of life for area residents and to maintain area resources for future generations (McIntyre, 1993). This approach emphasises that planning for sustainable

tourism development should be cross-sectional and integrated, involving government agencies, private corporations, citizen groups, and individuals affected by development.

Critical to sustainable tourism development is the involvement of local residents in the planning and implementation of new developments. Local residents must be provided with objective and comprehensive information, research and communication about the nature of development and its effect on the human and cultural environments (McIntyre, 1993). This information should be made available to local residents prior to and throughout the development process.

Local participation during the early stages of the planning process is critical to tourism development. Lankford (1994) indicates that to mitigate negative socio-cultural impacts, goals and strategies of tourism development must reflect to incorporate local residents' views to ensure consensus on development policies and programmes. Lankford further states that if residents' perceptions and preferences do not support tourism development policy and programmes, then programmes are likely to fail or be ineffective in their implementation.

With growing concern about the environmental and social impacts of tourism, planning has become more integrated (Gravel, 1979) and has matured to the point where it considers the impact of tourism development on a number of constituencies, not just an organisational or site specific economic sectors. Perhaps the most innovative consequence of this maturation of planning has been the call for the inclusion of the host communities in the planning process.

As the case study will show later, the inclusion of a wider range of stakeholders within the planning process has its costs in terms of potentially longer time horizons and an increased possibility of conflict and uncertainty. However, others have argued that this is not necessarily so that "... if the public and private groups are given the chance to

participate at an early stage there is sufficient consensus of opinion to permit broadly based planning objectives” (Murphy, 1985, p.172). Murphy stated further that as a result of the willingness of residents to participate and their ability to develop rational and practical options, confirms that tourism planning need not remain the realm of the expert alone. Given the chance, the public can provide a useful input into the decision making process.

The call for more inclusive planning is widespread in tourism planning circles and has even taken advantage of developments in computer-aided decision support technology. Other forms of decision making innovations, including brainstorming, focus groups, and Delphi surveys, are also used to bring issues of concern among affected constituencies to the forefront of debate about tourism development and facilitate the identification of acceptable solutions. Murphy (1985) summarised this movement to inclusion and its advantages by stating that public opinion and political power must be courted and won if the industry is to continue to rely on government support and community assets for its survival and success. By stressing the community and systems aspects of tourism it becomes apparent that this activity is now interwoven into the social, economic and environmental aspects of all communities, whether or not they are major destinations. Under these circumstances, sustainable tourism can be integrated into general planning procedures of all communities and become co-ordinated with facility developments in the physical and social fabric of destination areas.

What has followed from the above discussion on sustainable development and sustainable tourism is the need for co-operation between role players, a co-ordinated vision and consensus building to achieve a sustainable environment, which in this case, can be achieved through the biosphere. The concept, collaborative planning is part of the instrument, which can go a long way to rebalancing the fragmented nature of society and simultaneously creating the environment for sustainable tourism. This concept is to which we will now turn.

3.4 Collaborative Planning

There has seen a shift in understanding of planning from a rational, scientific, top-down perspective to one in which diversity of lifestyles and differences are celebrated. We live in pluralist societies which result in conflicts of group interests and thus difficult issues and agendas arise with respect to the coexistence in our shared local environments. (Healey 1992; 1997). The challenge to logical human reason strikes at the heart of modernity and rational thought, where the philosophy of postmodernism undermines the foundations of two hundred years of rational, scientific thought. However, postmodernism is not a meta narrative waiting to take over from modernist theory but rather it is a diverse multiplicity of critical deconstructive and oppositional voices. It can be seen as a dismantling exercise directed against the failures of modernity rather than a search for new ways of planning.

This is not to imply, however, that modernity has not been challenged. Notions of planning rationality have been reformulated and reasserted to take account of such challenges as the concept of genealogy, the methodology of archaeology, deconstructionism, postmodern-feminism, critical and structuration theory.

According to Healey (1997) concern about the environments in which we live and how to manage our coexistence in shared spaces has led to new ways of understanding in a global society. Her theory of collaborative planning develops an institutionalist approach to understanding urban and regional change drawing on developments in regional economics and sociology. The focus is on social relations of daily life and the interweaving of social and biospheric relations. The institutional approach emphasises the power relations in local environments and reveals the diversity of ways in which that power is expressed. It makes visible and explains the dimensions of that diversity and helps to reveal the way power relations enter the finegrain of practises, structuring the public policy

game and inhibiting the assertion of many stakeholders (Healey 1997).

Healey (1997) develops a communicative approach for the design of government systems and practices, focusing on building collaborative, consensus-building practices. Drawing on the work of the sociologist Anthony Giddens' structuration theory and the philosopher Jurgen Habermas' theory of communicative action, a way forward is offered in the shaping of government processes in a world of power sharing, and takes the ethical position that all stakeholders should have a voice. It offers a way of mobilising for change through collective efforts in transforming ways of thinking. It thus presents a way forward in realising the practical meaning of participatory democracy in pluralist societies (Healey 1997).

Communicative rationality offers a new form of planning through discussion and debate. Its openness, exteriorising quality and its internal capacity for criticism should ward off any potential to turn mutual understanding into a repressive regime (Healey 1993).

The key elements of communicative theory, according to Healey (1993;1997), are:

1. That all forms of knowledge are socially constructed, and that ways of knowing, such as that of technicians, scientists and experts are not as different from practical reasoning. Planning is an interactive and interpretative process and therefore formal techniques of analysis and design processes are but one form of discourse.
2. That the development and communication of knowledge and reasoning are of different forms. It is a process, which could be enriched by discussions of moral dilemmas and aesthetic experience using a range of presentation forms from poetry to prose and storytelling to scientific analysis. Communicative action should focus on achieving mutual understanding whilst being aware of that which may not be understood.

3. That there is a social context in which individuals form their ideas and beliefs. Therefore they do not arrive at these beliefs as individuals but learn about their views in social contexts and through interaction. Therefore intercommunication involves respect for different forms of knowing and implies recognising, valuing, listening to, and searching for translative possibilities.
4. People have diverse interests, lifestyle choices and expectations. As a result power relations have the potential to oppress and dominate through inadequate access to information, technology and material resources and through presumptuous assumptions and practises. Therefore planning involves deciding on who to consult as well as organising a platform for meaningful debate and input and as such needs to be critical about its' own processes.
5. "That public policies which are concerned with managing coexistence in shared spaces which seek to be efficient, effective and accountable to all those with a 'stake' in a place need to draw upon, and spread ownership of, the above range of knowledge and reasoning." (Healey 1997:29). Therefore the struggle of engaging incommunicative action is to grasp the diverse range of viewpoints and find ways of compromising between competing claims without devaluing them until they have been explored.
6. That this leads away from disparate competitive interest bargaining to a form of collaborative consensus building. Cultures can therefore be built through the developing and sharing of organising ideas, co-ordinating actions by different groups and the transformation of the ways of organising and knowing. Interaction is not simply bargaining around predefined interests but involves a process of mutual learning through mutually trying to understand. Therefore, diverse people from different cultural and social backgrounds are encouraged to recognise one another and negotiate their concerns.
7. A reflective and critical capacity should be encouraged in the process of debate

and communication using Habermas' criteria of comprehensibility, integrity, legitimacy and truth. Criticism should not be directed at discourses of communities but at the discourse surrounding the proposals and outcomes of the communicative action.

However, Healey states that the communicative approach to planning has paid little attention to the development of understanding of regional economic analysis, urban geography and urban sociology which also emphasises the social processes through which everyday life and economic activity are accomplished. Therefore an objective of collaborative planning theory is to bring these two bodies of thought together; which are both grounded in the social construction of meaning, thinking and acting; and therefore, overcome the persistent tendency in planning thought and practice to separate the understanding of urban and regional change from the processes of governance through which political communities can collectively address their common dilemmas about what is happening to their neighbourhoods. (Healey 1997:30)

Furthermore, emphasis should also be placed on the importance of the realisation that all collaborative planning takes place in systems of power relations which effect the successful outcome of communication based consensus building.

Pressure arises on land management and spatial planning practices due to the difficulties in societies in dealing with the problems generated by the coexistence in common spaces by people living disparate lifestyles, caring about different environmental qualities and conducting diverse forms of survival strategies. The challenge of managing coexistence in shared spaces requires the interlinking of social, environmental and economic dimensions.(Healey, 1997)

Changes in local environments have major consequence on everyday patterns of survival. They upset people's sense of well-being, identity and opportunity and therefore can be of a contentious nature. The result, where there are great differences in relational

interaction between people, may be the domination and exclusion of those who have fewer power bases. As a consequence, the practice of land use regulation is harnessed in the attempt by some groups of people to keep different 'others' out of their neighbourhoods, in the practice of 'exclusionary zoning' (Huxely, 1994) or locational conflict.

However, we still have to live in shared spaces and collaboration among neighbours can be helpful in fulfilling everyday survival strategies. This does not rely on a shared moral order or a return to the idea of place-based community, which could lead to immediate hostility, but rather that people are reworking the meaning of a place-based political community. The critical challenge to political communities is that they should rely on an awareness of diversity and differences whilst building up trust and understanding. This requires active discussion processes through which local knowledge can be used in public forums, where there is recognition of diverse viewpoints, respect for these views, and sufficient trust to move from discussion to action on these issues. (Healey 1997).

Other ways of moving beyond interest group conflicts are being explored drawing on principles of conflict mediation and consensus-building. These emphasise the potential for collaborative discussion of shared concerns about local environmental changes, through which people can come to learn about potential impacts and possible ways of valuing and addressing them (Innes, 1992; Innes, Gruber et al, 1994). Through such discursive practices, people learn about each other, about different points of view and come to reflect on their own point of view. In this way, a store of mutual understanding is built up, a sort of 'social and intellectual capital' (Innes, 1994), which can be drawn upon when dealing with subsequent issues. It also helps to build up, across the diversity of ways of living and ways of thinking, an institutional capacity to collaborate and to co-ordinate. It also serves to build 'institutional coherence' through which shared problems about the way urban region space is organised can be collectively addressed. The hope of the new ideas in planning theory is that, through such a process of 'learning how to collaborate',

a richer understanding and awareness of conflicts over local environments can develop, from which collective approaches to resolving conflicts may emerge. (Healy 1997).

Healey (1997) argues that the institutional approach is based on the conception that individual identities are socially constructed through social relations with other people in particular geographic and historical contexts. From this our attitudes and values are framed and influence our cultural perceptions. Therefore, the diversity and differences, which cause problems in local environments, are not just about individual differences but also involve differences in culture. "The problem which arises in working out how to manage our coexistence in shared spaces through working collaboratively is that this typically involves intersecting with multiple lifeworlds and multiple cultural communities" (Healey 1997:63).

The institutionalist approach argues that a way through collaborating across cultural differences is firstly to recognise where a cultural is coming from, and secondly, to actively build a shared understanding of meaning or a new cultural formation.

Furthermore, the institutionalist approach put forward by Healey (1997) recognises that social constructions are inter-linked with a web of powerful structuring forces that influence our social relations. Such forces can be employment ties, money markets, ethnicity, family status, class position etc. Collaborative planning is therefore grounded in the theory of such relation-building processes focusing attention on the networks, which shape our lives.

Local conflicts over space therefore do not just bring together individuals with different agendas and interests, but people in different cultural relations, with different ways of constructing meaning. Local conflict may not be just about specific issues, therefore, but organisational forms and ways of conducting discussions. Therefore any collaborative effort which is trying to reach an understanding across different cultural relations to

address matters of common environmental concern will require attention to the way in which the issues are discussed, who gets to participate in the discussions and lastly to the issue in question (Healey 1997).

However some voices always dominate the public arena which leads to cultural domination rather than cultural consensus building and inter-cultural communication. " Through choosing an inclusionary dialogical style, political communities in a location may be able to generate the practices of reciprocal respect through which we challenge the competitive babble into which many policy debates founder and build a relevant and stable consensus."(Healey 1997:67).

The relational encounters discussed have a role to play in the building of institutional capacity. The concept of institutional capacity refers to the quality of the collection of relational networks in an area. It has been developed in the regional economic literature to refer to the social relations, which make a difference to regional economic performance. The quality of institutional capacity matters in the objective of economic competitiveness, sustainable development or sustainable tourism development. The relational encounters over a shared local environmental issue reflect power relationships and therefore the potential exists to change the balance of power. In the discussion of ideas, new ways of organising and networks are established, systems of meanings may be changed and authority exercised in different ways.(Healey 1997).

The institutional approach to spatial and environmental planning place emphasis on how people changed their ways of doing things, their perceptions and therefore a changed frame of reference. The generation of intellectual and social capital is an important outcome of collaborative planning. What the outcomes of this process would be are difficult to identify but should allow for learning during policy development and implementation. Furthermore, collaborative planning facilitates and maintains new links appropriate to the history and circumstances of an area and reaches out to all

stakeholders. The inclusion of all stakeholders derives from a search to find an enduring, legitimate and stable process for addressing problems of coexisting in an area. Unless all stakeholders are included in the process, policy and practice will be continuously challenged and ignored leading to an unsustainable practice for managing collective concerns.

Healey focuses attention on the very real problems, which can arise within a communicative planning process, which is assumed that mutual understanding has been reached but in fact parties may well be operating within different "systems of meanings".

Drawing on the anthropological work of Geertz (1983) she argues that "we see things differently because words, phrases, expressions, objects, are interpreted differently according to our frame of reference" (1992:152). Her position on communicative action is that the diversity of interests in most planning issues must be recognised and accepted, as must the fact that "understanding each other" is unlikely to ever be fully achieved. But by maintaining, in the process of argumentation around planning issues, a reflexive and critical attitude to the process of discourse itself, she argues that it is possible to begin to move towards mutual understanding, and potentially to begin to challenge material conditions and establish power relations.

Healey anticipates a central criticism which may be levelled at her position and at the position of communicative action more generally: that her assumption that participants in such planning processes are both capable of, and desiring of, the achievement of consensus is naive, and ignores the fundamental conflict, inequity and domination which is part of our society. To this Healey has two replies. Firstly that there is no alternative: if we are to engage in planning our choice is to return to previous anti-democratic approaches or seek more open, transparent and democratic forms of collective action. Secondly, that certain recent planning initiatives have shown that we are capable of democratic "planning through debate" and that we ought to develop and extend these ideas.

Healey's most recent work (1997, 1998) shifts to an interest in the governance processes through which to manage conflicts around spatial and environmental issues. She rejects what she terms the neo-liberal approach of setting up performance criteria by which planning actions can be judged, because this approach is not able to reduce conflict and simply encourages people to follow rules rather than explore the real impact of planning projects. Instead, Healey draws on the "new institutionalism" developing in the social sciences, in order to "focus the institutional terrain of the communicative approach in planning theory" (1998:4).

Her argument is that processes of conflict mediation, consensus-building and stakeholder partnerships encourage mutual learning, and over time build up a store of social and intellectual capital which can be beneficially drawn on in future processes. She sees the 'institutional coherence' which this builds, in particular contexts, as similar to the idea of political 'regimes': this begins to build theoretical links between the 'agency' focus of communicative planning and the 'structural' focus of other theories of urban change rooted in broader social and economic forces.

Particularly useful about Healey's recent (1998) work, is the introduction of the analytical concepts of the institutionalist approach to planning theory. This approach focuses not only on the formal structures and procedures of public institutions, but more specifically on the way in which people actively and interactively construct their worlds, within the constraints of structural forces. Interaction manifests itself in relational webs or networks encompassing economic and social life and governance. Relational webs develop coherence within which people construct a sense of themselves, and nodes, which form a focus of these webs. Webs can intersect and overlap, as people operate in more than one network. From this perspective governance involves more than the formal institutions of government: it is complemented by the informal and less visible ways in which power and influence are mobilised.

Healey (1998) views spatial planning as a sphere of governance which cuts across relational webs, forming an arena which can bring together people who are spatially related, but are linked to networks which cut across space: as such it brings together people who operate in very different cultural communities and with different ways of valuing and acting. Spatial planning systems offer arenas in which conflicts or projects concerning space can be dealt with, but are challenged by the complexity of the intersecting webs which are brought together. It is here that Healey sees the usefulness of a Habermasian focus on the nature of communication, bringing an awareness of how distortions to truth and open debate can occur. From a normative perspective, Healey sees the challenge for inter-cultural (or inter-network) interaction to build up inter-cultural dialogue and a store of social learning around the issues of space and place.

Collaborative planning criticism

There has been little critique of collaborative planning in the 1990's. Tewdwr-Jones et al (1998) provides this opportunity to examine, firstly, the increased questioning of its theoretical foundations. Second, that practical problems have undermined any attempt to translate collaborative planning into realistic projects and have focussed on process rather than outcomes. Thirdly, that we perceive a growing dissatisfaction with the unfulfilled promises of communicative rationality as well as evidence (to back up our own perceptions) that those who pursue it as a theoretical exercise seek to speak on behalf of others that do not hold similar view. (Tewdwr-Jones et al. 1998:4).

Tewdwr-Jones (1998) are of the opinion that stakeholders within collaborative planning discourse may not all be striving for enhanced democracy for communities, especially when local and national concerns are raised on the same agenda. Stakeholders in the arena of debate will possess different aims, values and professional agendas.

Furthermore, the assumption that being involved in a democratic process will lead to greater involvement is also open to debate.

Collaborative planning assumes, according to Tewdwr-Jones (1998), that uncoerced consensus can be reached but how does one mediate when such consensus is not reached? The use of 'tribunals' represents a dominatory approach to politics, which goes against the grain of communicative rationality and furthermore shows a desire to mediate and unify disagreements. Reaching agreement through open debate is then dependant on the threat of imposition and is hardly uncoerced. Another factor is whether communicative rationality should aim for consensus ? The argument is that seeking consensus where it does not exist is against the principles of self expression and difference. There is a danger if not inevitably that seeking consensus will silence rather than give voice.(Tewdwr-Jones 1998:9).

Collaborative planning assumes that all sections of a community can be incorporated in the planning process, although little has been said on how all the stakeholders are identified, who identifies them and how this could be achieved. With the role of the expert being sidelined by the communicative process, who will facilitate the process, sort through the arguments expressed and where do the personnel opinions or judgements of the professional fit in.(Tewdwr-Jones 1998)

Collaborative planning recognises the distribution of power between stakeholders and suggests that by building up trust and confidence the balance of power will shift. However, this is an optimistic version of reality. Firstly, it does not take into account the power inherent within individuals who could intentionally employ tactics to bring about their own agendas. Secondly, groups contributing to the collaborative planning exercise will have common agendas and values in an attempt to ensure that their agendas succeed, even if they agree to open, honest debate. (e.g. environmental groups). Thirdly, individual stakeholders put forward a particular image of themselves in presenting their viewpoints,

to elicit an acceptable image or to present a false position to minimise the debate. (Tewdwr-Jones 1998).

Forester (1989) recognises this point by discussing the power elements of professional's everyday activities and their ability to use strategic action.

Communicative action is therefore inherently political and powerful since it is unable to control the individual thought processes of stakeholders or guarantee that all participants will act in an open and honest manner all the time. And so long as there is a possibility that individuals will not wish to build trust, understanding and new relations of power among participants, to generate a social intellectual and political capital which can endure beyond the particular collaborative effort (Innes, 1994), a truly successful communicative action process is infeasible since power and political action will remain dominant determinants. (Tewdwr-Jones et al 1998).

The view that individuals put forward their thoughts in an open, honest manner and are then persuaded to change their opinions through discourse fails to take account of the benefits of argumentation. If everybody is to agree what would be the purpose of expressing their opinions in the first place? Would not collaborative planning only benefit the majority and exclude minority groups: the very section collaborative planning is seeking to support? Furthermore, an evaluation of the outcome of discourse is not established by collaborative planning. If people as stakeholders are to be persuaded to openly and honestly voice their opinions, they will want to know how the decisions made will lead to policy outcomes and decisions. (Tewdwr-Jones 1998).

Collaborative planning assumes that in order that debate takes place honestly and openly individual stakeholders should possess equal knowledge about issues to be discussed and that they have the necessary skills for effective participation. Both suppositions have obvious inherent problems. Furthermore, collaborative planning theory assumes that

(communicative and political economy)" the power of explanation is increased.

Healey has tended to situate her work on the communicative theory side of the debate, but perhaps more than others within this position, has not lost sight of structure. Different from Lauria (and others), however, she argues for the use of a sociological and institutional perspective to make the connection between political economy and communicative theory. In particular she uses the work of Anthony Giddens (1984) on structuration and the relation between political economy and phenomenology (Healey, 1997)

The process of communication, which takes place in planning, cannot be separated from the substance of that communication. Communicative planners have tended to focus on the discursive output of planners (arguments, documents etc) and the experiences of individual planners in their work environments, with the aim of fostering more democratic decision-making processes. The assumption is, often, if the process has been democratic then the outcomes are of lesser importance (Healey, 1998). Fischler (1998) argues that the kind of theory, which they produce, has primarily pedagogical usefulness: planners will be more effective if they understand the pitfalls and obstacles, which have beset, and perhaps been overcome by other planners. But in terms of understanding planning as a socially produced activity this focus is inadequate. The very existence of planning as a professional activity is justified by its concern with substance: producing better urban environments, protecting the environment and so on, and the way in which these goals are promoted (or contested) cannot be divorced from the goals themselves.

3.5 Conclusion

The biosphere concept is based on the principles of working towards sustainable development, incorporating care of the environment and greater social equity, including respect for rural communities and their accumulated wisdom. These principles go a long

way towards the concept of collaborative planning. Both argue for the need to involve local communities not only to participate in the future of their environment but that indigenous populations must have a voice in their future. Both concepts recognise that without the collaboration of all key role players, the achievement of a sustainable environment (in this case sustainable tourism) will not materialise.

The biosphere concept focuses on certain key directions, which encompass the vision of the above concepts. The promoting conservation and sustainable development that include a wide variety of environmental, biological, economic and cultural situations. A sound base in the humanities particularly acute in countries where biosphere reserves lack human and financial resources. The reflection of a more fully human dimension. Connections should be made between cultural and biological diversity. Traditional knowledge and genetic resources should be conserved, and their role in sustainable development should be recognised and encouraged. The promotion of the management, essentially as a "pact" between the local community and society, as a whole. Management should be open, evolving and adaptive. Such an approach will help ensure that biosphere reserves - and their local communities - are better placed to respond to external political, economic and social pressures. The bringing together of all interested groups and sectors in a partnership approach to biosphere reserves, both at site and network levels. Information should flow freely among all concerned.

In sum, the biosphere is there to preserve and generate natural and cultural values, through management that is scientifically correct, culturally creative and operationally sustainable. The underlying role of the biosphere, as mentioned above, brings the concepts of sustainable development, sustainable tourism and collaborative planning into perspective when applying them in practice.

Having provided a clearer understanding on the concepts of sustainable development, sustainable tourism and collaborative planning and their linkage to the biosphere concept

the next chapter will deal more closely with the case study of the Thukela Biosphere reserve. The debate with respect to issues on sustainability, sustainable tourism, and collaborative planning within fragmented societies will be further explored in later chapters.

CHAPTER 4

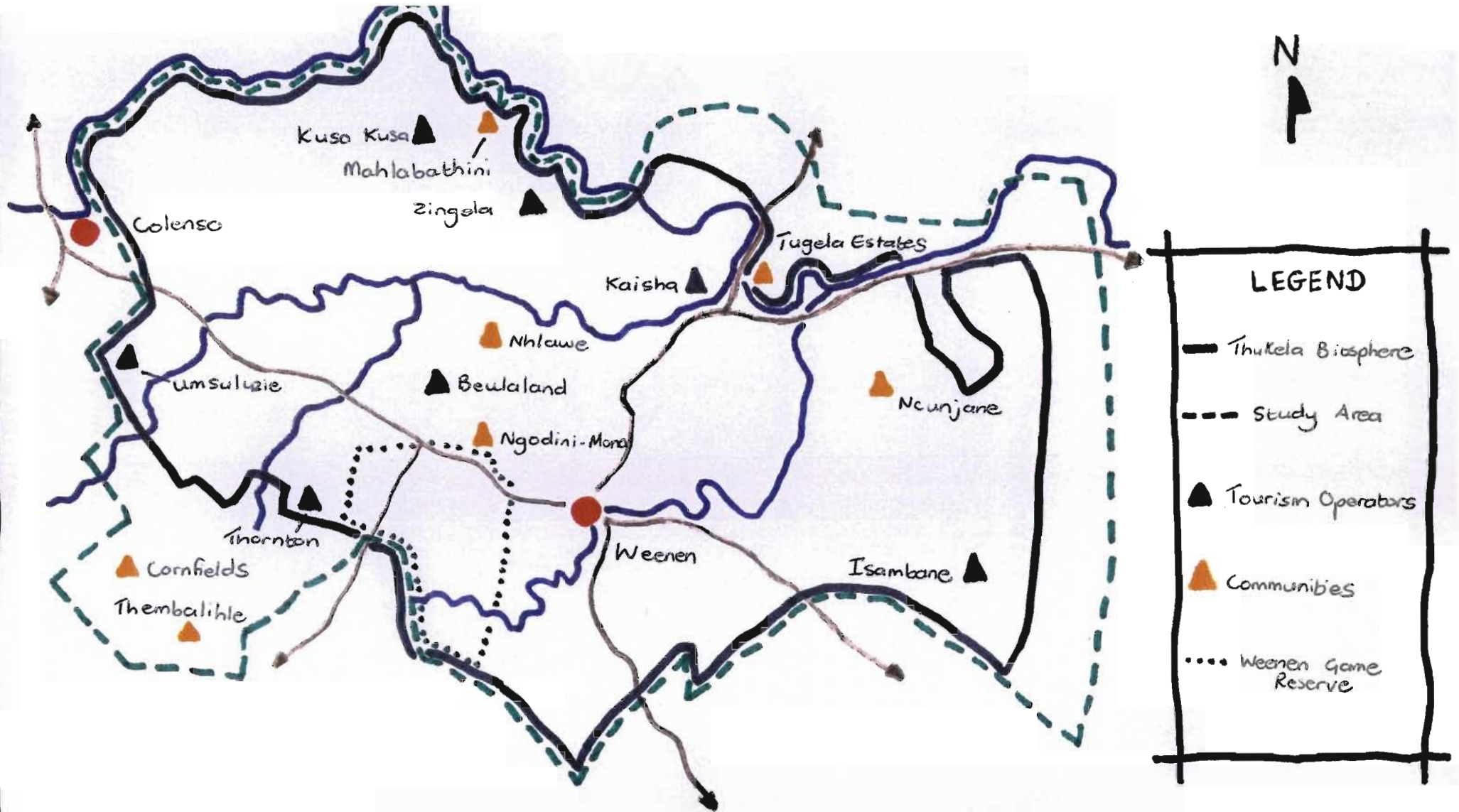
THE THUKELA BIOSPHERE RESERVE

4.1 Introduction

This chapter will provide: a description of the study area, the methodology that was followed to undertake the study, an analysis of the study area's physical attributes, attention to the land issues within the study area, issues in respect of the survey undertaken with the various communities in and around the study area are discussed, and finally a few concluding thoughts.

4.2 The Study Area (see map 2)

The Thukela Biosphere Reserve (TBR) in is an attempt to create an integrated land use option in South Africa, which will benefit both conservation and the 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. In the popular jargon of today, the TBR is a means of implementing sustainable development within the country. The TBR is situated in the midlands area of Kwa-Zulu Natal . (map 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



MAP 2: The Thukela Biosphere Reserve

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 tourism, 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.

Despite these seemingly daunting problems, however, the TBR has the potential to provide a new type of sustainable tourism/conservation and development - oriented land use. The success of the Thukela Biosphere Reserve in providing equitable solutions to the struggles for land and resources heralds an important step in land-use management for South Africa as a whole. The TBR could therefore be seen as a test of the relevance of the biosphere concept in South Africa and in turn the validity of sustainable tourism within this concept.

4.3 Background to Local Communities within the TBR

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 study area. 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 fragmentation and environmental disintegration which accompanied these practices. These historical factors inform the current status quo and highlight the difficulties in perusing a

sustainable future for communities in and around the TBR.

4.3.1 Historical development and Social Demography

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 African people was one of the most densely populated areas and as a result huge strain was placed on its social and natural environment.

Traditionally, African people were organised into homesteads, which were largely self supporting. As the homestead-economy began to decline it became necessary for vast numbers of home steaders to seek involvement in wage-labour. This was found in two forms:

- * **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.
- * **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 organisation 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 (Clacey, 1989; Van Onselen, 1996).

The thornveld region around Weenen village occupied a notable role in the organisation of labour tenancy in the country (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 institutionalised indebtedness became a key factor in assuring both the supply and control of African workers (Kockott, 1993; Van Onselen, 1996). A tenant's presence on a landlord's property was at the whim of the latter and so ensured good behaviour on the part of the tenants. Despite its susceptibility to exploitation, African 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.

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).

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;). 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 (Marcus, 1995).

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 solution¹ 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 1996. 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 (N.P.A, 1990). This call has not been heeded by local landowners however, and the social disruption caused by evictions continues. Absentee land ownership 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. 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 tourism and game farming. The central issue in the conflict is therefore ownership and use of natural resources such as soil, water, grazing land and firewood.

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. "Thus 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 an important case for the creation of more sustainable land-use options.

4.4 Methodology

4.4.1 Selection of sectors

For the purpose of the survey the study area was divided into sectors. The first sector are the communities that are currently involved in one or another land reform project (ie redistribution projects) residing in and around the TBR. The second sector are the communities presently residing on the farms within the TBR. The third sector are the tourist operators and farmers who are currently active within the TBR.

Within the above sectors four groups of respondents were targeted for the open ended

and structured questionnaire. The first group was the tourist operators within the case study area. The second group were communities residing within the biosphere reserve. The third group were communities bordering the biosphere reserve and the fourth group were farmers residing within the biosphere reserve.

The survey questionnaire did not cover questions relating to the socio-economic position of the communities interviewed. This information was available as recent surveys had been undertaken by the Department of Land Affairs and NGOs with respect to the communities within and around the biosphere. Thus the questionnaire only covered questions that related directly to the study.

The grouping of the respondents, as indicated above, was to give a clearer indication of the biosphere's role with respect to tourism in the area.

4.4.2 Time schedule

A total of one week was spent in the study area amongst the residents between the 5 and 9 October 1998. Some in depth interviews with other key role players ie TBR committee members, tourist operators etc. and government organisations ie Natal Parks Board, Department of Land Affairs etc. had however been completed between the months of August and November.

4.4.3 Interviewing Method

Interviews were completed with the aid of a interpreter. A person from Lima, an NGO active in the area, arranged the interviews with the help of some community members in the area. The interpreter was fully briefed prior to undertaking the interviews. A total of sixty interviews were completed.

4.4.4 Groups interviewed

Respondents were interviewed from the communities of Tugela Estates, Thembalihle, Cornfields, Nyodini-Mona, Nhlawe, Mahlabathini, Ncunjane, farmworker communities scattered on farms throughout the biosphere, farmers and tourist operators (see map 2).

The selection of the above communities was two-fold. First on the bases of accessibility to the respective respondents. At present the Department of Land Affairs is working with certain communities in the study area in respect of land reform projects. Thus these became a first priority. The second was to get a range of redistribution, restitution and labour tenant respondents. The purpose of interviewing the farmers and tourist operators was to represent the "other side of the story" and to determine to what extent the views on sustainable tourism within the biosphere would differ.

The interviews served to gain an understanding of, inter alia, the present source of income of the resident population, the degree of communication between various role players, the impact the biosphere has had on tourism, other forms of local economic development generated as a result of the Biosphere reserve, opportunities that the Biosphere reserve has presented to tourism, economic upliftment/development and the future that the reserve holds for the resident population from a tourism view point.

4.5 Physical background to the study area

4.5.1 Location and geology

The rough hilly terrain of the Thukela Biosphere Reserve is bounded by three important rivers (see map 2): the Tugela River, The Bushmans River and the Blaaukrans River (see map 2). 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.

4.5.2 Climate

The region experiences notable extremes of temperature. The average January temperature is a high 31 C, while the maximum high recorded is 42,8 C. The average July temperature is 18 C, while the minimum recorded is 6,7C. (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 mm to 996 mm per annum. 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 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.

4.5.3 Biogeography and Ecology

The TBR falls within the savannah biome of southern Africa (Rutherford and Westfall, 1994) and the vegetation of the area is typically known as Weenen Valley Bushveld (Edwards, 1967). 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. The Weenen Nature Reserve is in fact used to "farm" four very important and endangered species: Black rhinoceros, White (square-lipped) rhinoceros, buffalo and roan antelope. The TBR therefore has a very important role to play in the long term conservation status of some rare and endangered mammal species.

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. Certain grass species form an important resource for local communities who use it for thatching.

4.5.4 Extent of Land Degradation

A soils map of the Tugela basin completed by the Town and Regional Planning Commission in 1968 shows a large extent of land denuded by gully erosion around Weenen. Indeed a 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).

Today, the Valley bushveld of the Weenen region is considered one of the most seriously degraded veld types in KwaZulu-Natal (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).

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. The alluvial soils in the valleys have also been subject to intensive agricultural production, which has disrupted the natural processes and resulted in decreased soil nutrient value. Soil erosion in the area is extremely severe as visual observation can testify.

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).

4.6 Sustainable resource use

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.

4.6.1 Present Land Use

The 96 000 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. 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. Due to economic pressures some of the land owners turned to tourism as an alternative. However, these tourism facilities were extremely limited in the initial stages of the biosphere reserve but have subsequently grown into very well organised and profitable tourism ventures. Presently there are 10 operators within the biosphere reserve offering a diverse form of tourism facilities for example, caravan parks and camping sites, hiking trails, white-water rafting, horse trails, 4x4 vehicle trails etc.

A land use breakdown of the Thukela Biosphere Reserve, adapted from (Sandwith, 1993), shows Nature Conservation and Game Farming at 35%, Cattle Ranching 47%, Subsistence Agriculture 10% and Commercial cultivated lands 8%.

4.6.2 Game Farming and Tourism

A report by the Natal Parks Board (Sandwith, 1993) indicates that the following industries are likely to experience multiplier effects from 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 with the biosphere since they had anticipated quick economic returns from game and tourism, however, these have not yet come to fruition as anticipated.

4.6.3 Water and Soil Conservation

The periodic droughts to which the Weenen region is subject means that water is a precious and highly demanded resource. Most rural African 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. 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 tourism infrastructure (for example hotels and lodges).

4.6.4 Secondary Products

Wood is an important fuel resource for African communities. Many white farmers express concern that hardwoods are rapidly disappearing. A survey would need to be undertaken to find out if this is indeed the case. Many farmers allow labour tenants only 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 mentioned. Certain grass and sedge species are also utilised by local communities, for thatching and 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 (Channing, pers.comm.).

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, more detailed 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 processing of natural indigenous resources. These secondary products might include fuelwood, thatch grass and carving timber. One would suggest 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, which exist for their sustainable exploitation. What is apparent from the interviews is the above options have not yet been explored. Part of the reason for this is the lack of collaboration between the various role players in the study area.

4.7 Conclusion

In summing up, 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 exotic thornveld with decreasing palatable grasslands for grazing.

The rapid degradation of the veld lends urgency to the necessity of finding more sustainable land usage's in the region. Possibilities for this include tourism 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 tourism industry. Despite its potential, however, tourism is at present only a limited activity in the area since, in most cases, it requires enormous capital input to be truly successful. However, opportunity exists for local communities to become apart of the tourism sector in the biosphere. With the collaboration of key roles players the local community could actively participate either directly (through employment) or indirectly (from "spin-offs") in that they develop there own micro enterprises/industries

within the biosphere.

Other alternatives for income generation, which 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 achieved by co-operative management, a prerequisite been an institutional structure that has been attained through the collaboration of all the users of those resources.

CHAPTER 5

COMMUNITY ANALYSIS

5.1 Introduction

This chapter provides a discussion on the Thukela Biosphere Reserve (TBR), looking at issues surrounding the development of the TBR and a analysis of communities and the various role players within the TBR. The purpose of this chapter is to gain an understanding, by way of a survey, of the various views and opinions of the people resident within and around the TBR with respect to biosphere's as an instrument of sustainable tourism and community development. Whilst this analysis provides some answers, it would be misleading to assume that this topic has been fully explored and the opportunity for further debate is apparent.

5.2 The Thukela Biosphere Reserve

5.2.1 Background

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 1997.

5.2.2 Policy and Problems

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 Centre) between these communities and the TBR. Despite the TBR's claims that the new reserve would create employment opportunities through the initiation of tourism the communities instead developed the attitude that the TBR was:

- * a plot to remove African people from their place of settlement and a means of further dividing black communities
- * a means of removing livestock from the communities;
- * a means of decreasing African peoples access to land and of reinforcing apartheid (Channing, pers. comm.)

Communities have indicated that the Natal Parks Board and the Dept. of Agriculture are working towards a similar agenda. The interviews completed amongst communities during this study show that these views have changed little over five years, which calls into question the effectiveness of the TBR's commitment 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 the balance was covered by the benefiting community. A potentially negative situation was therefore seemingly resolved. However, Cornfields and Thembalihle still have limited involvement in the TBR and the new land, which they have acquired, is not being used sustainably.

The TBR did not only receive negative reactions from communities outside of the 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. The survey showed that farmworker communities were more concerned with dangerous wild animals, with the possibility of them being evicted from the land and the possible loss of livestock. A study of labour tenants perceptions toward the TBR in 1994 revealed that most people were extremely negative about the reserve (Pitout, 1994).

TBR members began to recognise that these conflicts between communities were becoming greater than they themselves could manage. A non-government organisation, the Rural Foundation (RF), was called in to assist and a Community Development Officer was appointed by the RF early in 1994 (Pitout, 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 which brings into question the commitment which TBR members had toward community development.

The lack of commitment by various role players still remains an obstacle. The forums and committee's established have resolved some of the more conflicting issues but certain realities remain. Rural people still have limited means to sustain themselves and the development of tourism in the study area has not trickled down to the rural poor. Once again, partly due to the lack of institutional structures that provide opportunities for all residents in the biosphere to benefit from the potential economic gains.

5.2.3 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 Programmes. The district pilot project has ensured the redistribution of state and private land back to African rural communities who have inter alia been provided with support from planning. This has important implications for the Thukela Biosphere Reserve as it means that some land within the biosphere has been reallocated to communities who may not support the concept of the biosphere. It is also important because of conflict amongst the white population and the African 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 (1996) 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 and social sustainability must be integrated into the projects.

These principles are very important in light of the study. 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 controlled sustainable land usage's. Sustainable land use therefore, lies entirely in the hands of the local communities. Thus in order for the biosphere to fully realise its sustainable tourism potential and so enhance the economic viability of the rural community, the need for collaboration between key roles becomes critical in this endeavour.

5.3 Analysis of Communities

The social profile of most households in the TBR region is one in which extended families are common. The high percentage of youth in the TBR 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 study 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 entrepreneurial activities is limited and so many people seek employment in the illegal trade in "dagga" (Marcus 1995).

For purposes of clarification the communities are discussed here as seven distinct groups, three existing outside of the boundaries of the Biosphere Reserve and four within the boundaries. The communities are Tugela Estates, Thembalihle, Cornfields, Nyodini-Mona, Nhlawe, Mahlabathini, Ncunjane 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 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 (Marcus 1995).

5.3.1 Communities Surrounding the Thukela Biosphere Reserve

5.3.1.1 Tugela Estates

The results of the survey show that this community exhibits the most negative reactions to the TBR. It is locally regarded as the most lawless and violence-stricken community. One of the major sources of income for many members of Tugela Estates is the illegal cultivation of "dagga", 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.

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 community. 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 has not delivered as expected. It also 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.

People in Tugela Estates directly blame the landowners of the TBR for the deterioration of their environment. 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.

5.3.1.2 Thembalihle

The survey shows that Thembalihle has a community of approximately 2800 people, with approximately 850 cattle and 950 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 similar manner under the new Pilot Land Project.

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. Thus the issue on the most appropriate land use, to ensure a sustainable future, is still to be resolved.

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), most 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). What is evident is the lack of support for the existing institutional structures. This in turn has implications when trying to work towards set goal.

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 community are thus concerned with the 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 discussions that the community did not really understand the concept of the TBR.

5.3.1.3 Cornfields

Cornfields has a large community of about 3800 people with 1400 cattle and 1900 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 recognised (Pitout, 1994). This has implications for the development and application of policy within these two communities.

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 attitude that, the white farmers want the biosphere as a place for animals and not Africans.

Whilst attempts by some TBR members have been made to illustrate the advantages of tourism to the area the community representatives revealed that they were not convinced. 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 and other tourism ventures in the area. However, they admit that they don't fully understand how the TBR will work.

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 over

utilised. 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.

Land for farming is perceived largely as the solution to the problems of the community. Interviews showed that they don't farm at the moment (due to a lack of land) but given the opportunity farming would be their most important source of income. However there is no management plan within the community for the new land and anyone can graze their cattle anywhere.

5.3.2 Communities within the Thukela Biosphere reserve

5.3.2.1 Nhlawe

As with the other communities Nhlawe is characterised by high rates of unemployment, 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. 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 most important problems, which were identified in the Nhlawe community, 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 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.

It was also evident that none of the Nhlawe community were employed within the tourism sector. Some responses did show that they believed that tourism could offer an alternative form of income. However, none had explored this possibility as a result of not knowing what to do.

5.3.2.2 Mahlabathini and Ncunjane communities

Interviews with the local community revealed a deep-seated distrust of the landowners of the TBR although the communities are 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 community. 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 has not delivered as expected even though these communities are benefiting, to some degree, in this regard. It also emerged that there is also little co-operation from landowners in the TBR, and the persons interviewed 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.

People in these communities directly blame the landowners of the TBR for the deterioration of their environment. Whereas white landowners attribute the degradation in these communities 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.

It was also evident that none of the people in the Mahlabathini and Ncunjane communities were employed within the tourism sector. Some responses did show that they believed that tourism could offer an alternative form of income.

5.3.2.3 Ngodini-Mona

As with the other communities Ngodini-Mona is characterised by high rates of unemployment, 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. 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 most important problems, which were identified in the Ngodini-Mona community, 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 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.

It was also evident that none of the Ngodini-Mona community were employed within the tourism sector. Some responses did show that they believed that tourism could offer an alternative form of income. However, none had explored this possibility as a result of not knowing what to do.

5.3.2.4 Farmworker Communities within the TBR

Farmworker communities initially rebelled against the TBR concept, but since the introduction of a community liaison 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 attitude 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.

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 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".

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.

5.3.3 Farmers within the TBR

Farmers interviewed have a very sceptical outlook on the long term sustainability of the biosphere. This is mainly attributed to the communities that reside within the reserve at present. The farmers attribute the degradation of land in these communities to ignorance and poor management on the parts of the inhabitants. Whilst the inhabitants themselves attribute environmental degradation to much wider ranging issues of politics and power struggles which in part is acknowledge by the farmers.

The farmers are willing to cooperate but the reluctance on their part to take the initiative is evident. However, some of the farmers interviewed did show an appreciation of the biosphere's potential to sustain tourism and contribute to an economic turn in the region.

5.3.4 Tourism operators

Some of the tourism ventures currently undertaken in the biosphere provide a more than lucrative income to the operator. This is partly due to the fact that some of the tourism camps are fulfilling the needs of a niche market and in some cases are focussing their venture to the international market. This all bodes well for the operator but the spin-offs from these tourism ventures are few and far between. It could be argued that apart from the few staff that are employed by the various tourism operators very little has accrued to the resident community. The interviews showed that the operators are willing to get involved in promoting and assisting the African people in tourism but no significant effort has yet been made.

What is positive, is the growth in the tourism ventures within the biosphere over the past few years. Operators interviewed listed the biosphere as a primary reason for their location, apart from the natural resource base, as it provided the operator with some level of security. However, operators were concerned about the sustainability of their tourism ventures, particularly as the very resource, which they rely on, is being threatened by the host population.

Once again it is clear that co-operative management between the various role players could provide not only for a source of economic upliftment but could go a long way towards ensuring the sustainability of tourism within the biosphere.

5.4 Conclusion

The communities of the study area 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 and ownership 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 African 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 African 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 the unsustainable use of land and the various aspects, which played a role in the destruction of the environment. 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 coping strategies of communities. Constraints to community resource management included economics, the "commons" syndrome, historical factors, and lack of enforced policy through recognised structures.

The opportunity to develop tourism as an alternative source of income is still a concept that needs further deliberation by local communities. It is apparent that the seed has been sown and that communities will develop their own enterprises linked to tourism has a positive future. Suggestions as to how these communities may be integrated into the TBR tourism sector and what effect this will have on economic sustainability of the African people is discussed further in the following chapter.

CHAPTER 6

CONCLUDING THOUGHTS

6.1 Introduction

This chapter offers some concluding thoughts on the future of the Thukela Biosphere reserve, perspectives on collaborative planning and the way forward for the residents of the biosphere. This chapter does not provide all the answers to sustainable tourism and community development for the residents of the biosphere, but it does raise some fundamental issues, which could guide the ongoing development of the biosphere. The future of the biosphere has to begin with the commitment and willingness of all residents - the alternative brings little hope.

6.2 The future 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 reserves (UNESCO, 1995a). The Seville conference emphasised that the development function of reserves through local community participation and planning should become a focal point of all biosphere reserves and recognised 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).

Part of MAB's biosphere reserve concept was the commitment 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 undergo a complete conceptual metamorphosis and recognise the need to involve local rural communities in the biosphere plans. Despite arguments that the biosphere promises a new approach to sustainable tourism, 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 tourism 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, however, 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 (Shimire, 1991). The Thukela Biosphere Reserve needs to learn from such instances and avoid falling into a similar trap.

According to the UNESCO definition (Batisse, 1986), the basic idea of a biosphere reserve is to create multiple zones which cater for different land usage's. 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 emphasised 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 criticised, 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 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. The TBR has an 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 decentralisation of power and of providing local communities with a means of controlling their own destiny.

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 to the disenchantment of some farmers.

Despite this fact, 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 tourism 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 land use strategies (Waters-Bayer and Bayer, 1994). A collaborative approach can help identify potential and existing local level conflicts. Efforts to strengthen the position of disadvantaged groups (e.g. 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 concerns or to assert any rights, conflict will be lacking. Changing processes in the

TBR which accompany the democratisation 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 tourism 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.

An important aspect to be considered is how the Thukela Biosphere Reserve is able to successfully implement a sustainable resource management strategy for the region and if this will benefit local communities.

As indicated previously, 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 African people who live in the area. The perception that their livestock will be replaced with game is a source of much bitterness and animosity towards the reserve. A similar 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 reserved 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 and the local communities, a step which the reserve management has gone some way towards achieving.

Tourism in South Africa increased by 52% between 1994 and 1995 (Chadwick, 1996). Thus the initiation of an tourism economy holds great promise in the TBR study area. The

implementation of tourism needs to benefit local communities however, if it is to succeed. Reactions by the communities in and around the TBR are generally negative towards tourism - the main reason being scepticism that any of the benefits will accrue to them. Interestingly, Heinen's (1993) study in the Kosi-Tappu reserve of Nepal also revealed that local populations were not in favour of tourism because they could not perceive any benefits from it. 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 to local communities.

An investigation into the economic characteristics and potential for wildlife utilisation 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 (KNP) is attempting to stimulate small businesses in its bordering communities mainly through curio production 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 combating 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 study reported being involved.

Another option for improving the economic well-being of rural communities is the harvesting of secondary products. (Shackleton, 1996). Secondary products are regarded as natural indigenous products available from a given piece of land. In the TBR, 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.

6.3 Collaborative planning

Healey has argued how political communities which focus on the management of shared spaces in regions, settlements and neighbourhoods come to define and address their policy agendas will have substantial social, economic and environmental effects, which will have significance not merely for that community but for nations, supranational regions and global objectives. A critical capability for such efforts is the capacity to interrelate the concerns of the different cultural communities, which co-exist in a place. These may vary enormously in their existing relations with each other, in their systems of meaning and ways of organising and in their spatial reach. The concept of cultural communities emphasises that people live inter-subjectively, embedded in one or more relational worlds, through which we frame our approach to issues and learn new ways of thinking and acting.

This concept draws on and develops the insights of an institutionalist approach to social relations and a communicative approach to social learning. The capacity to interrelate involves the ability to make relational links, across cultural barriers, organisational divisions and fractures in the distribution of power. Building links as an activity of social mobilisation can be a force for ideological domination, which would crowd out the ways of

thinking and organising of many of the cultural communities of a place. This would be likely in current conditions to reinforce the alienation from mainstream politics and organisation felt by many these days, and prevent the rich social learning which is recognised as helpful to economic development. Healey has argued for an inclusionary approach to link-making work, through cultivating the capacity for collaborative, multi-cultural communication and learning, developed through building up relations of understanding and trust. A Habermasian communicative ethics provides a valuable conceptual resource for thinking about how to do this particularly within a biosphere reserve.(Healey, 1997).

Collaborative efforts in defining and developing policy agendas and strategic approaches to collective concerns about shared spaces among the members of political communities serve to build up social, intellectual and political capital which becomes a new institutional resource. It generates a cultural community of its own, which enables future issues to be discussed more effectively, and provides channels through which all kinds of other issues, such as recognition of the adverse social consequences of new economic tendencies, or knowledge about economic opportunities, or ways to reduce behaviours which are harming biospheric sustainability, may be more rapidly understood and acted upon. In this way, such a collaborative cultural community focused on the governance of local environments should also help to recreate a public realm.(Healey, 1997).

Such relation-making and culture-building work takes place through dialogue, and its qualities and outcomes are the result of the interaction between who gets involved and in what arenas, the communicative routine and styles which build up, and the existing social relational worlds which co-exist in a place. The activity of planning, as a conscious policy-driven effort to insert a strategic, long-term, interrelating viewpoint into governance processes, has the capacity to assist the task of relational capacity-building by its role in informing political communities about the range of stakeholders and about how they like to discuss issues; by its role in helping to shape arenas where stakeholders can meet; and

by helping those involved work out what it means to build new collective ways of thinking and acting, to re-frame and re-structure their ways of proceeding. Those involved as experts in such processes should have an ethical duty to attend to all stakeholders as the interactive process develops. The result is a process of collaborative planning. (Healey, 1997).

These formal systems are often seen as immovable constraints, powerful systems that are just 'there'. But the institutionalist approach emphasises that constraints are never fixed. They are socially made and re-made; through dialogue, by re-thinking; by changing perspectives, through social mobilisation. A communicative approach helps to focus on what this task of re-making structures involves. But it is difficult work, requiring recognition of how we come to think, what we do and how we come to organise in the ways that we do; and how power can flow unrecognised and embedded through the fine grain of our daily practices. It is power-challenging and ethically-demanding. Yet is happening around us continuously, in the cultural worlds of the powerful as they create and use what the rest of us see as structures and systems, as we make and re-make our own ways of going on, and in what we all do as we acknowledge, challenge and resist embedded power. (Healy, 1997)

6.4 The way forward

There are many complex issues involved in the establishment and operation of the Thukela Biosphere reserve. Budgets are small and the problems large resulting in, at present, an inability to change many of the parameters within which the Biosphere management committee presently operates. Many of the causes are dislocated from the immediate surrounds of both the landowners and the labour tenants - existing property rights regimes, governments inability to manage development, a lack of education facilities, economic incentives to over exploit resources, absence of linkages between

conservation needs and factors promoting development and external influences on rural communities, e.g. Politics, macro-economy, laws and social change.

Planning is not a dispassionate process. Moreover, not all of those who are impacted by tourism are able to influence the planning agenda or contribute to the formulation of plans. Nonetheless, the decisions that are made influence the allocation of resources and, ultimately, largely determine who gains and who loses from the resulting tourism. Thus tourism development is a political process involving differential access to power and control (Hall, 1994). The presence or absence of plans, the content of plans, and whether plans are actually implemented have far reaching implications for the character of tourism that occurs, including trade-offs between economic, environmental, and social consequences of development as well as the extent to which residents are able to become involved in tourism as it evolves in their community.

Protected areas cannot co-exist with communities, which are hostile to them. They must be socially responsive and just. For Biosphere managers, detailed knowledge of the people whose lives are affected by the establishment and management of parks, is as important as information about fauna and flora. The cultural and socio-economic characteristics of local people, including age and gender, division of labour, etc, forms the basis for measures to promote the sustainable use of natural resources, alleviate poverty, raise the quality of human life and create positive support for the Biosphere concept.

The biosphere reserve concept as initiated by UNESCO offers an important new land use strategy for South Africa because it emphasises 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.

Biosphere reserves form part of the worldwide move toward more collaborative ideals.

These ideals are particularly applicable to South Africa at present where the participation and socio-economic development of historically disadvantaged and disenfranchised rural communities is of major concern.

Paradigm shifts in planning and development have moved away from the "objective scientific" approaches towards a political ecology approach which recognises the complex interactions between local people's access rights, political transformation and environmental degradation.

Communities in and around the Thukela Biosphere 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 African communities towards the landowner members of the TBR.

There needs to be political commitment to conservation in general and to the local projects identified within regions. Political commitment includes explicit commitments or at least co-operation from local authorities, social leaders, national and provincial governments and their associated agencies to collaborative tourism, which will in the long term benefit all the residents of a region. This requires the various economic, physical and regional planning approaches to provide a viable framework for fully integrating tourism and development.

Although KwaZulu and Natal are now considered as one, many legal obstacles remain which prevent both former authorities from acting outside their boundaries. There is also a lack of clarity, especially, on the land reform issues regarding the respective role of central and provincial government responsibilities. This issue is further complicated by the lack of clarity on how the future rural local government forums will be constituted. There is definitely a need to delegate to the local level as much of the decision making as possible, which could provide opportunities for the real negotiation amongst all members of a district.

Where appropriate, the management structures of biosphere reserves should be empowered to represent different local and provincial interests. This will allow for the co-ordination with other regional development initiatives and allow for effective communication between regional development planners and the project.

Conflict between the different land users is evident in the Thukela Biosphere reserve. One of the most important steps needed to be taken is for all sides involved to sit down and try to recognise the validity of the opposing views. It is also important to identify the various "stakeholders" involved in the conflict and their interests. Once this has been done it will be necessary to develop a consultative process, which encourages competing groups to identify optimal management solutions acceptable to the majority.

A lack of secure tenure has prevented many communities to adopt a long-term perspective towards land management and conservation. In the Thukela Biosphere situation, priority should be given to lobbying central government for the establishment of secure land tenure for labour tenants, and at the local level ensuring equitable access to resources for all occupants of the district. Given the resistance of many of the farmers to providing security of tenure to labour tenants a non-governmental organisation may have to be approached to fulfil this advocacy role.

Communities, especially those living in and around Biosphere areas, often have important and long-standing relationships with these areas. Local communities depend on the resources of the Thukela Biosphere for their livelihood and cultural survival. Yet these relationships have too often been ignored and even destroyed by resource conservation, inadequate rural development projects and management initiatives.

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 collaboration of local communities. Defining appropriate structures for collaboration is difficult. 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 African 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. Collaboration 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 of sustainable tourism and community development depends on the establishment of clear and precise objectives, long term commitment, and concentration on a small number of defined objectives and, most importantly, the establishment of local linkages.

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Internet Websites:

Webmaster at Conservation. ORG.

Mab@unesco.org

www.unesco.org/mab/home/frameuk.htm

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Personal Interviews

The following were interviewed:

Natal Parks Board - R. Porter and T Sandwith
Thukela Biosphere Reserve - C. Channing
SCAP for the Drakensberg - J Van der Vegte(consultant)
Dept. Local Government and Housing - N. Fox
Dept. Land Affairs - R. Clacey, K van Heerden and M Shabalala
Town and Regional Planning Commission - L. Sanders
Lima - K. Pitout
Bergwatch - M. Photenhauer
Local Council of Weneen
Umsuluzi Game Park - Wendy Mayer
Kaisha - Nico Mouton
Kusa Kusa - Mark du Plessis
Thornton Lodge - EM Winter
Isambane - P. Channing
Zingela - M. Calverley
Beulaland - V. Coetzee

**GOAL I: USE BIOSPHERE RESERVES
TO CONSERVE NATURAL
AND CULTURAL DIVERSITY**

Objective I.1: Improve the coverage of natural and cultural biodiversity by means of the World Network of Biosphere Reserves.

Recommended at the international level:

1. Promote biosphere reserves as means of implementing the goals of the Convention on Biological Diversity.
2. Promote a comprehensive approach to biogeographical classification that takes into account such ideas as vulnerability analysis, in order to develop a system encompassing socio-ecological factors.

Recommended at the national level:

3. Prepare a biogeographical analysis of the country as a basis, *inter alia*, for assessing coverage of the World Network of Biosphere Reserves.
4. In light of the analysis, and taking into account existing protected areas, establish, strengthen or extend biosphere reserves as necessary, giving special attention to fragmented habitats, threatened ecosystems, and fragile and vulnerable environments, both natural and cultural.

Objective I.2: Integrate biosphere reserves into conservation planning.

Recommended at the international level:

1. Encourage the establishment of transboundary biosphere reserves as a means of dealing with the conservation of organisms, ecosystems, and genetic resources that cross national boundaries.

Recommended at the national level:

2. Integrate biosphere reserves in strategies for biodiversity conservation and sustainable use, in plans for protected areas, and in the national biodiversity strategies and action plans provided for in Article 6 of the Convention on Biological Diversity.
3. When applicable, include projects to strengthen and develop biosphere reserves in programmes to be initiated and funded under the Convention on Biological

Diversity and other multilateral conventions.

4. Link biosphere reserves with each other, and with other protected areas, through green corridors and in other ways that enhance biodiversity conservation, and ensure that these links are maintained.
5. Use biosphere reserves for *in situ* conservation of genetic resources, including wild relatives of cultivated and domesticated species, and consider using the reserves as rehabilitation/re-introduction sites, and link them as appropriate with *ex situ* conservation and use programmes.

**GOAL II: UTILIZE BIOSPHERE RESERVES
AS MODELS OF LAND MANAGEMENT
AND OF APPROACHES
TO SUSTAINABLE DEVELOPMENT**

Objective II.1: Secure the support and involvement of local people.

Recommended at the international level:

1. Prepare guidelines for key aspects of biosphere reserve management, including the resolution of conflicts, provision of local benefits, and involvement of stakeholders in decision-making and in responsibility for management.

Recommended at the national level:

2. Incorporate biosphere reserves into plans for implementing the sustainable use goals of Agenda 21 and the Convention on Biological Diversity.
3. Establish, strengthen or extend biosphere reserves to include areas where traditional life styles and indigenous uses of biodiversity are practiced (including sacred sites), and/or where there are critical interactions between people and their environment (e.g., peri-urban areas, degraded rural areas, coastal areas, freshwater environments and wetlands).
4. Identify and promote the establishment of activities compatible with the goals of conservation through the transfer of appropriate technologies which include traditional knowledge and which promote sustainable development in the buffer and transition zones.



Recommended at the individual reserve level:

5. Survey the interests of the various stakeholders and fully involve them in planning and decision-making regarding the management and use of the reserve.
6. Identify and address factors that lead to environmental degradation and unsustainable use of biological resources.
7. Evaluate the natural products and services of the reserve and use these evaluations to promote environmentally sound and economically sustainable income opportunities for local people.
8. Develop incentives for the conservation and sustainable use of natural resources, and develop alternative means of livelihood for local populations when existing activities are limited or prohibited within the biosphere reserve.
9. Ensure that the benefits derived from the use of natural resources are equitably shared with the stakeholders, by such means as sharing the entrance fees, sale of natural products or handicrafts, use of local construction techniques and labour, and development of sustainable activities (e.g., agriculture, forestry, etc.).

Objective II.2: Ensure better harmonization and interaction among the different biosphere reserve zones.

Recommended at the national level:

1. Ensure that each biosphere reserve has an effective management policy or plan and an appropriate authority or mechanism to implement it.
2. Develop means of identifying incompatibilities between the conservation and sustainable use functions of biosphere reserves and take measures to ensure that an appropriate balance between the functions is maintained.

Recommended at the individual reserve level:

3. Develop and establish institutional mechanisms to manage, co-ordinate and integrate the biosphere reserve's programmes and activities.
4. Establish a local consultative framework in which the reserve's economic and social stakeholders are represented, including

the full range of interests (e.g., agriculture, forestry, hunting and extracting, water and energy supply, fisheries, tourism, recreation, research).

Objective II.3: Integrate biosphere reserves into regional planning.

Recommended at the national level:

1. Include biosphere reserves in regional development policies and in regional land-use planning projects.
2. Encourage the major land-use sectors near each biosphere reserve to adopt practices favouring sustainable land use.

Recommended at the individual reserve level:

3. Organize forums and set up demonstration sites for the examination of socio-economic and environmental problems of the region and for the sustainable utilization of biological resources important to the region.

GOAL III: USE BIOSPHERE RESERVES FOR RESEARCH, MONITORING, EDUCATION AND TRAINING

Objective III.1: Improve knowledge of the interactions between humans and the biosphere.

Recommended at the international level:

1. Use the World Network of Biosphere Reserves to conduct comparative environmental and socio-economic research, including long-term research that will require decades to complete.
2. Use the World Network of Biosphere Reserves for international research programmes that deal with topics such as biological diversity, desertification, water cycles, ethnobiology, and global change.
3. Use the World Network of Biosphere Reserves for co-operative research programmes at the regional and inter-regional levels, such as those existing for the Southern Hemisphere, East Asia and Latin America.
4. Encourage the development of innovative, interdisciplinary research tools for biosphere reserves, including flexible modelling

systems for integrating social, economic and ecological data.

5. Develop a clearing house for research tools and methodologies in biosphere reserves.
6. Encourage interactions between the World Network of Biosphere Reserves and other research and education networks, and facilitate the use of the biosphere reserves for collaborative research projects of consortia of universities and other institutions of higher learning and research, in the private as well as public sector, and at non-governmental as well as governmental levels.

Recommended at the national level:

7. Integrate biosphere reserves with national and regional scientific research programmes, and link these research activities to national and regional policies on conservation and sustainable development.

Recommended at the individual reserve level:

8. Use biosphere reserves for basic and applied research, particularly projects with a focus on local issues, interdisciplinary projects incorporating both the natural and the social sciences, and projects involving the rehabilitation of degraded ecosystems, the conservation of soils and water and the sustainable use of natural resources.
9. Develop a functional system of data management for rational use of research and monitoring results in the management of the biosphere reserve.

Objective III.2: Improve monitoring activities.

Recommended at the international level:

1. Use the World Network of Biosphere Reserves, at the international, regional, national and local levels, as priority long-term monitoring sites for international programmes focused on topics such as terrestrial and marine observing systems, global change, biodiversity, and forest health.
2. Encourage the adoption of standardized protocols for meta-data concerning the description of flora and fauna, to facilitate the interchange, accessibility and utilization of scientific information generated in biosphere reserves.

Recommended at the national level:

3. Encourage the participation of biosphere reserves in national programmes of ecological and environmental monitoring and development of linkages between biosphere reserves and other monitoring sites and networks.

Recommended at the individual reserve level:

4. Use the reserve for making inventories of fauna and flora, collecting ecological and socio-economic data, making meteorological and hydrological observations, studying the effects of pollution, etc., for scientific purposes and as the basis for sound site management.
5. Use the reserve as an experimental area for the development and testing of methods and approaches for the evaluation and monitoring of biodiversity, sustainability and quality of life of its inhabitants.
6. Use the reserve for developing indicators of sustainability (in ecological, economic, social and institutional terms) for the different productive activities carried out within the buffer zones and transition areas.
7. Develop a functional system of data management for rational use of research and monitoring results in the management of the biosphere reserve.

Objective III.3: Improve education, public awareness and involvement.

Recommended at the international level:

1. Facilitate exchange of experience and information between biosphere reserves, with a view to strengthening the involvement of volunteers and local people in biosphere reserve activities.
2. Promote the development of communication systems for diffusing information on biosphere reserves and on experiences at the field level.

Recommended at the national level:

3. Include information on conservation and sustainable use, as practiced in biosphere reserves, in school programmes and teaching manuals, and in media efforts.

4. Encourage participation of biosphere reserves in international networks and programmes, to promote cross-cutting linkages in education and public awareness.

Recommended at the individual reserve level:

5. Encourage involvement of local communities, schoolchildren and other stakeholders in education and training programmes and in research and monitoring activities within biosphere reserves.
6. Produce visitors' information about the reserve, its importance for conservation and sustainable use of biodiversity, its socio-cultural aspects, and its recreational and educational programmes and resources.
7. Promote the development of ecology field educational centres within individual reserves, as facilities for contributing to the education of schoolchildren and other groups.

Objective III.4: Improve training for specialists and managers.

Recommended at the international level:

1. Utilize the World Network of Biosphere Reserves to support and encourage international training opportunities and programmes.
2. Identify representative biosphere reserves to serve as regional training centres.

Recommended at the national level:

3. Define the training needed by biosphere reserve managers in the 21st century and develop model training programmes on such topics as how to design and implement inventory and monitoring programmes in biosphere reserves, how to analyze and study socio-cultural conditions, how to solve conflicts, and how to manage resources co-operatively in an ecosystem or landscape context.

Recommended at the individual reserve level:

4. Use the reserve for on-site training and for national, regional and local seminars.
5. Encourage appropriate training and employment of local people and other stakeholders to allow their full participa-

tion in inventory, monitoring and research in programmes in biosphere reserves.

6. Encourage training programmes for local communities and other local agents (such as decision-makers, local leaders and agents working in production, technology transfer, and community development programmes) in order to allow their full participation in the planning, management and monitoring processes of biosphere reserves.

GOAL IV: IMPLEMENT THE BIOSPHERE RESERVE CONCEPT

Objective IV.1: Integrate the functions of biosphere reserves.

Recommended at the international level:

1. Identify and publicize demonstration (model or illustrative examples of) biosphere reserves, whose experiences will be beneficial to others, at the national, regional and international levels.
2. Give guidance/advice on the elaboration and periodic review of strategies and national action plans for biosphere reserves.
3. Organize forums and other information exchange mechanisms for biosphere reserve managers.
4. Prepare and disseminate information on how to develop management plans or policies for biosphere reserves.
5. Prepare guidance on management issues at biosphere reserve sites, including, *inter alia*, methods to ensure local participation, case studies of various management options, and techniques of conflict resolution.

Recommended at the national level:

6. Ensure that each biosphere reserve has an effective management policy or plan and an appropriate authority or mechanism to implement it.
7. Encourage private sector initiatives to establish and maintain environmentally and socially sustainable activities in appropriate zones of biosphere reserves and in surrounding areas, in order to stimulate community development.
8. Develop and periodically review strategies

and national action plans for biosphere reserves; these strategies should strive for complementarity and added value of biosphere reserves with respect to other national instruments for conservation.

9. Organize forums and other information exchange mechanisms for biosphere reserve managers.

Recommended at the individual reserve level:

10. Identify and map the different zones of biosphere reserves and define their respective status.
11. Prepare, implement and monitor an overall management plan or policy that includes all of the zones of biosphere reserves.
12. Where necessary, in order to preserve the core area, re-plan the buffer and transition zones according to sustainable development criteria.
13. Define and establish institutional mechanisms to manage, co-ordinate and integrate the reserve's programmes and activities.
14. Ensure that the local community participate in planning and management of biosphere reserves.
15. Encourage private sector initiatives to establish and maintain environmentally and socially sustainable activities in the reserve and surrounding areas.

Objective IV.2: Strengthen the World Network of Biosphere Reserves.

Recommended at the international level:

1. Facilitate provision of adequate resources for implementation of the Statutory Framework of the World Network of Biosphere Reserves.
2. Facilitate the periodic review by each country of its biosphere reserves, as required in the Statutory Framework of the World Network of Biosphere Reserves, and assist countries in taking measures to make their biosphere reserves functional.
3. Support the functioning of the Advisory Committee for Biosphere Reserves and fully consider and utilize its recommendations and guidance.
4. Lead the development of communication

among biosphere reserves, taking into account their communication and technical capabilities, and strengthen existing and planned regional or thematic networks.

5. Develop creative connections and partnerships with other networks of similar managed areas, and with international governmental and non-governmental organizations with goals congruent with those of biosphere reserves.

6. Promote and facilitate twinning between biosphere reserve sites and foster trans-boundary reserves.

7. Give biosphere reserves more visibility by disseminating information materials, developing communication policies, and highlighting their roles as members of the World Network of Biosphere Reserves.

8. Wherever possible, advocate the inclusion of biosphere reserves in projects financed by bilateral and multilateral aid organizations.

9. Mobilize private funds, from businesses, NGOs and foundations, for the benefit of biosphere reserves.

10. Develop standards and methodologies for collecting and exchanging various types of data, and assist their application across the Network of Biosphere Reserves.

11. Monitor, assess and follow up on the implementation of the Seville Strategy, utilizing the Implementation Indicators, and analyze the factors that aid in attainment of the indicators, as well as those that hinder such attainment.

Recommended at the national level:

12. Facilitate provision of adequate resources for implementation of the Statutory Framework of the World Network of Biosphere Reserves.

13. Develop a national-level mechanism to advise and co-ordinate the biosphere reserves; and fully consider and utilize its recommendations and guidance.

14. Prepare an evaluation of the status and operations of each of the country's biosphere reserves, as required in the Statutory Framework, and provide appropriate resources to address any deficiencies.

15. Develop creative connections and partnerships with other networks of similar

- managed areas and with international governmental and non-governmental organizations with goals congruent with those of the biosphere reserves.
16. Seek opportunities for twinning between biosphere reserves and establish trans-boundary biosphere reserves, where appropriate.
 17. Give biosphere reserves more visibility by disseminating information materials, developing communication policies, and highlighting their roles as members of the Network.
 18. Include biosphere reserves in proposals for financing from international and bilateral funding mechanisms, including the Global Environment Facility.
 19. Mobilize private funds, from businesses, NGOs and foundations, for the benefit of biosphere reserves.

20. Monitor, assess and follow up on the implementation of the Seville Strategy, utilizing the Implementation Indicators, and analyze the factors that aid in attainment of the indicators, as well as those that hinder such attainment.

Recommended at the individual reserve level:

21. Give biosphere reserves more visibility by disseminating information materials, developing communication policies, and highlighting their roles as members of the Network.
22. Mobilize private funds, from businesses, NGOs and foundations, for the benefit of biosphere reserves.
23. Monitor, assess and follow up on the implementation of the Seville Strategy, utilizing the Implementation Indicators, and analyze the factors that aid in attainment of the indicators, as well as those that hinder such attainment.

IMPLEMENTATION INDICATORS

CROSS REFERENCE

International level	
Biosphere reserves included in implementation of the Convention on Biological Diversity	I.1.1
Improved biogeographical system developed	I.1.2
New trans-boundary biosphere reserves developed	I.2.1; IV.2.6
Guidelines developed and published	(I.1.1; IV.1.4; IV.1.5
Comparative research programmes implemented	III.1.1
Biosphere reserves incorporated into international research programmes	III.1.2
Regional and inter-regional research programmes developed	III.1.3
Interdisciplinary research tools developed	III.1.4
Cleaning house for research tools and methodologies developed	III.1.5
Interactions developed with other research and education networks	III.1.6
Biosphere reserves incorporated into international monitoring programmes	III.2.1
Standardized protocols and methodologies adopted for data and for data exchange	III.2.2; IV.2.10
Mechanism developed for exchanging experiences and information between biosphere reserves	III.3.1
Biosphere reserve communication system implemented	III.3.2; IV.2.4; IV.2.7
International training opportunities and programmes developed	III.4.1
Regional training centres identified and developed	III.4.2
Demonstration biosphere reserves identified and publicized	IV.1.1
Guidance provided on elaboration and review of strategies and national action plans for biosphere reserves	IV.1.2
Mechanisms developed for information exchange among biosphere reserve managers	IV.1.3
Statutory Framework of the World Network of Biosphere Reserves is implemented at the international and national levels	IV.2.1; IV.2.2
Advisory Committee for Biosphere Reserves is functional and effective	IV.2.3
Regional or thematic networks developed or strengthened	IV.2.4
Interactions developed between biosphere reserves and similar managed areas and organizations	IV.2.5
Mechanisms developed to foster twinning between biosphere reserves	IV.2.6
Information and promotional materials developed for the World Network of Biosphere Reserves	IV.2.7
Strategies developed for including biosphere reserves in bilateral and multilateral aid projects	IV.2.8
Strategies developed for mobilizing funds from businesses, NGOs and foundations	IV.2.9
Data standards and methodologies applied across the World Network	IV.2.10
Mechanisms developed for monitoring and assessing the implementation of the Seville Strategy at national level	IV.2.11