

**DEVELOPMENT DEFICIENCY IN THE MIDST OF
ABUNDANCE: INDIGENOUS KNOWLEDGE AND
DEVELOPMENT IN THE COMMUNITIES OF MPEMBENI
AND MDLETSHENI ABUTTING HLUHLUWE-IMFOLOZI
PARK**

By

Thandi Precious Lindi Ngubane

**Submitted in partial fulfillment of the academic requirement
for the degree of
Master of Social Science in Community and Development
Studies
in the
School of Social Work and Community Development,
University of KwaZulu-Natal, Howard College Campus**

September 2006

TABLE OF CONTENTS	PAGE
List of Content	i
Appendices	iv
List of Figures and Maps	v
List of Tables	vi
List of Abbreviations and Acronyms	vii
Abstract	viii
Acknowledgements	x
Preface	xi
 <u>CHAPTER 1:</u> INTRODUCTION	 1
1. Introduction	1
2. Definition of Terms	2
3. International Context	4
4. Background to the Study Aims and Objectives	6
4.1 Aims	6
4.2 Objectives	7
5. Research Questions	7
6. Motivation and Choice of Study	8
7. Value of Study	10
8. Chapter Sequence	12
 <u>CHAPTER 2:</u> LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK	 14
1. Introduction	14
2. Literature Review	14
3. Rural Areas	20
4. Rural Development	21
5. Sustainable Development	21

6. Indigenous Knowledge	26
7. Linking Rural Development to Indigenous Knowledge	28
8. History of Conservation in South Africa	30
9. Custodians of Biological Diversity in KwaZulu-Natal	31
9.1 Legal Basis of Conservation in KwaZulu-Natal	31
9.2 Policies	32
10. Conceptual Framework	32
 <u>CHAPTER 3:</u> BACKGROUND OF STUDY AREA	 36
1. Introduction	36
2. Study area	39
3. Hluhluwe-Imfolozi Park Historical Background	40
4. Reason for the Selection of Study Area	41
5. Location and Size	44
6. Climatic Conditions	44
7. Fauna and Flora	44
8. Land Use	48
9. Conclusion	48
 <u>CHAPTER 4:</u> METHODOLOGY	 49
1. Introduction	49
2. Sampling and Sample Size	49
3. Data Collection	51
4. Interview Methods and Tools	52
5. Procedure in the Field	53
6. Interviews with Ezemvelo KZN Wildlife Staff	54
7. Observation as a Tool	55
7.1 Life History	57
8. Limitations of the Study	58
9. Ethical Considerations	59

CHAPTER 5: FINDINGS AND DISCUSSION 60

1. Introduction	60
2. Background Information of the Respondents	60
2.1 Length of stay in the Area	60
2.2 Source of Income	62
2.3 Level of Education	66
2.4 Gender	67
2.5 Age	67
3. Information on Indigenous Knowledge and Development	69
3.1 Ecological Understanding	69
3.1.1 Flora	69
3.1.2 Fauna	72
3.2 Indigenous Wildlife Management	74
3.3 Indigenous Morality	75
3.4 Indigenous Knowledge Transmission	77
3.5 Communities Attitudes Towards Indigenous Knowledge	78
4. Views of the Ezemvelo KZN Wildlife Staff	80
4.1 Management Levels	80
4.2 Access to Indigenous Knowledge by EKZNW	80
4.3 Recognition of Indigenous Knowledge as useful by EKZNW	81
4.4 Role of EKZNW Regarding Indigenous Knowledge	82
4.5 Suggestions to Reposition EKZNW	83
4.6 Conclusion	85

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS 87

1. Introduction	87
2. Reflection to the Study	88
3. Conclusion	89
4. Recommendations	90
5. Summary	92

REFERENCES

APPENDICES

Appendix A: Ethical Consideration Disclosure

Appendix B: Community Questionnaire

Appendix C: Ezemvelo KZN Wildlife Questionnaire

Appendix D: Environmental Education Policy

Appendix E: Community Levy Policy

Appendix F: CAMPFIRE

LIST OF FIGURES AND MAPS

FIGURE	DESCRIPTION	PAGE
2.1	Elements of Sustainable Development	23
2.2	Sustainable Rural Livelihoods Framework	24
3.1	Map showing KZN Province and HIP	42
3.2	Map showing HIP and the relative position of the Study Area	45
3.3	Map showing main rivers flowing through HIP	46
5.1	Length of Stay in the Area	61
5.2	Respondents' Source of Income	64
5.3	Level of Education	66
5.4	Gender Composition of Respondents	67
5.5	Age Category of Respondents	68

LIST OF TABLES

TABLE	DESCRIPTION	PAGE
3.1	Vertebrate Species at HIP that have declined	44
4.1	Data collection approaches that have been used	57
5.1	Respondents' source of Income	65
5.2	Plant Exploited for Indigenous Medicine	71
5.3	Communities' attitudes towards biodiversity conservation	79

LIST OF ABBREVIATIONS AND ACRONYMS

BIODIVERSITY	Biological diversity
CAMPFIRE	Communal Areas Management Programme for Indigenous Resources
CBOs	Community Based Organizations
CEO	Chief Executive Officer
CK	Cosmopolitan Knowledge
CP&P	Conservation, Partnerships & Projects
CPC	Conservation Partnerships Co-ordinator
CCO	Community Conservation Officer
CM (H)	Conservation Manager (Hluhluwe)
EKZNW	Ezemvelo KwaZulu-Natal Wildlife
GMZ	General Manager (Zululand)
HIP	Hluhluwe-Imfolozi Park
IK	Indigenous Knowledge
IKS	Indigenous Knowledge Systems
KDNC	KwaZulu Directorate of Nature Conservation
KZN	KwaZulu-Natal
KZNNCS	KwaZulu-Natal Nature Conservation Service
NGOs	Non Governmental Organizations
WPC	World Parks Congress
SADC	Southern African Developing Countries
SANPARKS	South African National Parks
TAs	Traditional Authorities
UNCED	United Nations Conference on Environment and Development

ABSTRACT

The state of the environment in South Africa is deteriorating and the province of KwaZulu-Natal is no exception to the situation. KwaZulu Natal is experiencing soil erosion, has inadequate policies for environmental protection, and current environmental measures lack mass support (Ndimande, 2001:6). This is so because the beliefs of the past ascribed overpopulation as the main factor for the degradation of the environment and many conservation projects disregarded human needs, rights and dignity. For instance, the establishment of many game reserves meant forced removal and social dislocation of indigenous people (Ngobese and Cock, 1995:17-21). Forced removal and social dislocation in any situation can instigate conflict.

Conservation agencies in South Africa, such as Ezemvelo KZN Wildlife (EKZNW) in KwaZulu-Natal (KZN), can be very effective in their conservation efforts if they create a platform that allows indigenous knowledgeable communities to participate in the management of protected areas. This participation could be in the form of allowing and encouraging communities abutting protected areas to contribute relevant Indigenous Knowledge (IK) for use to authorities of EKZNW. This effectiveness could be enhanced if the result of community participation will be sustainability in the community. According to Shragge (1993), a community has a heart, and its lifeblood is its authentic culture, its shared experiences of the past and its local ways of doing things (1993:39). Utterances such as the one below by Masuku (1999) do not stand conservation agencies in good stead.

‘ ...the lack of good understanding of people's way of life by my organizations(EKZNW) in areas that are today recognized as protected areas is occasionally pointed as one of the sources of conflict around conservation issues...(1999:1) ’

The aim of this study was to explore ways in which EKZNW could position itself to be an integral part of saving the decline of indigenous knowledge, and to nurture and stimulates its production as a starting point towards improving the

lives of rural poor communities adjacent to Hluhluwe-Imfolozi Park, with specific reference to communities of Mpembeni and Mdletsheni Traditional Authorities.

For the purpose of this research, communities' animal and plant indigenous knowledge was chosen as the yardstick for assessment of contribution that communities can make to biological diversity conservation and development. The choice was informed by an understanding that the diversity of plants and animals provide us with a resilient natural system, which in turn provides a crucial life support system such as purification of air and water. On the other hand, poverty drives the rural poor, who also benefit from this life support system, into poaching and unsustainable resource harvesting. These illegalities, although the only option, play a negative role in the viability and sustainability of biological diversity conservation.

Research findings revealed that plant and animal indigenous knowledge is present in the communities, and they face a great challenge that there is no systematic documentation of this knowledge, and its oral transmission is inconsistent.

It was through the urgent need dictated by the status quo that this research project was conceived. An attempt was made to tap into this knowledge by conducting a study in the two communities and bring it to the forefront of biological diversity conservation, and into development projects funded through community levy fund by EKZNW, in order to uplift the communities' standard of living.

ACKNOWLEDGEMENTS

Firstly I would like to express my thanks to the Almighty God for wisdom, knowledge, determination, endurance and health profusely accorded to me during my entire study life.

Secondly I express my thanks to the following people for their invaluable contributions:

- I acknowledge my supervisor, Dr Thokozani Xaba for invaluable supervision, input, advice, and guidance. His co-operation, commitment and sacrifice made it possible for me to come this far. To him I express my sincere gratitude.
- I am also indebted to Ezemvelo KZN Wildlife for funding my studies.
- Thanks to all the respondents from Mpembeni Traditional Authority, Mdletsheni Traditional Authorities and Ezemvelo KZN Wildlife for cheerfully and willingly co-operated with me to accomplish the aims of this study.
- I am also particularly grateful to my friends Pinky Mathabela and Njoya Silas for their support and willingness to help whenever I had a question or two.
- Special thanks go to my colleagues for their social and academic support.

Thirdly and finally, I offer my deepest love and heartfelt gratitude to the following special people in my life:

- My mother, for taking care of my children when I could not.
- To my husband Mlungisi, I say 'Mbovu, Somahashi, Nomafu, Ngcukumane, for his emotional and spiritual support and active participation when I was conducting fieldwork.
- To my three children, Melissa, Sean and Nomafu for coping with mom's divided attention during her studies. To them I say, 'You are my pride, mom will always support you in your chosen academic fields'.

PREFACE

The research work described in this dissertation was carried out in the School of Social Work and Community Development, University of KwaZulu-Natal, Howard College under the supervision of Dr Thokozani Xaba. The fieldwork took place at Mpembeni and Mdletsheni Traditional Authorities abutting Hluhluwe- Imfolozi Park in KwaZulu-Natal Province. Throughout the research, contacts were maintained with the university.

At the time of the study, I was employed as a Social Ecologist at Ezemvelo KZN Wildlife (EKZNW), a parastatal organization in KwaZulu-Natal that is mandated by the KwaZulu-Natal Provincial Government to manage the Province's biological diversity inside and outside of protected areas. My work entailed co-ordinating the Environmental Education programme and conducting social research for the organization. The co-ordination is done through working with Community Conservation Officers who are based in the three regions of the organization.

At the conception of the idea for this study, I was working in the Conservation Partnerships & Projects (CP&P) Branch that, as a result of business review, was dissolved. All staff previously under this branch was absorbed under a new branch called Biodiversity Conservation Operations Division.

C P & P Branch was more people-oriented in its approach; its focus was on establishing and nurturing good people relations with the KwaZulu-Natal people, especially those abutting protected areas. This Branch was the flagship and mouthpiece of EKZNW striving to instill in people's minds that the organization's approach was no longer only bio-centric but anthropocentric; the name of the branch was itself self-explanatory.

While still serving under the CP&P Branch, I learnt that the organization's intent was to research and document indigenous knowledge (IK) relevant to biodiversity conservation and accord and utilize it equally with western knowledge ("scientific" knowledge/ cosmopolitan knowledge) where possible and relevant.

The intention of EKZNW to research and document IK is stated under the objectives' section of its Environmental Education Policy (Appendix D).

I also became aware that there was a fund in the organization called a Community Levy Fund. Community based development projects identified by communities neighbouring protected areas under the management of EKZNW were/are supported from this fund. Community projects are funded as per the provisions of the Community Levy Fund policy and guidelines (Appendix E). To my knowledge, at the time of documenting this work, no indigenous knowledge oriented projects had thus been funded out of the Community Levy Fund.

CP&P Branch enabled me to gain access to communities where development projects were very widespread. A new crèche, new schools and classrooms, a community clinic, and a Community Conservation Game Reserve (CCGR) are among some of the structures that are mushrooming within the homesteads as indication of development in the community. I also witnessed signs of failing development projects that could either be attributed to promises made and never kept by project donors, or lack of capacity or project ownership on the side of communities. All these failing projects gave me some foundation into the concept of development and opened certain lines of investigation. Something appropriate that was going to acknowledge people and be sustainable had to happen. The question was, 'What is it and whatever it is, whose responsibility is it?'

I had always dreamt of my thesis as a valuable piece of work on the shelf at EKZNW library. Now that CP&P Branch is non-existent, will this piece of work serve any purpose? The more I think about it, the more I get butterflies in my stomach. Will my employer take offence that I choose to use information that shows him in a negative light? If I leave out uncomplimentary considerations, then I do conceal what is actually happening. However, I find consolation in the stand I have taken, which is to be as objective as possible and portray events and people's attitudes and ambitions as I experienced them during fieldwork. These are indeed trying times and objectivity is triumphant. I hope this work will

contribute to the Development Discipline, and any biases encountered during reading should be accepted and used for critical reflection.

This dissertation represents an original work by myself and has not otherwise been submitted in any form for any degree or diploma to any institution of higher learning. Use of other people's work in the text is duly acknowledged.

TPL NGUBANE

CHAPTER 1: INTRODUCTION

1. Introduction

The thesis will explore the efforts of the Conservation bodies in KwaZulu- Natal, especially Ezemvelo KZN Wildlife (EKZNW), to become effective in the process of creating platforms that enhance indigenous knowledge amongst local communities and that lead to the communities' participation in the management of protected areas. Such participation will ultimately lead to higher levels of developmental sustainability in the area under investigation, i.e. the rural poor communities adjacent to Hluhluwe-Imfolozi Park, with specific reference to Mpembeni and Mdletsheni.

As we journey through this work, constant reference will be made to the concepts 'scientific' and 'indigenous' when talking about different forms of knowledge and when showing the differences that exist between these forms of knowledge. This study will refer to the knowledge acquired through formal education as western knowledge or Cosmopolitan Knowledge (CK), and to that acquired outside formal education as Indigenous Knowledge (IK). This is objectively done to steer out of the aggrandization usually conferred to formal knowledge. This aggrandization is evident in the use of terms such as 'scientific' when referring to knowledge acquired through formal education or when distinguishing it from the other form acquired outside formal education.

Where use of the term 'scientific' will be inevitable when referring to CK, it should not be regarded as embracing the idea that indigenous knowledge is non-scientific. Ideological perception such as that of Warren (1991) when he says IK is a term used to distinguish scientific knowledge from that developed by communities, portrays IK as non-scientific and such literature is in abundance. Whether either form of knowledge or one of them is worthy of being labeled scientific is outside the aims and objectives of this study, hence will not be entertained.

2. The International Context

Many of the documents signed at United Nations Conference on Environment and Development (UNCED) in 1992 at Rio reflect the need to conserve the knowledge of the environment that is being lost in communities and to develop mechanisms to protect the earth's biological diversity. UNCED was an important incentive for the United Nations and other development agencies to embrace Agenda 21 as the guiding principle for sustainable development at local level.

The World Conference on Science (Budapest, 1999) recommended that scientific and indigenous knowledge should be integrated in interdisciplinary projects dealing with links between culture, environment and development in areas for the conservation of biological diversity, management of natural resources, understanding of natural hazards and mitigation of their impact. Local communities and other relevant players should be empowered and be involved in these projects (Fitzgerald et.al. 1995). Development professionals consider indigenous knowledge as an invaluable and under-utilized knowledge reservoir, which presents developing countries with a powerful asset. This has been aptly demonstrated by Khan, Mantzaris and Radebe (2005) who have illustrated the developmental aspects of IK with a number of empirical examples both in terms of private enterprise as well as community development.

In the case of this research, indigenous knowledge refers to knowledge developed by a specific local community that has gone through a long historical route and that has established its knowledge through cultural affirmation, verbal and historical traditions, internal and external social, group and individual interactions with other indigenous communities, natural resource management and a host of other characteristics that are the foundations and backbone of indigenous knowledge.

An understanding is required of IK and its role in community life from an integrated perspective that includes both spiritual and material aspects of a society as well as the complex relation between them. At the same time, it is

necessary to understand and to explore the potential contribution of IK to local development. The present status of IK is that these forms of knowledge have hitherto been suppressed.

The oral, rural, non-formal and 'powerless' nature of indigenous knowledge has made it largely invisible to the development community and to global science. A further factor contributing to indigenous knowledge's powerlessness can be attributed to the Apartheid political system in South Africa. The political and ideological underpinnings upon which the Apartheid regime was based and perpetrated was founded on the notion that the culture, customs and tradition of the African indigenous people were to be subjected to the "superior" elements of "White, Christian civilization and way of life". Because of the political and ideological dominance of the white regime through its state apparatuses and machinery, the key elements and implementation of IK systems were suppressed (Bonner 1977; Magubane 1979; Bozzoli 1979).

Indigenous knowledge is the knowledge that was rooted in the minds of the rural oppressed masses that had to a greater extent neither a formal education background nor a political voice.

As a consequence, indigenous knowledge has not been captured and stored in a systematic way, with the implicit danger it may become extinct. Western knowledge that is based on western value systems, beliefs and a practice offered in all educational institutions was forever indulged with glorification at the expense of IK. Ideological perceptions relating to IK were camouflaged with negativity and backwardness. Indigenous knowledge has often been dismissed as unsystematic and incapable of meeting the productivity needs of the modern world. A definition such as, 'IK is a term used to distinguish scientific knowledge from that developed by communities' by Warren (1991:42-43) is proof enough of generalizing IK as unworthy of scientific status.

Fortunately the situation has changed. Since the last decade of the twentieth century we have witnessed an explosive growth in the number of publications on the relevance of indigenous knowledge in a variety of policy sectors and academic disciplines. The bibliography of the present thesis and the citations included in its contents are a testimony to this. It is therefore fortunate to observe that global science has acknowledged the relevance of indigenous knowledge as well.

3. Definition of Terms

Indigenous knowledge systems (IKS) refer to the complex set of knowledge and technologies existing and developed around specific conditions of populations and communities indigenous to a particular geographic area. IKS can also develop within communities descended from populations that inhabited the country at the time of conquest or colonization. These populations retain some of, or their entire own social, economic, cultural and political institutions (National Research Foundation 1991:45).

The focus of IKS might be on the long history of the practice, in which case it is often called 'traditional knowledge'. Grenier (1998) defines Indigenous Knowledge (IK) as the unique, traditional and local knowledge existing within and developed around specific conditions of women and men indigenous to a particular geographic area. It is unique to a given culture or society. Its nature of being mostly non-formal and less documented makes it seem to be seen to contrast with the knowledge generated within the international system of universities, research institutes and private firms. Communities in developing countries use IK at a local level as the decision-making basis pertaining to food security, human and animal health, education, natural resource management and other vital activities. The generation of such indigenous knowledge has been acknowledged as a primary source of survival for many communities throughout Africa and South Africa in particular (Gough 1997).

IK systems are also dynamic as new knowledge is continuously added. Such systems do innovate from within and also will internalize, use and adapt external common practice seen in communities that are indigenous to specific

area of knowledge to suit the local situation. It is the result of a continuous process of experimentation, innovation, and adaptation that enables indigenous knowledge to blend with science and technology (Fitzgerald et.al 1995).

The following definition is a combination of these different aspects: 'indigenous knowledge, also referred to as traditional or local knowledge, refers to the large body of knowledge and skills that have been developed outside the formal educational system. It is embedded in culture and is unique to a given location or society'. IK is thus an important part of the lives of the poor (Indigenous Knowledge Systems, 2003: 5).

In a more inclusive and wider definition IK could be summarized in the following way:

- IK is generated within communities
- IK is context and culture specific
- IK is the basis for decision-making and survival strategies
- IK is non-formal knowledge and not systematically documented
- IK covers critical issues: primary production, human and animal life, natural resource management
- IK is dynamic and based on innovation, adaptation, and experimentation
- IK is oral and rural in nature (Fitzgerald, P *et.al* 1995:4)

It can be said that indigenous Knowledge (IK) can be seen and interpreted in a myriad of ways and angles. Analysis of the above statements of definitions about IK reveals that several interrelated aspects appear to be more or less connected to the livelihoods of people, mostly the rural poor. Although the About Indigenous Knowledge (2003) definition treats the terms, 'traditional knowledge' and 'local knowledge' as synonymous to and equivalents of IK, it is worth mentioning that in this study IK is regarded as being able to be either modern or traditional.

Statements such as 'IK is dynamic and based on innovation, adaptation, and experimentation' by About Indigenous Knowledge (2003) advocate the modernity of IK. While it is to a greater extent also true that IK is oral and rural in nature, this point can be said to refer mainly to 'traditional' indigenous knowledge. Literature such as *Isilulu Solwazi Lwemvelo* written by Gcumisa (1998) is an example of a systematic documentation of indigenous knowledge.

5. Background to the Study Aims and Objectives

Ezemvelo KZN Wildlife is a parastatal organisation in KwaZulu-Natal that is mandated by the KZN Provincial Government to manage the biodiversity of the province. In my position as a Social Ecologist within the then Conservation Partnerships & Projects Branch at EKZNW, I learnt that the organisation's intent was to research and document indigenous knowledge (IK) relevant to biodiversity conservation and accord and utilize it equally in relation to western knowledge ("*scientific*" knowledge/ *cosmopolitan knowledge*) where possible and relevant. This intention is stated in the organisation's Environmental Education policy document (Appendix D).

I also became aware that there was a fund in the organization called a Community Levy Fund. Community based development projects identified by communities neighbouring any protected area under the management of EKZNW are funded out of this fund.

5.1 Aims

The aim of this study was to understand the indigenous knowledge of communities surrounding Hluhluwe- Imfolozi Park and how this could be integrated into conservation programmes. The loss of biodiversity in most areas of KwaZulu-Natal has been readily acknowledged by reports received from EKZNW staff. These reports reveal that:

- (a) Areas with the highest biodiversity are also the areas inhabited by the rural poor communities (Khan, Mantzaris and Radebe 2005:3-4).

- (b) The depletion of biodiversity is accompanied by and much preceded by the erosion of indigenous knowledge about diverse biological resources.

An omission on the part of EKZNW in consulting local communities, before implementing projects intended for community development will ultimately impede local participation. Headstrong incentives directed to the rural poor such as arresting people each time they are caught poaching, has often led to adverse impacts on EKZNW community relations.

There is therefore a need to strategically conserve biodiversity as well as indigenous knowledge practices and lifestyles that favour biodiversity conservation.

5.2 Objectives

To achieve the above-mentioned aims, the following objectives were pursued:

- (a) To describe the IK about plants and animals that would be relevant to biodiversity conservation in the Mdletsheni and Mpembeni communities.
- (b) To understand the communities' attitudes towards conservation of plants and animals.
- (c) To recommend how IK relevant to biodiversity conservation can be integrated into environmental education and development projects.

This work therefore argues for the acknowledgement and conservation of indigenous knowledge of biological resources through the establishment of networks that would link local communities and conservationist with counterparts around the province.

6. Research Questions

Some of the rural communities possessing indigenous knowledge are usually the poorest of the poor and are usually located where wildlife is the best economic option. This means that poverty drives them into either poaching or buying illegally harvested natural resources, thus earning an income. This sometimes occurs when these are turned into *umuthi*, an art that is learnt or

passed from generation to generation. Tapping into the indigenous knowledge possessed by the people and incorporating it into the Western conservation approach can create economic benefits for the communities. This study therefore aimed to discover the indigenous animal and plant knowledge possessed by the people and to bring it to the centre of development so that it could benefit them and also be documented, for present and future generations.

The assumption of the study was that there is a role for indigenous knowledge in development initiatives by Ezemvelo KZN Wildlife for communities around the Hluhluwe Imfolozi Park. This created the following questions:

- (a) Which of the communities' Indigenous Knowledge could be incorporated into development projects to benefit both biological diversity and communities bordering Hluhluwe-Imfolozi Park?
- (b) How could development projects tap into Indigenous Knowledge relevant to biological diversity?
- (c) What is the level of EKZNW's contribution to the development of Indigenous Knowledge within communities in order for communities to be active participants in development?

These questions are an attempt to discover whether or not the indigenous knowledge possessed by the people can be of value to development projects. We will also know what is required in order to gain access to indigenous knowledge possessed by the communities.

7. Motivations and Choice of Study

For a very long time in the history of South Africa, conservation initiatives have seen the decline of wildlife resources despite painstaking and diverse conservationist approaches and well-equipped military units tailored to eradicate poaching and natural effects on biodiversity. The www.redlist.org provides summary statistics of extinct and threatened species of plants and

animals per country. South Africa is no exception to the rule. There is enough evidence to suggest that extinction of the country's plant and animal species is a real threat.

In this work I take the view that the crisis of biodiversity decline in Hluhluwe-Imfolozi Park is rooted in the social organization of resources. This particularly refers to distributive justice of the resources, inclusivity in the participation models used by the cutting edge agencies such as Ezemvelo KZN Wildlife to democratize their development initiatives.

In the new political dispensation there is an array of policy interventions that have been instituted to deal with social exclusion in matters of biodiversity conservation. But there can be no sustainable claim that the policy can deal with the crisis in hand without due alterations in the policies, thinking and actions of local active agencies and the communities themselves.

The preliminary observation based on my interaction with the field suggests that marginalization of local communities in biodiversity conservation can begin to change when biodiversity conservation agencies cease to dichotomize nature and human community but rather view the two as a single whole and complete part of their core business.

Biodiversity conservation agencies thought that they were capable enough to manage biodiversity without including indigenous communities and learning from the knowledge they possessed. Approaches of the past overlooked the historical evidence that indigenous communities have utilized natural resources over centuries without impairing their capacities to support them and their successive generations, the very essence of sustainable development (WCED 1987; Yeld 1997).

At Ezemvelo KZN Wildlife (EKZNW) there had been a paradigm shift from this inadequate conventional wildlife management style towards an approach that wanted to incorporate indigenous knowledge of the communities into development initiatives. EKZNW's concern was that continuous decline of

indigenous knowledge would result in a crisis for social local participation, legitimacy of development initiatives and a threat to the conservation nature and society. The above-mentioned historical shift followed the political change that took place in the country at the dawn of democracy in 1994. The new democratic culture that followed the country's political change was accompanied by a new set of ideas, values and realities that called on community participation, consultation and transparency that have been embedded in South Africa's legal framework. EKZNW as a legal entity was obligated to implement the new culture, values, and realities of the country and its laws and to adjust to the newly established democratic order.

Effective participation of indigenous communities (where formal modern schooling is less practiced) is only possible if indigenous knowledge, at least, is prevalent, organized, regenerated and is a solution to daily livelihood hurdles of a community (Khan, Mantzaris and Radebe 2005:7). Therefore indigenous knowledge in this case becomes a connecting point between EKZNW as a social actor and the community that must be brought to the center of development on the basis of what they can contribute.

Biodiversity conservation has to deal with the cumulative social tendencies destructive to conservation, the looming catastrophe caused by the slow fading of indigenous knowledge (living a vacuum, especially due to absence of at least the cosmopolitan knowledge). This work will therefore attempt to re-define the function of EKZNW in the mosaic of roles, to assert it as a conservator (understood in terms of biodiversity conservation and human society) and a catalyst in conservation and regeneration of indigenous knowledge.

8. Value of Study

This study will attempt to seal the widening crack between EKZNW and the communities at HIP whereby communities feel left out in development initiatives pertaining to them. It is hoped that EKZNW will realize that local

communities through using their own knowledge, can direct their own development.

This is directly linked with the key objectives of the study that include the description and analysis of the IK possessed by the community in relation to plants and animals and their conservation as well as to recommend how IK relevant to biodiversity conservation can be incorporated into environmental education and development projects.

In this sense the findings from this research could be useful in the following ways:

- (a) The Revised National Curriculum Statement builds on the vision of the Constitution of South Africa and Curriculum 2005 and reflects the principle of inclusiveness and practices of social justice, a healthy environment, and human rights. The principle of inclusiveness means that the curriculum is sensitive to issues of IK, poverty, gender, and other challenges like disabilities. Community Conservation Officers (CCOs) have a responsibility to work with communities in the collection of IK related to biodiversity for using this knowledge in the implementation of Environmental Education programmes. Findings will therefore indicate how far and wide CCOs need to go in search of indigenous knowledge.
- (b) Ezemvelo KZN Wildlife (EKZNW) has a number of underutilized environmental education centres because of staff shortages. These centres could be converted into environmental education centres cum indigenous knowledge centres run by both EKZNW and the communities.
- (c) Some IK is only in the minds of people and is orally transmitted

between generations. Through Community Based Organizations (CBOs) such as Local Boards, communities can facilitate documentation of an IK booklet that could be copyrighted and generate revenue for them (local communities). This could mark the beginning of systematic dissemination of IK to other institutions and from one generation to the next. This can help to augment the declining capacity of the traditional means of transmission of this knowledge due to formal schooling.

- (d) The community could also share with EKZNW indigenous ecological knowledge that could be integrated into cosmopolitan conventional ecological approaches for the management of protected areas.

9. Chapter Sequence

This study consists of six chapters. Chapter 1 provides a general introduction to the study, giving a background to the study aims and objectives. It also gives the research questions, the motivation and choice of study and discusses the perceived value of this study. The objective of this chapter is to inform the reader about the intention of this study.

In Chapter 2 both the theoretical and conceptual frameworks are discussed. The concepts, namely, rural areas, sustainable development, rural development and indigenous knowledge, are discussed. And the concept rural development is linked to indigenous knowledge. The chapter also explores the history of conservation in South Africa, Nature Conservation Act in KwaZulu-Natal. Literature on indigenous knowledge and conceptual framework is also discussed.

Chapter 3 deals with the descriptive background of the study area. The study area is the Mdletsheni and Mpembeni Tribal Authorities, two of the ten tribal

authorities bordering Hluhluwe-Imfolozi Park. The chapter also gives the historical background of HIP, its location and size, as well as climatic conditions of the area.

Chapter 4 reviews the methods employed in conducting the study. It discusses the choice of the research, the methods and tools for collecting data, the sample size and concludes by discussing the study limitations and ethical considerations.

Chapter 5 presents a detailed analysis and discussion of the finding relating to the respondents in this study. The profile and indigenous knowledge of the respondents from the two Traditional Authorities (TAs) and EKZNW staff perception about indigenous knowledge and development at HIP are discussed.

Chapter 6 is the final chapter that focuses on the conclusion drawn as a result of the findings of the study and recommendations made for curbing diminishing of IK at HIP and improving relations between HIP communities and EKZNW.

CHAPTER 2: LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

1. Introduction

The present study will attempt to examine the importance and maintenance of indigenous knowledge amongst rural people and communities as a foundation upon which the Ezemvelo KZN Wildlife (EKZNW) can build a culture of environmental awareness amongst them. A case study of the areas of Mpembeni and Mdletsheni will be the empirical component of the project.

The chapter will examine indigenous knowledge (IK) and the conceptual framework applied in the study. The chapter begins with a literature review and then defines the concept 'rural area' since the study takes place in a rural area. An analysis of the elements of sustainable development follows. This analysis is relevant in view of the fact that as people we live in the environment and development is what people do in an attempt to improve their fate within the environment. The chapter concludes by suggesting a paradigm shift in issue of biodiversity conservation towards an approach that will allow neighbouring communities a say in management plans.

2. Literature Review

The threat that faces indigenous knowledge systems (IKS) is that it is often marginalized and lost in modern times due to segmentation and amalgamation of cultures and traditional institutions that supported it. The proponents of IKS unanimously agree that ideological perceptions relating to IKS are shrouded with negativity and associated with backwardness despite the fact that they are still largely retained and practiced by their custodians. Modern development ideology sees IKS as an obstacle to development if not retarding it (Covane, 1996; Gata, 1996; Seepe, 2001).

The National Research Foundation defines IKS as the complex set of knowledge and technologies existing and developed around specific conditions of populations and communities Indigenous to a particular area.

Nxumalo (1995) in his key note address at an IKS Conference held in Pietermaritzburg, South Africa states that the greatest challenge for indigenous knowledge is that it is usually not documented because it is only in the minds of the local people and is passed orally from generation to generation orally.

The results of a study by Quiroz (1996) depict IKS as a product of holistic systems of perceptions, relationships and organizational arrangements that have suffered neglect and ridicule over centuries as they lack documentation systems.

Domah (2000) from a feminist perspective strongly agrees with Quiroz's findings while referring to industrialisation as one of the challenges facing Indigenous Knowledge Systems amongst communities indigenous to the island of Mauritius. She sees industrialisation as a challenge because while in the past knowledge was transmitted from a parent to a child especially from mother to daughter, at present a number of women now work outside the home, severing the line of transmission of knowledge. It is clear in this deliberation that women are regarded as institutions responsible for the transfer of knowledge from one generation to another.

Driven by a perceived widening gap of indigenous knowledge that is gradually becoming extinct, Brascoupes, and Mann, (2001) produced a guide whose main objective was to empower indigenous communities of Canada to recognize, protect, preserve and share their indigenous knowledge in keeping with the goals and traditions. In the process of developing this document it became evident that some communities were not really aware of the traditional knowledge they possessed. The present study attempts to examine such processes evident within the Hluhluwe-Imfolozi Park communities.

Thus whilst a community's Indigenous Knowledge defines a community's uniqueness and ties its past to the future, many communities do know how to go about identifying and protecting it. This guide assumes that all communities are able to do what is necessary to protect and control access to their Indigenous Knowledge.

While all indigenous communities should aspire to a situation where they will be self-reliant, it needs to be said that not all communities are presently so. It should also be borne in mind that most of the time the interventions of development agencies have a hidden agenda to supplant pre-existing knowledge of the locals and replace it with theirs deemed to be superior. Brascoupes and Mann's (2001)'s guide is general in approach because it encompasses all indigenous communities of Canada. It is in the interest of this study to remain focused and bridge the gap at Hluhluwe-Imfolozi Park.

Ohiorhenuan (2001) in his research on developmental issues commissioned by The United Nations Development Programme (UNDP) shows a positive utilitarian attitude towards indigenous knowledge and sustainable human development. He asserts that sustainable human development is development that not only generates economic growth but also distributes benefits equally while ensuring that local people are not marginalised but empowered. He qualifies such development as one that gives priority to the poor and is pro-nature, pro-jobs and pro-women and provides for people participation in decisions affecting them.

He approaches his work from an 'Africanist' perspective whereby people take ownership of their destiny. His work can be located within an 'Afro-centric' paradigm when he says, *'the richness of the African continent lies precisely in the different-ness but essential one-ness of its constituent cultural groupings'*. While this work touches on the critical area of society, and reveals the beliefs of UNDP about the concept of sustainable development and IKS, the whole process of repositioning EKZNW on matters of biodiversity conservation and people participation has to be a process owned by EKZNW, in partnership with communities and all stakeholders and role players.

Odora Hoppers (2002) argues that indigenous knowledge systems are the missing link in the literacy education, poverty alleviation and development strategies. She expresses no confidence on the current development paradigms because they fail to acknowledge the considerable "prior

knowledge" possessed by people from Africa. Her work represents a serious and innovative attempt to negate the Western perspective that automatically equates being rural with being poor, illiterate with being ignorant and what is not written down as being thoughtless. She further explains that globalization has made political leaders realize that illiteracy is not the main obstacle to development and more so in some rural areas local leaders are in positions of power without the advantage of literacy.

She forewarns of the threats of globalization amongst which is the threat of the appropriation of IKS into proprietary knowledge of a few. She sees a need for the government to commit into new ethics of thought and practice towards the weak and vulnerable, whereby rural people's skills, knowledge and competencies acquired through indigenous methods would form the basis of any development intervention. For her, development will only take place if and when people's pride is restored and their history is recovered. Within this context development is not about what people do have, but between the confluence of indigenous knowledge and non-discrimination. Odora Hoppers' writing pinpoints the fact that rural people have a heritage of knowledge that is fundamental to interpretation of their world in accordance with practices that they recognize.

The objective of Thakadu's work in Botswana carried out in 1996 was to investigate the potential contribution of indigenous knowledge systems in wildlife conservation and to assess the link between indigenous ecological principles and conventional ecological principles. His method of data collection was through both secondary and primary means, using literature, key informants, focused groups and participant observations. The study revealed that communities had resource management and conservation strategies based on sound ecological principles though they are marginalised in favour of conventional inadequate conservation attempts that have no relevance to the cultures resident within the ecosystems.

I share the same concerns as Thakadu (1997) that indigenous knowledge lacks systematic documentation, and indigenous conservation strategies of

the communities are sidelined in favour of the conventional methods irrelevant to the culture of the communities. His study, however, does not come up with a solution as to what should be done to change the status quo. Despite the narrow focus of the study, which was hunting, it did manage to provide an insight regarding the threat towards the indigenous knowledge as well as the impact and severity of modernization on indigenous knowledge.

A recent project of Laird and Wynberg (2003), commissioned by the International Union for International Conservation of Nature (IUCN), which primarily focused on the impacts of commercializing products from marula and crabwood trees, and helping overcome the poor understanding that affected communities have about what biodiversity prospecting involves, represents an attempt to address conflicting development and conservation issues. Biodiversity prospecting, sometimes shortened to 'bioprospecting', describes the collection of natural resources with the intention to commercialize them.

Laird and Wynberg's study attests to the fact that local communities possess valuable indigenous knowledge relating to the use of natural resources. This attestation becomes blatantly evident when they quote instances whereby bioprospecting is likely to occur. They say, 'biopiracy is the collection of traditional knowledge about biodiversity without permission from the owners'. Commercialisation of Hoodia based on the San peoples' traditional knowledge is one such example. The San used the species of Hoodia to stave off thirst and hunger. Today there is a patented appetite suppressing compound called P57 from the Hoodia plant. The San people were not involved in any stage of development of P57 and no arrangements were made to benefit them for their traditional knowledge. Although the case of San people happened four decades ago, similar incidents have not ceased even today.

Laird and Wynberg's study is very general in approach because it encompassed all holders of indigenous knowledge, regardless of their geographical location and was thus limited in the sense that it only focused on floral resources with no mention being made of faunal indigenous knowledge. The essence of sustainable development hinges on attaining both economical

and ecological soundness without any social cost.

It is in the interest of this study to refine and focus indigenous knowledge to development initiatives by EKZNW at HIP with regards to animal and plant indigenous knowledge possessed by the Mpembeni and the Mdletsheni Tribal Authorities. Studies undertaken, consultation done and workshops previously held were not comprehensive enough nor were they specific to HIP, and were mainly undertaken or held to underscore or discredit the exaggerated view of cosmopolitan knowledge.

This study is influenced by Warren's (1992) theory that indigenous knowledge and biodiversity are complementary phenomena essential to human development. He is concerned about the existence of a vast heritage of knowledge about species, ecosystems, and their use, but not appearing in world literature, being either insufficiently 'scientific' or not developmental. The study embraces Warren's (1992) point of view that IK represents an immensely valuable database that provides humankind with insights on how numerous communities have interacted with their changing environment including its floral and faunal resources.

The role of nineteenth century colonialism and social science in ignoring and sometimes maligning indigenous knowledge has been well documented (Warren 1989). Studies that depicted local communities and their knowledge as primitive, simple and static are now countered by a rapidly expanding literature generated by both biological and social scientists that describes the complexity and sophistication of many indigenous natural resource management systems. Indigenous knowledge is being lost at an unprecedented rate. Its preservation and documentation should be a research priority of the highest order. Existing literature on IK that could be located in a wide range of academic fields such as horticulture, botany, zoology, ecology, wildlife management, animal science, soil science, and hydrology indicate that the negative attitudes commonly held about indigenous knowledge during the colonial era have begun to change (Makombe 1993).

This has been confirmed through the contributions of some of the most innovative African thinkers and intellectuals both on the Continent and in the Diaspora in the seminal *Endogenous Knowledge: Research Trails* (CODESRIA 1997), where the concept of Indigenous Knowledge and Indigenous Knowledge Systems is articulated in its theoretical, philosophical and empirical underpinnings.

3. Rural Area

Clout (1993) considers places termed to be rural as possessing certain specific features, which qualifies them to be such. These features give these places a unique social character such as, among other things, inadequate infrastructure and open countryside and relatively fewer employees in secondary industries. All of these features apply to HIP, and it is for this reason that the social fabric for the production of IK is intact because not many people are employed in the formal sector.

The concept rural is clouded with controversy and disagreement when it comes to defining it. Little chance remains for ever reaching consensus on its meaning (libery, 1998). In South Africa there presently exist no legal definitions and no formally accepted ones (RDP; Department of Land Affairs, 1997). In the Apartheid era areas were defined as rural by reason of having a high density of people living in areas whose economic bedrock was a considerable distance from the city where people were employed. In actual fact such places were urban areas without amenities.

Statistics South Africa (1996) defines a rural area as, 'an area with the lowest levels of services and the greatest average distance to the nearest service point as compared to town and city centres and includes large scale farming', (The Rural Development Strategy of the Government of National Unity, 1995). This definition concurs with the one by the Department of Land Affairs (1997) where a rural area is 'an area which is sparsely populated with people either depending on farming or natural resources'. In South Africa poverty is prevalent in rural areas particularly in female-headed households (ibid.).

4. Rural Development

Harriss (1992) on defining rural development adopts a definition used by the World Bank where rural development is seen as a strategy designed to improve the economic and social life of a specific group of people, the rural poor. It is seen to be all- embracing and focused in the sense that it is not only limited to agriculture but the entire economy and specifically addresses issues of poverty and inequality.

In the view of Harmse (1994) the level of development in South African rural areas is low with most people trapped in subsistence economy. Most rural female-headed households are poverty stricken (The Rural Development Strategy, 1995) and HIP is no exception to the rule. This could be attributed to the fact that the literacy rate is low, and also that men and women organize their lives differently according to their respective priorities. Access to social benefits and an economic resource is not equitable for men and women. Women are to a greater extent involved in reproductive work which is time consuming and often unpaid. Culture and the previous socio-economic status of women are the breeders of these disparities.

5. Sustainable Development

The observance by the global community of harmful factors affecting the environment has resulted in the birth of the concept of sustainable development. According to French (1978) there was a recognition that protecting the environment called for integrating ecological consideration into social, economic and foreign policy making.

Sustainable development is a post-modern approach to development recently accepted in South Africa that perceives the environment as a holistic entity that integrates social, economic and biophysical concerns. This approach recognizes indigenous people and warrants their protection from environmentally unsound practices thereby allowing clear people participation whilst ensuring their empowerment (Fitzgerald *et al.*1995; Southey, *et al*

.2002).In this study, the challenges and opportunities of sustainable development are seen to lie both with communities and EKZNW.

Many organizations and institutions have adopted different definitions of sustainable development, however, one of the most commonly used ones being the one in the 1987 Brundtland's report of the World Commission on Environment and Development (WCED) which says, '*Sustainable development is development which meets the needs of the present without compromising the ability of the future generations to meet their own needs*' (Urquhart and Atkinson, 2000; Yeld, 1997).

The 1992 United Nations Conference on Environment and Development, also known as the Rio Conference, which was a follow up on the WCED sought to achieve the objectives of the WCED that are, environmental protection, economic growth, and social equity. Both the 1997 WCED and the 1992 UNCED conferences affirm that partnerships are the best tools to achieve sustainable development at local level. The challenges of sustainable development at HIP for EKZNW could not be further reiterated.

All of these definitions integrate the elements of sustainable development as shown in Figure 1.1 below. In this figure, *Economic Vitality* includes access to assets providing adequate livelihood or productive economic livelihood as well as creating an environment conducive to the creation of wealth. *Ecological Integrity* is concerned with the conservation of the environment, enhancement of biological diversity and healthy functioning of ecological systems. Emphasis is more on sustainable use of natural resources.

Social Equity focuses on empowering the communities to be able to manage their resources. Sustainable development is therefore a process that aims at striking the balance amongst these three processes and it is illustrated in Figure 1 where the three components intersect.

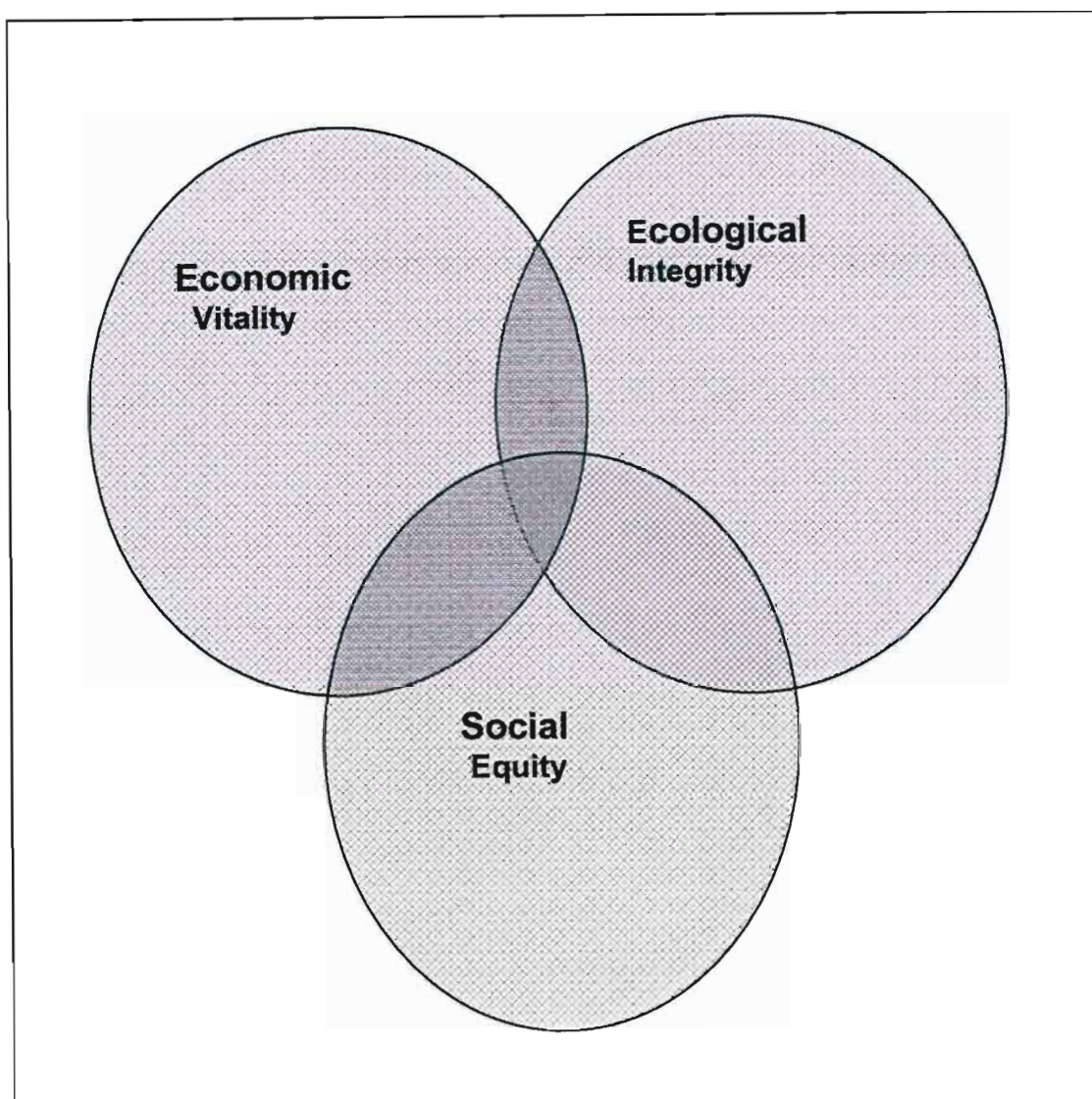
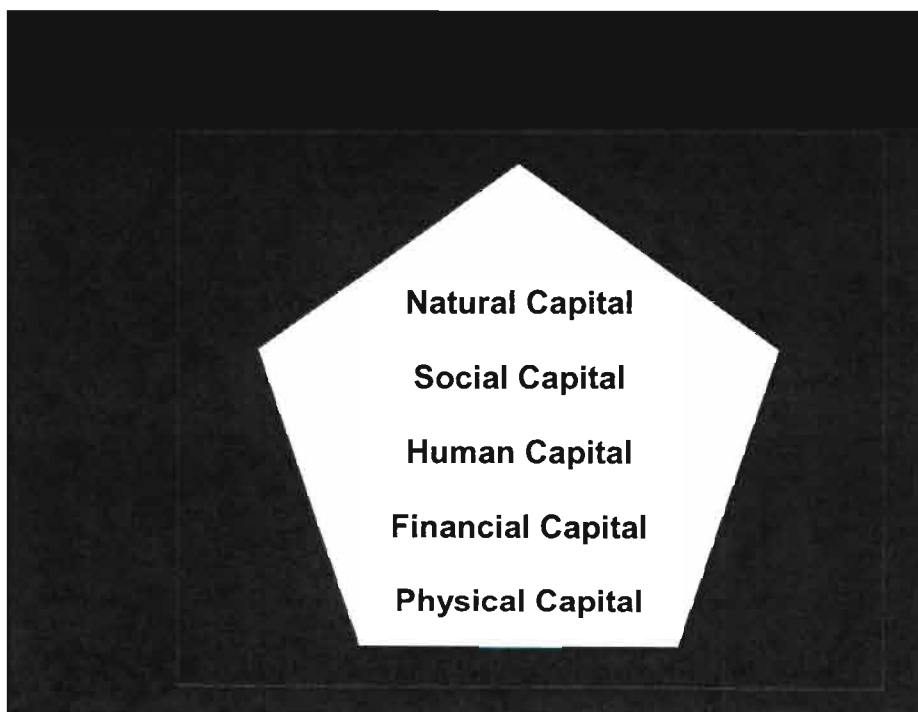


Figure 2.1: The Elements of Sustainable Development
(Urquhart and Atkinson 2000)

Any development oriented agenda recognizes the importance of maintaining ecological systems while developing and enhancing social capital, involving people in decision-making, addressing issues of social justice while ensuring that decisions taken are both economical and ecologically viable and sustainable (Scott, 2000). Sustainable development seeks out partnerships between government and people and encourages stakeholder participation. Oelofse (1998) says that the base to sustainable development is the encouragement of partnerships between local people and the private and public sector. What Oelofse (1998) states is to a greater extent the aim of this

study, to show ways and means of encouraging, elaborating and remodeling the partnership that exists between EKZNW and the HIP communities. Remodeling partnership in this case would be to change the functions of EKZNW to include taking part in the production of IK that is relevant to the biodiversity conservation. It would also mean maintaining conservation as production and use of IK and building appropriate structures.

Carney (1998) speaks of sustainable rural livelihoods. The term livelihood refers to a means of living, sustenance, or a process of nourishing. For Oelofse (1998) adequate livelihood is derived as a result of economic accessibility. She says attainment of a rural sustainable livelihood for a community lies at the heart of five different types of assets upon which communities' draw. These are:



**Figure 2.2: The Sustainable Rural Livelihoods (SRL)
Framework (Modified from Carney 1998)**

- Natural Capital (*land, water, environmental resources*)
- Social Capital (*wider institutions of society*)
- Human Capital (*skills, knowledge, good health*)

- Physical Capital (*basic infrastructure, transport*)
- Financial Capital (*supplies of credit, pension*)

While I may have some reservations with the dissection of the above SRL framework, I have nevertheless borrowed it to illustrate the concept of SRL.

What the above framework says is that planning is a very critical part of sustainability. Planning should be holistic in its approach. What happens to one system has an impact on other systems and so forth. One cannot talk of sustainable development where one system is sacrificed or undermined and others are perpetuated at the expense of it. As an example, any development project that undermines the 'human capital' cannot be said to be sustainable, therefore, a project at HIP that disregards the IK of communities cannot be said to be sustainable.

The main idea behind sustainable development is that the environment and development are not two separate issues but are strongly inter-linked (Urquhart and Atkinson, 2000). This is an aspiration endorsed by governments, business and civil society (Ghai and Vivian, 1992). Rather than a skewed focus on economic growth only, sustainable development integrates the social, economic and environmental dimension while ensuring full participation of the people. Hence I would define a people-centred development as a process that improves the living standards of the people.

Brown (1991) says an unsustainable strategy would aim at homogenizing peoples and cultures with the aim of eliminating differences. Sustainability is aimed at fostering tolerance; it realizes that each has a lot to offer and learn because of being different from the other. Barber (1987) takes this a step further when he mentions that the primary objective of sustainable development is that of 'reducing the absolute poverty of the world's poor through providing lasting and secure livelihoods that minimize resource depletion, environmental degradation, cultural disruption and social instability.

6. Indigenous Knowledge

Matawanyika (1998) provides a working definition of Indigenous Knowledge as including the following:

- Localized African systems developed over a long period whose patterns are based upon local knowledge systems and expressed in local languages.
- These systems are essentially African in origin even though they may display foreign attributes.
- They are influenced by innovations emerging from within themselves, and from other indigenous systems.
- People are said to be indigenous because of their descent from populations inhabiting the countries at the time of conquest, colonization or the establishment of state boundaries. These people retain some if not all of their social, economic, cultural and political institutions. Indigenous is therefore not confined to the minority groupings in the region but encompasses major groupings as well. A major criterion of indigenous would reflect African origination.

Dr Catherine Odora-Hoppers, one of the country's advocates of IKS at an International Conference hosted by University of Venda says that the term is often applied to accumulated knowledge, science, technology and environmental understanding in non-Westernized rural societies. IKS is not about woven baskets and handcraft for tourists *per se* but is both a national heritage and a national resource. A resource that should be protected and developed so that it can be put at the service of present and future generations (Mail & Guardian, 2001).

Contrary to the view of Matawanyika (1998) and Odora-Hoppers (2001), Warren (1991) says IK is not science and is different from (scientific) knowledge generated by universities, government, research centers and private industry in the sense that communities develop it.

It is interesting to note that different perspectives exist regarding the same concept and that there are perspectives that suggests that IK should be integrated into the mainstream while others imply that IK is science - separate from the mainstream but equal (Emeagwali, 2003). It is even more interesting to note that development paradigms have since realized that indigenous knowledge systems are the missing link in development strategies in Africa (Odora- Hoppers 2002).

Gumbo (1994) defines indigenous knowledge as that local knowledge that is unique to a specific culture and is based on certain skills. He sees it as a mechanism for ensuring minimum life survival. It is always based on people's discoveries. Warren (1991) refers to IK as wisdom or insight gained and developed by people in a particular locality, through years of careful observation and experimentation with the natural phenomenon around them.

In the view of Makhetha (1996) incorporating indigenous knowledge into development may be achieved through people participation in project planning and implementation and active integration of indigenous with scientific knowledge in order to capitalize on their potential complementarities. It is always agreed that active integration has received inadequate attention. There is no way that development can be sustainable unless grassroots people are properly involved, based on their values, culture, traditions, attitudes and indigenous knowledge. Indigenous knowledge cannot be defined without defining the context in which it exists (Peshoane, 1994).

These definitions and understanding of IKS are described from a strictly African perspective, but it has become obvious from the content of the thesis so far that indigenous knowledge is a global phenomenon that is rooted in every society on earth.

7. Linking Rural Development to Indigenous Knowledge

Indigenous knowledge (IK) and biodiversity are complimentary phenomena fundamental to human rural development. A recommendation by the World Conference on Science (1992) is that cosmopolitan knowledge and indigenous knowledge should be integrated in interdisciplinary projects dealing with links between culture, environment and development, and that rural communities and other relevant players should be involved in these projects (Warren, 1992).

For Titilola (1990), development professionals consider indigenous knowledge as an invaluable and under-utilized knowledge reservoir, which presents rural communities with a powerful asset. He strongly believes that development activities that work with and through indigenous knowledge and organizational structures have several important advantages over projects that operate outside them.

International and national development agencies have recognized the value of participatory approaches to decision-making for sustainable approaches to development. During the past decade a rapidly growing set of evidence indicates a strong relationship between indigenous knowledge and sustainable development. This knowledge offers new models for developments that are both ecologically and socially sound (Posey 1985:139-140). Furthermore, Titilola (1990) has demonstrated the cost-effectiveness of adding indigenous knowledge components into rural development projects. For this reason, the potential contribution of indigenous knowledge at HIP to manageable, sustainable and cost-effective development strategy should not be neglected.

According to Dewes (1993) the knowledge of indigenous people is an enabling component of development. He equates this knowledge with the feathers of a bird, since a bird can only fly if it has feathers. In the context of HIP, citing Dewes (1993), this would mean that the IK possessed by the communities is adequate enough to improve their economic and social lives.

Equating IK to the bird's feathers is Dewes' (1993) argument and it does not change anything for the HIP communities. The challenge is to restructure EKZNW into a development agent at HIP to see this knowledge from the point of view of many proponents of IK such as Gumbo (1994) and Makhetha (1996) (referred to later in the chapter) but not Warren (1991) who regards IK as unscientific.

Creemers (1997) mentions that in KZN the focus of economic development has been placed on tourism development and community empowerment. Potter (1997) sees this as a device for generating material benefits to poor rural communities while integrating conservation and development and alleviating poverty.

Embracing this at Hluhluwe-Imfolozi Park (HIP) would be questionable because whilst there exist examples of HIP communities engaging in tourism-related economic activities within or near the park, such activities have not changed their economic status and again local communities have no decision making powers as Roberts (1997) claims.

For example at Nyalazi and Memorial gates there are curio shops where local women sell their hand-made crafts. Most of these women have neither formal schooling nor formal employment. Their market is to greater extent international tourists. Tourism has its high and low peaks; it is hence not a very reliable source of income. Also, at the gates one often comes across children doing traditional Zulu dancing. Zulu dance can take different forms of body movement depending on the skill of the dancer. A skillful dancer is able to portray a particular animal whilst dancing without pronouncing that verbally. Lyrics of the song to which a dancer dances can sometimes though not always, have relevance to conservation. Tourists are not compelled to give these traditional dancers money, and that alone qualifies this activity as a very unreliable income generating venture. Both these activities have an element of IK in them. What it implies is therefore that IK has not yet been recognized as significant to conservation endeavors. However, the mindset is that it could

be best used for greeting tourists whom again are not obliged to watch (the dance) or buy (the craft).

8. History of Conservation in South Africa

Historically, conservation areas were managed as islands, far removed from communities faced with a painful struggle for survival. Also isolated from economic activities, protected areas were well on their way to extinction in the twenty first century as a result of poaching by communities. This is a cause for concern given that the poor communities were not doing this out of ignorance but in order to survive (Molefe, 2003).

The first formally protected areas to be established on the African continent were in Zululand, the then British Colony, in 1895. They were Hluhluwe, Imfolozi, and St Lucia Game Reserves, and remain so even today. There has therefore been a long history of nature conservation in this region of South Africa. In 1947, the Natal Parks Board was formed and later, due to Apartheid policies of the government, the KwaZulu homeland established the Bureau of Natural Resources, which in 1994 became the KwaZulu Directorate of Nature Conservation (KDNC).

In 1998, these two bodies were amalgamated to form the KwaZulu-Natal Nature Conservation Service (KZNCS), which is marketed as Ezemvelo KZN Wildlife. Except for The Greater St Lucia Wetland Park, following its listing as a World Heritage Site, EKZNW manages all the other state owned protected areas in the province, which cover approximately eight percent of the province (Derwent, 2003).

According to the report of the recent World Parks Congress (WPC) held in Durban in September 2003, the SANParks chairman and the director of the World Conservation Union in South Africa said respectively,

‘The success of conservation lies in cooperation. Protected areas stand no chance of surviving unless they play a role in the economy’ ... ‘The challenge is to show that promised benefits from conservation are viable

economically, and are not mere mirages to silence the rumbling discontent of the victims of development-speak' (Molefe, 2003:17)

According to the message in these two statements, the days of conserving nature for its own sake are over. Cooperation in the form of partnership between communities and conservation management is imperative for biodiversity to thrive and people to stop exploiting economically valuable flora and fauna. Development and the environment are interdependent, and sustainable development is a fine balance between the two as a result of rural subsistence.

9. The Custodians of Biological Diversity in KZN

9.1 Legal Bases of Conservation in KZN

Ezemvelo KZN Wildlife (EKZNW) and KwaZulu-Natal Conservation Services (KZNCS) are established in terms of the KwaZulu Nature Conservation Management Act No.9 of 1997. EKZNW is a parastatal body within the Department of Agriculture and Environmental Affairs, of which the political head is the Minister in the provincial cabinet. The Minister appoints the members of the board as well as the Chief Executive Officer (CEO). In terms of the KwaZulu Nature Conservation Management Act No.9 of 1997, EKZNW is responsible for the conservation of biological diversity in KwaZulu-Natal (KZN) as well as the provision of tourism facilities within the protected areas under its control.

The vision of EKZNW is to ensure that the intrinsic value of parks, wildlife, land and seascapes of KZN are sensitively protected as a source of spiritual and long-term sustenance for future generations. The mission of EKZNW therefore seeks to ensure the sustainable conservation of biological diversity in partnership with the people (Derwent, 2003). Chapter 5 of the KwaZulu Nature Conservation Management Act No.9 of 1997 stipulates the establishment of Local Boards. Local Boards are intended to enhance the relationship between the neighbouring communities and biological diversity conservation. Four Local Boards were established in 1999, one of which was

the Hluhluwe-Imfolozi Park (HIP) Local Board. There were five major directorates within EKZNW. These were created to derive efficiency in the execution of the core function. One of these directorates was the Conservation Partnership & Projects (CP&P) Directorate, which played a strategic role in nurturing and sustaining community relations between EKZNW and the communities.

9.2 Policies

In order to carry out its strategic function efficiently, three policies in the Community Conservation Section within the CP&P Directorate exists, the Land Claims Policy, the Community Levy Policy, and the Environmental Education Policy. The Land Claims Policy refers to the legal procedure endorsed by EKZNW that informs efforts undertaken to restore the land rights of the indigenous people in the rural areas. The Community Levy Policy is associated with the payment of levies by individuals and groups that will be used for the benefit of rural poor communities for development and growth. The Environmental Education Policy informs the educational initiatives undertaken by EKZNW in educating communities about environmental, growth and development issues.

10. Conceptual Framework

My present job at EKZNW has afforded me an opportunity to witness situations and occurrences where conservation projects conflict with local communities who have lived off the land for generations. Substantial arguments and moral rights usually come into question: 'Who can objectively determine whether the rights of indigenous peoples or the conservation of biodiversity have preference?' I still have to find a person who is neither affected nor an interested party to answer the question. This section provides the researcher's conceptual framework about HIP and adjacent resident traditional authorities (TAs).

To tackle rural poverty in communities surrounding protected areas, EKZNW has to actively involve the community in all aspects and regard social and

economic development projects as integral to the organisation's operation. EKZNW has to acknowledge that people are a cornerstone of the region's natural environment and are entitled to sustained benefits from its natural resources. '*Island*' protected areas that do not take cognizance of the socio-economic aspirations of surrounding communities foster resentment and antagonism that eventually lead to interference in the wildlife areas.

Many conservation and resource management projects disregard or fail to recognize the rights and contributions of indigenous peoples. Poor rural people frequently resist subjection to a worldview that they cannot endorse (Redclift, 1992). The rural people's resistance always comes across as passivity. Basic information about indigenous communities and wildlife in and around wilderness areas is frequently lacking, and therefore the interconnectedness of the two entities is ignored (Agee and Johnson, 1988). This is not only dangerous and harmful for the local communities residing adjacent to protected areas, but also troubling for the management and future maintenance of the protected area itself. The connection between regions of high biodiversity and poverty cannot be broken without providing incentives that value local indigenous knowledge.

Communities adjacent to protected areas bear the costs of the land separation and rarely see any profit gain from it. Therefore, local communities see conservation projects as unfair obstacles that restrict their abilities to earn a living. In addition, the population, health, and unsustainable land use issues that prioritize their lives prompt illegal violation of conservation laws (Wells and Brandon, 1992).

According to various literature governments have poor records of acting to solve environmental problems and it is usually left to NGOs to attempt to build better lives for the poor rural communities (Fisher, 1993; Reay, 1997; Vinke, 1992).

This literature concurs with the CAMPFIRE programme whose aim is to wait for no government but devolve money from wildlife right down to the grassroots, to the individual household (Bakker-Cole, 1999).

It is therefore to the advantage of EKZNW to appeal to the emotions of the HIP communities and gain their trust through recognizing the valuable knowledge that they have and welcome their contribution of indigenous knowledge to biodiversity planning matters. It is my belief that HIP communities will embrace and promote visions and dreams of EKZNW because they would have played a part in formulating them.

Indigenous ecological knowledge represents an invaluable data base that provides humankind with insights on how communities have interacted with their changing environment, including both domesticated and wild species of plants and animals. Although overlooked until recently, indigenous knowledge is now recognized as cultural capital for any given community.

IKS should be brought into the mainstream of knowledge in order to establish its place within the larger body of knowledge. The socio-economic potential of IK should be considered, as well as the non-socio-economic values, such as the impact of IK on lifestyles and the ways in which societies are run.

Local communities residing adjacent to protected areas often utilise various resources from the protected areas not only for direct consumption but also as inputs in agriculture. Incentives to conserve these resources would indirectly create incentives for the conservation of the wilderness areas as well. Conservation of biodiversity without conserving and augmenting local indigenous knowledge is like conserving a library without its catalogue. A plant may become a weed and a book untraceable in the library.

Indigenous knowledge should be integrated in the work of scientists as a complementary contribution to all efforts of science and technology in its search for solutions and strategies to combat poverty and to generate sustainability in development.

Indigenous knowledge is an important part of the lives of the poor. It is a key element of the social capital of the poor, their main asset to invest in the

struggle for survival, to produce food, to provide for shelter or to achieve control of their own lives. For this reason as well, the potential contribution of indigenous knowledge to locally manageable, sustainable and cost-effective survival strategies should not be neglected.

If EKZNW is to properly and successfully manage biodiversity for both present and future generations, the informal indigenous knowledge of the rural communities, that is, the farmers, herbalists, ¹*izinyanga* and others, must be involved.

¹ Traditional healers

CHAPTER 3: BACKGROUND OF STUDY AREA

1. Introduction

The present study seeks to explore the dimensions of indigenous knowledge amongst two rural communities and its relations to the efforts of the Ezemvelo KwaZulu Natal Wildlife to maintain environmental sustainability in the area. The previous chapters covered the existing literature on the topic and the conceptual framework upon which the present project is based.

This chapter focuses on the description of the study area. The major emphasis is on providing the profile of the province of KwaZulu-Natal, historical background about Hluhluwe- Imfolozi Park (HIP), and providing the relative location of Mpembeni and Mdletsheni. Before this a historical background to conservation needs to be undertaken.

Historically, conservation areas were managed as islands, far removed from communities faced with a painful struggle for survival. Also isolated from economic activities, protected areas were well on their way to extinction in the twenty first century as a result of poaching by communities. This is a cause for concern given that the poor communities were not doing this out of ignorance but in order to survive (Molefe, 2003).

The first formally protected areas to be established on the African continent were in Zululand, the then British Colony, in 1895. They were Hluhluwe, Imfolozi, and St Lucia Game Reserves, and remain so even today. There has therefore been a long history of nature conservation in this region of South Africa. In 1947, the Natal Parks Board was formed and later, due to Apartheid policies of the government, the KwaZulu homeland established the Bureau of Natural Resources, which in 1994 became the KwaZulu Directorate of Nature Conservation (KDNC).

In 1998, these two bodies were amalgamated to form the KwaZulu-Natal Nature Conservation Service (KZNCS), which is marketed as Ezemvelo KZN Wildlife. Except for The Greater St Lucia Wetland Park, following its listing as a World Heritage Site, EKZNW manages all the other state owned protected areas in the province, which cover approximately eight percent of the province (Derwent, 2003).

According to the report of the recent World Parks Congress (WPC) held in Durban in September 2003, the SANParks chairman and the director of the World Conservation Union in South Africa said respectively,

'The success of conservation lies in cooperation. Protected areas stand no chance of surviving unless they play a role in the economy' ... 'The challenge is to show that promised benefits from conservation are viable economically, and are not mere mirages to silence the rumbling discontent of the victims of development-speak' (Molefe, 2003:17)

According to the message in these two statements, the days of conserving nature for its own sake are over. Cooperation in the form of partnership between communities and conservation management is imperative for biodiversity to thrive and people to stop exploiting economically valuable flora and fauna. Development and the environment are interdependent, and sustainable development is a fine balance between the two as a result of rural subsistence.

Ezemvelo KZN Wildlife (EKZNW) and KwaZulu-Natal Conservation Services (KZNCS) are established in terms of the KwaZulu Nature Conservation Management Act No.9 of 1997. EKZNW is a parastatal body within the Department of Agriculture and Environmental Affairs, of which the political head is the Minister in the provincial cabinet. The Minister appoints the members of the board as well as the Chief Executive Officer (CEO). In terms of the KwaZulu Nature Conservation Management Act No.9 of 1997, EKZNW is responsible for the conservation of biological diversity in KwaZulu-Natal

(KZN) as well as the provision of tourism facilities within the protected areas under its control.

The vision of EKZNW is to ensure that the intrinsic value of parks, wildlife, land and seascapes of KZN are sensitively protected as a source of spiritual and long-term sustenance for future generations. The mission of EKZNW therefore seeks to ensure the sustainable conservation of biological diversity in partnership with the people (Derwent, 2003). Chapter 5 of the KwaZulu Nature Conservation Management Act No.9 of 1997 stipulates the establishment of Local Boards. Local Boards are intended to enhance the relationship between the neighbouring communities and biological diversity conservation. Four Local Boards were established in 1999, one of which was the Hluhluwe-Imfolozi Park (HIP) Local Board. There were five major directorates within EKZNW. These were created to derive efficiency in the execution of the core function. One of these directorates was the Conservation Partnership & Projects (CP&P) Directorate, which played a strategic role in nurturing and sustaining community relations between EKZNW and the communities.

In order to carry out its strategic function efficiently, three policies in the Community Conservation Section within the CP&P Directorate exists, the Land Claims Policy, the Community Levy Policy, and the Environmental Education Policy. The Land Claims Policy refers to the legal procedure endorsed by EKZNW that informs efforts undertaken to restore the land rights of the indigenous people in the rural areas. The Community Levy Policy is associated with the payment of levies by individuals and groups that will be used for the benefit of rural poor communities for development and growth. The Environmental Education Policy informs the educational initiatives undertaken by EKZNW in educating communities about environmental sustainability.

2. Study Area

KwaZulu-Natal occupies about 92 000 square kilometers, or one-tenth, of South Africa's land surface. It is the country's third smallest province. KwaZulu-Natal has the largest population, approximately 9.3 million. This is about 20% of the total population of the country. About 43% of KwaZulu-Natal's population lives in urban centres, while the rest live in non-urban areas (South African Census 2001). The rural communities are strongly influenced by traditional authority structures and the communal administration of land and resources is common.

The majority of the population is Zulu-speaking, followed by English and Afrikaans speakers. The province is home to the Zulu monarchy, the only monarchy in South Africa, whose traditional capital is in KwaNongoma. The port city of Durban is host to the busiest harbour in Africa. The Richards Bay/Empangeni industrial hub and the joint capitals of Pietermaritzburg and Ulundi are the province's main centres of urban growth (South African Census 2001; www.zulukingdom.org.za).

Geographically, KwaZulu-Natal has significant diversity. The subtropical coastline has protected indigenous coastal forests at Dukuduku and Kosi Bay. The St Lucia Estuary, which was declared a World Heritage Site in December 1999, is found in this area. Another World Heritage Site, the Drakensberg Mountain Range, runs 200 kilometres along the western boundary of the province, separating KwaZulu-Natal from Lesotho and the Eastern Cape. Game and nature reserves prosper, particularly in the northern parts of the province.

The labour force in the province of KwaZulu-Natal is relatively poorly skilled. According to Statistics South Africa of September 2002, 957 000 people aged 20 years and above, 24% of the total population have no formal schooling. About 1.3 million people, 28% of the total population in the same category,

received some secondary schooling, while 18% completed Grade 12, the final year of schooling offered in South Africa (www.proulysa.co.za).

KwaZulu-Natal employs less than half of the potential labour force in the formal economy. More than one million people are without jobs while 1.57 million people between 15 and 65 years are employed, according to Statistics South Africa. However, several researchers consider the unemployment figure to be significantly higher, reaching at least 50 to 55%. (Khumalo, 2004; South African Labour and Development Unit 2004).

The gap between the per capita income of people living in urban and rural areas is huge, reaching the ratio of 6:1. A large percentage of the people living in KwaZulu-Natal, particularly in rural areas, rely on income from family members who are recruited to mining and industries in other provinces, such as Gauteng, where Johannesburg is situated. This means that their struggle for mere economic survival is an everyday occurrence and has direct and indirect negative effects on their way of life.

KwaZulu-Natal output includes sugar, dairy products, metal goods, leather products and footwear, automotive components, textiles and clothing, aluminum products, wood and wood commodities, paper and paper products, chemicals, coal and fruit (Profile KwaZulu natal 2001:5-7)

3. Hluhluwe-Imfolozi Park Historical Background.

Existing research suggests that human settlement at what today is known as ¹Hluhluwe-Imfolozi Park (HIP) dates back to about 1500 years ago (Figure 3.1) (Munster and Sandwith, 1998; Pooley and Player, 1995) and was occupied by the Zulu tribe (Infield, 1988). Pooley and Player (1995) goes on to say the Mthethwa people under the leadership of iNkosi Dingiswayo occupied the area until 1818. One of the biggest hunts was conducted in the area between the White and the Black Imfolozi rivers (Figure3.3) by iNkosi Shaka ka

¹ Previously called Hluhluwe Umfolozi Park (HUP)

Senzangakhona during the periods 1818-1828. People resided in the western part of Imfolozi till the Anglo-Zulu war in 1879. The presence of malaria and tsetse flies made the lower lying areas of the place not suited to human occupation.

Within 30 years of the arrival of white people in the region, hunting had decimated the wildlife populations (Infield, 1988). The concerns of wildlife deterioration by certain conservationist due to unsustainable hunting in the area led to the creation of the two reserves, Hluhluwe and Imfolozi later proclaimed as a protected area in 1895. The Provincial Administration was compelled to hand over the reserve to the Department of Veterinary Service in 1932 because of the outbreak of Nagana, which was transmitted by tsetse flies (Pooley and Player, 1995).

The reserve was deproclaimed twice during the periods 1932 to 1939, and 1945 to 1947. The reserve was reproclaimed in 1952 and its control was handed over to the Natal Parks Board. The limited number of game guards and no fence around the reserve heightened incidents of poaching that led to the erection of the fence. The presence of the fence resulted in the reintroduction of certain species to the reserve such as lions, cheetahs, elephants and giraffes (Pooley and Player, 1995). The present situation is that the two reserves Hluhluwe and Imfolozi make up one protected area called Hluhluwe-Imfolozi Park (HIP) that is managed by Ezemvelo KZN Wildlife in terms of KwaZulu-Natal Nature Conservation Act No.9 of 1997 that is a provincial legislation (Appendix G).

4. Reason for Selection of Study Area

The study was conducted in the communities of Mpembeni and Mdletsheni Traditional Authorities (TAs), two of the ten TAS as shown in figure 3.1, adjacent to Hluhluwe-Imfolozi Park (HIP). My choice of HIP and the Mpembeni and Mdletsheni Tribal Authorities as the study area was influenced by the huge livelihood antithesis between the park and the ten tribal authorities that abut it as well as the cultural and historical richness of the park. HIP

generates huge revenue from visitors and yet in the neighborhood where it is located there is poverty.

A succession of cultures that date back to about 500 000 years ago seemed to have occupied the HIP area and surrounds. There is strong evidence of occupancy by indigenous people revealing itself in the all over scattered settlement sites throughout the park. Amongst such sites are those of iNkosi Dingiswayo and iNkosi Mpande. A study conducted by Penner (1970:3-4) and (Munster and Sandwith (1998: 9) supports this.

There has been a long history of difficult relations between Black rural communities neighbouring protected areas and the former Natal Parks Board. This was so because the majority of the populations' experience of parks during the colonial and Apartheid periods was one of exclusion or confrontation. In many cases indigenous people had been removed from parks, losing ancestral land and livelihood in the process (Cowan, G.I. et al, 2003). Even in this era where South Africa has committed itself as a country in the new Constitution as well as in national and provincial conservation legislations, the relations are still soured. Occurrences of poaching and the 'them and us' syndrome still prevail despite efforts on the side of EKZNW to strengthen the relations with neighbouring communities.

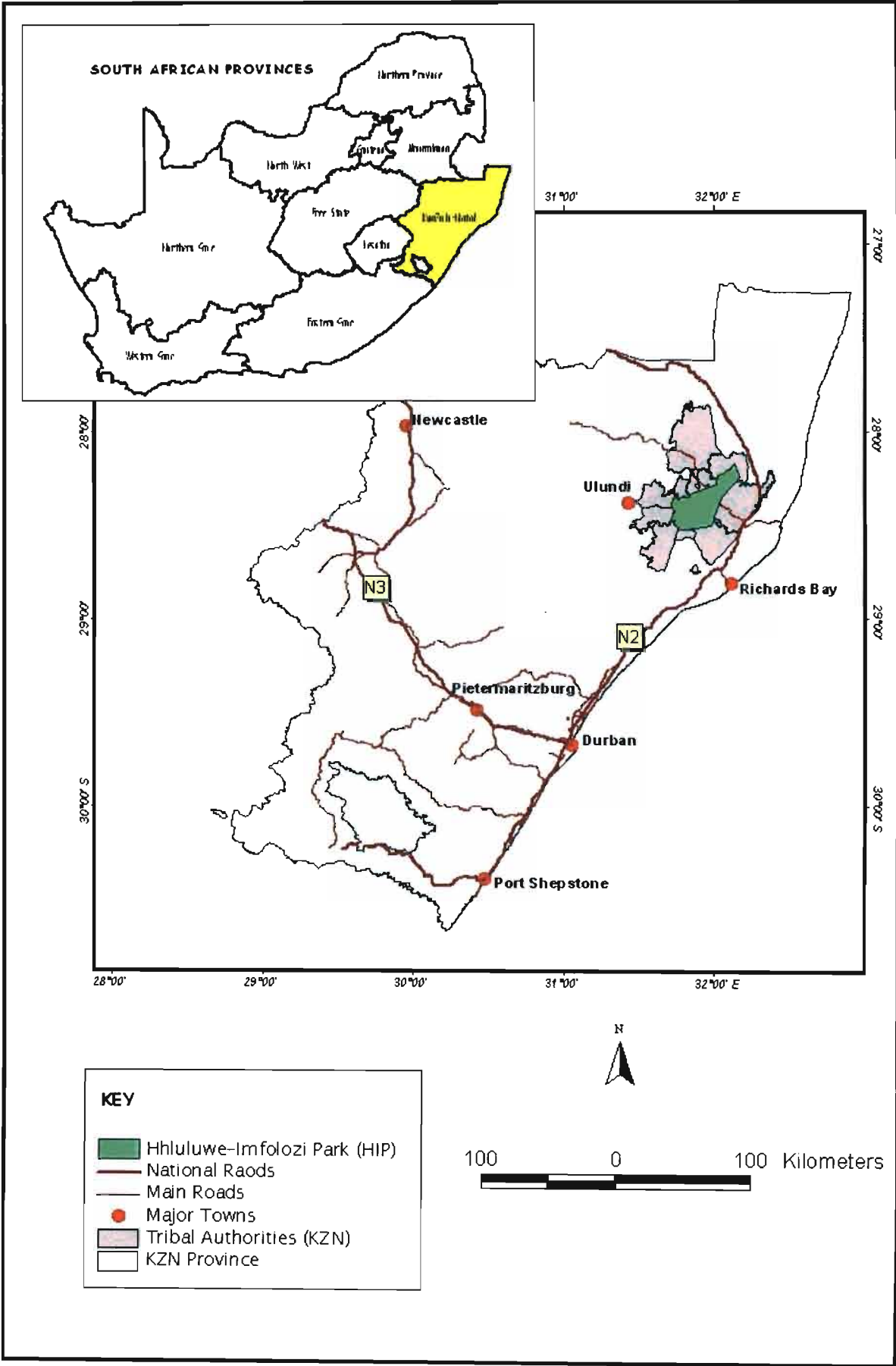


Figure 3.1: Map showing KZN Province and Hluhluwe Imfolozi Park

5. Location and Size

Hluhluwe-Imfolozi Park (HIP) is a park in the northeastern part of KZN province, approximately 65km from the sea, in the hills and valleys of the coastal forest, and 285km from Durban. It covers an area of approximately 96 453 hectares and lies between 28°00'S 32°00'E and 28°00'S 32°00'E (Munster and Sandwith, 1998).

HIP can be accessed from the north via the Hluhluwe village using the Memorial gate, from the south via Mtubatuba using the Nyalazi gate and from the west through Ulundi using the Cengeni gate. The Mpembeni Tribal Authority (TA) lies to the west of Hluhluwe-Imfolozi Park (HIP) and Mdletsheni TA lie north of HIP as shown in Figure 3.2.

6. Climatic Conditions

Hluhluwe-Imfolozi Park (HIP) consists mainly of hilly landscape cut up by a number of deeply incised watercourses and wide, deep river valleys (see Figure 3.3.) The climate is warm-to-hot and humid sub-tropical. Temperatures range from 22°C in winter to 28°C in summer. The rainfall received is generally seasonal and most of it occurs in October and March (Pooley and Players, 1995). In Hluhluwe most watercourses are short-lived, with the Hluhluwe and Nzimane rivers flowing for most of the year. In Imfolozi, the major rivers are the Black and the White Imfolozi rivers. In below-average rainfall periods, the main rivers are reduced to a series of pools (Munster and Sandwith, 1998).

7. Fauna and Flora

The region of HIP is characteristic of elements of both tropical and temperate fauna and flora. Scrub forests, grasslands, and coastbelt vegetation, including evergreen sub-tropical forests are HIP's principal plant communities. Closed forest communities and ridge top grasslands occurring at higher altitudes are the distinct characteristics of Hluhluwe, making it different from Imfolozi section, which is dominated by open acacia woodlands.

HIP is home to about 59% of vertebrates, and their presence is of importance. All African mega herbivores, the big five and large carnivores occur in the

park. Little is known about invertebrate, and about 67% of recorded species of birds in KZN are known to exist at HIP. It is estimated that 8.6% of the 514 vertebrates at HIP are threatened. For example the numbers of the rare blue duiker have declined since the 1970’s (Munster and Sandwith, 1998).

Table 3.1: Vertebrate species at HIP that have declined

SPECIES	REASON
Blue duiker	Unknown
Elephant	Hunting
Lion	Hunting
Wild dog	Hunting
Bushbuck	Unknown

The area under investigated is classified as a Traditional Authority area and this is evident from Figure 3.2 below.

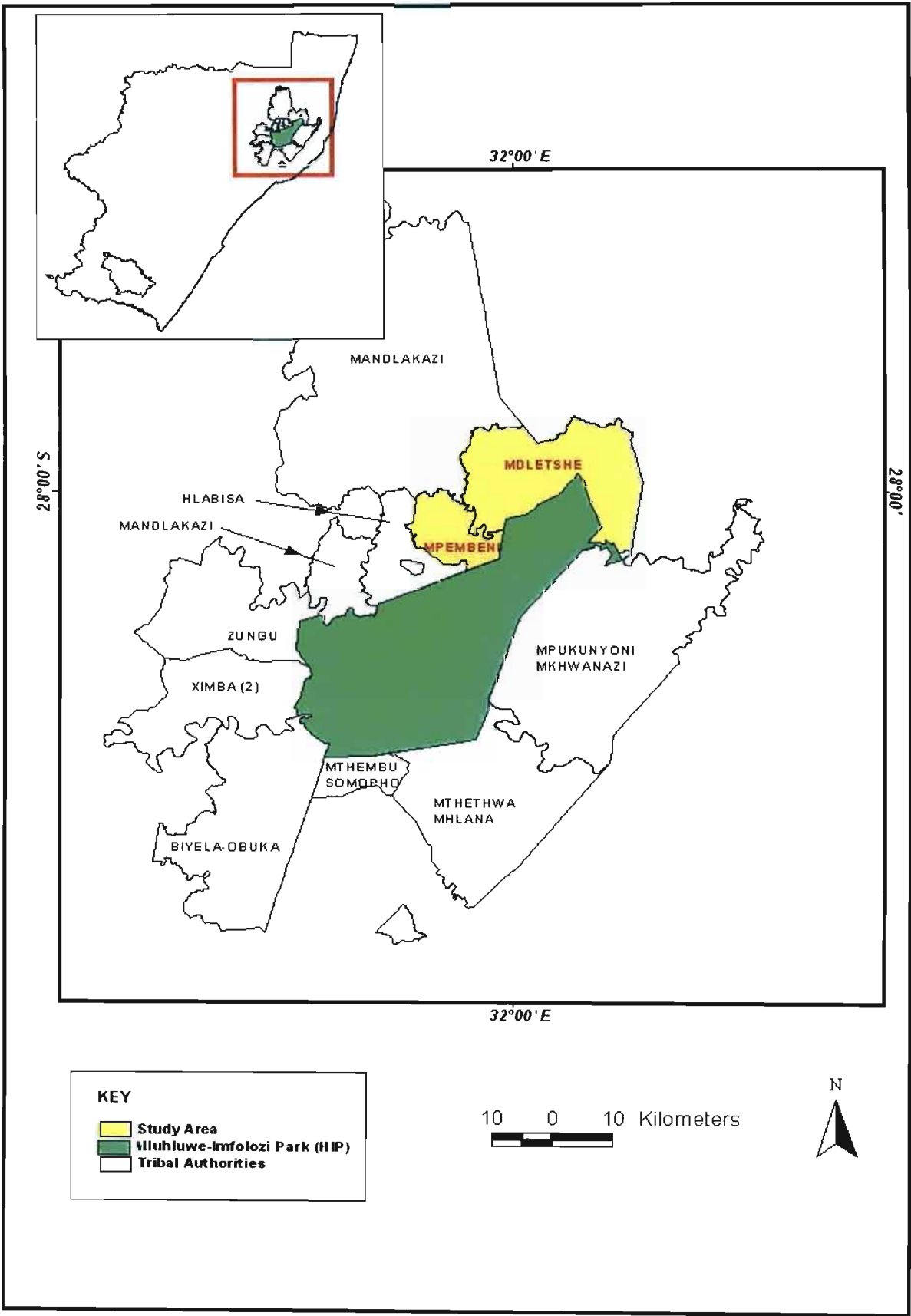


Figure 3.2: Map showing HIP and the relative position of the Study Area

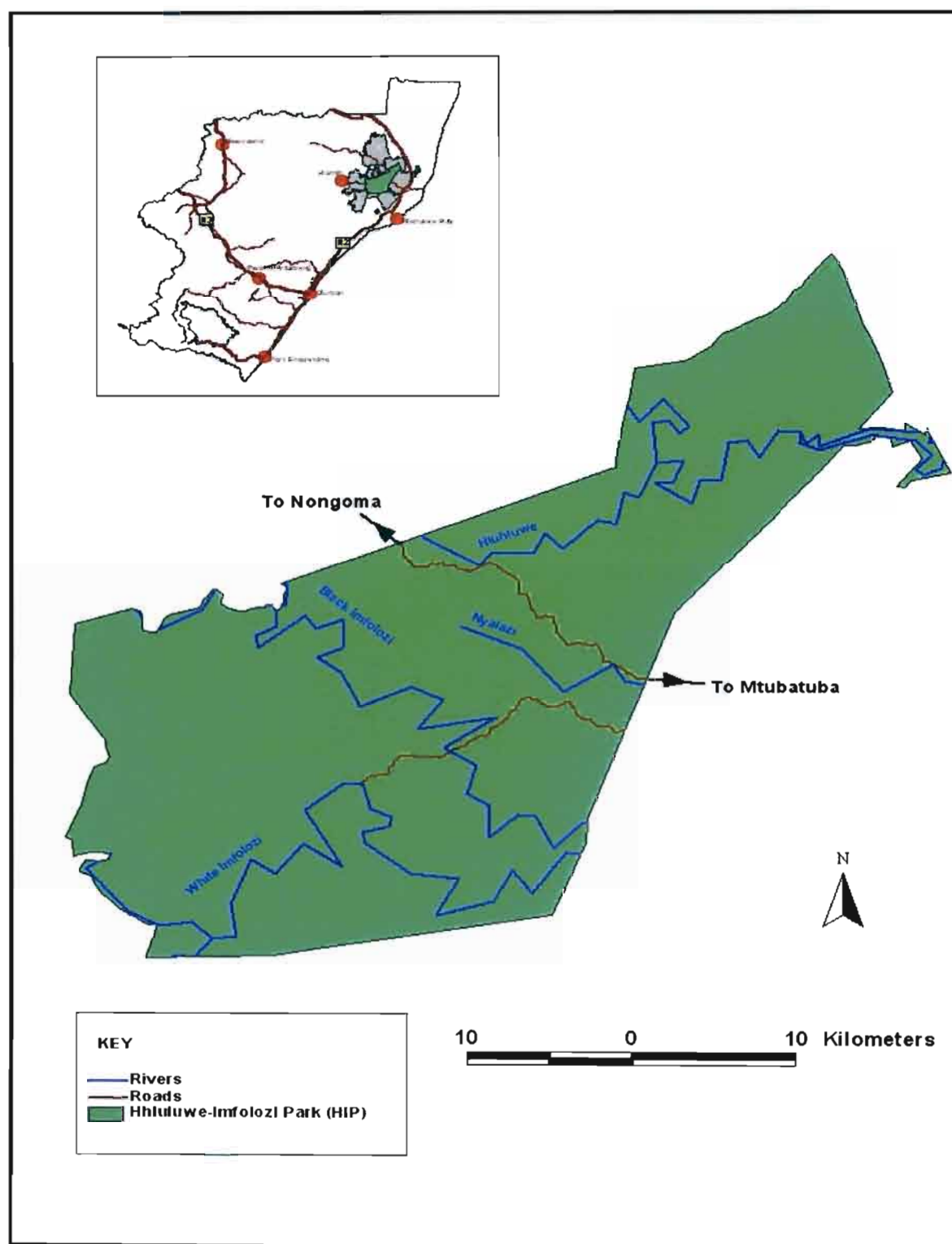


Figure 3.3: Map showing main rivers flowing through HIP

8. Land Use

Land use is characterized by extensive agriculture with commercial, industrial and infrastructural development. Land use to the west side of the park is more traditional with subsistence agriculture on communal land.

9. Conclusion

The spectrum of species occurring at HIP provides an unparalleled wildlife spectacle for visitors and serves as a motivation for visits to HIP (Munster and Sandwith, 1998). Over the years of HIP's development taking place parallel to a grinding and ever growing poverty of the surrounding community, HIP has become an island of abundant wealth generated through tourist attractions of different sorts.

What has remained a contrast since the commodification of HIP is its proximity to the indigenous local communities while remaining inaccessible to them. Local people cannot afford gate entries and conservation levies that have to be paid in order to enter the park and enjoy amongst other things the aesthetical and spiritual values that it provides.

CHAPTER 4: RESEARCH METHODOLOGY

1. Introduction

It has been mentioned that the present study seeks to investigate the existence and future utilization of indigenous knowledge amongst the rural local people in the tribal areas of Mpembeni and Mdletsheni Traditional Authorities in the Hluhluwe-Imfolozi Park (HIP) in maintaining and strengthening the environmental sustainability of the area. Following the literature review and the conceptual framework associated with the project, the location and realities of the area were explored, so that the reader would be able to understand the existing present dynamics at play.

Research is a disciplined process of collecting information in a systematic and purposeful manner structured from human experience. It is also a means by which a discipline expands its knowledge base (Simpson, 1995). The systematic manner in which it is carried out, and its objectivity towards establishing a valid understanding of a phenomenon is what distinguishes it from everyday forms of observation (Durrheim, 1999; Mouton and Marais, 1996). There is often a large difference between research strategy and real-life studies (Giddens, 1993). This chapter provides a discussion of the actual research methods used in this study. More attention is given to sampling technique and sample size, data categories, data collection and procedure in the field, observation as a tool for collecting data, limitations of the study, and ethical considerations.

2. Sampling and Sample Size

Sampling involves making decisions about who will be participants in the study. It entails the selection of a sub-set of some predetermined size from population being researched whereby those researched will become respondents in the study (Bailey, 1997). In this study data was collected from

three different types of information-rich sources. These were individuals from the Mpembeni Tribal Authority, the Mdletsheni Tribal Authority and employees of Ezemvelo KZN Wildlife working at Hluhluwe-Imfolozi Park both from Conservation Branch and Conservation, Partnerships and Projects Branch.

These two Traditional Authorities (TAs) were chosen because the preliminary survey conducted revealed that they were well developed from an institutional point of view as compared to the other eight adjacent TAs. In addition, these two communities had mixed feelings about Ezemvelo KZN Wildlife's occupancy of HIP, alleging that they were forcefully removed from the park and are legitimate owners of HIP. Whether these allegations about forceful removal and ownership are true or not, was not the purpose of this study.

The criterion used was that the respondent had to be an adult member of a household (≥ 40 years) regardless of sex. My reason for this is the view that elderly community members are the senior holders of indigenous knowledge (Mtshali, 1994). My regard for them as worthy of being chosen holders of indigenous knowledge stems from their having lived in a period where cultural values were still strong. They had lived through times where they had a strange knowledge of plant and animal life, first-hand experience that younger people lack. Time and finances available to carry out the study dictated that a maximum sample size be forty, though a bigger sample would have been preferred in order to increase representivity of the population and to reduce sampling errors.

A purposive sample was drawn for the respondents of Ezemvelo KZN Wildlife. The researcher used her 'judgment' to 'handpick' the sample because she felt they were information rich (Grinnel 1993; Marlow, 1998). The General Manager (Zulu-land) (GMZ) was chosen because he is the head of biological diversity conservation in the Zululand region, which in my belief can be successfully conserved using indigenous knowledge possessed by the two communities. The Conservation Partnerships Coordinator (Zululand) (CPCZ) was chosen because establishing and nurturing community relations is the responsibility of this job in the Zululand region. The Conservation Manager

(Hluhluwe) was chosen because his job entails mainly conservation of the plants and animals inside the park. Cases of poaching and culling are his focus areas. The Community Conservation Officers were chosen as key informants because they are the foot soldiers who work closely with the two communities bordering Hluhluwe-Imfolozi Park. Overall, 44 people were interviewed as it will become clear later in this chapter.

3. Data Collection

The act of employing different methods of data collection in a single project is called triangulation. This is to some extent able to compensate for the limitations of each method utilized and it increases reliability (Mouton & Marais, 1996). Different methods and different settings allow access to different levels of knowledge. The type of information sought, the socio-economic and political setting of the area of study, time and resources available can also be determining factors in which methods to employ.

Opoku (1994) says the range of methods that are commonly used in the collection of data on indigenous knowledge include participant observation, face-to-face interviews, administration of questionnaires, use of documentary evidence, public records, case studies, life history and group discussions.

Data collected originated from both the primary and secondary sources. Primary sources were personal observations, interviews and informal discussions with key informants from the Mpembeni and Mdletsheni TAs and relevant Ezemvelo KZN Wildlife Zulu-land Region staff. In harmony with Peil 's (1982) generally accepted format, interviews with the communities were formulated in such a way that biographical questions were used to open the discussion and indigenous knowledge- oriented questions constituted the second part of the discussion (see Appendix B).

The first part of the question sought to extract the following data:

- Period of stay in the area

- The respondent's source of income
- Whether or not the respondent attended formal schooling
- Gender (male or female)
- The year of birth or age

The second part sought to extract data around indigenous knowledge and development:

- Value attached to wildlife and harvesting patterns
- Wildlife knowledge
- Participation in development initiatives at Hluhluwe-Imfolozi Park
- Involvement in other IKS oriented organizations
- Role of IKS in biodiversity conservation
- Recognition of IKS by Ezemvelo KZN Wildlife

Secondary data sources included the use of maps and policy documents (see appendices).

4. Interview Methods and Tools

Respondents were subjected to face-to-face interviews made up of open-ended and close-ended questions. Blalock and Blalock (1970) have high regard for this method because of its flexibility and effectiveness when compared to a formal questionnaire. Given the nature of the sample and their life background it was decided that face- to- face interviews and the use of both close and open-ended questions combined both an array of flexible and diversified responses on the part of the interviewees and was thus considered to be the best tool available to the researcher in terms of acquiring proper responses.

These methods were chosen in the light that the research was going to be conducted in a rural area where the majority of the respondents had no formal

schooling and the target group was going to be elders. In an attempt to safeguard both uniformity in the manner in which questions were asked and the thorough coverage of issues under investigation, a prepared well in advance questionnaire, was used as a personal guide (see Appendix B).

While the latest trend in conducting face-to-face interviews is the use of tape recorders and videos, in this study responses of interviewees was captured on paper (Giddens, 1983). The choice to employ neither a tape recorder nor a video was influenced by the fact that the objective of the study was not conversational analysis, but to gather as much information as possible, in a less intimidating environment.

Both open-ended questions and standardized questions were asked. The trick behind open-ended questions was to obtain unsolicited responses whilst allowing respondents to give their own opinions in their own words (Giddens, 1993). Through this process the researcher was able to draw out information from the respondents while at the same time making the interview appear more conversational rather than only a solicitation for responses. Interviewees talked at length on a matter they deemed important. Standardized questions provided responses to specific issues, which the researcher deemed to be of importance (Appendix B).

5. Procedure in the field with Communities

A meeting was held with the administrative structures of the respective communities to make an initial introduction of the project, its purpose and potential benefit to the communities. This meeting legitimized the entry of the researcher into the communities. This meeting was also instrumental in overcoming the intruder-mentality syndrome. This means that the meeting guaranteed that the researcher created a feeling of participation, accountability and transparency between her and the subjects of the research and was not considered an “intruder”. An issue of note-taking and

confidentiality was addressed at this early stage of the study. Two of the key informants were identified at this meeting by the administrative structures. It was through key informants that a snowball of most resource people was established. These included sangomas, traditional healers and ordinary people who held specialized knowledge relevant to the study.

There was also an opportunistic interview with a community member of Mpembeni Tribal Authority who happened to be in the same age category that the researcher had targeted for interviewing. The two (researcher and community member) happened to be attending the same meeting and during introductions the researcher learnt that he was from Mpembeni Tribal Authority. The researcher could not miss the opportunity; hence a thirty-minute interview ensued during the lunch break. This is the only interview that the researcher conducted with a member of the community during office hours clothed in uniform in her capacity as an official of Ezemvelo KZN Wildlife. The researcher had by all means avoided being in uniform because she believed that it would affect the responses she would get from the respondents and that would jeopardize the study. The Mpembeni community was the first to be interviewed, followed by the Mdletsheni community, and lastly, the EKZNW officials.

6. Interviews with Ezemvelo KZN Wildlife Staff

The information on data collection shared in this section was with the following employees of EKZNW who were interviewed because of their involvement at HIP. For the purpose of non-disclosure and confidentiality, their real names are not disclosed, but only their designations. In short there were four employees of the organization interviewed.

Interviewee A, General Manager: Zululand Region

Interviewee B, Conservation Partnership Coordinator

Interviewee C, Community Conservation Officer: Hluhluwe -Imfolozi Park

Interviewee D, Conservation Manager: Hluhluwe

Interviews with these officials of EKZNW had no time restriction. Of the four interviews conducted, interviews A and B were actually conducted face-to-face, and the other two telephonically. The reason for conducting these interviews telephonically was that both time and distance would not permit face-to-face interviews, even though it would have been preferred. These officials were based at Hluhluwe-Imfolozi Park (HIP) and the nature of their work involved numerous meetings and a lot of traveling around HIP. Sarantakos (1993) argues that telephonic interviews provide the best source of information when the researcher cannot easily access the respondents.

The duration of each of these interviews was relatively shorter than the duration of those with the communities. None of them lasted for more than thirty minutes each. This I ascribed to the fact that EKZNW officials were better educated than the community members, hence quicker to understand questions, and that the interviews were relatively more relaxed, since the researcher was a colleague and well- known to the interviewees.

7. Observation as a Tool

The researcher subscribes to the philosophy of Cohen and Marion (1991) that interviews are a principal means of gathering information. Mastery of a listening skill by the interviewer as well as having an eye to detail play a major role during the interview because the interviewee's gestures and body language too, play an important part in conveying message. This method of gathering information by looking is called observation. Observation relies on optics as its main source of data collection and strengthens the likelihood of the researcher to identify unforeseen issues (Sarantakos, 1993).

During interviews the researcher was able to observe the spirit of *ubuntu* (humanity) and unselfishness of the interviewees from the two communities. The effect of this observation during interviews was a welcoming appearance that encouraged flexibility and made her feel relaxed. She was able to follow leads and probe issues of importance that had not been expected prior to the interviews.

Robinson (1998) distinguishes between *participant observation* and *non-participant observation* whereby the former involves spending a considerable amount of time in the natural environment of the subjects, not revealing one as a researcher, whereas with the latter the observer is not part of the natural environment of the subjects. The researcher's presence and identity in the communities of Mpembeni and Mdletsheni Tribal Authorities was disclosed, hence her observation was non-participant. The researcher's presence in the area and her continuous interaction with individuals and groups was the basis of her observational methods employed in the process of the research.

Palys (1997) states that some research problems require data that can only be collected through observation. In this study however, observation was an added-on method that was both necessary and unavoidable during the face-to-face interviews. It played a vital role during data collection particularly regarding, amongst other things, how interviewees carried themselves in their households. One quotable example of this was at Mpembeni Tribal Authority where during the interview a grandchild constantly played with the grandparent. The researcher observed this with admiration, and time and again she too had a word or two to say to the child, and she asked a question or so to the grandparent about the child. This is demonstrable of instances whereby the researcher functioned as a participant observer. It happened so because the researcher got sunk into the grandchild-grandparent relation she

was witnessing and wondered how often instances like this transform into unconscious passing of indigenous knowledge to the younger generation. It is for instances like this that Sarantakos (1993) mentions that observations can take different forms regarding the manner in which they occur, depending on the researcher.

7.1 Life History

According to Anzul in (Masuku, 1999: 21) a prolonged presence within a social situation transforms it so much that one eventually gives it less thought. The researcher did not plan to get a life history of each respondent, but had designed a questionnaire guide in such a way that biographical information of respondents was sought. There was one respondent who willingly told his life story from birth to how he became *inyanga* and how much respect he had for wildlife.

Table4.1: Data Collection Approaches Used in the Study

Type of Data Collection	Instrument Used	Number Interviewed	Level of Study
Semi-structured face-to-face	Note pad and a questionnaire guide containing open- and close- ended questions	12	Preliminary interviews
Semi-structured face-to-face	Note pad and a questionnaire guide containing open- and close- ended questions	29	Data collection for the study
Unstructured face-to-face opportunistic interview	Nil	1	Data collection
Semi-structured telephonic interviews	Telephone, fax and email	2	Data collection for the study

8. Limitations of the Study

According to Silverman (1993), research writers agree that all methodological approaches have potential limitations which must be considered if a study's findings and recommendations are to be validated. He proposes that for a study to be accepted as scientific, it must adopt methods that are appropriate to the study's subject matter.

While interpretation of qualitative research methodology is a highly technical process, it is more dependent on researcher's judgement than is the case with quantitative methodology. As Marlow (1998:4-5) has observed, personal, intellectual and professional biases are more likely to interfere with qualitative data analysis. Qualitative studies such as this one need to concentrate on these innate biases and create measures to limit their impact on the result of the study. The time frame necessitated the selection of only two traditional authorities out of the ten that about HIP. The ten traditional authorities may have provided much richer and in-depth data to work through and brought about more of the hidden indigenous knowledge.

Accessing all respondents at a convenient time for the researcher was not easy. All of them were too far from one another. This alone was very exhausting and frustrating for the researcher, all the more so since there were deadlines to be met. The researcher feels that staying in the midst of either community, withholding her identity as a researcher and employing participant observation for a reasonably longer period would have enhanced her findings. The researcher had no financial assistance to carry out the study; traveling and subsistence costs were borne by her, which ended up being very costly. She also had to solicit the services of someone from the area to accompany her from one household to the other, since she was not very familiar with the area. Notwithstanding the fact that the study area was the researcher's personal choice, time and distance were limiting factors in that she was in full-time employment during the fieldwork. She had to conduct fieldwork in her own private time and was expected to meet deadlines while the study area was more than 200km from the researcher's hometown. Also, difficulty was

experienced in obtaining literature that would be specific to Mpembeni and Mdletsheni Traditional Authorities.

The analysis was both quantitative and qualitative and took the form of table and quotations from respondents.

9. Ethical Considerations

Most qualitative research focuses on people, their problems and identifiable contexts. According to Gilchrist and Schinke in Grinnell (1998), researchers are privy to personal information that requires ethical safeguards to prevent unacceptable or distressful repercussions. This study subscribed to the following principles designed in order to safeguard against being unethical:

Voluntary and informed consent:

All participants were informed about the purpose of the study as well as being told of their right not to avail themselves if they so wished. (Appendix A). A verbal consent agreement was entered into with the interviewees.

Protection from physical and mental harm:

No participant was coerced or subjected to any form of either physical or mental harm during the course of interviews.

Confidentiality and anonymity:

All participants in the study were assured of absolute confidentiality and that the data derived from the study would be used strictly for the purposes of the study.

The same principles described above were applicable to the EKZNW officials interviewed as well as the person who accompanied the researcher in her trips to the area where the investigation took place.

The chapter examined the empirical parameters upon which the thesis is based. It identified the key issues and factors utilized in the analysis such as the tools utilized, the type of sampling used and other aspects of the research.

CHAPTER 5: FINDINGS AND DISCUSSION

1. Introduction

This section presents the empirical findings of the research undertaken among the inhabitants of two rural areas in relation to the relevance of IK as an integral part of environmental sustainability in the area. In the previous chapters the literature review, conceptual framework and methodological foundations of the project were presented.

The present chapter consists of three interrelated parts where the findings of the study as elicited from the respondents are presented. The first part is the general background information of the respondents from the two Traditional Authorities. This part comprises the respondents' length of stay in the area, their source of income, their family members, their levels of education, gender and age. The second part is about the communities' indigenous knowledge and their aspirations regarding the management style at Hluhluwe- Imfolozi Park (HIP). The third part represents findings as communicated by Ezemvelo KZN Wildlife (EKZNW) staff.

2. BACKGROUND INFORMATION OF THE COMMUNITY RESPONDENTS

2.1 Length of stay in the area

Results show that 35 (87%) of the respondents have been living in the area for more than twenty years, while 2 (5%) had been in the area for less than ten years and the remaining 3 (8%) for more than ten years but less than twenty years (see figure 5.1). This means that the vast majority of the respondents has a deep knowledge of the area and their surroundings and will be able to be of assistance in the context of this research. The majority of respondents has the historical experience in the area and has seen the area growing to what it is

today; they have lived its development and have first hand experience of the dynamics and shaping of their lives hand in hand with the surrounding environment.

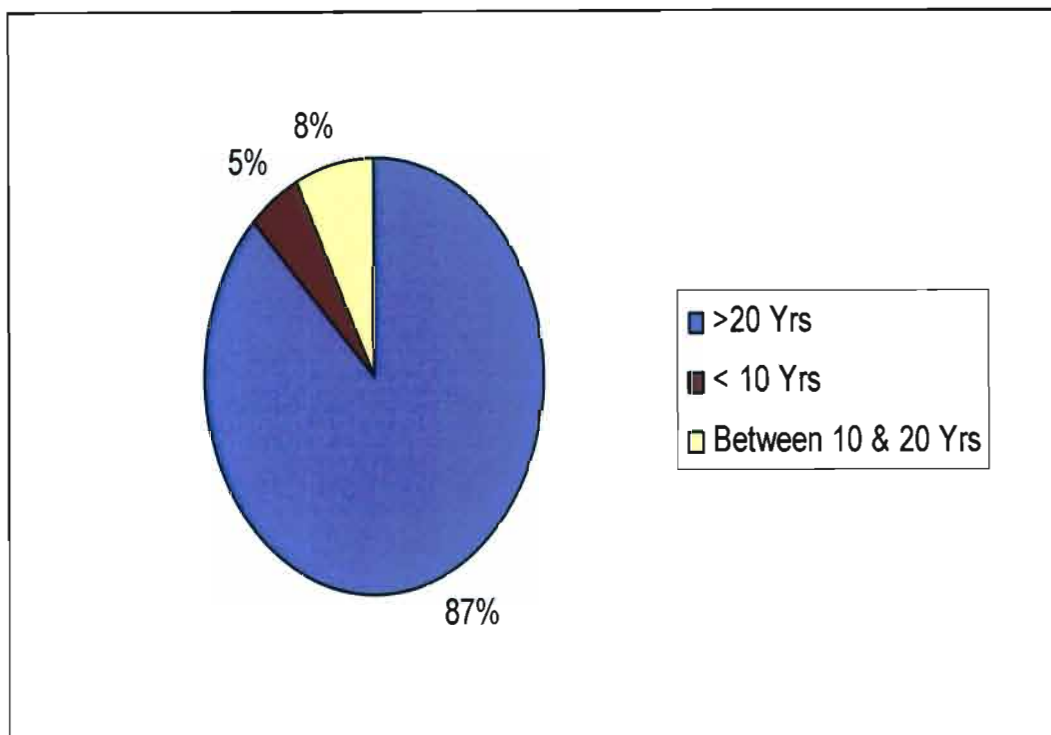


Figure 5.1: Length of Stay in the Area

Results show that the majority of the respondents can be a reliable source with regards to indigenous knowledge in respect of indigenous animals and plants endemic to HIP. These results also reveal that these communities have used their natural resources in a sustainable manner in the past which is why they could subsist on resources for more than twenty years.

2.2 Source of income

Respondents derived their income from a variety of sources. Apart from 2 people (2%) who claimed to have no source of income, respondents whose source of income was pension accounted for 20 people (50%), while those who derived their income from the sale of livestock accounted for 26 people (65%). Eight people (20%) derived their income from being self-employed and 4 (10%) were wage labourers and 19 people (48%) derived theirs from household gardening (Table 5.1). It needs to be said that a number of the respondents indicated that they had more than one (albeit meager) source of income, hence the number of responses is higher than the number of interviewees.

In short the evidence produced by the respondents indicated that most of them tried to make a living through a variety of ways and hence multiple responses were produced in the process of interviewing them.

Most respondents mentioned that they were struggling to make ends meet. It was also discovered that most households were failing to meet all their basic needs like being able to buy bread on a daily basis. The researcher found that to a larger extent, communities assign their plight to Ezemvelo KZN Wildlife (EKZNW) for *'taking their land'*.

As one of the respondents said:

"From 1994 we see in the news that in our country many people take their ancestral land back, and we are happy for them. The government in many ways has done a good job in giving back the land to the people, because historically this is their land. In our case, it is clear that this is our land, but we are still without it, it has been taken away from us. We understand that there need to be some ways out of this situation, but no one talks about these things. We have asked all these questions to our leaders, but we are not happy with their responses. They do not talk straight to us. We understand that there are laws in the country, but we do not want to break these laws, but we also know that

something needs to be done for us, as we live here for many years, our ancestors were born here. For how long should we wait?"

Such an utterance convinced the researcher that the introduction of programmes similar to CAMPFIRE (Appendix F) would mitigate potential negative trends that might occur and help boost wildlife populations, while giving these two communities better living standards.

Those respondents who were aware of the functions and operations of EKZNW described it as a highly centralized bureaucratic system of operations that tends to impose top-down decisions on people at grassroots levels whilst denying them to be self-innovative. This is then a major cause of natural resource mismanagement on the side of local communities. Contrary to this analogy about EKZNW, CAMPFIRE seeks to entrench the role of local people in natural resource management through the utilization of local skills, particularly indigenous knowledge (Maveneke, 1998).

One interviewee said the following regarding EKZNW:

" Occasionally we see their officials, they come here to tell us about their decisions , some people ask them how these decisions were made without our opinion , we tell them that these decisions are sometimes not correct, but they insist that they have the mandate and knowledge to take these decisions and this is what they have done. This is against the will of the community, as we feel strongly that this is our land and decisions that concern us must be debated with us, the community needs to be consulted about our lives and the future. This land is the land of our ancestors and our land and we need to take care of it. We are aware that EKZNW have people who know a lot of things about wild life, but much of it is from books , we live here, we know what is happening, how to take care of ourselves, our lives and our land. How can people in their offices take care of our land and what is happening here?"

An educated guess embedded on a successful story from another African country, Zimbabwe, is that, HIP communities should be able to utilize their indigenous knowledge using the common natural resources effectively and in a sustainable manner. Sustainable utilization of resources will occur provided there are clear benefits to the community and the community is empowered through local level institutions as to how to do that and if there is an element of co-management between communities and EKZNW. This, evidently, is not the case at present.

The comparison between CAMFIRE and Ezemvelo KZN Wildlife was presented in order for the reader to understand the differences in functions, operations and emphasis. CAMPFIRE thus is a more people-centered initiative while EKZNW follows the top-down approach to environmental sustainability.

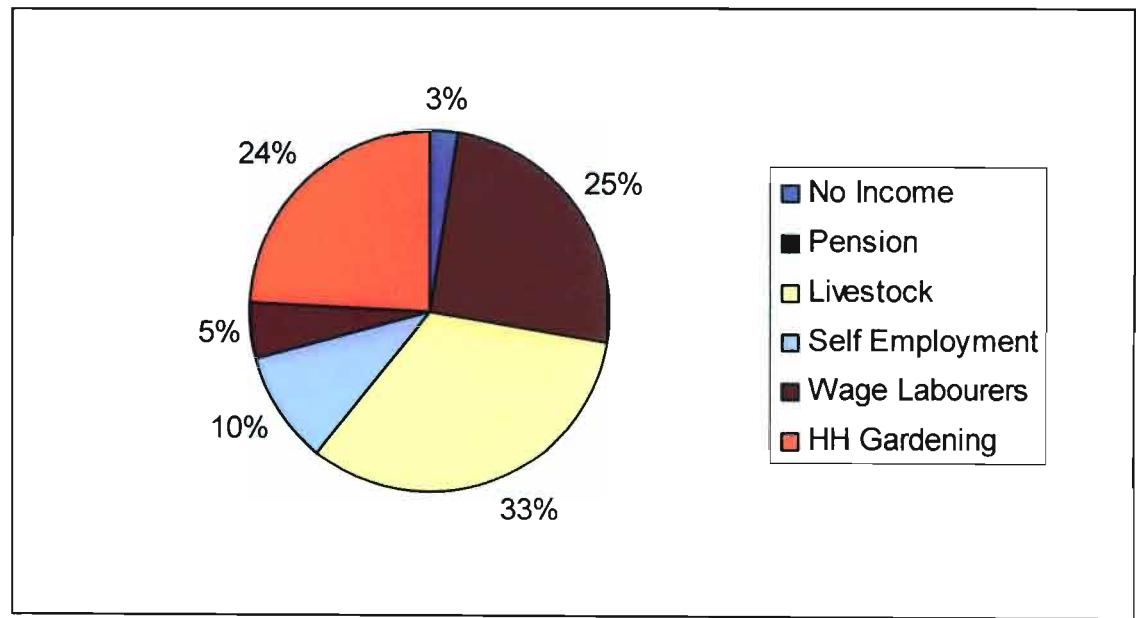


Figure 5.2: Respondents' source of Income

Table 5.1: Respondents' source of income

SOURCE OF INCOME	Frequency (N=50 Multiple responses	Percentage
Self employment	8	20
Wage labour	4	8
Household gardening	19	48
Livestock keeping	26	65
Pension	20	50
None	2	2

Some of the respondents declared that they had more than one source of income, hence the numerical discrepancy appearing on the table.

It is evident in this table that 8 (20%) of the respondents declared self employment, such as informal selling as their primary source of income, while 4 (10%) were formally employed as wage labourers. Nineteen (48%) of the respondents declared their source of income as a result of homegrown gardening, whereby they cultivate various vegetables, which in turn they sell for money to their neighbours or in the market.

Twenty-six (65%) of the respondents were involved in keeping and raising livestock, which in turn they sold for money, while 20 (50%) relied on state pensions for their livelihood.

It becomes apparent that the majority of the respondents have indicated that they have different ways of acquiring more income through a variety of ways (hence the multiple responses recorded).

2.3 Level of Education

The results reveal that 36 (90%) of the respondents had no formal education and the remaining 4 (10%) respondents claimed to have acquired formal primary education. Information gathered during informal discussion with respondents and EKZNW staffs who works in these communities revealed that it is a trend for those members of the community to relocate to urban areas in search of better employment and living conditions. Illiteracy poses a great threat to documentation of indigenous knowledge.

A project documenting this knowledge and acknowledging its sources is but one way of dealing with the challenge so that future generations can access such knowledge years later. To encourage participation, projects should be tailored to the audience, for instance, using printed documents in an area where there is a high level of illiteracy will discourage participation.

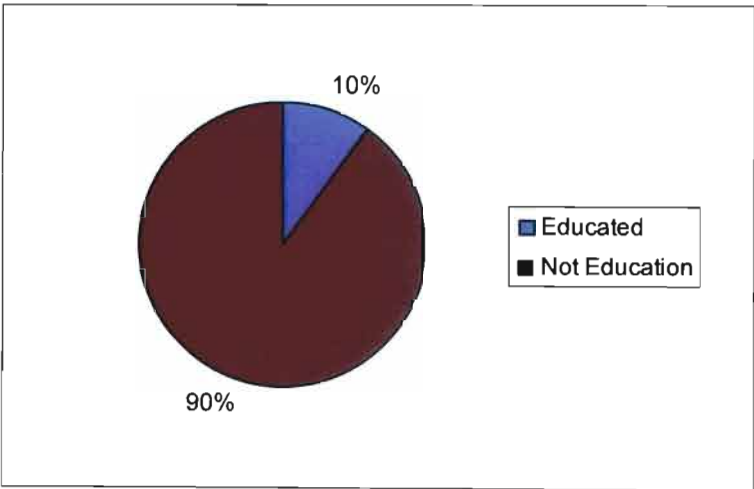


Figure 5.3: Level of Education

2.4 Gender

The results showed that 26 (65%) of the respondents were men and 14 (35%) were women.

This can be attributed to two factors:

- (a) It is either that more men than women in the communities are knowledgeable on plants and animal indigenous knowledge or,
- (b) People tended to associate this knowledge more with men than women.

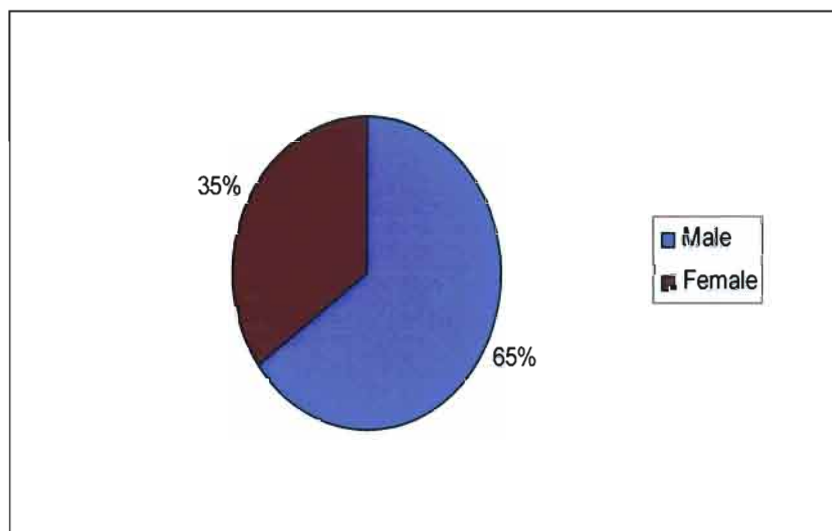


Figure 5.4: Gender Composition of Respondents

2.5 Age

Respondents were grouped into three age categories regardless of gender.

The first category was that of respondents between the ages of 40-49, the second was the category 50-59 and the third was 60 and above. Respondents in the first category accounted for 8 (20%) of the entire population sample. The second

category consisted of 12 respondents (30%) and the third category accounted for 20 (50%).

This situation, based on the sample indicates that in our case and as it is related to the present project, it is the elderly in the community who have more information and indigenous knowledge. It became evident in the process of the study that no systems are in place to conserve such valuable knowledge existing amongst the elders.

It is therefore important for EKZNW to see to it that such knowledge is conserved, and where possible, integrated into scientific knowledge for the benefit of conservation and future generations. Tourists visiting HIP can also benefit a great deal if such knowledge is within reach in an orderly and structured manner.

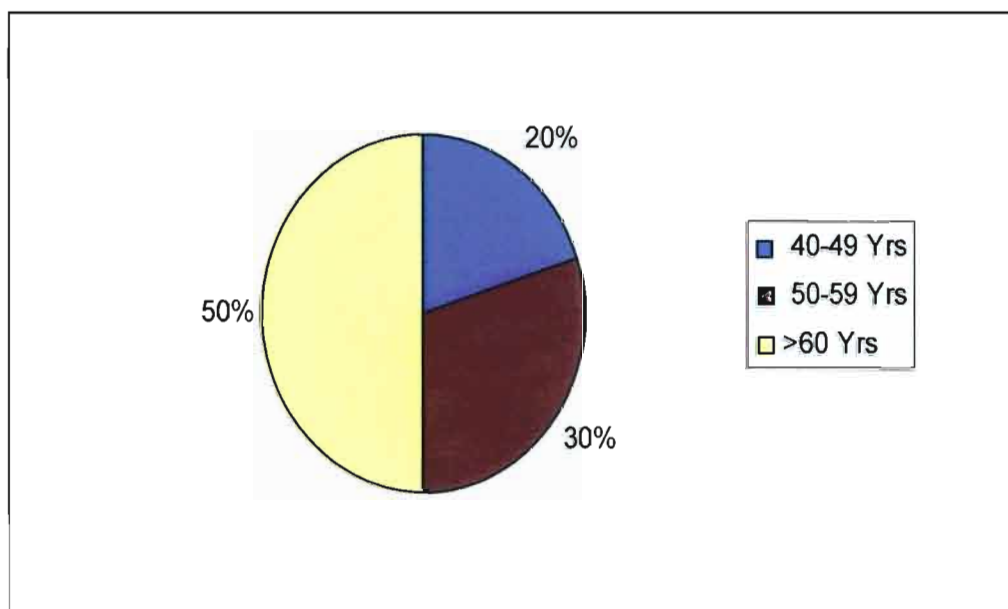


Figure 5.5: Age Category of Respondents

3. INFORMATION ON INDIGENOUS KNOWLEDGE AND DEVELOPMENT

3.1 Ecological Understanding

Following the examination of the demographic profile of the respondents, an analysis of results emanating from the empirical research will follow.

Both communities in their responses showed that behind the acquisition and existence of indigenous knowledge there was awareness and understanding of the environment in which they lived.

For a number of methodological reasons the responses of both communities in relation to the questions will be presented together. This was decided upon as in the process of the analysis of data it became evident that the vast majority of responses obtained were very similar in nature. If in the process it was established that the responses were different, then these could be analyzed separately and their differences and similarities as well as the underlying reasons could be examined. However, the similarities were very evident and a separation of beliefs and attitudes was not deemed necessary.

The first part of the interview schedule dealt with flora.

3.1.1 Flora

Three respondents at Mpembeni Traditional Authority (TA) pinpointed the relationship between health and the Mncaka tree. One of them said:

'Izihlahla ziphethe impilo yabantu, buka nje lesasihlahla soMncaka.'
(Trees contain health for people, look at that Mncaka tree)

One respondent at Mdletsheni Tribal Authority indicated her level of indigenous knowledge when she said:

'Sitheza nje kuphela izihlahla ezizomile njengoMnqawe.'

(We collect only dead wood such as e.g. Mnqawe)

Two interviewees at Mdletsheni Tribal Authority had this to say about the fig tree:

'Umkhiwane uphethe amanzi, uyisiphethu samanzi.'

(A fig tree contains water; it is the well for water)

Three interviewees at Mpempeni Tribal Authority related the relationship between fauna and water to the researcher as follows:

'Intsheshe, umhlambamanzi kanye nomdoni ayithezwa.lyimisuka yamanzi.'

(You do not harvest Ntsheshe, mhlambamanzi, and mdoni. They are sources of water)

'Izwe elingenazimila limpofu futhi aliphelele.'

(A country with no plants is poor and incomplete)

On a general note of both appreciation and knowledge regarding wild plants one respondent from Mdletsheni TA said that:

'Izimila zasendle ziyimpilo, futhi siziphilisa ngazo.'

(Wild plants are life, and we derive a living from them)', while another from Mpempeni TA said;

'(Ngezimila zasendle ngiyakwazi ukwenza umuthi wenhlanhla,umuthi ozokuvikela nomuthi wewozawoza.'

(With wild plants I am able to make a lucky charm that will protect you and make you appeal to everyone)

Another five interviewees from both areas, who indicated that wild plants were used by many people not only for the production of *umuthi*, but also as traditional medicine, expressed similar sentiments. It was related to the researcher that such indigenous knowledge was passed from grandmother and grandfather to their siblings and from generation to generation.

Table 5.2: Plants Exploited for Indigenous Medicine

Families	Scientific Name	Common Zulu Name	Status
Streliziaceae	Strelitzia reginae	Igceba	Not protected
Rhamnaceae	Berchemia zeyheri	Mncaka	Not protected
Fabaceae	Acacia robusta	Mnqawe	Not protected
Apocynaceae	Voacanga thouarsi	Mhlambamanzi	Not protected
Myrtaceae	Syzigium cordatum	Mdoni	Not protected
Encephalartos	Cycad	Isigqikisomkhovu	Protected
Lauraceae	Ocotea bullata	Unukani	Specially
Poaceae	Cenchrus ciliaris	Indungulu	Protected
Asphodelaceae	Bulbine	Ibhucu	Protected
Meliaceae	Trichilia emetica	UmKhuhlu	Not protected
Lauraceae	Cinnamomum	Ulosolina	Not protected
Asphodelaceae	camphora	ICacane	Protected
	Kniphofia rooperi	Umampunzana	Protected
Geraniaceae	Monsonia natalensis	Unginakile	Protected
Thymelaceae	parviflora	UVuma	Not protected
Amaranthaceae	Synaptolepis kirkii	omhlophe	Protected
	Celosia trigyna	UVela Bahleke	Protected

Source: Dictionary of Popularly Traded Plants in South Africa

One of the prides of African culture in general (see Appendix E) and that of HIP in particular is knowledge of indigenous plants. Living in close proximity with the natural environment has taught communities to respect wild plants as either a source of medicine, a protector against evil spirits, an attractor of blessings and also as a means to communicate with ancestors. As a matter of fact, compared to modern drugs, products of traditional medicine are cheaper and much more accessible to rural communities (Adjakpa, 1999).

As one of the oldest responses indicated:

“From the time I was small my mother told me all the stories about the trees and what they are all about. In our days this was the duty of the mother to teach us all these things, as she taught us how to cook on the fire or do the entire house work. When we were girls we walked a lot to fetch water and had a chance to see all the trees and then tell our mothers what they looked like and they told us their names and what they were about. They knew about these trees from their mothers and we also told our daughters about these trees, what they do and how to use their leaves, etc. The problem is that most of our daughters are not with us, it is difficult for mothers to be without daughters”.

The responses recorded earlier in terms of the attitudes expressed and knowledge demonstrated in terms of the indigenous trees indicate that living in proximity to plants and trees as well as tradition and community interaction has led the people in the Hluhluwe area to acquire a very good knowledge on the issue.

3.1.2 Fauna

In terms of fauna, seven people interviewed, who provided almost identical responses as follows, made a number of general comments. These interviewees

openly spoke about indigenous knowledge and its understanding in their interviews with the researcher.

Three respondents at Mdletsheni Tribal Authority indicated their level of indigenous knowledge when they said:

'Zilethwe nguNkulunkulu kithina ngokunjalo nathi kuzona,'
(God brought them to us like us to them)' (Provided by three respondents)

Two interviewees at Mpembeni Traditional Authority had this to say about the fig tree:

'Kunesikhathi sokuzingela nesikhathi sokungazingeli'
(There is time to hunt and time not to hunt)'

Another two interviewees from both Traditional Authorities expressed similar sentiments about ruthless killing of animals when they said:

'Ungaphatheka kanjani uma othandiweyo wakho ebulawa phambi kwakho?'
(How would you feel if your loved one is killed before you?)

Collection of resources at particular periods or seasons indicates knowledge about the environment and life cycles of species concerned.

From the findings presented in Chapter 4 thus far, it would seem that the communities interviewed have a good idea of how to use natural resources. For example, in relation to flora, live trees are not harvested, and with regards to fauna, hunting is seasonal. Some of these practices correspond with some conservation methods suggested in western literature (Brascoupe and Mann 2001; Agee and Johnson 1988). Such practices and ideas need to be

documented, so they will complement existing western knowledge and will help future generations not to forget their forefather's indigenous knowledge.

3.2 Indigenous Wildlife Management

Hunting, according to indigenous knowledge is sustainable in that you do not hunt intensively during breeding and mating seasons.

The responses expressed below indicate general feelings with regard to wildlife management and its significance to communities:

Two respondents (one from each traditional authority area) said:

'Awusibulali islwane esimithi.'

(You do not kill a pregnant animal)

Such an attitude pinpoints not only to great respect towards a pregnant animal but also indicates sensitivity towards environmental sensitivity.

Another interviewee from Mpembeni Traditional Authority said:

'Ngiwumqaphi wemvelo.'

(I am a watchdog for wildlife)'

Previous conservation laws under the apartheid regime were never negotiated with the communities but imposed on them. No attempts were made to discover what indigenous communities could bring on board for conservation. However, the above statements indicate that the respondents in the communities possess strong feelings for both wildlife and environmental sustainability. The two communities still hold in high esteem the authority of their traditional leaders. The above statement as recorded can lead to the assumption that communities were traditionally watchdogs for natural resources. This became evident in the

conversations and interviews between the researcher and the subjects and is against the background of poverty and deprivation of many rural people in the area.

As one of the respondents, a 56-year old male said:

"We are born and grew up in this area, and it is us who look after all the trees, the bush and the animals, because we were taught by our mothers, fathers and elders that without them we will not be here. Some of the officials who come here and look after all these things are good people who know a lot of things, some of them even know things about our Zulu culture and way of life, but no one can know our culture better than us, because we did not learn this culture from the books, but we learnt culture from our lives".

The researcher therefore believes that if EKZNW could exploit the existence of traditional leadership in the community and through them initiate indigenous projects that are income generating oriented, and if such initiatives become a reality it is strongly felt that occurrences of poaching could be halted.

3.3 Indigenous Morality

It became evident that communities possess religious and cultural beliefs, which contribute significantly to the protection of certain species. This obviously became evident through a careful study of the respondents' quotations presented above. In response to the questions posed on various species and their significance for both nature and people in the communities, the researcher recorded the following answers:

Six respondents in both Mpembeni Traditional Authority and Mdletsheni Traditional Authority had this to say about various animal species:

'Zonke izilwane zibalulekile ekulapheni,njengalo nje ibhubesi,indlovu kany nenyathi.'

(All animals are useful in healing e.g. lion, elephant, and buffalo)

Four respondents in these areas answered as follows to the same question:

'Inyathi ingasetshenziselwa ukuthakatha kube sekutheni uqonde ukwenzani.'

(Buffalo for witchcraft depending on what you are making)

With regard to the relationship of indigenous knowledge and healing within the community five respondents had this to say:

'Selapha ngemithi nangezilwane,asihambisani nokusebenzisa izitho zemizimba yabantu.'

(Healing using plants and animals, we are against using human beings body parts)

Talking about animal species specifically, seven respondents reacted as follows in both areas:

'Ngiyazizwela izilwane zasendle ngoba nazo zilapha ngo Nkulunkulu.'

(I feel pity for wild animals since they are here by God)

Basing the argument on the responses of the interviewees, it is evident that the two communities have indigenous morals based on their cultural view of wildlife. There is therefore a great need for intense revival of community participation in biodiversity conservation matters.

In conditions where poverty is rife, and everyday living is difficult, it is important for people to benefit directly or indirectly from conservation. It is important for people to know that looking after wild animals and plants will in the end benefit them both economically and socially.

3.4 Indigenous Knowledge Transmission

Results reveal a relative strength of indigenous knowledge (IK) in the sense that within sectors of the community, as personified by the interviewees of this study, IK seems to be well rooted amongst them, and there is evidence as witnessed by the quotations provided that is engraved in the minds of the elders in both the communities. However it surfaced that there is a slight problem related to the transmission of this knowledge to the younger generations of the area's inhabitants.

It is a weakness thus that there is no systematic organized mode of transmission from the elders to the young and there is no documentation in place. Legends, tales, story-telling and regimental structures served as vehicles for transmitting IK. This was blamed on:

- Urban migration.
- HIV-AIDS that seems to be prevalent in many young people's deaths.
- The preoccupation of young people to move away in order to take advantage of opportunities created by tourist "explosion" in the area.
- There is a tendency of the young people, even those in school to look down on traditions, although not necessarily on culture.
- A strong materialism and consumerism attitude amongst younger people.
- A sense of disillusionment amongst the young people regarding their lives, education, job prospects and their future.

Thirty-six respondents (90% of the sample) attributed this weakness to cultural fragmentation, which is a product of modern times due to poor schooling and urban migration. It is encouraging that EKZNW has decided to incorporate IK in the Environmental Education Policy. There is also a need to draw in elders from the community as living resources of IK.

This was a reality readily accepted by the EKZNW managers interviewed in the context of the study.

3.5 Communities' Attitudes towards Conservation

This section examined the attitudes of the community towards conservation.

Question 1 as a main question included eight sub questions, which tested the attitudes of communities towards the desirability of conservation as a concept.

The range of scores was divided into three classes: 'Positive, negative and neutral.' A response which indicated a positive attitude was scored at +1, a response indicating a negative attitude was scored a (-1), and a 'do not know response' was given a zero (0). Although several responses were recorded as 'do not know', as indicated in the table above, only 3% of the sample population displayed a negative attitude towards the concept of conservation and the majority, which was more than 90% ,supported the concept as indicated by the positive results in the table.

Such responses indicate that, contrary to the assumptions of many western conservationists that Third World rural communities are almost entirely antagonistic to conservation and ignorant of conservation issues (Infield, 1998). There are in fact strong feelings supporting conservation among the respondents belonging to these rural groups. The concept of conservation and attitudes towards it is indeed well supported by HIP communities.

TABLE 5.3: Communities' attitudes towards biodiversity conservation

QUESTION1	Don't know /no	Yes/when necessary	Not at all
A	1	36	3
B	0	35	0
C	6	30	4
D	0	37	3
E	0	35	0
F	3	33	4
G	0	38	2

The examination of the above results emanating from the empirical research indicates that:

- (a) The majority of respondents have a very positive attitude towards conservation.
- (b) They possess knowledge of diversity and conservation as a result of the existence of IK.
- (c) Culture, history, socialization and tradition are very strong influences in the existences of IK and attitudes towards conservation and biodiversity.
- (d) There is a strong feeling that a number of economic and social factors are instrumental in the lack of the transmission of such knowledge to younger generations.

Having examined the opinions, ideas and attitudes of the selected respondents regarding conservation and IK, let us turn to the respective results obtained from EKZNW staff.

4. VIEWS OF THE EKZNW STAFF

4.1 Management Level

A total of four interviews were held with the officials of EKZNW at different levels. Of the four, two indicated that they were upper level management officials; one was at lower level and the other at middle level management. Two of the respondents responded to all the questions.

4.2 Access to Indigenous Knowledge by EKZNW

The respondents indicated that an average of one project per community has been funded by EKZNW. In relation to what systems have been put in place to access and utilize IK, three of the managers responded that very little has been done. Some did however reveal that the organization is drawing on indigenous ethics and codes of conduct and that links are maintained with *izinyanga* and in addition the Conservation Partnerships & Projects (CP&P) Branch could be regarded as a system for accessing IK.

Though one manager mentioned that EKZNW is working through Local Boards to give local communities rights and control over natural resources, Local Boards fall far short of a system to access and utilize the wealth of IK possessed by the local people. Hence very little or nothing exists to access, interpret and apply IK from the communities. Local Boards are bodies encompassing a wide array of local actors instrumental in the function of the area , including local municipality officials, representatives of state departments as well as various semi-state

entities and traditional leaders. Occasionally local community leaders are also called to participate in these bodies.

Three of the respondents did not seem to identify any obstacles to accessing and interpreting IK except one who pointed out that nothing is being done to explore traditional ways of doing things. It was also mentioned that some ecologists do not see IK as a special source of learning and that non-indigenous writers have been trying to articulate the position that indigenous ethics introduce alternative ways of life.

This position was articulated by this particular respondent as follows:

“We as civil servants cannot really participate in such debates, although they are serious and we can learn much from these. There are scientists who understand and explain all these environmental issues in different ways, some are in the USA and Britain, others are in Africa and look at things differently because they believe African people have their own belief and understanding of things, in terms of IK . This is we have all these new things from Africa, like African Renaissance, NEPAD and the African Union , because there are leaders who believe that Africa needs her own solutions to her problems. We cannot participate in these discussions because we work with rules, regulations and laws, which dictate to us how to perform our duties and responsibilities. Even if or when we try to help people and communities this has to be done within these laws and regulations”

4.3 Recognition of Indigenous Knowledge as Useful

All respondents shied away from indicating whether existing obstacles of accessing and interpreting IK were born from within EKZNW. This reality, which is also evident in the preceding quotation by an official, makes it difficult for them as employees and managers to access their role in lifting the obstacle. However, they all agreed that IK is useful for biological conservation, especially the plant and animal knowledge. They indicated that such knowledge would enhance

people-animal and people-plant relationships, thus increasing people's knowledge of plants and animals. This would lead to their sustainable use and preservation (if and when necessary) and future generations would also benefit. Such IK preservation, they indicated, would contribute to a better history of HIP and sustainable use of natural resources.

4.4 Role of EKZNW regarding Indigenous Knowledge

Three out of the four respondents indicated that EKZNW recognizes community IK and the remaining interviewee stated that there was no clear-cut indication of such recognition by EKZNW. Two of the interviewees, 50% of the sample population stated that EKZNW's recognition of IK was evident in the use of:

- (a) Community tour guides,
- (b) The propagation of *muthi* plants for use as community medicinal plants by izinyanga,
- (c) The formation of Traditional Healers' Association, and
- (d) The inclusion of community elders' IK during environmental education excursions and workshops.

Such responses pinpoint a certain degree of acceptance of IK on the part of the EKZNW officials, an encouraging sign. However, it needs to be said that such recognition did not come from all respondents.

Some of the interviewees pointed out that these initiatives were inadequate and stressed the need for EKZNW to document and interpret IK and the need for thorough research on the information to enhance current EKZNW's delivery to communities.

4.5 Suggestions to Reposition EKZNW as a Catalyst of Change

Question 5 to the EKZNW staff (Appendix C) focused on repositioning EKZNW as a catalyst of change at HIP. The respondents were asked to suggest what they would like to see happen. In their answers they mentioned a need to display community indigenous information including indigenous domestic lifestyles and indigenous technology inside the park. For all of these to operate, it was suggested that a structure with indigenous knowledge would be required. All respondents also agreed that local people have contributed to some of EKZNW initiated projects, giving examples such as *izinyanga*, craft markets, *Imbewu* project, and Mpembeni Community Conservation Game Reserve (CCGR).

The examples of indigenous knowledge contributions to the EKZNW projects were acknowledged by the officials as adding value to the work of the organization, because the new elements of indigenous knowledge implemented brought new insights to its work.

As one of the officials said:

'The more one talks to the people, especially the elders, the more you learn about the importance of this embedded culture, traditions and knowledge that is evident. In the past, none of us had such opportunities, due to the constraint Apartheid imposed on professionals in the field. Now we are in a process of recording, listening and in fact implementing a lot of ideas. This is something that could never been heard of before.'

Generally community members were appreciative of the idea of incorporating IK into development projects while not all staffs were comfortable with the idea.

With regards to positioning EKZNW as a catalyst for change at HIP, a number of suggestions were brought forward such as:

(a) To conduct a joint investigation in all the ten adjacent communities to find out what IK is possessed by them and make sure that it is not abused. Conducting such an investigation would maybe benefit EKZNW in the sense that IK that could be discovered could be useful to HIP and could also be utilized to enhance the partnership between EKZNW and communities.

(b) Introduction of joint ventures. This could mark the death of the “*us and them syndrome*” that still lingers vividly in some circles of the community. It is also anticipated that this exercise would be a living proof of the embracing of the principle of sustainable development that ‘*people must be given an opportunity to participate in all activities and decisions that affect their lives (LA21)*’. The World Summit 2002 that was held in Johannesburg was very strong on the establishment of environmental partnerships at local level for the achievement of sustainable development.

(c) Evident demonstration in the responses of some of a strong belief that IK existed in the communities. It was mentioned that this is the time to explore the knowledge of the locals who once existed harmoniously with the animals and plants.

(d) Undertaking in the near future of a number of tasks related and bound to strengthen IK and environmental sustainability.

These responses and recommendations surfaced in the interviews with the managers as they are knowledgeable and experienced, and understand the realities of the present situation.

(e) Establishment of nurseries that would act as an IK outdoor classroom to encourage IK learning. The responsibility of establishing nurseries could be incorporated in the duties and responsibilities of all Community Conservation Officers.

- (f) Engage trained local guides who would use local history when relating about the background history of the park whilst opening and creating access to cultural sites inside the protected areas.
- (g) Support community based ecotourism, giving local people an opportunity to showcase their African practices. Tourists from abroad like to experience what it used to be like in the olden days.

Taking into account the responses of those interviewed, It is apparent from their suggestions that the majority of staff at EKZNW have positive expectation from IK and that given a try there is a possibility that there is something that the communities' IK can do to benefit conservation as well as benefit people economically. This assumption is based on suggestions by EKZNW staff cited below:

'I would like to see local people with most wanted IK being given opportunity to use that knowledge to the benefit of the community and the park, by having activities in the park.'

'To have local people applying their indigenous knowledge will make them feel part of the park and they will develop the sense of belonging.'

'Strengthen cultural activities and support conservation awareness through using old ex-employees of the organization.'

4.6 Conclusion

The chapter provided the empirical basis of the whole project and examined the attitudes, opinions and ideas, as well as the knowledge of the indigenous local people regarding indigenous knowledge.

Although it would be important for comparative reasons to present the different findings recorded in the two areas under examination separately, it is important to mention the unanimity of attitudes, opinions, ideas and knowledge regarding indigenous knowledge.

While the chapter outlined the solid understanding of indigenous knowledge amongst local people who were sampled by the researcher in the two study areas, Mpembeni and Mdletsheni Traditional Authorities, it became evident through the interviews with the managers of Ezemvelo KZN Wildlife in charge of the wildlife in the area that a number of initiatives and steps need to be undertaken to further develop the efficiency in the midst of abundance in the Hluhluwe-Imfolozi Park area. These will be further elaborated upon in the last chapter of this thesis.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

1. Introduction

This chapter provides a summary of the findings, conclusion and recommendations based on the findings of the study which it is believed can play an important role for Ezemvelo KZN Wildlife to be seen as a catalyst of change at Hluhluwe Imfolozi Park.

Ezemvelo KZN Wildlife in its Environmental Education Policy Document mentioned clearly their intention to research and document indigenous knowledge relevant to biodiversity and utilise it equally on matters of biodiversity conservation where possible and relevant. The researcher believed that communities had abundant invaluable and under-utilized reservoir of indigenous knowledge that could be accessed and used to the benefit of biodiversity. Employees of EKZNW employ scientific methods to conserve biodiversity.

To test the possibility of merging these two forms of knowledge, a survey had to be undertaken. The aim of the survey was to explore ways in which EKZNW could position itself to be an integral part of saving the decline of indigenous knowledge whilst at the same time improving the lives of rural poor communities adjacent to Hluhluwe-Imfolozi Park, with specific reference to communities of Mpembeni and Mdletsheni Traditional Authorities. The study aim sought to:

- (i) discover the amount of plant and animal indigenous knowledge that existed in the communities, and
- (ii) discover the attitudes of EKZNW staff towards indigenous knowledge that communities in particular the Mpembeni and Mdletsheni Traditional Authorities possessed and whether they regarded that knowledge authentic enough to be integrated into conservation.

The study consisted of two samples, one drawn from the Mpembeni and Mdletsheni communities, which are two of the ten Traditional Authorities abutting Hluhluwe-Imfolozi Park, and the second one was made up of staff from Ezemvelo KZN Wildlife. A maximum sample size of forty adults above the age of 40 from the two traditional authorities was interviewed; whilst a purposive sample consisting of four top management officials from Ezemvelo KZN Wildlife was interviewed.

The thesis explored the effort of Ezemvelo KZN Wildlife (EKZNW) in becoming successful in the process of creating platforms that would enhance integration of indigenous knowledge with scientific methods of conservation to benefit conservation programmes as well as lifestyles that favoured biodiversity conservation. The main findings revealed that communities possessed plant and animal indigenous knowledge and that this knowledge faced a great challenge because there was no systematic documentation of it and its oral transmission was inconsistent.

2. Reflections to the Study

Irrespective of the fact that the aim and objectives of the study were achieved, the researcher feels that more informative results would have been obtained and this is attributed to the following:

- It is most likely that the other eight traditional communities abutting Hluhluwe-Imfolozi Park have their different attitudes and different plant and animal indigenous knowledge. All or more than two communities should have been selected to be part of the sample.
- All the community members interviewed are constituents and subordinates within the traditional authority led by *inkosi*. The possibility that *inkosi* as the head of the traditional authority had an impact on their responses cannot be ignored.

- Biodiversity conservation extends beyond the protection of plants and animals. Unfortunately, indigenous knowledge about habitats, propagation and carrying capacity was not explored. It would have been beneficial to get the views of the communities on these issues.
- Only Ezemvelo KZN Wildlife senior management officials were interviewed. It would have been better to get the knowledge and pinions of junior employees who happen to be from the Mpembeni and Mdletsheni Traditional Authorities and be in the above age 40 category.
- The utilization of the services of a guide during field work, who was from the community and then a temporary employee of Ezemvelo KZN Wildlife, may have impacted on the responses. This can be attributed to the fact that since the guide was junior to the respondents, they might have given positive responses in order to earn/maintain the respect of the guide. A more neutral person should have been used as a guide.
- If it were not for time and financial constraints, a larger sample size should have been used to reduce sampling errors as well as to increase the likelihood that a sample is representative of the population.

3. Conclusion

Despite the fact that the Mpembeni and Mdletsheni Traditional Authorities are poverty stricken, with lower levels of education, the study has revealed that:

(a) Communities have valuable indigenous knowledge (IK) that they are willing to contribute to Ezemvelo KZN Wildlife (EKZNW) and that is worth incorporating for the benefit of biological diversity and present and future generations.

(b) Communities selectively remove plants and animal species for food, medicine and wood and although communities have a level of awareness of the impact of their activities, they are justified as necessities.

(c) Some officials of EKZNW realise that communities have invaluable indigenous knowledge about animals and plants that could be tapped into and that could be incorporated into activities of EKZNW for the benefit of both present and future generations as well as biodiversity.

4. Recommendations

- Research into IKS should ideally be carried out with the participation of the communities in which it originates and is held. Such research can look into indigenous local methods for conservation; indigenous local uses of natural resources; and indigenous recipes for the use of natural resources in a sustainable manner.
- There is an urgent need for Ezemvelo KZN Wildlife to develop an organizational strategy for indigenous knowledge, innovations, practices and lifestyles that favour biodiversity conservation. The strategy could entail establishment of knowledge networks that would link holders of indigenous knowledge and conservators with other counterparts struggling in similar situations across the SADC region.
- There is a need for Knowledge Networks that would facilitate effective implementation and change needed in the existing operational framework. These Knowledge Networks could perform several other functions, such as:
 - a) Recognize and reward those communities who still have indigenous knowledge and use it for the benefit of the environment; and
 - b) Link formal science with indigenous knowledge in order to add value to the local innovations and initiatives.

The focus of the Knowledge Networks should not only be on the incentives for conservation of indigenous knowledge, practices and lifestyles but also on the conditions for their effective implementation.

- A gap is widening for both traditional and modern indigenous knowledge. For both forms of knowledge there is no systematic mode of knowledge transmission, and if there is any, it is incomplete and unorganized. It is therefore recommended that EKZNW establish capacity within communities so that it can become clear whether the present knowledge is modern or traditional and if doing so would benefit communities and EKZNW.
- Sustainable livelihoods of the local people of bordering Hluhluwe-Imfolozi Park depend on the utilization of faunal and floral products. There is therefore a need for EKZNW to think about other alternatives that could compensate for the sacrifice that local people are expected to make by not utilizing these wildlife resources. Such alternatives could be an establishment of woodlots and community nurseries.
- EKZNW boasts a partnership that exists between them and the communities. It would be interesting to interrogate the type of partnership that exists, to investigate if this partnership has been able to build capacity among communities so that they are in a position to initiate projects that will sustain them in future.
- I recommend that EKZNW try harder to create and/or nurture the already existing environmental education partnerships with schools and maybe encourage adoption and indigenous knowledge researching of plants and animal species as a way of encouraging environmental ethics amongst learners.
- Failure of most organizations to integrate gender concerns usually result into development initiatives that are biased against women. In the context of

partnership and community development, it would be worth spelling out measures that are there to safeguard against assuming that communities are homogeneous entities with limited interests. A database showing how EKZNW has impacted positively on the lives of rural empowered women could be sufficient.

- Men and women have different roles in society and unequal access to different roles in society and unequal access to opportunities and resources. Both men and women have a reservoir of indigenous knowledge that is undocumented and needs to be passed on to present and future generations. EKZNW needs to set out a project to compile a conservation-oriented IK booklet with inputs from men and women. A mechanism to present EKZNW as a catalyst of change during this project would have to be investigated and developed prior to the project. The objective of this mechanism would be to ensure that during data collection, women are not alienated from the project but have equal opportunity to make a contribution to the process as men.

5. Summary

The study has displayed that there is a role for Indigenous knowledge within biodiversity conservation. Communities' indigenous knowledge could provide solution to some of ever escalating problems associated with conventional methods of conservation. Integration of indigenous knowledge into conservation methods and programmes has a potential to contribute to socio-economic development of the communities bordering Hluhluwe-Imfolozi Park. There is a need however for further studies to explore possibilities for the socio-economic potential of all communities bordering protected areas under the management of Ezemvelo KZN Wildlife.

REFERENCES

Adjakpa,B.J. et OGOUVIDE,F.T. (1999) Contribution a l'e'tude e'conomique et socioculturelle des oiseaux sauvages utilise's en pharmacope'e be'ninois.CEROE., Cotonou. Article publie' dans la Nature et Faune. Vol.18 no.1 April 2002.

Agee, J. and Johnson, D. (1988) Ecosystem Management for Parks and Wilderness, Seattle, WA: University of Washington Press.

Bailey, K (1987) Methods of Social Research, Free Press, New York

Bakker-Cole, M. (1999) Wildlife, Wilderness and People: *The Untold Story of How Southern Africa is Saving its Wildlife*. Bezier journals: Zimbabwe.

Blalock, A. B. and Blalock, H. M. (1970) Introduction to Social Research. Prentice- Hall Inc Englewood Cliffs. New Jersey.

Bonner, P. (1977) Working Papers in Southern African studies, Johannesburg, Ravan Press.

Bozzoli, B. (1979) Labour, Township and Protest, Johannesburg, Ravan Press.

Brascoupe, S. &Mann, H. (2001) *A Community Guide to Protecting Indigenous Knowledge*, [online] Available: <http://www.scidev.net/dossiers/indigenous-indigenous/ikdoes.html> [2003, March 03].

Carney, D. (1998) Sustainable Rural Livelihoods: *What contributions can we make?* Russell Press Ltd.: Nottingham, London.

Clout, H. (1993) European Experiences of Rural Development. London: Rural Development Commission.

CODESRIA (1997) Endogenous Knowledge: Research Trails, Harare

Cohen, L and Manion, L (1991) Research Methods in Education. Routledge, London.

- Cowan, G.I., and Swift, M. (2003) *Strategic Innovations in Biodiversity Conservation: The South African Experience*. Department of Environmental Affairs and Tourism, Pretoria.
- Derwent, S and Porter, R. (2003) *Benefits Beyond Boundaries. 5th World Parks Congress: Field Visits to Protected Areas in KwaZulu-Natal, South Africa*. 14-15 September 2003.
- Diederichs, N. (2001) *Dictionary of Popular Traded Plants in South Africa*. SHARE-NET: Howick.
- Domah, P.D. (2000) *The Reconstructing and Privatisation of Regional Companies in England and Wales: A Social Cost Benefit Analysis*, Vol. 22, No1, pp 107-146.
- Durkheim, E. (1982) *The Rules of Sociological Method*. Macmillan, London.
- Emeagwili, G. (2003) *African Indigenous Knowledge Systems (AIK)*: Implications for the Curriculum, [online] <http://www.africa.net/AIK.htm>. [2003, April 04].
- Fisher, J. (1993) *The Road from Rio*. Sustainable Development and the Non-governmental Movement in the Third World. London: Praeger.
- Fitzgerald, P., McLennan, A. and Munslow B. (1995) *Managing Sustainable Development in South Africa*. Oxford University Press, Cape Town.
- Flavier, J.M. et al. (1995) "The regional program for the promotion of indigenous knowledge in Asia", pp. 479-487 in Warren, D.M., L.J. Slikkerveer and D. Brokensha (editions). *The cultural dimension of development: Indigenous knowledge systems*. London: Intermediate Technology Publications.
- Gcumisa, S. (1993) *Isilulu Solwazi Lwemvelo*. Shuter & Shooter, Pietermaritzburg.
- Ghai, D. and Vivian, M.J. (1992) *Grassroots Environmental Action: People's Participation in Sustainable Action*. Routledge, London

Giddens, A. (1992) *Modernity and Self-Identity*. Polity Press: Cambridge.

Giddens, A. (1993) *Sociology*. 2nd edn. Polity Press: Cambridge.

Gough, A. (1997) *Indigenous Knowledge*. In Fien, J. Heck, D., Ferreira, J. 1997 *Learning for a sustainable Environment*. UNESCO ACEID Bangkok & Griffith University CIREE, Brisbane

Grenier, L. (1998) *Working with Indigenous Knowledge: A Guide for Researchers*. IDRC, Ottawa.

Grinnell, R. M. (1993) *Social Work Research and Evaluation*. FE Peacock Publications, Itasca, USA.

Haralambos, M. (1986) *Sociology: Themes and Perspectives*. 2nd edn. University Tutorial Press: London.

Harmse, A.C. (1994) "Rural Development in South African Context," In: Only Study Guide for GGE302-k: Population and Regional Development in South Africa. Pretoria: UNISA.

Harris, J. (1992) *Rural Development: Theories of Peasant Economy and Agrarian Change*. London: Routledge.

Hopper, E. (1981) *Social Mobility: A Study of Control and Instability*. Oxford, Blackwell.

Indigenous Knowledge Systems (1999) [online] Available: <http://www.indigenousknowledgesystems/nrf/documents/> [2003, August 05].

Infield, M.M (1988) "Attitudes of a Rural Community towards Conservation and a Local Conservation Area in Natal, South Africa," Biological Conservation 45:21-45.

Jiah, R (1998) "The Role of the SADC NATURAL Resources Management Programme in Southern Africa". In Rihoy, E. (1998). Natural Resource Tenure in Southern Africa: Exploring Options and Opportunities: Proceedings of a workshop on Land/Resource Tenure and Decentralisation in Johannesburg. SP Litho Press.

Khan, S., Mantzaris, E., Radebe, D. (2005) "Indigenous Knowledge and Its Significance for African Communities ', November, unpublished, Durban, South Africa.

Khumalo, G.N. (2004) The Unemployment figures don't tell the story, University of Western Cape Economics Seminar, August, unpublished, Cape Town; SA Labour and Development Unit 2004, Bulletin, September, UCT School of Economics.

Kolawole, OD (2001), 'Local Knowledge Utilization and Sustainable Rural Development in the 21st century,' Indigenous Knowledge and Development Monitor (9-3).
KwaZulu-Natal (KMI).1996:2 Investing in KwaZulu-Natal, Durban: Price Waterhouse.

Laird, S.A., Wynberg, R. (2003) Biodiversity Prospecting & Access and Benefit Sharing: *An Introductory Primer*. IUCN, Pretoria, South Africa.

Lui, J. (1996) 'A Cross-National Approach Determining Resident Perceptions of the Impact of Tourism on the Environment,' *Annals of Tourism Research* 14: 17-37.

Loubser, C.P. (1996) Study Guide for the HED Diploma. Pretoria: University of South Africa.

Magubane, B. (1979) The Political Economy of Race and Class in South Africa. New York.

Makombe, K. (1993) *Sharing the Land, Wildlife, People and Development in Africa*.
International Union for Conservation – ROSA. Environmental Issues Series No. 1. pp 9-13.
Harare.

Marlow, C. (1998) Research Methods for Generalist Social Work Pacific Grove. Brooks Publishers.

Masuku, L.S. (1999) The Role of Indigenous Knowledge In/For Environmental Education: The Case of A Nguni Story In The School Water Action Project. Unpublished Master's Thesis, Rhodes University.

Matawanyika, JZZ et al (Eds.) (1995) Indigenous Knowledge Systems and Natural Resource Management in Southern Africa; *Report of the Southern Africa Regional Workshop, Harare, Zimbabwe, 20-22 April 1994*. Print Holdings: Zimbabwe.

Matawanyika, J and Sibanda, H. (1998) The Missing Link: Reviving Indigenous Knowledge Systems in Promoting Sustainable Natural Resource Management in South Africa. Proceedings of a Regional Workshop held in Midmar, KwaZulu-Natal, 23-28 April 1994. Strand Multiprint: Harare.

Maveneke, J (1998) "Decentralisation in Campfire: Current Issues and Constraints". In Rihoy, E. (1998). Natural Resource Tenure in Southern Africa: Exploring Options and Opportunities: Proceedings of a workshop on Land/Resource Tenure and Decentralisation in Johannesburg. SP Litho Press.

Molefe, R. (2003) 'Parks no longer Islands: Conservation Areas Need to Benefit the Communities in their Midst in order to Survive', *Sowetan*, 23 September, p17. Johannesburg.

Mouton, J and Marais, H.C. (1996) Basic Concepts in the Methodology of the Social Sciences. Human Science Research Council Publishers. Pretoria. South Africa

Munster, D.O. & Sandwith, T.S. 1998. Conceptual Development Plan for the Hluhluwe-Imfolozi Park, Planning Division: KZN Wildlife: Pietermaritzburg.

National Research Council (1991) Indigenous Knowledge at the Interface with Other Systems of Knowledge. Unpublished Report 5(3): 18-45.

Ndimande, P.S.M. (2001) 'Gender Inequality Still A Critical Issue In The Development of Rural KwaZulu-Natal'. Paper presented at a Biennial Conference of the Economics Society of South Africa, September 2001. Glenburn Lodge, Johannesburg. Unpublished.

Ngobese, P. and Cock, J. (1995) Development and Environment. In: Fitzgerald, P et al. Managing Sustainable Development in South Africa, Oxford University Press, Cape Town.

Nxumalo, O.E.H.M. (1995) Indigenous Knowledge Systems and Natural Resources Management in South Africa. *Key Note Address for a Conference on Study and Promotions of Indigenous Knowledge Systems and Sustainable Natural Resources Management in Southern Africa. Howick. S.A.* Unpublished.

Oelofse, C and Scott, D. (1998) Green and Brown: Improving One's Living World through Participatory Environmental Education. *Infocus Forum* 6(4): 19-24.

Pooley, T and Player, I. (1995) KwaZulu-Natal Wildlife Destinations: A Guide to the Game Reserves, Resorts, Private Nature Reserves, Ranches and Wildlife Areas of KwaZulu-Natal Cape Town: Southern Book Publishers.

Profile KwaZulu-Natal cc, (2001) [online] Available: [http:// www. Profile KwaZulu-Natal.html](http://www.ProfileKwaZulu-Natal.html) [2003, August17].

Odora Hoppers, C. *Africa Insights*. Indigenous Knowledge Systems: The missing Link in Literacy, Poverty Alleviation and Development Strategies in Africa volume 32, issue 1, March 2002:3-7.

Odora Hoopers, C. (2002) *Indigenous Knowledge Systems and the integration of Knowledge Systems: Towards a Philosophy of Articulation*. New Africa Books: South Africa.

Ohiorhenuan, J.F.E. African Renaissance: A Rejection and Embrace of the Past: A Guest Column. *Enterprise: Networking for Africa's Entrepreneurs and Leaders*, Issue 153, April 2001: 40-41.

Opoku, K.A. (1994) How do We Collect Information on Indigenous Systems? Paper presented in a regional Workshop on *Indigenous Knowledge Systems and Natural Resources Management in Southern Africa*: 20-22 April 1994. Matawanyika, J.Z.Z. et al. pp. 65-72. IUCN. Harare.

Palys, T. (1997) *Research Decisions: Qualitative and Quantitative Perspectives*. Harcourt Brace, Canada.

Peil, M. (1982) *Social Science Research Methods: An African Handbook*. Hodder and Stoughton: London.

Peshoane, T. (1994) What is the practical importance of indigenous systems for community resources management in Lesotho? Paper presented in a regional Workshop on *Indigenous Knowledge Systems and Natural Resources Management in Southern Africa*: 20-22 April 1994. Matawanyika, J.Z.Z. et al. pp. 73. IUCN. Harare.

Quiroz, C. 'Local Knowledge Systems Contribute to Sustainable Development.' *Indigenous Knowledge and Development Monitor*, Volume4, Issue1, 1996: 3-5.

Reay, N. (1997) *Environmental Upgrading of Schools in the Eastern Cape, South Africa: Creating potential for NGO/Government/Beneficiary. A Case Study Prepared by EDA Trust* Matatiele, March 1997. Matatiele: EDA Trust.

Redclift, M.R. (1992) *Sustainable Development and Popular Participation: A Framework for Analysis* in Ghai, D. and Vivian, J.M. (eds.) *Grassroots Environmental Action*. Routledge, London.

Robinson, G. M. (1998) *Methods and Techniques in Human Geography*. John Wiley and Sons Ltd., England.

Sarantakos, S. (1993) *Social Research*. Charles Stuart University, Rivenia.

Scott, D. (2000) *Participatory Environmental Education in Environmental Decision-Making*

Processes. Human Needs Resources and the Environment Report (HNRE) 63, School of Life and Environmental Sciences, University of Natal, Durban.

Sseepe, S. (2000) 'Indigenous Knowledge Systems Can Benefit Everyone', *Mail & Guardian*, 19-25 Oct., p22.

Silverman, D. (1993) *Interpreting Qualitative Data. Methods for Analyzing Talk, Text and Interaction*. Sage Publishers, London.

Simpson, T.M. (1995) *Why does Biodiversity Decline? The Analysis Forces for Global Change*. In: *the Economics and Ecology of Biodiversity Decline*. Swanson T.M. 1ST Edition. P1-11. Cambridge University Press, Cambridge.

South African Labour and Development Unit (2004): September Bulletin, UCT School of Economics: Cape Town.

Southey, S., McNeil, C. and De Ravin, E. (2002) Equator Initiative: Building on Local Partnerships for Poverty Reduction and Biodiversity Conservation. *Urban Green File* 7(5): 53-55.

Statistics South Africa (1998:4-5). Living in KwaZulu-Natal [online] Available: statssa.gov.za/living/KwaZulu-n/section1.htm [2003August08].

Statistics South Africa (2002): [online] Available: <http://www.proudlysa.co.za> [2003, August 05]
Sunmonu, H. (1993) *Africa within the World*, [online] Available: <http://worldviews.igc.org/awpguide/devel.html> [2003, September03]

Tandon, R. (1990) 'Partnership in Social Development Evaluation' in Marsden, D. and Oakley, P. *Evaluating Social Development Project*. Oxfam, Oxford.

Thakadu, O.T. (1997) Indigenous Wildlife Management Knowledge Systems And Their Role In Facilitating Community Based Wildlife Management Projects In Botswana. Unpublished Master's Thesis, University of Natal, Pietermaritzburg.

The Rural Development Strategy of the Government of National Unity. (1995) Putting Rural People in Charge: A Discussion Document Ministry in the Office of the President. Pretoria.

The Rural Development Task Team (RDP) and Land Reform Policy Branch (Department of Land Affairs), (1997) Thriving Rural Areas: Rural Development Framework Pretoria.

United Nations Conference on Environment and Development (1992) [online] Available: <http://unced.org/documents/rio/html> [2003, July 14].

Urquhart, P. and Atkinson, D. (2000) A Pathway to Sustainability-Local Agenda 21 in South Africa. Trident Press: Cape Town, South Africa.

Vinke, J. (1992) Actors and approaches in environmental education in developing countries in environmental education. An Approach to Sustainable Development. Paris: OECD.

Warren, DM (1991) Using Indigenous Knowledge for Agricultural Development. World Bank Discussion Paper 127. Washington, DC.

Warren, DM (1996) 'The Role of indigenous Knowledge and Biotechnology in Sustainable Agricultural Development', A Keynote Address presented at the Southwestern Nigeria Regional Workshop on Indigenous Knowledge and Biotechnology. 30 July 1996. Nigeria.

Wells, M. and Brandon, K. (1992) People and Parks: Linking Protected Area Management with Local Communities, Washington, D.C.: The World Bank.

World Commission on Environment and Development (WCED) (1987). Our Common Future. Oxford University Press, New York.

World Conference on Science (1999). [http:// wcs/Budapest/unesco/html](http://wcs/Budapest/unesco/html).

Yeld, J. (1997) Caring For The Earth- South Africa: A Guide to Sustainable Living. Juta Academic Publishers. Kenwyn, Cape Town.

York, RO (1997) Building Basic Competencies in Social Work Research: An Experiential Approach. East Carolina University: USA p286.

APPENDIX A: ETHICAL CONSIDERATION DISCLOSURE

BEFORE INTERVIEW

The researcher introduced herself to the respondent and informed her/him about the purpose of the study and that she/he as a potential respondent had:

- (a) a right to either avail herself/himself for the interview or not to avail herself/himself/ if she/he so wished, and that,
- (b) if she/he availed, herself/himself/ she/he had a right to indicate to the researcher during the interview her/his change of mind with regards to continuing with the interview and that that right would be respected.

On consent, the researcher advised the respondent of absolute confidentiality and that all data was going to be used strictly for the purpose of the research.

AFTER INTERVIEW

The researcher thanked the respondents and inquired if the respondent had:

- (a) felt any signs of coercion during the interview or
- (b) Been subjected to any physical or mental harm during the interview.

CONCLUSION

It is as a result of strict adherence to this preparatory interview with would be respondents that ethical consideration was taken into account. All people approached consented to the interview and none of them agreed to having been coerced or felt having been subjected to physical or mental harm during the interview.

APPENDIX B: QUESTIONNAIRE FOR COMMUNITIES

A: GENERAL BACKGROUND INFORMATION

- Period of stay in the area
- Source of income
- Respondents level of education
- Gender
- Year of birth/Age

B: INFORMATION ON IK AND DEVELOPMENT

QUESTION 1

In the light of the Conservation Management Act No.9 of 1997 what is the attitude of respondents towards wildlife conservation?

- a) Are wild animals important to you?
- b) Why are they important?
- c) How often do you hunt?
- d) Are wild plants important to you?
- e) Why are they important?
- f) How often do you harvest wild plants?
- g) What are your views on hunting and harvesting all round the year?

QUESTION 2

Which of these IKS practices could be incorporated to development projects to benefit biological diversity conservation and the local communities bordering Hluhluwe-Imfolozi Park?

- a) What type of knowledge do you have about wild animals?
- b) What type of knowledge do you have about wild plants?
- c) Could you give me examples where you use this knowledge?
- d) Does what you do with your indigenous knowledge of animals and plants earn you a living or help conserve the natural resources or both?
- e) Explain how the above happens.

QUESTION 3

- a) Do you take part in the development initiatives of Hluhluwe-Imfolozi Park by the EKZNW?

Yes/ No

- b) (1)If yes, how does your indigenous knowledge about animals or plants help you take part in development issues? / If no, do you think there is a greater part you can play if you were given an opportunity?
- c) What stops your greater participation at the moment?

QUESTION 4

How could development projects tap on those IKS features relevant to biological diversity but are monopolised by particular institutions within the community?

- a) How did you acquire the knowledge that you possess?
- b) What do you do to safeguard against forgetting this knowledge?
- c) Who else in the family has this knowledge?
- d) Would you be willing to share this knowledge with an outsider?
- e) What would an outsider have to do in order to know what you know?

QUESTION 5

How useful are indigenous knowledge systems in biological diversity conservation in general?

- a) Is there any role that the knowledge you possess can play in conservation of wildlife?
- Yes/No
- b) If yes, what role is that?

QUESTION 6

- a) Are there organizations in the area that are custodians of indigenous knowledge? (E.g. Traditional healers associations. They could be formal/informal)

- b) Do you take part in their activities?
- c) Could you list their activities?

QUESTION 7

How is EKZNW not contributing to adding value to Indigenous Knowledge despite the stated intention of the organization?

- a) To what extent is EKZNW recognizing the knowledge that you have?
- b) What would you like to see happening from EKZNW regarding the knowledge that you possess?
- c) Are there any EKZNW sponsored development projects in this area that in which you have contributed your knowledge?
- d) Have you as a person tried to contribute your knowledge in a development project?

APPENDIX C: QUESTIONNAIRE FOR EKZNW STAFF

QUESTION 1[MANAGEMENT]

TO FIND OUT ABOUT THE MANAGEMENT LEVEL

At what level of management are you?

Lower

Middle

Upper

QUESTION 2[ACCESS TO IK BY EKZNW]

TO DETERMINE HOW DEVELOPMENT PROJECTS COULD TAP ON THOSE IKS FEATURES RELEVANT TO BIOLOGICAL DIVERSITY BUT MONOPOLISED BY PARTICULAR INSTITUTIONS WITHIN THE COMMUNITY, THE FOLLOWING QUESTIONS WERE ASKED

- a) How many development projects has Ezemvelo KZN Wildlife (EKZNW) funded at HIP out of the community levy fund?
- b) Of those, how many are for:
 - (i) Mpembeni Community?
 - (ii) Mdletsheni Community?
- c) What systems have been put in place by EKZNW to access and utilize the indigenous knowledge possessed by these communities for the benefit of both the people and conservation?
- d) Have the systems helped EKZNW access, interpret, and apply the indigenous knowledge acquired from the communities for its own conservation functions?
- e) Describe the problems encountered, if there have been any, in the area of
 - (i) Access to indigenous knowledge
 - (ii) Interpretation of indigenous knowledge
 - (iii) Application of indigenous knowledge
- f) If the problems have been as a result of EKZNW's shortcomings, what are those

shortcomings?

- g) If the problems have been a result of influence from outside of the EKZNW, what are those influences?

QUESTION 3[RECOGNITION OF IK AS USEFUL]

IS INDIGENOUS KNOWLEDGE USEFUL FOR EKZNW BIODIVERSITY CONSERVATION?

- a) Is there any role that the animal and plant indigenous knowledge that is possessed by these two communities can play in biodiversity conservation?

Yes/No

- b) If yes, what role is that role?

QUESTION 4[ROLE OF EKZNW REGARDING IK]

HOW IS EKZNW NOT CONTRIBUTING TO ADDING VALUE TO INDIGENOUS KNOWLEDGE DESPITE THE STATED INTENTION OF THE ORGANIZATION?

- a) Does EKZNW recognize the indigenous knowledge possessed by the communities?

Yes/No

- (i) If yes, to what extent (give examples where possible)?

(ii) If no, what would you like to see happening regarding the indigenous knowledge that the Communities have?

- b) Are there any developments projects in this area where EKZNW has allowed communities to contribute their indigenous knowledge?

Yes / No

- (i) If yes, can you give names of those projects?

- c) Have you as a person in your position tried to encourage incorporation of indigenous knowledge in a development project funded by EKZNW?

Yes/ No

- (i) If yes, was that to other staff members or to members of the community?

- d) How was that received?

QUESTION 5

If you were to suggest for EKZNW to reposition itself as a catalyst of change at HIP, what would you suggest with regards to indigenous knowledge possessed by these two communities?

APPENDIX :D



EZEMVELO KZN WILDLIFE

CONSERVATION, PARTNERSHIPS & ECOTOURISM

Environmental Education Policy

Purpose

To set out conditions and parameters that will foster a uniform approach for environmental education programmes carried out by staff of Ezemvelo KZN Wildlife (EKZNW), inside and outside protected areas, with allowance for the uniqueness of the areas in which the programmes are carried out.

Rationale

For a very long time the philosophy of biodiversity conservation upheld by the formal conservation authorities denied rural black communities an opportunity to contribute to, and benefit from, biodiversity conservation. This exclusionary management style created feelings of contempt and resentment by these communities for biodiversity conservation within and outside protected areas.

This exclusion has also resulted in a lack of knowledge about the importance of biodiversity conservation for sustainable livelihood strategies and this is detrimental and threatening to biodiversity.

EKZNW has realized that conserving the biodiversity of KwaZulu-Natal is dependent on:

- (a) the recognition by the public that everyone has a responsibility and a positive role to play; and
- (b) the recognition by the organization (EKZNW) that contributions of the people are imperative.

Environmental Education is therefore a tool to educate and to positively influence communities' attitudes and behavior towards the conservation of biodiversity for the benefit of the environment as well as present and future generations.

Policy

EKZNW will implement an Environmental Education (EE) programme, which will be:

- (a) target specific, area specific, objective oriented and address real life issues;
- (b) incorporate relevant indigenous knowledge where possible; and
- (c) Employ a people-centered, participatory approach.



APPENDIX: E

EZEMVELO KZN WILDLIFE

POLICY

SUBJECT: **COMMUNITY LEVY POLICY**

POLICY FILE NO.: 4.16

DATE OF APPROVAL: 31 January 2003

BOARD MINUTE: **4.5**

1. RATIONALE / BACKGROUND

- (a) Ezemvelo KZN Wildlife (EKZNW) makes available funding from the community levy fund to local communities in KwaZulu-Natal in order to:
 - (i) meet social responsibility by sharing tangible benefits acquired through tourism revenue and make protected areas relevant to neighbours;
 - (ii) Create awareness in communities as to long term benefits of Conservation Partnerships; and
 - (iii) Promote shared responsibility for biodiversity conservation
- (b) Communities adjacent to protected areas have expectations based on their relationships with protected areas. Some of these communities have interests and perceptions about the heritage and biodiversity resources within these protected areas.

2. REALITY JUDGEMENT / FACTS

- (a) protected areas managed by EKZNW are surrounded by a variety of communities some of which are poor;

- (b) adjacent communities to protected areas have traditional and political leadership structures;
- (c) some of these protected areas have the potential of creating business, employment and development opportunities for adjacent communities;
- (d) the plight of local communities largely restricts accessibility of resources within and outside protected areas; and
- (e) as a result of historical relations, adjacent communities have negative perceptions about the management of the protected areas;
- (f) sustainable management of biodiversity within the protected areas can only be realised with participation of local communities;
- (g) many and varied community needs cannot be satisfied due to limited human, financial and natural resources;
- (h) there is limited capacity among many communities in matters regarding community levy project management; and
- (i) the Community Levy Co-ordinator's salary and operational budget / administration costs shall be funded from 100% of the community levy fund.

3. ON THE BASIS OF THE ABOVE STATED RATIONALE AND REALITY JUDGEMENT, EZEMVELO KZN WILDLIFE (EKZNW) UNDERTAKES TO:

- (a) Collect the community levy from visitors to protected areas under EKZNW management where the community levy is charged;
- (b) manage the community levy fund efficiently, effectively and transparently in an accountable manner in keeping with the principles of Public Finance Management Act(PFMA);
- (c) facilitate identification, preparation and submission of funding proposals for

- projects within the available budget;
- (d) publicise the distribution of the community levy fund;
 - (e) allocate 90% of the community levy fund collected in a protected area for the development of communities adjacent to that protected area;
 - (f) ensure that the community levy fund is used solely for the purposes for which it was approved;
 - (g) ensure that the community levy fund is audited by independent auditors; and
 - (h) facilitate resolution within sections, groups of the same community and among communities where differences about the usage of the community levy fund arise.

APPENDIX: F

CAMPFIRE is the Communal Areas Management Programme for Indigenous Resources. It is a decentralized Zimbabwean-born initiative of empowering local communities to manage and utilize natural resources to their exclusive economic benefit (Jiah, 1998; Maveneke, 1998). Decentralization for CAMPFIRE is the process of enabling lower tier structures of private or public organisation to handle issues relating to the running of that particular organisation. In the case of HIP, this could be deconcentrating certain activities from EKZNW to the local structures.

Research based knowledge on CAMPFIRE demonstrates that this programme has been most effective for the management of wildlife held on communal land. Local communities, because of financial incentives, are said to take upon themselves the responsibility and initiative to protect and conserve their wildlife that in the past they would have poached or used unsustainably (Jiah, 1998).

International experience informs us that this CAMPFIRE programme was successful. This is true of rural local communities of Guruve, Muzarabani, Binga, Chipinge and Gokwe North that are CAMPFIRE districts in Zimbabwe (Maveneke, 1998).

CAMPFIRE has also exposed another two economic realities associated with decentralization. First is the reality of skills transfer. Local communities learn to undertake their own assessments of their own needs. Second are the management responsibilities. They learn and become involved in wildlife inventories and monitoring (Maveneke, 1998).