Can National Parks deliver in a modern world?
Cases from Mikumi National Park in Tanzania and Bwindi Impenetrable National Park in Uganda

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We, Karoline Jacobsen Kvalvik and Katusiime Ritah Bitariho, declare that this thesis is the result of our research and sources of information other than our own have been acknowledged. This work has not been previously submitted to any other university than the Norwegian University of Life Sciences (UMB) for award of any type of academic degree.

Date: _____   Date: _____

Signature: _____   Signature: _____

Karoline Jacobsen Kvalvik   **Katusiime Ritah Bitariho**

*To our parents; Magnar Kvalvik, Tone Jacobsen Kvalvik and Mr. Bitariho Deogratias;
and Ritah's husband Svein Bjarne Sandvik*

In memory of Joy Muhawe Bareshya

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ABSTRACT

Tanzania and Uganda are two countries in Africa with an outstanding abundance of biodiversity. This biodiversity is usually conserved in Protected Areas such as national parks. Mikumi National Park (MINAPA) and Bwindi Impenetrable National Park (BINP) are of great international importance because of their ecological qualities. MINAPA and Selous Game Reserve form a unique eco-system and together, they hold one of the largest populations of wild elephants. BINP has exceptional biodiversity but its international conservation value mostly emanates from being home to the endangered mountain gorillas. The park as an organisation has increasingly become responsible for delivering biodiversity conservation, tourist products and economic development, and also contributes to poverty alleviation around the park. This study looks at, if the park as an organisation and institution is equipped to deliver in all these areas. We have analysed MINAPA and BINP and also looked at how practical cases of major problems faced by the two parks are handled by the management. The parks are semi-autonomous, but still they have quite strict chains of command throughout their management system. They are guided by formal rules and procedures according to management plans such as the General Management Plan. The division of labour is composed of diverse expertise and the parks' physical structures are mostly underdeveloped and underfunded. This leads to both parks delivering more in areas of biodiversity conservation and control of poaching, than in tourism and community conservation. Furthermore, policies for these areas are present in the parks, but their implementation is ineffective, leading to institutional failure.

Both national parks are surrounded by human settlements, whose integration in management has had both positive and negative consequences. During our fieldwork, we discovered that MINAPA and BINP employees hold strong conservation values and follow strict norms relating to conservation. In addition to biodiversity conservation, TANAPA and UWA have improved and increased community conservation and participation as one of their main values. However, employees in the parks do not share the latter core value with their park authorities. Further, our results also indicate that local people's values are linked to the utilisation of park resources, which conflict with park management and its internal stakeholders' values. This creates major challenges for both parties.

Local people surrounding MINAPA and BINP express that park authorities do not carry out enough actions to address their concerns, whereas park staff claim that they are incapable of responding to all local people's demands. Furthermore, local people are to a certain extent involved in some of the parks' management programmes, particularly, revenue sharing, problem animal and poaching control measures and multiple resource use, but park authorities still dominate and control decision-making. The local people's attitudes have possibilities of changing if they are involved more in park management and if issues such as problem animals, poaching and their gains from the parks are addressed. As a result, aspects of empowerment, responsibility and rights sharing could be improved. There is a need for an organisational and institutional change of the park as an instrument in the direction of improving the collaborative resource use management, particularly including local people more in decision-making.

Key terms:

Conservation, Organisation, Institution, Park management, National Park, Mikumi, MINAPA, Bwindi, BINP

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS AND ACRONYMS

ABRU	Animal Behaviour Research Unit
BINP	Bwindi Impenetrable National Park
BMCA	Bwindi/Mgahinga Conservation Area
BMCT	Bwindi/Mgahinga Conservation Trust Fund
CARE	Cooperative for Assistance and Relief Everywhere
CBD	Convention on Biological Diversity
CCS	Community Conservation Service
CPI	Community Protected Area Institution
CTPH	Conservation Through Public Health
DG	Director General
DRC	Democratic Republic of Congo
ED	Executive Director
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statements
ERA	Electricity Regulatory Authority
GMP	General Management Plan
HIPC	Heavily Indebted Poor Countries
HUGO	Human-Gorilla Conflict Resolution
HQ	Headquarter
IBA	Important Bird Areas
IPC	Investment Promotion Centre
ITFC	Institute of Tropical Forest Conservation
IUCN	The International Union for Conservation of Nature
LC	Local Council
MGCF	Mountain Gorilla Conservation Fund
MGNP	Mgahinga National Park
MINAPA	Mikumi National Park
MIST	Management Information System
MNRT	Ministry of Natural Resource and Tourism
MRC	Monitoring and Research Co-ordinator
MTTI	Minister/ Ministry of Tourism, Trade and Industry

NEMA	National Environment Management Authority
NEMC	National Environment Management Council
NFA	National Forestry Authority
NGO	Non Government Organisation
PA	Protected Area
SUA	Sokoine University of Agriculture
SWIFT	Special Tourism Protection Force
TANAPA	Tanzania National Parks
TANZAM highway	Tanzania-Zambia highway
TAWIRI	Tanzania Wildlife Research Institute
TPDF	Tanzania Peoples' Defence Force
TTB	Tanzania Tourist Board
UNEP	United Nations Environment Programme
UPDF	The Uganda Peoples Defence Force
UWA	Uganda Wildlife Authority
VETA	Vocational Education and Training Authority
VGS	Village Games Scouts
VPO	Vice President's Office
WCC	Warden Community Conservation
WCMC	World Conservation Monitoring Centre
WCPA	The World Commission on Protected Areas
WCS	Wildlife Conservation Society
WLE	Warden Law Enforcement
WMR	Warden Monitoring and Research

PART I

"The survival of our wildlife is a matter of grave concern to all of us in Africa. These wild creatures amid the wild places they inhabit are not only important as a source of wonder and inspiration but an integral part of our natural resources ..."

- Former President Mwalimu Julius K Nyerere[1]-

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[1] President Nyerere in the Arusha Manifesto in September 1961.

CHAPTER 1 – INTRODUCTION

1. 1 Introduction

'*Wilderness stands as the last remaining place where civilization, that all too human disease, has not fully infected the earth. It is an island in the polluted sea of urban-industrial modernity'* (Cronon 1995)*.* The notion of protecting nature and wilderness has existed for centuries, but has in the recent decades grown in both recognition and scope, leading to a remarkable increase in amount of gazetted conservation areas.

Conservation areas worldwide have expanded more than 10 times over the last 30 years. In 1970, these areas constituted less than 1,000,000 km^2, however, by 1997, they grew to over 12,200,000 km^2 (UNEP 2008; Zimmerer et al. 2004). Today, there are more than 100,000 protected areas (PAs)[2] worldwide that together comprise around 12% of the Earth's surface (UNEP 2008). For any conservation efforts of natural resources and wildlife to be effective and efficient, there is need for collaboration within the park management and also cooperation between park managers and people in the surrounding communities regarding knowledge, aspirations, and decision-making from either side. This study aimed at finding out whether the conservation, tourism and outreach policy initiatives are successful by looking deep into the park management of Mikumi National Park (MINAPA) and Bwindi Impenetrable National Park (BINP) in East Africa. The intention was to find out how different people view conservation and what perceptions different stakeholders have towards the strategies that are used so as to measure the parks' performance. Studying park management also gives us an insight in the unsolved problems the two national parks have.

The way we chose to study park management is rather a "new" way of doing research in this field. We use an inside-out process focussing on park management, its structure and how it operates and works. The research was conducted in two different parks in two separate countries where PAs form important elements of land use and development policies. In this

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[2] Protected Areas are defined by the International Union for Conservation of Nature (IUCN) as *"a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values"* (Dudley & Laffoley 2008).

research, we endeavoured to look at the national parks as organisations, focussing on their structures and their management cultures. We also focussed on the main challenges and difficulties in the parks. We furthermore tried to find out whether it is the principles of the parks' policies that are not working, or if it is the organisations themselves that are not able to perform. Additionally, we tried to find out whether the parks are fully equipped to deliver what they promise.

Conservation is connected to the focus on *"providing for life now and into the future,"* and it is often seen as a fundamental tool for safeguarding biodiversity life itself (UNEP 2008:1). It is accepted worldwide that issues concerning biodiversity conservation are "contentious and complex" (Karanth et al. 2008). There are also critical questions on the effectiveness of conservation of PAs. These normally arise from efforts by conservationists to protect the wildlife versus the local people that originally used these lands and reserves as habitats. The latter are usually denied access and control over these resources. Conservationists portray their fight to conserve the environment while contributing to development of livelihoods and institutions, leading to poverty reduction. However, the question is whether their strategies are successfully contributing to development and if these endeavours benefit all people that are involved in conservation and/or have tourism interests.

According to Karanth et al. (2008) identifying different opinions and attitudes of people towards conservation may help address challenges of conservation strategies and contribute to development of solutions that lead to effective biodiversity conservation. Furthermore, *"attitudes play a major role in acceptance of environmental policies or management actions by the public, and conservationists"* (Winter et al., 2005 in Karanth et al. 2008:2358).

1.2   Background

Politically, conservation has been accomplished in different ways and the two dominant conservation policy approaches are "fortress" conservation versus participatory management. Most conservation efforts in Africa have historically been "fortress" approaches, or pure "preservationist" approaches. It started with the arrival of the colonisers and their quest to gain control of land and resources, and large numbers of indigenous people were moved out of their areas and denied any future settlement (Balikoowa 2008). Traditional practices were

to a great extent also denied, such as slash and burn, shifting cultivation and livestock herding was made illegal within most conserved areas. Even if conservation efforts began during the colonial period in Africa, indigenous people have earlier carried out conservation efforts on their own. (Kistler 2009).

In the 1980s, participatory national park management begun in Africa and many countries have since incorporated it in their conservation measures (Barrow et al. 2001). This approach advocates for; participation of all key stakeholders in decision making of national park management, consideration of needs of local communities and underprivileged people, and it can be accomplished by combined visioning, benefit sharing, capacity building, conservation empowerment in co-managed PAs and power transfer as rights to a certain extent than privileges (Namara 2006). The aim of this approach was to combine wildlife conservation and rural development such as the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) projects of Zimbabwe (Mashinya 2007; Vihemäki 2005). However, even if such participatory mechanisms are said to promote better conservation results, it is argued by Stringer et al. (2006), that they can also easily make power sharing remain *"elusive, with management largely autocratic"* thus local communities benefiting less and park managers incurring more expenditures on employing experts to generate preliminary indicator lists for learning adaptive national park management. The participatory conservation approach is also reported to have programmes and projects that are widely documented, but not without their flaws (Mashinya 2007).

1.2.1 Tanzania

1.2.1.1 Protected Areas in Tanzania

Wildlife has for centuries played an important role in Tanzania, and it has had this preeminent role since the pre-colonial era. Today, Tanzania has one of the largest PAs in Africa with around 40% of the total territorial area under some kind of protection. There are also different degrees of protection, where national parks represent the highest level of resource protection that can be provided. Tanzania has dedicated more than 46,348 km^2 to national parks, including other reserves, conservation areas and marine parks. Furthermore, there are over 600 Forests Reserves, 49 Game Controlled Areas, 62 State Forest Reserves and 32 Game Reserves and other protected areas in Tanzania today (TANAPA 2008a; The United Republic of Tanzania 2009a).

1.2.1.2 Tanzania National Parks (TANAPA)

The Tanganyika National Parks Ordinance of 1959 established the organisation that is today known as Tanzania National Parks (TANAPA). At present time the organisation consist of 15 national parks, with plans to add more in the near future, as well as to expand existing parks. TANAPA is a parastatal organisation[3] that is delegated with legal mandate to manage and regulate areas classified as National Parks. The organisation is also fully financing itself without any government subsidy, and every cent that the national parks get in park fees goes back to the protection and maintenance of the national park and their system (TANAPA 2008a). During the last decades, there has been a policy change in the national park management in Tanzania. The wildlife policy of 1998 promoted more local participation and community-based conservation due to the increase in Human-Wildlife conflict. A modification was also seen as necessary owing to the fact that wildlife conservation has not historically been successful in this area (Nelson et al. 2007).

TANAPA's purpose is to preserve extraordinary areas and areas of great value, as well as ensure that the parks maintain a high degree of integrity, management plans are developed and visitors get a quality experience. The aim and purpose of TANAPA are shown in their vision and mission statements.

Their vision is *"to be the highest globally rated institution in sustainable conservation and provision of exceptional tourism services"* (TANAPA 2008a). TANAPA's mission statement emphasises the conservation and management of park resources for the benefit of present and future generations, together with providing excellent tourism services (TANAPA 2008a).

1.2.2 Uganda

1.2.2.1 Protected Areas (PAs) in Uganda

Natural resource and wildlife management in Uganda has a long history. PAs in Uganda cover 33,000km^2, which constitutes 14% of the country's total area. There are 10 National Parks, 12 wildlife reserves and 710 forest reserves (Howard et al. 1997; UWA 2009). According to Namara (2006), the majority of wildlife resources are centrally controlled and managed by the Uganda Wildlife Authority (UWA) and the National Forest Authority (NFA). In the 1980s, the

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[3] Parastatal organisations are owned and controlled by the government. They are further *"self-financed and rely upon their own income from investments for financing their operations"* (Packard 1972)

Ugandan government set aside these areas to protect biodiversity and promote tourism while permitting multiple use programmes. In this way, people living adjacent to the PAs would access resources beneficial to their livelihood and tourism would encourage economic development (Howard et al. 1997).

1.2.2.2 Uganda Wildlife Authority

UWA is a semi-autonomous government body[4] that was formed in 1996 as a result of merging two bodies in 1995; the Game Department and Uganda National Parks (Blomley 2003; Roberts 2003). It was formed under the 1996 Wildlife Act which was amended in 2000 under cap 200 (UWA 2009). It also states that its most important conservation measure in BINP is taking into consideration the rights and knowledge of people in the neighbouring communities by using the community conservation approach (UWA 2001). The aim of this policy, as stated in UWA's mission is to *"conserve and sustainably manage the wildlife and Protected Areas of Uganda in partnership with neighbouring communities and other stakeholders for the benefit of the people of Uganda and the global community."* In this case, people neighbouring BINP are thought to be among the park stakeholders in management in order to facilitate effective achievement of results.

Under the Uganda Wildlife Act, BINP management has continued to emphasize the inclusion of local stakeholders in its approach as a tool to enhance development through tourism in the neighbouring communities in order to reduce poverty (Blomley 2003).

BINP was made a World Heritage Site in 1994 (Blomley 2003) and in 1993, Uganda ratified the Convention on Biological Diversity (CBD) exhibiting that the country was strengthening its conservation interests since this convention calls for closer cooperation with the international community. Uganda, therefore, also involves the objectives of the convention within its national laws, programmes, policies and action plans (The Republic of Uganda 2009).

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[4] Distinct public sector organisation established (often in law) to either: perform a state function free from political influence; achieve a political objective; provide Government with outside independent advice. It is an organisation with some level of operational independence but whose existence depends on continued Government support (Farrugia & O'Connell 2007-08) .

1.2.3 PAPIA

This research was conducted as part of the project Protected Areas and Poverty in Africa (PAPIA). The project is an on-going 5-year research project; from 2007 to 2011. It aims to give a better understanding of the complex relationship between PAs and poverty. PAPIA is led by Norsk institutt for naturforskning (NINA) and the Department of International Environment and Development Studies (Noragric) and funded by the Research Council of Norway. The project focuses on the poverty aspects in relation to two national parks in Uganda and another two in Tanzania. Our focus will be on two national parks, Bwindi Impenetrable National Park in Uganda and Mikumi National Park in Tanzania.

1.3   Statement of problem

The purpose of national park management is mainly to conserve natural and wildlife resources, control the tourism section and cooperate with communities surrounding the national park. It is, therefore, important that park staff, other stakeholders, and the neighbouring communities know initiatives and programmes designed to protect these areas. This is because their values, norms, perceptions and attitudes determine the success or failure of the parks regarding biodiversity conservation. Furthermore, such conservation initiatives and programmes, if not well known to neighbouring communities may lead to failure in the management of the parks. Thus, successful environmental and socio-economic development can be attained if the above stakeholders relate well and understand the impact of conserving the environment and its ecosystems. Additionally, effective conservation of biological diversity should contribute to development (Blomley et al. 2010) and poverty alleviation.

This study was, therefore, designed to explore the management and administrative structures and cultures of the two national parks: MINAPA in southern Tanzania and BINP in South-western Uganda. It is an organisational study of the two parks focussing on their delivery as organisations and looking at their resources, structures, cultures, relations, central authorities, and other relevant actors at local, regional, national and international levels. An emphasis has been put on knowledge, attitudes, values, norms, and challenges practitioners have towards park management and conservation, basing on the conservation processes and structures put in place by the Tanzanian and Ugandan governments.

1.3.1 Goal

The goal of this research was to carry out an organisational analysis of MINAPA and BINP by looking at their organisational structures and management cultures.

1.4 Specific objectives and research questions

Prior to the study of organisational structures and management cultures of PAs, it is important to understand and examine the situations of their existing institutions and discover factors that can explain their levels of performance and delivery.

This research was guided by three objectives under which a set of research questions was explored.

1.4.1 Objective 1

To map MINAPA and BINP as organisations and study their existing structures

The study sought to explore the social and physical structures of the two national parks. Additionally, we looked at the role of the different stakeholders in the management of the parks. Furthermore, we examined the planning and implementation procedures that enable the parks to meet their production ambitions of different goods and services. These include how biodiversity is conserved, how they manage tourism activities and how they interact with and serve local communities.

  i.   *Which organisational structures do the parks consist of?*
  ii.   *How are the parks' General Management Plans structured, planned, implemented, monitored and evaluated?*
  iii. *What is the role of the different stakeholders in the management of MINAPA and BINP?*

1.4.2 Objective 2

To assess the management cultures of the two national parks by looking at them as social institutions

The second objective sought to identify the "personality" of the park management and external stakeholders' influence and perception towards the parks' performance and delivery.

  i.   *What are the stakeholders' values, norms and perceptions regarding park management?*
  ii. *What can be done to improve the management cultures of the MINAPA and BINP?*

1.4.3 Objective 3

To investigate cases in MINAPA and BINP exemplifying park management structures and cultures

The last objective intended to explore the key challenges facing the management of the two national parks. We additionally sought to focus deeper on practical cases that we found in the two different national parks. The cases were drawn from what the park staff and different stakeholders identified as the key factors affecting the performance and delivery of the national parks. The parks were handled as separate cases depending on factors considered important regarding effective park performance and delivery. We further searched for recommendations of addressing challenges of the identified cases. This objective reflects on the first two objectives and the point is to use examples to enlighten how MINAPA and BINP function as organisations. The importance of this objective is to also replicate how the parks approach and try to solve pertinent problems.

  i.   *What are the key main management challenges facing the two national parks?*

1.4.3.1 Cases in MINAPA and BINP

Case 1: Problem animals

  i.   *How does the system function in the park when problem animals are reported?*
  ii. *What could be a future way to handle this issue?*

Case 2: Poaching

    i.   *What is the nature and extent of poaching today?*

   ii.   *What could be a future way to handle this issue?*

1.5   Justification of the study

This study is not only significant for those involved in wildlife conservation and management of MINAPA and BINP and those whose livelihoods depend on them, but also for other conservationists and natural resource managers worldwide. The study could also be useful for improving the conservation policies in MINAPA and BINP in order to increase the effectiveness of the applied instruments and measures. The research findings will hopefully be beneficial for the PAPIA project in Tanzania and Uganda.

A small amount of research concerning the structure and culture of national park management has been done using an inside-out approach. This is one of the reasons why we chose to conduct such a research.

1.6   Definition of terms

<u>Park management</u> – All MINAPA and BINP activities such as planning, organising, staffing, directing and controlling of the parks.

<u>Park authorities</u> – A group of innovative people operating various activities and facilities to ensure protection and sustainable management of MINAPA and BINP's resources and property under the authority of TANAPA and UWA.

<u>Park staff/employee/manager/officer/worker</u> – People employed in MINAPA or BINP management.

<u>Park "residents"</u> – People living legally inside MINAPA; park staff and their families, housekeepers and teachers.

Park stakeholder – Those involved with MINAPA and BINP; in our case the park staff, local people, research groups, NGOs, park "residents", camp/hotel employees, academics, politicians, media and the international community.

Local people – People living in areas around and close to MINAPA and BINP.

Local communities – Communities surrounding MINAPA and BINP.

1.7   Thesis outline

The first chapter has looked at the history of conservation in Africa in general, and in Tanzania and Uganda in particular. The purpose of exploring this history is to understand why certain areas are gazetted and protected against human settlement, livestock rearing, hunting and cultivation. Additionally, it is to understand the existing performance of the two national parks; MINAPA and BINP. This chapter also presents the problem statement, the specific objectives and research questions that were used to analyse the organisational structures and management cultures of the two national parks.

Chapter 2 describes the theoretical framework of our study.

Chapter 3 gives a description of the methodology we used in data collection and analysis of our data. It presents the limitation of the methodology and challenges encountered during the study and how they were managed. It also demonstrates the ethics considered while conducting the research.

Chapter 4 describes the two study areas, MINAPA in Tanzania and BINP in Uganda.

Chapter 5, 6 and 7 present the results of the research and discusses these findings while contrasting them with existing literature on national parks as organisations and institutions.

Chapter 8 is the concluding chapter where findings of the study are summarised and recommendations that can contribute to improve the performance and delivery of the two national parks are suggested. Recommendations for further studies were also presented.

The annexes consist of the questionnaire, checklists for key informant interviews and

interview guides for focus group discussions.

CHAPTER 2 – THEORETICAL APPROACHES

This study utilises organisational and institutional concepts and theories in order to understand how national parks are managed regarding performance and delivery in fields of biodiversity, economic and social benefits, and challenges facing the two national parks; MINAPA and BINP. We use these theories to possibly develop, maintain and change our understandings of park management, and to analyse the appropriateness of TANAPA and UWA policies. This analysis includes their economic efficiency in relation to tourism, political legitimacy in biodiversity conservation and effectiveness in reaching the intended purposes respectively. Since national parks form part of the lives of people living in neighbouring communities and conservationists (Blomley et al. 2010), it is crucial to understand their (parks) impact on local people's livelihoods and impact on biodiversity qualities at large. It is inadequate to only focus on what the park consists of regarding its ecosystems and wildlife resources without paying attention to the stakeholders' perceptions, values and norms. Furthermore, it is important to look at these perceptions among different stakeholders, for they contribute to shaping people's actions and perceptions towards the park. This chapter gives an overview of the complexity of organisations and institutions regarding national park management. The following section seeks to map the parks and what they do by looking at them as organisations.

2.1   Organisational Theory

In this study, we employ organisational theories by using Hatch's *five circles model* and focussing on the management structure and culture. We chose these theories because they encompass institutions, which according to North (1990) have values, attitudes, and norms that shape people's actions and perceptions. With such basic norms, the theories can influence or fit in conservation for it is a social, economic and political sector that is established with institutions. Organisational and management culture will be presented in Section 2.2.

2.1.1 The five-circles model

An organisation is a social system or a group of people that is intentionally constructed and

work together for shared purposes to solve special assignments and reach certain goals (Jacobsen & Thorsvik 2007). By looking at the explicit aim of being together for a common purpose, we separate organisations from other social groups. If the members of a group have common assignments, resources, goals, procedures and guidelines that keep them on the same track, it contributes in deciding if it is an organisation or not (Jacobsen & Thorsvik 2007). Jacobsen and Thorsvik (2007) operate with four keywords to understand what an organisation is. First they point out 'social', which demonstrates that an organisation consists of humans that interact with each other. 'System' is the second keyword that confirms that an organisation is dependent on the resources from the surroundings to maintain its activities. The third description is 'intentionally constructed'. Assignments are distributed to different departments within the organisation and there is a distribution of responsibility. The last term in the definition is that organisations are established to 'solve duties' and 'achieve goals'. The reason why an organisation is established is a result of people realising that this is an efficient way of solving an assignment (Jacobsen & Thorsvik 2007). Hatch (2001) uses a five-circle model to show that organisations can be understood as elements that overlap and pervade each other depending on the surroundings, elements such as social structure, technology, physical structure and culture.
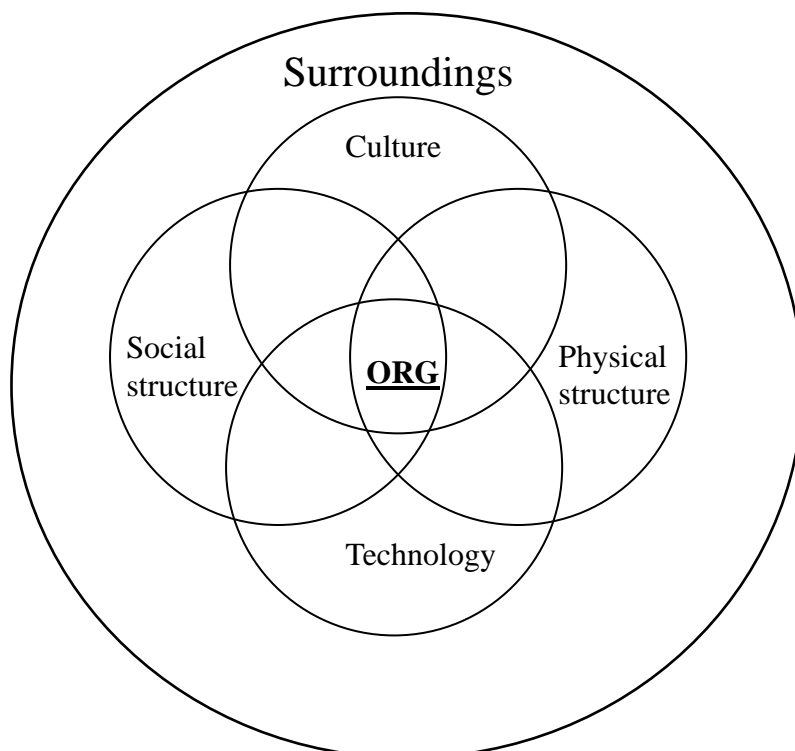
Figure 2.1: Hatch's five-circle model of an organisation

(Source: Hatch 1997:15)

To illustrate the links between social structure, technology, physical structure and culture, the model portrays them as four partially overlapping circles, enclosed with the surrounding. They are incorporated in and help creating the surroundings. The fifth circle indicates the important relationship between all aspects of the organisation and its surroundings (Hatch 2001). We have chosen to focus mainly on social and physical structures and the management culture of the national parks; the concept of technology will therefore not be prioritised in this research. Culture will be presented in the second part of this chapter, under management culture. Using the five-circle model the area where the four circles overlap can for example tell us that these elements are not complete and they all have something in common with each other. It is also the combination of the different understandings that we develop that provides us with an abundant illustration of the parks as organisations. According to the IUCN (2008), a protected area is *"a clearly defined geographical space, recognised, dedicated and managed through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values"*

There are some structures, types and components that need to be established in order for an institution, in this case MINAPA and BINP management, to run longer and successfully with limited conflict outbreaks. According to Hatch, the five-circle model will help identify such components.

2.1.2 Organisation types and structures

Configuration is a central concept in organisational theory. The basis of studies of organisations is that they have different structures (Jacobsen & Thorsvik 2007). To analyse and understand how national parks function as organisations, we look closer at different organisation types and structures, in particular the bureaucratic, social, economic and physical structures of the park management. The organisational structures also differ from each other regarding dimensions such as sharing of labour, coordination, complexity, centralisation, specialisation, formalisation, resources, funding, size and control (Jacobsen & Thorsvik 2007).

2.1.2.1 Organisation types

Strand (2007) mentions four types of organisations; bureaucracy, expert, entrepreneur and group organisations (Strand 2007). Hatch (2001) refers to mechanistic, organic and

bureaucratic organisation types, and uses structural dimensions to describe the various types. Jacobsen and Thorsvik (2007) operate with five different organisation forms; entrepreneur, *machine* bureaucracy, professional bureaucracy, innovative and divisional organisation.

Practically speaking, all organisations consist of elements from the different categories mentioned above. By looking into different organisation types we intend to create a framework that systematises the organisation's functions and assignments (Strand 2007).

2.1.2.2 Organisational structure

Organisations are constructed in many different ways. The structure refers to the relations between the different parts of the whole organisation and it determines how the organisation works and performs in different fields. Looking at organisational structure gives us a clearer idea of the role and functions of the departments and employees. Organisational structure can be said to be the architecture that decides how the organisation looks like (Jacobsen & Thorsvik 2007).

National parks in Tanzania and Uganda are centralized managements where most of the important decision-making is concentrated to the top management. This top management has the overall authority over the different departments and divisions. In Chapter 4, we present an organisational-chart to give an illustration of how the organisational structure is in both parks.

Organisational theorists are particularly interested in two sorts of organisational structures – the social and the physical. We will in the next two sections go into organisations as both social and physical structures.

Social structure and bureaucracy

Social structure in an organisation is the relationship between the social elements, such as human beings, positions and the organisational units that belong to the organisation, for example departments and divisions (Hatch 2001).

Weber, a German sociologist and political economist, was interested in defining essential characteristics of the industrial society and one of his foremost attractions was the bureaucratisation of society. Weber imagined organisations as social structures and to him the "ideal" organisation type and social structure was precisely the bureaucracy, which he

characterised by the use of rules and regulation, impersonal, authority and stability (Hatch 2001; Jacobsen & Thorsvik 2007). Both MINAPA and BINP are bureaucratic organisations with features such as several levels of specialisation, written rules and regulations and formal authority in the management (Strand 2007). It is important to understand the difference between Weber's ideal bureaucracy and the organisational reality that we know today. Weber uses the word 'bureaucracy' concerning ideas, not objects. He illustrates a system where employees with average abilities could be turned into rational decision-makers that would serve the client and employer both impartially and effectively. His ideal bureaucratic form gave promise of reliability and fair enforcement of rules. Even according to Weber, bureaucracy has both negative and positive sides. Weber himself feared "*that bureaucracy would become an iron cage*" (Hatch 1997:172). The bureaucracy is also very difficult to change, and following the rules can often turn into the main goal. On the other hand, "*the advantages of bureaucracy can be summarised with a few keywords: a clear distribution of responsibility, stability and predictability, and standardisation that promote productivity*" (Jacobsen & Thorsvik 2007:90).

Having organisations such as TANAPA and UWA in charge of the national parks assembles and accumulates different capabilities and skills. Max Weber imagined that organisations as social structures consist of an hierarchy of authority, division of labour and formal rules and procedures (Hatch 2001).

One can think of organisations as hierarchies of resources, power and authority. 'Authority' is one of the most frequently used terms in management theory. The concept for example yields clarification about different types of authority inherent in an organisation (Dalton et al. 1973). Since hierarchy can be seen as a basic aspect of life, hierarchies in organisations can be considered as extensions of natural tendencies. According to Weber, hierarchy is also a reflection of the distribution of authority among the different positions in an organisation. Authority gives different positions in an organisation, the capacity and right to influence people being responsible for them, and then influence is practiced through downward communication (Hatch 2001). The authority, rights and decision-making arena of an organisation identify the different levels of authority and what responsibility each actor has in the park management. It can also recognise who intervenes in decision-making in the park management. The decision-making arena is where there are legitimate systems (rules and structures) determining how decisions are taken in the park management process.

Hierarchy reflects the mode of sharing of authority, while the division of labour defines the distribution of responsibility. The organisation's duty is to carry out specific activities for the surrounding, for example interact with and serve local people. Distribution of responsibility between the different members of the organisation is an element in the social structure, and is usually considered as a part of technology (Hatch 2001).

Division of labour is about how management responsibilities are arranged in different organisational units, such as departments. We look at how these different management responsibilities are linked to individuals.

Formal rules and procedures also help us to specify how decisions are made and how the process of work should be (Hatch 2001). We have mainly used the General Management Plans and the quarterly and annual reports to look closer at park rules, procedures, plans and resources.

Hatch (2001) uses a table (Table 2.1) to describe the different dimensions and variables that can be used to measure and study the social structure of organisations.

Table 2.1: Dimensions of the organisational structure

Dimension	Unit of measurement
Size	Number of employees of the park management
Administration component	Percentage of employees working with administrative tasks
Span of control	How many are subordinate to the leader
Specialisation	How many special assignments are performed in the organisation
Standardisation	Occurrence of permanent procedures of regular and repeated events and activities
Formalisation	To what extent are rules, procedures and communication written down
Centralisation	Concentration of authority to make decisions
Complexity	Vertical and horizontal differentiation. E.g. How many hierarchy levels? How many departments are there in the organisation?

(Source: Hatch 2001:190)

Formalisation, centralisation and complexity are the three variables that are predominantly used when assessing the social structure of an organisation. Formalisation is about how rules, regulations, policies and procedures control the organisation. It can also lead to a reduction in communication within the organisation (Hatch 2001). Centralisation concerns the amount of

decisions that are made in the central part of the organisation. Measuring centralisation in an organisation can be difficult since the level of centralisation is complex and connected to different kinds of decisions. The complexity of an organisation refers to both vertical and horizontal differentiation. The differentiation concept is explained by Hatch (2001) as the processes that appear between the different cells in a plant. All parts of a plant have important functions, and the same can be said about the parts and activities in the organisation and park management. The differentiation in the organisation is important because it enables us to understand how they delegate their resources, people and responsibilities that are required. Size is another key factor relating to complexity, whereby the bigger the organisation, the more complex it often becomes.

Concisely, each organisation consists of social elements – people, their position in the organisation and the groups they belong to. The social structure in an organisation, therefore, reflects how the different responsibilities bring variety. An analysis of the social structure by using an organisational map is an important tool, but does not give a complete picture of what is going on in the organisation.

Organisations have more than just the social structure contributing to analysis and integration of differential activities. Furthermore, the physical structure and organisational culture are crucial.

Physical structure

The most obvious characteristics of organisations are the physical structures, despite that they have got relatively little attention within organisational theory.

The interest of studying the physical structure of organisations leads us back to the Hawthorne Research that was carried out in a factory in USA at the end of the 1920s and beginning of 1930s (Hatch 2001). The research dealt with how productivity was affected by light in the physical surroundings. But the conclusion was that increase in productivity was an outcome of social factors and not actually the physical working conditions (Hatch 2001). The concern for physical structures in organisations declined after this research and compared to social structures, it emerged almost insignificant. However, there is a new interest for physical structure today.

The relations between the physical elements explain the physical structure of an organisation.

Physical elements in an organisation include buildings and their arrangement and that of the furniture and equipment, design and decoration and the people staying there. The organisation's physical localisation or geography and the ground form are the elements of most interest in our study. These aspects play an important role in affecting the behaviour of the people that are included in the organisation. Additionally, the physical structure has a symbolic importance and influence, because the impression of the organisation is often created by this structure (Hatch 2001; Jacobsen & Thorsvik 2007).

2.2 Management culture

Generally, any administrative body is bound to have its own management culture in order to facilitate its operation. Management is a structure under organisations that has various components that include; values, norms and tasks and procedures of how to handle issues. These are influenced by experiences, history, education and background of the park employees and internal and external stakeholders. Additionally, all these factors determine perceptions and attitudes of park management towards local people and vice versa (Vedeld 2002). In the following section organisational culture and institutions are presented, as they are elements that contribute in developing the management culture.

2.2.1 Organisational culture

The organisational culture is an important element of an organisation, and it can be seen as binding guidelines (Strand 2007) and a combination of general cultural and economic processes in the surroundings of the organisation (Hatch 2001). According to Hatch (2001), the organisational culture is a difficult concept to define. Edgar Schein (Hatch 2001:205), one of the most famous theorists working with organisational theories and culture, defines it as *"the pattern of basic assumptions that a given group has invented, discovered, or developed in learning to cope with its problems of external adaption and internal integration, and that have worked well enough to be considered valid, and, therefore, to be thought to new members as the correct way to perceive, think, and feel in relation to these problems."* In the understanding of organisational culture, the focus is on the relations between humans and how their behaviour is interpreted. Most definitions are connected to groups, or something that is common for a group like experiences, beliefs, ideas, understandings, skills, norms, practices,

values and knowledge (Hatch 2001; Jacobsen & Thorsvik 2007; Strand 2007).

Organisational culture is also about companionship, variety and the mutual understanding among members of an organisation (Hatch 2001; Strand 2007). One of the key ideas of culture is companionship, seeing that culture is a social phenomenon that is only formed in a social setting (Jacobsen & Thorsvik 2007). Organisational culture therefore tells us how people behave ethically in an organisation and how the organisation is formed through cultural processes established from a wide spectre of actors in the surrounding (Hatch 2001; Sinclair 1993). Organisational culture is an institution and a concept that has been used. We chose to use it in order to understand better national parks as organisations and explain their successes and failures (Jacobsen & Thorsvik 2007).

The concept of culture was originally proposed as an answer to what makes us human. Additionally, the understanding of culture was simple and only about qualities humans had in common (Hatch 2001). This reflects the coordination and interaction among actors managing organisations since they are responsible for rule formulation (Vatn 2011). In the beginning of the 1980s however, organisational culture became popular, and the interest in this field can be explained by western industry losing huge market shares to Japanese enterprises resulting in people searching for an explanation (Hatch 2001; Strand 2007). Organisational theorists then began to study it as an individual or particular phenomenon (Hatch 2001; Jacobsen & Thorsvik 2007). It became and still is a challenge for organisations to understand, influence and even use organisational culture (Strand 2007). Therefore, it is important to remember that culture depends upon both community and diversity, and that similarity in these communities is allowed, but differences are also supported. Additionally, it is also crucial to consider who is recruited in organisations, what knowledge, skills, values and norms they have because these factors define an organisation's culture.

As mentioned above, we use Schein's definition of organisational culture. This definition is supported by his three level-culture model elaborated below.

2.1.2.1 Schein's organisational culture model

Schein developed his theory about organisational culture in the beginning of the 1980s (Hatch 2001). His model and definition has several central arguments, which have made it a classical reference when dealing with organisational theory (Jacobsen & Thorsvik 2007). His definition

stresses that it is necessary to bind the culture concept in organisational culture to a 'group' in the organisation that shares the same fundamental assumptions. In Schein's theory, the organisational culture exists on three levels: artefacts, values and norms, and basic underlying assumption as illustrated in Figure 2.2 (Hatch 2001; Jacobsen & Thorsvik 2007). These sets are identified as crucial components of management culture.

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┌──────────────────────────────────────────────────────────────┐
│                        Artefacts                             │
│ ┌──────────────────────────────────────────────────────────┐ │
│ │ Visual organisational structures and processes (hard to  │ │
│ │ decipher)                                                │ │
│ └──────────────────────────────────────────────────────────┘ │
└──────────────────────────────────────────────────────────────┘
                              ↓
┌──────────────────────────────────────────────────────────────┐
│                     Values and norms                         │
│ ┌──────────────────────────────────────────────────────────┐ │
│ │ Strategies, goals, philosophies (espoused justifications)│ │
│ └──────────────────────────────────────────────────────────┘ │
└──────────────────────────────────────────────────────────────┘
                              ↓
┌──────────────────────────────────────────────────────────────┐
│                Basic underlying assumptions                  │
│ ┌──────────────────────────────────────────────────────────┐ │
│ │ Unconscious, taken for granted beliefs, perceptions,     │ │
│ │ thoughts and feelings (ultimate source of values and     │ │
│ │ action)                                                  │ │
│ └──────────────────────────────────────────────────────────┘ │
└──────────────────────────────────────────────────────────────┘
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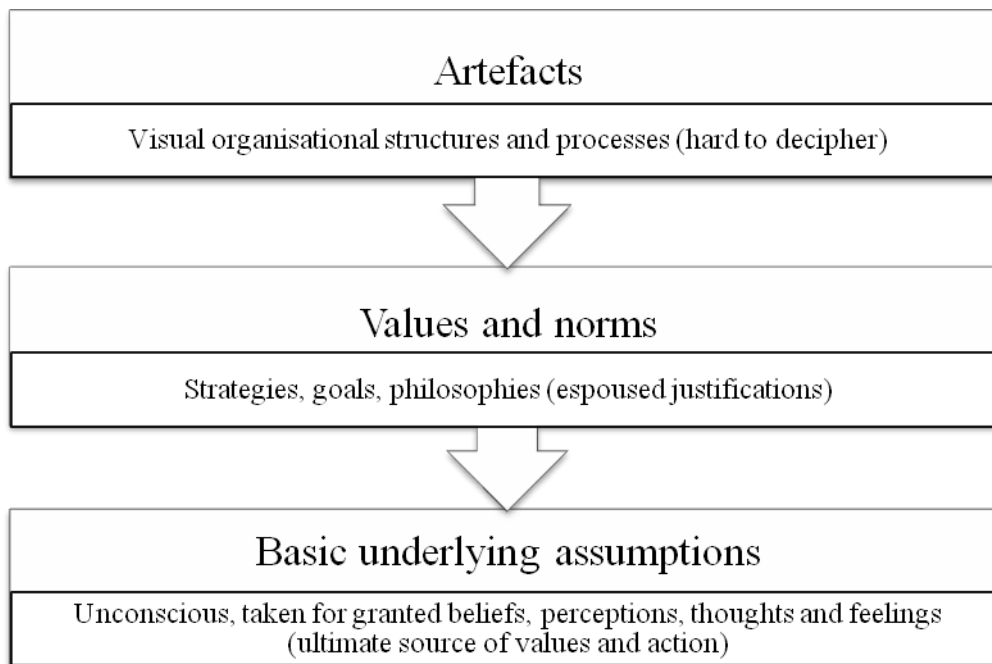
Figure 2.2: Schein's organisational culture model (three-culture level model)

(Source: Hatch 2001:236; Jacobsen & Thorsvik 2007:123).

On the surface, the artefacts are visible elements in culture that can be observed. It is both physical expressions (dress codes, architecture, art, work climate and furniture) and verbal behaviour expressions of the culture.

The next level is based on people's values and norms towards the organisation. First, the mission of an organisation is also frequently integrated in its management culture. Members of an organisation should therefore be capable of incorporating the mission in their duties, and their behaviour should demonstrate the content in the mission statement. Second, all organisations benefit from committing themselves to a mission and a strategy that describes the value that the organisation indents to produce. This means that the organisation will rely on producing that value (Moore 2000). Third, the values of people working in an organisation are the core of what the organisation is, however, the organisational values go beyond

individual values. An organisation is referred to as "*a group of people whose actions are coordinated in order to achieve certain results in which they all have an interest, although not necessarily for the same reason*" (Argandoña 2003:6). This explains the existence of both management structure and culture, and describes why values implemented within an organisation may not influence all of its members. We therefore distinguish between the values of the members of an organisation and the values the organisation embraces in order to achieve its purpose. It is important to remember that all values are held by individuals, but their significance is very different, yet both must be fostered. An organisation and the people belonging to it, hold a great variety of values (Argandoña 2003). Hatch (1997:214) defines values as "*social principles, goals and standards held within a culture to have intrinsic worth*" The values define what the members of the organisations care about, such as park boundaries, poaching and hunting, conservation and living standards. Forth, different statements relating to cases of moral matters were raised to look at the park managers and stakeholders' basic perceptions and values towards conservation. These values established a foundation for us to make judgements about what members of the organisation found was right and what was wrong.

The concept of total economic value (TEV) is a useful framework for identifying different values that are associated with PAs. The TEV of a PA or an environmental resource consist of its use values and non-use values. A use value arises from an actual use made of a given resource. The use values are divided into direct use values, which relate to actual uses; indirect use values, which relate to the benefits obtained from ecosystem function; and optional values, which is values derived from the willingness of using the protected area sometime in the future (Pearce & Moran 1994; Phillips 1998). For example, in MINAPA and BINP, direct use values mostly included commercial activities such as resource harvesting, tourism and research. The non-use values of a PA particularly difficult to define and estimate. They are values that humans hold for a PA, and they are in no way connected to the use of the protected area. The non-use values are normally divided between bequest and existence values. Bequest values are related to people knowing that other benefit or will benefit from the PA in the future. Existence values show the advantage of knowing that a certain PA exists, despite the fact that one is unlikely to use the area in any way (Phillips 1998). Figure 2.3 illustrates the relationship between the values explained above.
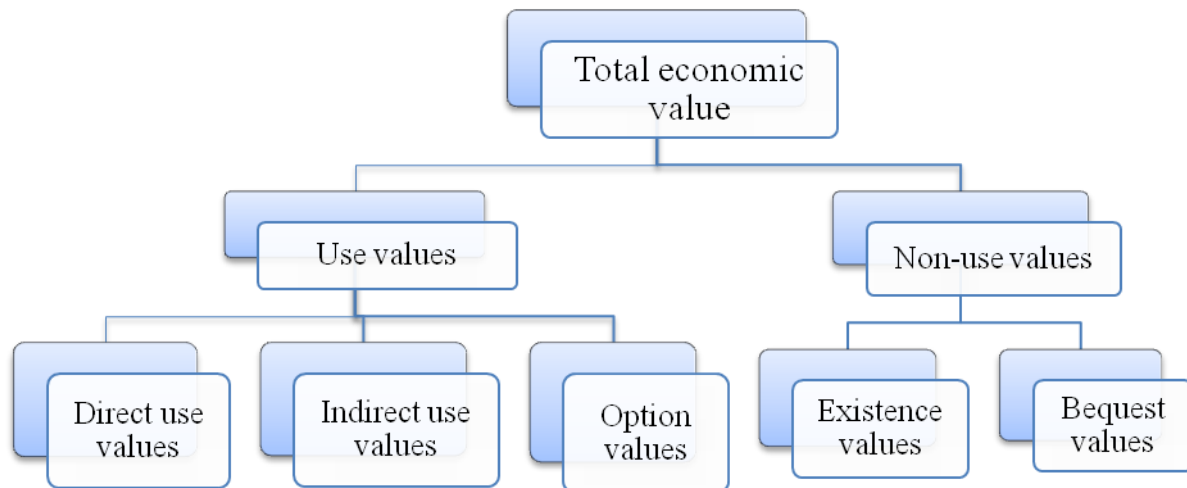
Figure 2.3: Total Economic Value

(Source: Phillips 1998:11)

Norms are related to values, and are the unwritten rules for action that let members of an organisational culture understand what is expected of them and how to behave in certain situations. They further determine what sorts of behaviour people in an institution can expect of one another. Norms also influence what is considered as normal and abnormal behaviour. The connection between values and norms is the behaviour norms sanctions, that is, punish or reward. According to Schein theory, *"the members of a culture hold values and conform to cultural norms because their underlying beliefs and assumptions nurture and support these norms and values"* (Hatch 1997:216). Norms and values encourage activities that produce surface-level artefacts, and artefacts are more or less the expression of the cultural core where values and norms are maintained (Hatch 1997).

On the deepest level of Schein's organisational culture model the basic perception is found, which is reflected through values and norms. This is the core in every culture and it is the fundamental perceptions that people take for granted (Balint 2006; Jacobsen & Thorsvik 2007). Perceptions represent what members of the organisation believe to be reality and it therefore influences what they recognise and how they feel and think (Hatch 2001). From a philosophical view, perception is a *"process of the consciousness of an object... and includes self expansion of the object"* (Krishnananda 1992:59). This means that man looks at objects as being outside his body and senses, but feels that these objects are reflected in his mind. Therefore, the mind is a mediator between the object and the person's soul. Krishnananda (1992) further explains that after understanding the environment or surrounding of man, the

26

actions of the mind are the ones that bring about perception. Perception is therefore a process of understanding the environment and this can be achieved by organising and interpreting sensory information. All perception involves signals in the nervous system, which in turn result from physical stimulation of the sense organs (Krishnananda 1992). Considering the use and values for PAs, people have different perceptions towards each other regarding management of national parks, especially, their biodiversity. The common perceptions are usually by park authorities towards other stakeholders in park management and vice versa. And these change over time as people undergo different experiences.

The above discussion shows that artefacts, values, norms and perceptions of organisations such as MINAPA and BINP define what their management cultures are. This is because norms are attitudes of park staff, while values are what these park staff care about or consider important to them. And since these park staff work together, they share the parks' norms that are associated with their assigned tasks, and at same time, share personal values. Therefore, norms may give a sense of shared values, but values could also create their own norms.

Furthermore, since management culture includes social norms that can be built within institutions, we, therefore, conclude that both parks are social institutions as will be illustrated in Section 2.2.2.

2.2.2 Institutions

MINAPA and BINP are located in different areas, but with similar institutional structures, making it possible for further study and comparison of their management cultures. Institutions have been conceptualised and defined in various ways by different scholars. North implies that institutions are humanly devised constraints that govern human interaction, whether between humans themselves or between humans and nature (Berkes & Folke 1998). Yami et al. (2009) further state that the different institution definitions reflect structures, mechanisms and processes, rules and norms that run human actions and social order. For instance; according to Ostrom, an institution is referred to as a "*set of rules actually used*" (Ghate & Nagendra 2005:510), and North (1990:3), also defines institutions as "*rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction.*"

In this study, we look at the two national parks as institutions within organisations being guided by rules and at the same time look at the institutions as social norms, legal rules or

conventions. The rules are made by individuals or groups of actors thus influence the way societies, communities and individuals change over time. This kind of shaping takes place through people's political, social and economic behaviour. In our case, the rules are used to protect the national park to ensure biodiversity conservation among other reasons; however, people adjacent to these parks are restricted from using park resources. These rules therefore become limiting factors to individual or community use of park resources thus influencing the level of both internal and external conflicts among park stakeholders. Furthermore, it is difficult to follow such rules since they are considered to be constraints, thus many individuals attempt to break or not follow them. To ensure compliance with these rules and change of such attitude towards park management, many countries have joined conventions, trained stakeholders, educated local people about the importance of the park, recruited professions, formulated policies and re-organised the park. Joining conventions eases communication in park management, communities adjacent to the parks, other actors and coordination of the park activities. As earlier mentioned under organisational theories, communication is an important aspect in organisations because it facilitates the coordination of activities and regulates conflicts. Vatn (2011) stresses that "*understanding and communicating*" among individuals is complicated thus the need for rules and conventions to ease the coordination of different actions among them.

From a social constructivist view, institutions are not regarded as constraints but instead considered to influence individuals, their values and preferences. They are believed to give expectations concerning other individuals' actions and give meaning to what is wrong and right (Vatn 2011). According to Vedeld (2002), they contribute to stabilising people's perceptions, interpretations, attitudes and justifications, which may later give "*meaning and context*." This influences conservation by improving park performance and delivery. They also support values and norms thus "*regularize life and take side*" (Vatn 2011:3). This as well helps in understanding "*historical change*" (North 1990:3). Since norms are considered to "*emphasize values,*" they therefore give meaning to situations (Vatn 2011). In this case, values and norms are dominant in management culture since the management of the two national parks has been driven for reasons such as resource conservation, conservation for future generations and tourism.

The following section describes how to analyse institutions in order to ensure their sustainable maintenance and performance.

2.2.3 Institutional analysis

According to Dhatt (2008:35), development of institutions and their sustainability incorporates three stages; the "*individual actors, organisations and social systems*" which are all crucial in policy analysis and institutional assessment. Therefore, aspects such as management, monetary resources, political palatability, institutional competence, participation, markets and cooperation should be considered when assessing institutional sustainability and analysing policies (Dhatt 2008). In this study, national parks are looked at as policy instrument packages having many functions that enable them to deliver different outcomes such as; biodiversity conservation, economic growth and reasonable pattern of distribution of benefits among different communities.

Institutional analysis involves how institutions are formed and how they work. This study looks at practical issues that are key challenges in both the national parks in question. We consider aspects of these cases such as the political legitimacy, economic efficiency and biodiversity effectiveness. This is to enable reflection on the organisational issues and management culture of the two national parks.

Regarding political legitimacy, power structures play an important role because they determine if the interest of the management actors is either individual or for the entire group (stakeholders). Power in this case involves rules that govern the relationship among actors depending on the institutional context put in place by the national park. The major components considered in this structure therefore are how rights and responsibilities are distributed to ensure authenticity. These rights are derived from rules made to run the park and so determine decision-making regarding resource access and which actors qualify to engage in park management. Institutions influence actions of actors of national park management. Table 2.2 shows a short summary of the different theory approaches used during this study.

Table 2.2: Summary of theory approaches

Objective	Theory approach	References
1. To map MINAPA and BINP as organisations and study their existing structures	<u>Organisational theory</u> (Hatch's five-circle model of an organisation)	Hatch (1997 and 2001), Jacobsen and Thorsvik (2007), and Strand (2007)
2. To assess the management cultures of the two national parks by looking at them as social institutions	<u>Management culture</u> (Schein's organisational culture model)	Hatch (1997 and 2001), Jacobsen and Thorsvik (2007), and Strand (2007)
3. To investigate cases in MINAPA and BINP, exemplifying park management structures and cultures	Institutional analysis by looking at aspects of cases (Economic efficiency, political legitimacy-local participation, biodiversity effectiveness)	Dhatt (2008), Vatn (2011) and North (1990)

(Source: Own fieldwork 2010)

CHAPTER 3 – RESEARCH METHODS

This chapter discusses the choice of research methods used in relation to data collection, analysis and theoretical basis. Data sampling and analysis will be described. Ethical considerations and challenges the researchers encountered that might have affected the quality of data are also presented.

3.1   Research strategies

The objectives of this study were: 1) to look at MINAPA and BINP as organisations and examine what they do, 2) to assess their management cultures by looking at them as social institutions, and 3) to look into practical cases as a way of exemplifying organisational structures and management cultures.

The study was carried out from October 2010 to January 2011 in MINAPA in western Tanzania and BINP in south-western Uganda. TANAPA, UWA, Sokoine University of Agriculture (SUA) and Makerere University staff were interviewed in Morogoro and Kampala respectively. These were interviewed because of their significant knowledge regarding research and management of the two national parks. The main methods were use of semi-structured questionnaires, key informant semi-structured interviews, focus group discussions and observation.

We chose to use both qualitative and quantitative methodology for this study. We look at the issues in a holistic manner whereby historical, social, political and cultural context, the resources available in the national park, to what extent these resources are accessed by local communities, strategies used to manage the resources, outcomes of these strategies are all investigated. Qualitative methods were seen as helpful because they are dynamic and flexible (Bryman 2008; Mikkelsen 2005). Statistical analysis was also used to analyse the survey data.

3.2 Research design and methodology

According to Creswell (2009:5), a research design refers to the *"plan or proposal to conduct research, involves the intersection of philosophy, strategies of inquiry, and specific methods."* The choice of research design or methods employed in data collection and analysis determines a research's *"credibility and comprehensiveness"* (Mutasa 2010:29). A mixed methods research approach was used in our study. This is elaborated in the following section.

3.2.1 Mixed methods research

We utilise both quantitative and qualitative research methods in order to strengthen our study regarding better representation of the populations of both the geographic areas and subjects under study. Using both methods also helped in triangulating data sources, in an approach that is commonly referred to as *"mixed methods approach"* or *"mixed methods research"* (Bryman 2008; Creswell 2009). The quantitative methods were used to examine the relationships among variables, while the qualitative methods were used to explore how individuals attribute to different issues and social problems. This contributes to understanding the dynamics of human processes and problems. We also chose to employ both methods in order to avoid or neutralise biases that may be evident in using only one method and to expand our scope of study. Additionally, using one type of data collection method may limit the researcher to only a specific selection of data, which may affect the research results (Bryman 2008). This research reflects a case study since the researchers explored in-depth the programs, activities, processes and events of MINAPA and BINP within a 3 months period.

According to Bryman (2008:604), the mixed methods paradigm consists of both quantitative and qualitative research patterns in which *"epistemological assumptions, values, and methods"* are integrated, although at a superficial level.

As earlier mentioned, this approach has the ability to *"offset"* biases linked to each research method, whereby weaknesses of either quantitative or qualitative methods are counterbalanced by the strengths of either method (Bryman 2008:612). It also capacitates a level of *"completeness"* whereby, in order for a researcher to obtain a *"complete answer to a research question or set of research questions,"* he or she needs to employ both quantitative and qualitative methods because gaps left by either methods can be filled in by the other (Bryman 2008:612). The Table below shows the different characteristics of the two research

method types.

Table 3.1: Quantitative Style versus Qualitative Style Research

Quantitative Style	Qualitative Style
Measure objective facts	Construct social reality, cultural meaning
Focus on variables	Focus on interactive processes, event
Reliability is key	Authenticity is key
Value free	Values are present and explicit
Independent of context	Situationally constrained
Many cases, subjects	Few cases, subjects
Statistical analysis	Thematic analysis
Researcher is detached	Researcher is involved

(Source: Mikkelsen 2005:142)

3.2.2 Selection of study area

MINAPA and BINP are well-suited areas to carry out organisational research.

MINAPA is one of the largest parks in Tanzania, it is easily accessible and SUA cooperates to some extent with the national park management. In addition, MINAPA has several interesting cases for studying practical management challenges such as the TANZAM highway, fire management, crop-raiding and poaching. There are more than 19 villages surrounding the park (TANAPA 2008a), and the relationship between these communities and the park management can be seen as both complicated and problematic.

On the other hand, BINP is harbouring one of the most endangered species (Mountain Gorillas-*Gorilla beringei beringei*) in the world, and it is presently generating a great amount of revenue from tourists for both UWA and the country at large. There have been ups and downs in the relationship between park managers and surrounding communities. One of the researchers had access to local knowledge, language, culture and history of the area as she has relatives from one of the regions of the park. This made it easier for her to go in depth with the research during the little time available.

3.2.3 Data collection methods

We used several methods to gather data for this study and these included: semi-structured questionnaires, key informant semi-structured interviews, focus group discussions, observation, and informal conversations. Secondary data was also collected.

3.2.3.1 Semi-structured questionnaires

We used semi-structured questionnaires that we administered in person. The questionnaires were used to gather quantitative data about different national park variables that influence management. The questionnaire had 61 questions, which were both open and close-ended. We used our objectives and research questions to design the questionnaire and also incorporated personal data of age, sex, religion, education level, and the research participants' working experiences and period of stay in the national parks, to be utilised in the data analysis.

3.2.3.2 Key informant semi-structured interviews

We chose semi-structured interviews because they permit flexibility in data collection. They allow the researcher to easily formulate questions and language expression during interviews so that it suits the interviewee's background and educational level (Bryman 2008; Mutasa 2010). Mutasa (2010) further states that these kinds of interviews eliminate any possibilities of rigidity, which are regular in structured interviews.

The interviews were guided by a list of questions. Most of the questions were open-ended, giving the respondents the opportunity to go into depth on some issues that were of interest to them.

With the consent of the interviewees, we used voice recorders to verify some of the interviews. Each interview lasted from about 30 minutes to 2 hours. We had research assistants who either translated from the local language to English for the case of the research in MINAPA or to a limited extent in BINP since the researcher understood the local languages. We transcribed the interviews while still in the field. This enabled us to put the collected data in writing while it was still fresh in our minds. This also avoided the trouble of having to sort huge amounts of data during the process of organising quantitative data.

3.2.3.3 Focus group discussions

A total of 10 focus group discussions were conducted among local people surrounding MINAPA and BINP. The groups consisted of men and women, youth and elderly and to some extent both the educated and the illiterate. The discussions concentrated on the changes within the national parks, their management, and local people's contribution towards park management, benefits and costs they incur due to the existence of the parks. Another relevant issue was problems they think the parks are facing and suggest possible ways to solve such problems.

By discussing all the above aspects, focus group discussions enabled us to acquire more knowledge about those issues, and thus permitting us to understand the changes that have taken place in these areas as well as some of the possible causes and costs of these changes.

3.2.3.4 Observation and Informal Conversations

Observations were employed to notice and gather images of the national parks' physical structures such as the administration buildings, infrastructure such as transport networks, gates, national parks' boundaries, and their surroundings including accommodation facilities (lodges, guest houses, camping sites), shops, research groups, and weather conditions.

We observed the park staff's time schedules when they went into the field to carry out their respective duties and when they returned from work. With this, we were able to acquire information about the different activities they did and what kind of activity each staff performed. This helped us when conducting various interviews since the respondents did not mention all the activities that different park staff under different departments carried out.

We also had random informal conversations with people in the local communities, either by the roadside, guesthouses and shops, or when we offered a ride to some who were walking to their homes from market places that were quite a distance away. This enabled us to get a lot of information about the lives of these people, what impact the existence of the national parks have on their livelihoods and their perception towards the park management. We were also able to learn about informal and formal institutions that they think exist in MINAPA and BINP and how these influence their lives.

3.2.3.5 Secondary data

We collected secondary data before and during the period of conducting our research. This process also continued during our thesis writing. We got this information from various articles, books, theses, reports, web pages and other scholarly materials written on national parks in Africa. We also gathered information from MINAPA Headquarters (HQs), SUA in Morogoro, Animal Behaviour Research Unit (ABRU) in MINAPA, UWA Headquarter offices in Kampala, BINP HQs in Buhoma, ITFC in Ruhija, and UWA offices in Kisoro district.

3.2.3.6 Data recording

Keeping records helps in assessing the quality of one's research and this can be done during *"a dependability audit"* where everything done during research is reviewed (Bailey 2007:40).

During some of the interviews, our research assistants and us used voice recorders to take note of every word that was said. We also took notes during those interviews and wrote down any additional information or reflections we got during discussions.

We had field notebooks where we noted the happenings of the day, appointments and observations if any. Additionally, apart from only keeping records of our activities during every stage of the research, we also reviewed our notes periodically and this facilitated in planning what to do next. We often sat down in the evening with our research assistants and reflected on what happened while conducting the interviews. This helped in memorising important information, which could have been forgotten if not written down.

The focus group interviews were conducted in Swahili for the case of communities living inside MINAPA and in Rukiga or Rufumbira for those living adjacent to BINP. Additionally, each question to be discussed by these groups was translated from English and the answers were also converted to English.

3.2.3.7 Diagnostic tools used

We developed 'trial' interview guides, checklists and a questionnaire that guided us to gather information we wanted from the respondents. These were targeted to different groups and the results obtained were used to design better guides incorporating what we had skipped out.

3.2.4 Validity and reliability of data

According to Mikkelsen (2005:195), there are few biases or errors linked to sampling and poor interviewing during research. It is therefore important to question the extent of validity and reliability of the research findings in order to lower the degree of such faults (Mikkelsen 2005). Validity is when *"what is measured is accurate and reflect the 'truth' or 'reality'"*, and reliability is when *"repeated observations using the same instrument under identical conditions produce similar results"* (Mikkelsen 2005:195). He further argues that these two aspects are not *"symmetrical"* and validity is *"not even theoretically attainable"* thus if the errors are very few or small, validity of the data is good and its reliability is high (Mikkelsen 2005:195-196).

In order to reduce the risk of having many biases or errors, we employed qualitative methods in a participatory manner and also explained to the interviewees the purpose of the research before each interview was conducted.

An example of such errors could be park staff at lower levels reporting that they are very satisfied with the park management, yet the majority complain about the condition of staff housing, lack of equipment and poor communication within park management.

3.2.5 Representativity

A total of 154 semi-structured questionnaires were administered to a randomly selected sample of staff at both MINAPA and BINP, and other internal stakeholders (NGO representatives, academics, natural and social science researchers and camp/hotel employees). Out of the 154 respondents, 52 were MINAPA park staff and 52 were BINP staff. This represented 47% of the staff at MINAPA and 31% at BINP. For each park, we also purposefully selected10 other staff members for semi-structured interviewing to gather specific information from unique positions such as that of the Chief Park Warden in MINAPA and the Conservation Area Manager in BINP. 25 semi-structured interviews were also conducted with the earlier mentioned internal stakeholders. In addition, we conducted focus group discussions in villages near both parks, within a distance of approximately 5 kilometres. Given the spread and the intensity of our sampling procedure, we believe our work gives a good presentation of the situation at the two parks. Both parks frequently transfer staff between parks in their respective countries, and most of our respondents had been at other

parks. At many points in our discussion, they made reference in terms of similarity of the situation with some former parks where they had worked, which suggests that our two cases are to an extent representative of the situation at other parks within the respective countries.

3.3   Data Sampling

In the course of our study, we collected both primary and secondary data. Chapter 1, 2, 3 and 4 are mainly based on secondary sources, while our findings, discussion and analysis lean largely on primary data collected in the field.

This research took place in two national parks located in two different countries. It was carried out in the field, either inside or around the park. Additionally, we interviewed key informants in Kampala, Arusha and Morogoro.

As earlier mentioned, different methods of data collection were used throughout the fieldwork; semi-structured questionnaires, key informant semi-structured interviews and focus group discussions. Suitable techniques of sampling were applied to each of these methods.

Our research participants were grouped into park staff, internal stakeholders and external stakeholders. Those that responded to the questionnaire were categorised as internal park respondents. The Table below illustrates the different groups.

Table 3.2: Definitions and explanation of research participants

Definitions	Explanation	Methods used
Park staff	BINP: Senior staff and junior staff MINAPA: Top staff and staff at lower level	1. Questionnaires 2. In-depth key informant interviews 3. Observation
Internal stakeholders	NGO representatives, researchers (social and natural science researchers), academics, hotel/camp employees and park "residents"	1. Questionnaires 2. In-depth key informant interviews 3. Observation
External stakeholders	Local people and local leaders	1. Focus group discussions 2. Observation
Internal park respondents	Park staff, NGO representatives, researchers (social and natural science researchers), academics, hotel/camp employees and park "residents"	1. Questionnaires 2. Observation
Focus group discussion participants	Local leaders and local people participating in focus groups conducted in 4 villages surrounding MINAPA and 2 surrounding BINP	1. Focus group discussions 2. Observation
Key informants	Park staff, NGO representatives, researchers (social and natural science researchers), academics, hotel/camp employees and local leaders	1. In-depth key informant interviews 2. Observation

(Source: Own fieldwork 2010)

3.3.1 Sampling for questionnaire and key informant interviews

To gather participants for our semi-structured questionnaires, we used non-probability methods of sampling. In non-probability sampling the respondents are selected non-randomly, which can result in some respondents being more likely to be selected than others (Bryman 2008). We carried out 154 questionnaires all together: 77 questionnaires in each of our two study sites. All together, 48 were conducted with park rangers in both parks, 56 with other park staff and 25 with internal stakeholders. Further, 25 were conducted with park "residents", meaning people living legally inside the park, who were mainly teachers, housewives and helpers. More specifically, we used convenience and purposive sampling, both being types of non-probability sampling method where the respondents are elected on account of convenience and accessibility. In organisational studies, this type of sampling is very common

and is often more influential than probability sampling (Bryman 2008).

We used purposive sampling to single out people being relevant to our research questions (Bryman 2008). In this case, it was mainly park rangers and park management staff we targeted for our questionnaires. We also applied the questionnaires on internal stakeholders.

Additionally, we conducted a total of 45 key informant semi-structured interviews, 25 in Tanzania and 20 in Uganda. Purposive and snowball sampling were used to conduct key informant semi- structured interviews. We considered purposive sampling as the best method to pick our key informants. Additionally, we applied snowball sampling while locating park staff, internal stakeholders and further informants. We first contacted informants relevant to our research and then used them to establish further contact with others to be interviewed (Bryman 2008). Since our research objects were to some extent hard to reach, we used this sampling method because many of the informants were interconnected and within the same networks.

Table 3.3: Key informants and interview objects

Tanzania	Uganda
1 Chief Park Warden	**1** Conservation Area Manager
9 MINAPA staff 1 Head of Tourism Department 1 Administrative Manager 1 Chief of Law Enforcement and protection 1 Zonal warden 2 Head of CCS/ Outreach program (both previous and present) 1 Park Ecologist 1 Assistant Accountant 1 Park Warden 1	**5 BINP staff** 1 Warden Tourism 1 Warden Law enforcement 1 Monitoring and Research Ranger 1 Warden Community Conservation 1 Accounts assistant **4 staff at UWA Headquarters- Kampala** 1 Law enforcement manager 2 Community conservation coordinators 1 Director of finance
13 Internal stakeholders 6 Lodge and camp managers 3 SUA and Vocational Education and Training Authority (VETA) staff 3 NGO managers/ project managers 1 TAWIRI project manager	**9 Internal stakeholders** 2 Makerere University staff 3 Representatives of research groups 4 Representatives of NGOs
2 Further informants (apprehended Masai)	**1** Elder of the Batwa
Total 25	**Total 20**
Total key informants and interview objects for both Tanzania and Uganda: **45**	

(Source: Own fieldwork 2010)

3.3.2 Sampling of focus group discussions

In addition to questionnaires and key informant interviews, we carried out a total of 10 focus group discussions, 6 in Tanzania and 4 in Uganda. Due to time and fund limitations, we decided to use focus groups in the neighbouring villages. The already existing secondary data regarding the relationship between park management and surrounding communities was another reason for conducting focus groups since use of questionnaires is a much more time consuming process.

Two villages close to both national parks were selected and two focus group discussions were conducted in each village. In Tanzania, close to MINAPA border, we chose Doma and Mikumi Villages and in Uganda, Buhoma and Ruhija Villages. Additionally, we conducted

two focus group discussions in two different villages in Tanzania because of a particular interesting case found during the fieldwork. Kiduhi and Parakuyo, bordering to the northern part of MINAPA were the chosen villages. The main reasons for choosing all these villages were the short distance from the park, easy access and relevance to our research questions and cases.

The 10 focus groups consisted of 5 to 20 participants and lasted approximately 1.5 hours.

In Tanzania, the Community Executive Officer (CEO) was used to initiate and create the focus groups. In Uganda, the 2 village leaders (LC 1 and 2) and a representative of the Batwa helped in initiating and creating the focus groups.

3.3.1 Sampling of secondary data

Sampling of secondary data was done throughout the whole process thus before, during and after our fieldwork. Articles, legal documents, brochures, maps and various reports were collected. Sokoine University of Agriculture, Makerere University and Norwegian University of Life Sciences were all frequently used to collect secondary data. Both national park HQs also provided us with a great deal of useful information.

3.4 Data Analysis

Part of the data analysis was completed in the course of our fieldwork, while the rest was done immediately after arriving in Norway. Data analysis was a result of the qualitative and quantitative methods we used.

3.4.1 Semi- structured questionnaires

The quantitative data collected was coded and entered into SPSS computer software for further quantitative analysis. A certain amount of the questions from the questionnaire were chosen for qualitative analysis. We used both SPSS and Microsoft Excel to summarise, manage and ensure consistency of the collected data. We also used Microsoft Excel to make both pie charts and graphs.

We worked with univariate analysis, which is a method that analyses only one variable at a

time. These identified variables were later used in descriptive analysis. Then we used bivariate analysis to examine *"the relationship between two variables, as in contingency tables or correlation"* (Bryman 2008:691) . These analyses and techniques were used to find pattern of data in order to get the correlation between all the different variables (Bryman 2008).

3.4.2 Key informant semi-structured interviews

The main part of our qualitative data collection was key informant semi-structured interviews. To analyse these interviews, we used a qualitative analysis method similar to what Creswell refers to as making *"sense out of text and image data"* (2003:190). During all interviews, we took notes and since top park staff and internal stakeholders spoke English, the interpreters were not necessary to participate in most of these interviews. More or less, all of our interviews were transcribed while in the field. This was a time consuming process so we did all analysis of the data after finishing the fieldwork. A tape recorder was only used during a minor part of our interviews owing to the fact that several interviewees did not consent to being recorded.

3.4.3 Focus group discussions

We used the same technique as we applied to the semi-structured interviews when analysing the focus group discussions. We made a transcript of the discussions and used the transcript in later analysis. The focus group discussions were mainly applied to give us an impression of the opinions that local people surrounding the national parks hold towards the park management.

3.5   Ethical considerations

Consideration of ethics during research pervades every part of the fieldwork process, that is; from the time of research topic selection to the time its results are being disseminated (Bailey 2007). Researchers in the field normally face *"informed consent, deception and confidentiality,"* as ethical concerns (Bailey 2007:15). This research was steered by principles guiding ethical concerns in social science research (Mutasa 2010:36). We followed principles that Diener and Crandall have broken down into four major parts *"harm to participants, lack*

of informed consent, invasion of privacy and deception" (Bryman 2008:118).

According to Bryman (2008:121), the principle of informed consent refers to *"that prospective research participants should be given as much information as might be needed to make an informed decision about whether or not they wish to participate in a study."* In order to obtain this principle, we informed the respondents the following aspects as advocated by Bailey (2007:17); that they are participating in the research, its purpose, the procedures that will be used during the research, the risks and benefits of the research, that participation in the research is of voluntary nature, that they have the right to stop the research at any time, the procedures being employed to protect confidentiality, their rights to have all their questions answered anytime, what is required of them if they approve to participate and that withdrawal at anytime will not cause them any consequences. We also always asked for permission before recording an interview and told the interviewees the reasons why we wanted to record.

We tried to treat research participants with respect and not as subjects to ensure that they would retain their self-esteem and we avoided promising them what we could not deliver. We tried to establish a good rapport with them by first asking them how they were, who we were and also exchanged personal information such as age, religion and civil status. At times we complimented but made sure not to ask or comment about any topic that can cause them *"harm or emotional distress"* (Bailey 2007:106). We have kept the research records confidential and tried using the findings as promised to the participants. This is to ensure that they are not identified after our thesis is published.

We as well abided by the ethic of invasion of privacy. We informed the participants that they were free to not answer questions they felt uncomfortable with. We also tried to access areas only where we had been granted access and avoided sneaking into areas where we had no right of entry. We followed the principle of asking for explicit permission before looking into or observing private matters as research is not a *"justification for observing private behaviours, places, or things"* (Bailey 2007:93).

The above principle also tackles the ethic of valuing or respecting cultures and traditions of the study area. We followed this by introducing ourselves to the local leaders and asking them for permission to carry out fieldwork before the whole interviewing process begun. This made our work easier since they even went ahead to introducing us to some people who were considered relevant to our study. We have also tried to interpret the data collected from

research the way it was presented to us in order to avoid intentional misinterpretation since this is regarded as a research ethic violation (Mutasa 2010).

3.6   Research limitations and challenges

Most research activities encounter various challenges before and during data collection and analysis. However, some limitations arise by surprise to the researcher while others could have been anticipated before the whole research process. The section below presents different limitations encountered during data collection and analysis, and under each limitation, a solution that we employed is listed. Since we operated with two study areas, we explain wherever differences occurred.

3.6.1 Access to and weather conditions of the research area

The research area in Uganda, BINP, is located almost 9 hours drive from Kampala. This road is of very poor quality and almost impassable during rainy seasons. Parts of our fieldwork were carried out during the second rainy season, leading to interviews being interrupted, rescheduled or cancelled. At times the researcher and interviewees could not hear each other clearly due to the noise from the rain.

Access to the second research area, MINAPA, was much easier due to the TANZAM highway crossing straight through the park. However, getting through the main gate was at first problematic, but after meeting with the Chief Park Warden, this was sorted out. It was also arranged that the researcher could live inside the park during the fieldwork. This was a great experience, where help from fellow researchers in the park was highly appreciated. Nevertheless, getting a driver and car into the park were both expensive and difficult; hence all driving had to be done by the researcher. Poor infrastructure such as roads within MINAPA and to the villages surrounding the park became challenging since the researcher had do to most driving.

3.6.2 Access to data and interviewees

We additionally struggled to access data and certain information. We were, for example, often denied access unless we paid for it, or denied access without any reason. For instance, in

Uganda one has to buy the General Management Plan for national parks if one wants to access it. Such additional costs had not been planned for. Since we both received financial support from the Department of International Environment and Development Studies (Noragric) and the PAPIA project, our financial situation was not seen as a limitation.

We met the same challenge in the field in finding and approaching our interview objects. The majority of MINAPA and BINP staff were generally in the field, either patrolling in the park and forest, guiding tourists, carrying out research, attending workshops, meeting and conferences, among other duties. This slowed down the research process in both Tanzania and Uganda. Park rangers were particularly hard to reach because of their working hours, patrols, the infrastructure inside the park and the accessibility we had to certain areas of the national parks.

3.6.3 Interview transcription

Transcribing interviews was a cumbersome process. We completed over 40 semi-structured interviews, whereas most lasted for more than 40 minutes, as well as 10 focus group discussions. We, therefore, chose to transcribe most of the interviews and focus groups during our fieldwork. All park management staff interviews were conducted in English and consequently took shorter time to complete, transcribe and analyse.

3.6.4 Language and interpreters

We would also like to mention the issue of the language barrier, which was a great challenge in MINAPA because most people only speak Swahili. Since the researcher only speaks Norwegian and English, an interpreter was hired. In addition to language, knowledge and culture made it difficult for her to go into depth with the little time available to carry out the research. Thus we believe some information could have been lost either during interpretation or due to the fact that the researcher could not fully go into depth with any further questions or ideas that may have otherwise cropped up during the interviews.

This was not the case for the researcher in BINP because she knows and understands the language, culture and has some knowledge of the people and culture there.

3.6.5 Time and logistics

Time, respondents' expectations and often transport were practical challenges. As mentioned earlier, movement from Kampala to BINP takes a very long time. The roads are very uncomfortable especially when it rains. Additionally, movement from one respondent to another took longer than planned. This was the case for MINAPA as well and therefore limited the number of questionnaires and interviews conducted in relation to the time available.

Respondents in areas around these national parks have gotten used to receiving something in return after being interviewed due to the previous researchers who did so. We were often expected to do the same, though we at times explained to such respondents how this is forbidden in research and also told them that we were mere students and so could not afford additional costs to what we already had to cater for. Most of them understood and went ahead to further guide us with the research.

3.6.6 Joint paper

There were some challenges associated to writing a joint-authored paper. During the fieldwork, we faced logistical challenges due to conducting the research in different areas. We struggled with exchange of information because we both had poor telecommunication and access to Internet. Writing a joint paper further made us dependent on each other, meaning that both negative and positive occurrences affected both. However, this was mainly a challenge during the fieldwork when we were apart.

3.6.7 Focus Group Discussions

We encountered challenges during the focus group discussions. In some focus groups, we failed to include all women. It was obvious that this depended on how many men; particularly elderly men were present during the discussion. The men usually dominated some of the discussions, but this was not the case in all of them. Other groups comprised of women actively participating in the discussions. In one of the villages where we experienced loss of information from women, we decided to solve this by conducting a second focus group discussion consisting 100% women.

CHAPTER 4 – STUDY AREA

This chapter gives a detailed description of the two study areas, Mikumi National Park in Tanzania and Bwindi Impenetrable National Park in Uganda.

4.1 Tanzania

4.1.1 Background: A profile of Tanzania

4.1.1.1 General information

Tanzania is located in East Africa bordering Kenya and Uganda in the north, Rwanda, Burundi and Democratic Republic of the Congo in the west, Mozambique, Zambia and Malawi in the south. The Indian Ocean is in the east where Tanzania has a 1,424 km long coastline. Tanzania is ranked 148 out of 169 countries on the United Nations Development Programme (UNDP's) Human Development Index (HDI). On that account it is considered a Low Human Developed Country (UNDP 2010a). Its population is estimated to 42.7 million (Central Intelligence Agency 2011a; LEAT 2011; TANAPA 2007). As mentioned earlier, Tanzania is known worldwide for its wildlife and spectacular nature. It has one of the largest PAs in Africa, whereas these areas vary and range from sea habitats to Africa's highest peak, Kilimanjaro. Tanzania also shares three of the largest lakes in Africa[5] with its neighbouring countries. Selous Game Reserve, the largest PA on the African continent, and some of Africa's largest national parks[6] are all situated in Tanzania.

Land tenure

After Tanzania became independent, the government legislated land tenure reforms that were mainly based on colonial policies and statuses; all land and natural resources were publicly owned and under the control of the state. The land rights and title were also based on use and occupation, not ownership (Central Intelligence Agency 2011a). In the mid-1990s, a debate over land tenure was formed and led to a new land policy in 1995 and a new land legislation, replacing the Land Ordinance from 1923, in 1999. The main aim of these land tenure reforms was to provide a framework for promoting private investment and ownership of land (Nelson et al. 2007). Despite the new legislation, the Tanzanian Government still has the final decision

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[5] Lake Victoria, Lake Tanganyika and Lake Nyasa
[6] Ruaha National Park and Serengeti National Park

in the protection and conservation of wildlife. TANAPA is in charge of 15 national parks occupying over 5% of the total territorial area. Tanzania has in addition game reserves, game controlled areas and forest reserves, which are all forms of PAs.

In 1994, the Director of Wildlife in Tanzania, M.A. Ndolanga, stated *"at present the state owns all wildlife and villages in community-based conservation projects areas are issued with a quota by the Department to give them the opportunity to hunt legally. Although this is a considerable step forward, the villagers do not own the wildlife and until they do, they will not feel responsible for it"* (Nelson et al. 2007:241).

Economy and tourism

Tanzania's economy depends heavily on agriculture, which accounts for more than ¼ of the Gross Domestic Product (GDP), provide 85% of exports and employs around 60% of the work force (LEAT 2011).

Tourism is also playing a significant role in the economic development of Tanzania. The tourism sector accounts for about 16% of the GDP and almost 25% of the total export earnings (Dalton et al. 1973). The Tanzanian President Jakaya Kikwete has stated that tourism is now the country's leading foreign exchange earner. In 2006/2007, TANAPA recorded around 700,000 tourists visiting Tanzanian national parks, which is a 4.2% increase from the previous year and an illustration of the steady growth Tanzania has experienced in nature-based tourism (TANAPA 2008a).

Conservation History

At the end of the 19th century, Germany colonised Tanganyika[7]. In 1896, the first Game Reserves and PAs in Africa were created and they were predominantly established to maintain the value of resources found in hunting and commercial products such as ivory (Baldus et al. 2001; Nelson et al. 2007). By 1913, the Germans had established 14 reserves, which mainly operated as hunting areas, covering roughly 3% of the land area.

The British Empire took over the control of Tanganyika after the World War 1, re-gazetted the game reserves that the Germans had established and centralised the management of wildlife through regulating utilisation. By 1930, several game reserves with high variation in restricted

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[7] Tanganyika is today Tanzania

land and wildlife use were founded. Some years later, the Convention for the Flora and Fauna of Africa declared in London that colonial administrations should investigate the possibility of establishing national parks (Kideghesho 2010; Nelson et al. 2007). In 1940, the Game Ordinance was presented and national parks were established as a legal entity for the first time in Tanzania (Nelson et al. 2007). Despite an enormous expansion and creation of PAs during the 20th century, illegal use of wildlife and human-wildlife conflicts grew in the 1960s, and by the 1980s, species like black rhino and elephants were threatened to be extinct. Consequently, Tanzania's Wildlife Sector started a process of policy reform in late 1980s, and in 1998, the first official wildlife policy in Tanzania was passed. This policy promoted more local participation and community-based conservation (Nelson et al. 2007). In the 1980s and beginning of the 1990s, Tanzania started to move towards community-based approaches to conservation management (Nelson et al. 2007).

Local government

The structures that govern all villages in rural Tanzania originate from the forced 'villagisation' operation from the 1970s, where millions of rural people were forced into rural centres. The Village Act of 1975 was to provide Village Council, which was to be elected by the Village Assembly (The United Republic of Tanzania 1999). In the 1980s, the local governments were re-established to decentralise the government administration. The reason for this was to get a more democratic participation in decision-making and implementation at village, district and regional levels (Mikkelsen 2005; The United Republic of Tanzania 1999). Between 1983 and 1984, local governments were constitutionally recognized through a series of Acts. Village and district councils were now created in rural areas while municipal and city councils were established in urban areas. Currently the rural authority consists of district councils, Ward Development Committees (WDCs) and village councils (TANAPA National Policy Committee 1994).

4.1.1.2 Description of study area

Geography, Geology, Climate and Demography

MINAPA is the fourth largest national park in Tanzania. The park was originally established as a game reserve in 1954, and gazetted as a national park in August 1964 covering an area of 1,070 km^2. The borders of the park were extended in 1975 to 3,230 km^2, which is its current

size. The park is located in eastern Tanzania between 7°00' and 7°50'S and between 37°00' and 37°30'E (Gunn 2009; Vedeld et al. 2011). MINAPA is located in Morogoro region, within the three districts, Kilosa, Mvomero and Morogoro. The main part of the park, including the HQs, is within Kilosa district. In the south, MINAPA borders the northern part of Africa's biggest game reserve and world heritage site, the Selous. Together MINAPA and Selous Game Reserve form a unique ecosystem. The TANZAM highway from Dar es Salaam to Zambia and Malawi cut across the park, which is rather unusual for a national park (Gunn 2009; TANAPA 2007).
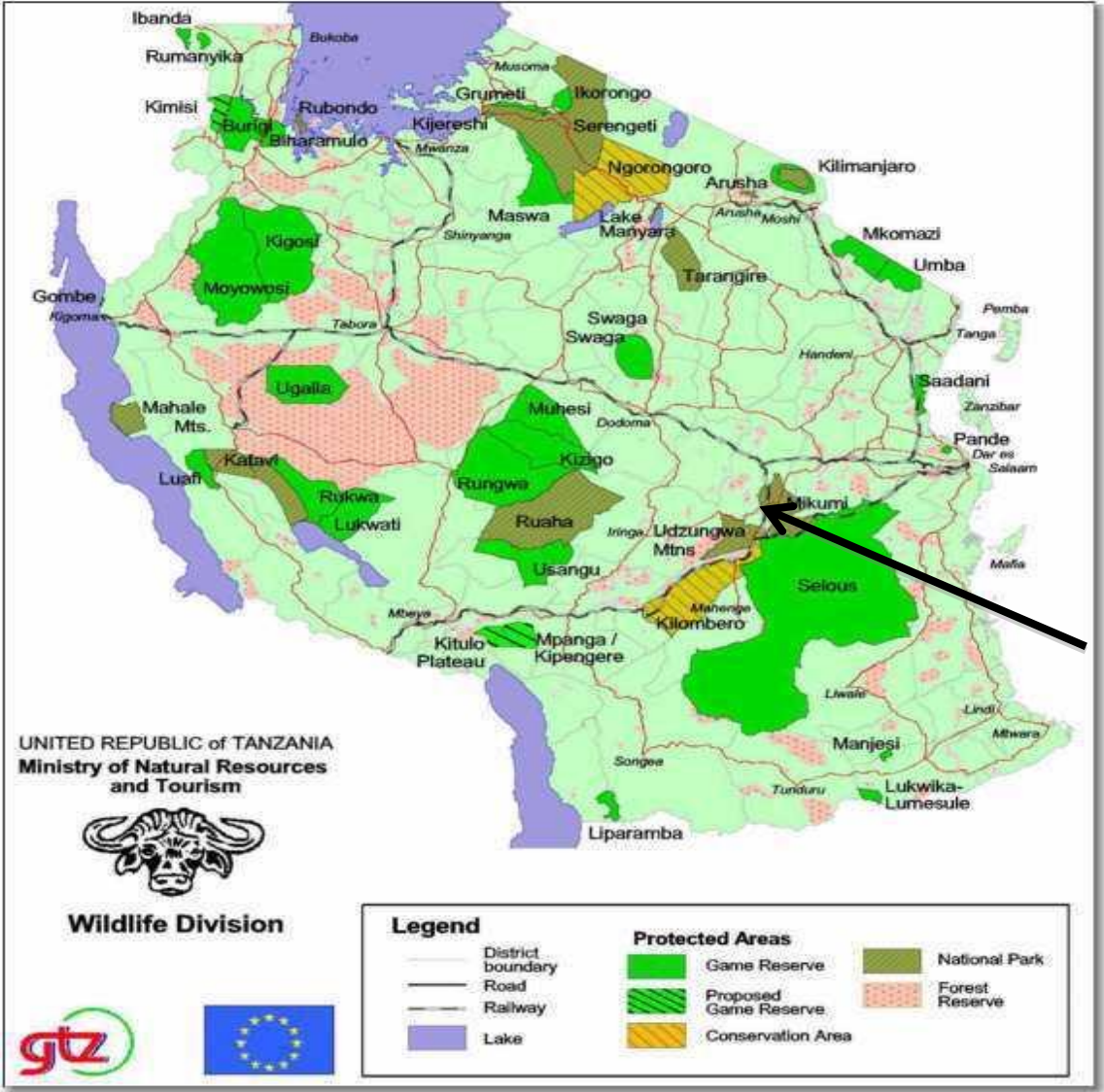
Figure 4.1: Map of Tanzania's protected areas

(Source: GTZ Wildlife Programme in Tanzania 2011)

In MINAPA, there is an altitudinal range of 430m above sea level in the southern plains to 1,270m above sea level in the Easter Arc's Malundwe Mountain, which is in the heart of the park. MINAPA is often divided into three catchment areas, the Wami, Ruaha and Rucu catchment. The Wami catchment is the most known and visited area of the park, and it consists of the Mkata Floodplain and a mixed woodland mosaic. Mkata floodplain is frequently compared to the famous Serengeti Plains and compromises approximately 30% of Mikumi National Park. The two other catchments, Ruaha and Ruvu, are areas with steeper hills and valleys south of the park (Gunn 2009; TANAPA 2007). The catchment areas are by the General Management Plan (GMP) and later in this paper referred to as the High Use Zone, Low Use Zone and Wilderness Zone (TANAPA 2007).

The rainfall patterns in MINAPA are extremely shifting and it can be difficult to determine the duration and timeline of the rainy season. It is still considered that there is a single rainy season that starts in December and ends around May. Between June and November, the climate is much dryer (Gunn et al. 2005).

There are 18 villages surrounding MINAPA, which has no other human habitation between their cultivation edge and the boundary. These human settlements vary in size and distance to the park boundary (Gunn 2009).
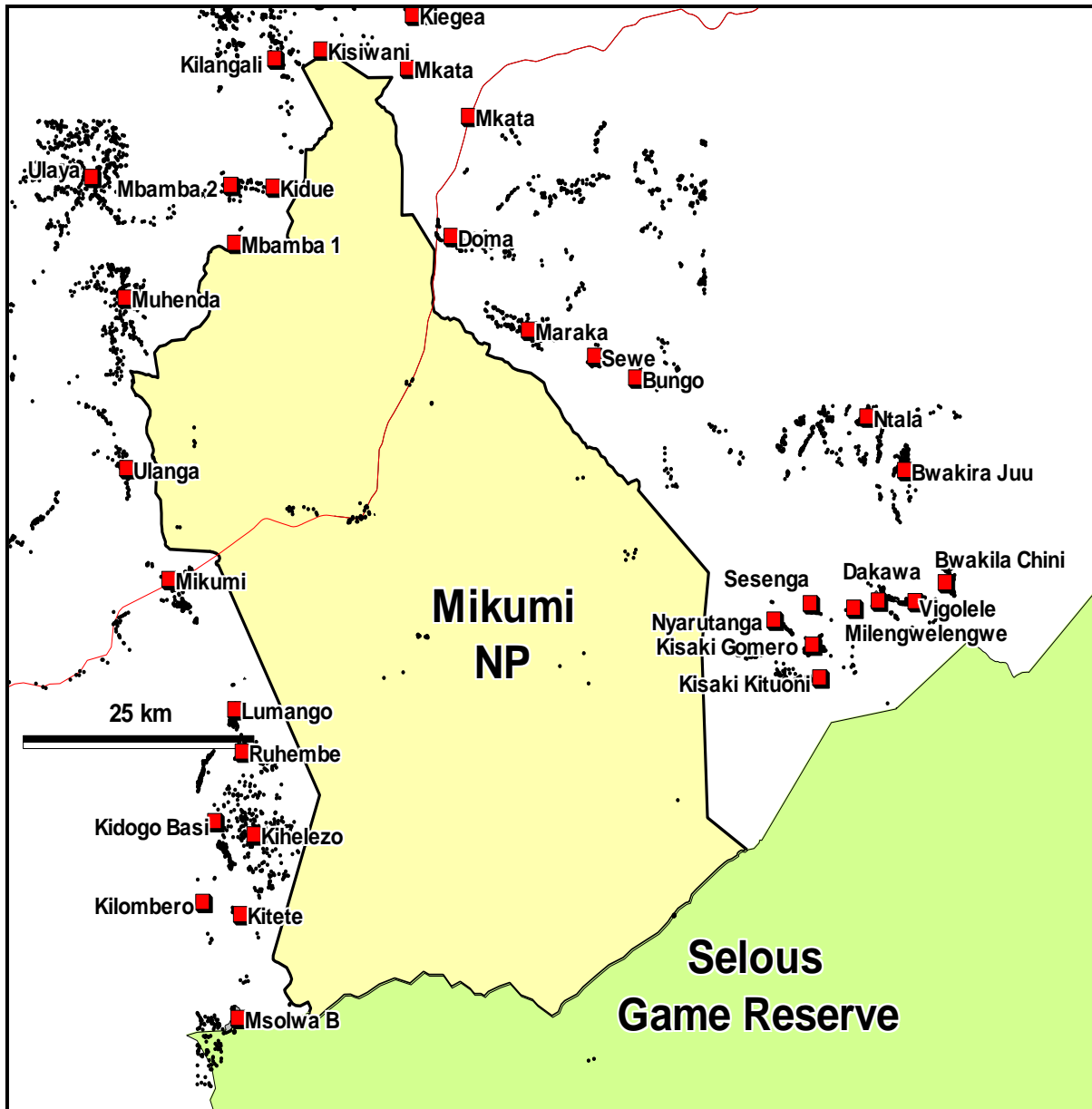
Figure 4.2: Map of Mikumi National Park and surrounding villages

(Source: MINAPA key informant 2010)

Fauna and Flora

MINAPA has a heterogeneous habitat that ranges from open grassland to woodland. The area harbours a complex collection of vegetation. Malundwe Mountain is part of the Easter Arc that is of exceptional biodiversity value. Malundwe divide the Wami River system to the north and the Ruaha to the south. The major river, Wami River, passes through the north of the park and is often dry in the peak of the dry season. This area is called the Mkata floodplain and is filled with alluvial clay soil also known as 'black cotton' soil (TANAPA 2008a). MINAPA has

more than 1,600 species of plants; a result of being an area where four major vegetation zones meet (The United Republic of Tanzania 1997).

To the south, MINAPA is connected to the Selous Game Reserve and together they form a unique ecosystem that holds one of the largest populations of wild elephants in Africa (Central Intelligence Agency 2011b; NEMC 2011). MINAPA host over 60 mammal species, including the eland, which is the world's largest antelope. The park is also known for its population of giraffes, zebras, greater kudu, wildebeest and sable antelope. Lions, leopards, wild dogs and black-backed jackal are the main predators of the park (TANAPA 2008a). Around 450 bird species have been recorded in MINAPA. The Mkata floodplain provides a preferred ground for buffaloes and several bird species. The ground hornbills, lilac-breasted roller, yellow-throated longclaw and bateleur eagle are some common residents in MINAPA (TANAPA 2008a).

Cultural History

East Africa was one of the main areas of slave trade during the nineteen-century. Most slaves were brought from what is today Democratic Republic of Congo (DRC) and western parts of Tanzania to the coast and onwards to Zanzibar where they were sold to mostly Arab countries (Sinclair 1993). At the same time, in 1857 Richard Francis Burton and John Hanning Speke travelled to seek for the source of the Nile. After finding what they set out to discover, they entered the area of Mikumi. Several animals found here were new to science and Speke described the area as "far richer, and ever prettier than the high lands above".

One slave route to the coast followed the Ruva River down to Zungomero (now Kisaki) and into southern Mikumi and across the Mkata floodplains. Several tribal groups lived in and around what is today Mikumi National Park, and most of these people disappeared or were relocated during the slave trade. Current local people around MINAPA are the Luguru that are found in the east and around Morogoro, Sagara to the west, Kaguru and Nguru to the north and the Vindunda and Pogoro to the southwest. Many of the villages surrounding the park are becoming culturally mixed (The United Republic of Tanzania 1997).

The Parakuyo are located to the north of the park. They are a former clan of the Masaai and are often seen and claim themselves to be Masaai. They have kept most Masaai traditions and follow Masaai rituals and cattle-herding lifestyle (personal observation in the field).

Park management and conservation significance

The TANZAM highway, crossing through MINAPA, establishes linkage and easy accessibility from the capital, Dar es Salaam, to the park. It is only a few hours' drive from the coast and is therefore visited by more Tanzanians than any other national park in the country (NCA Authority 2011; NEMC 2011).

MINAPA has, as mentioned, a high diversity of birds and a wide range of large mammals, including elephant, lion, giraffe, sable antelope, zebra and buffalos. However, the knowledge about which species are present in the park is limited (NEMC 2011). Nevertheless, MINAPA has over 450 species of birds among the Important Bird Areas[8] in Tanzania. The wild dog has been listed by IUCN as an endangered species, but occasional reports of sighting large packs suggest that MINAPA still has a viable population. The large giraffe and elephant population is also a resource of exceptional value (TANAPA 2007).

The management of MINAPA has a close collaboration with the Animal Behaviour Research Unit who does research on behaviour and ecology of yellow baboons. The research was established in 1974 and it is one of the longest primate field studies in the world (NEMC 2011).

Study villages around MINAPA

Most interviews for this study were conducted in the HQ of MINAPA, which is located in the heart of the park, only a couple of hundred meters from the main gate. Park staff and internal stakeholders were mostly stationed close to the HQ, which led this to becoming a natural base for the researcher.

The focus group discussions were carried out in 4 villages; Mikumi, Doma, Parakuyo and Kiduhi villages. All study villages were situated close to the park's boarders, differing in a distance ranging from 0 to 2000 meters (personal observation in the field).

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[8] The Important Bird Areas Program (IBA) is a global effort to identify and conserve areas that are vital to birds and other biodiversity (Audubon 2011)

4.2 Uganda

4.2.1 Background: A profile of Uganda

4.2.1.1 General information

Uganda, frequently known as the 'pearl of Africa', is a landlocked sub-Saharan country located in East Africa. It borders Sudan in the North, DRC in the West, Kenya in the East, Tanzania and Rwanda in the south. The country covers a total area of 241,038km^2. It has a population of about 33.7 million people with an annual population growth rate of 3.3% as per 2009 (UNDP 2010c). Uganda is faced with low annual incomes, high unemployment, HIV/AIDS pandemic, malaria, and food insecurity at times, and is rated 143 on the Human Development Index (UNDP 2010a). Among its important natural features are lakes such as Lake Victoria which is among the largest fresh water bodies in Africa, mountains, forests, swamps and tropical climate which is generally rainy with two dry seasons- December to February and June to August. Additionally, 27.9% of the total land is arable, 11.2% permanent crop land and 17.5% covered by forests (U.S Department of State 2011). The country is also commonly faced with political instabilities both from internal forces (tribes) and external conflicts from neighbouring countries.

Uganda is well known for its exceptional and diverse habitats and it is ranked among the top 10 countries of the world with plant and animal diversity (Roberts 2003). Many PAs have been established in Uganda for purposes of biodiversity, tourism and to promote both rural and country-wide socio-economic development. Furthermore, Uganda is blessed with some of the largest national parks such as Queen Elizabeth National Park, BINP, Mount Elgon National Park, Murchison Falls National Park and Lake Mburo National Park.

Land tenure

How land is utilised is an important aspect in wild and natural resource conservation, and park management in Uganda because it affects the social, political and economic well being of the population. This is also because land tenure influences people's ideas, norms, and practices since tenure is also a social institution (Vedeld 2002:24).Land is a very important asset to the people surrounding the park. Below is a brief history about land use in relation to biodiversity conservation in Uganda.

Land use in Uganda has had various systems of tenure due to the different ruling eras. During the pre-colonial era, land in Uganda was mostly communal and rights were obtained through inheritance and "pedigree" which were derived from customary agreements based on location and ethnicity (Lamprey et al. 2003). Nevertheless, due to high population pressures especially in South Western Uganda, land fragmentation increased, characterised by improper tenure systems and low development levels because the population lacked incentives to improve the land system. Towards the end of the 19th century, Uganda became a British protectorate and its tenure system changed from being communal to individual to promote self-sustenance and "private initiative"(Lamprey et al. 2003). People were therefore required to acquire certificates (land titles deeds) to prove their ownership. The British left behind a mixed conservation legacy where a certain amount of land commonly known as Mailo, was set aside for Kingship in Kingdoms leaving those that occupied the land to serve as tenants to pay rent to their kings and chiefs (Lamprey et al. 2003). The other land was left for the British crown. This was to improve agricultural production. However, in 1975, a "Land Reform Decree" was passed by the independent Ugandan government where land was made public (under the state) and was to be vested in the Uganda Land Commission. All landholders were to use land under a "lease basis" declaring how they were to develop it (Lamprey et al. 2003). The people originally living in Bwindi forests did not have land titles and this, therefore, made their eviction from the park legally speaking easier.

According to UWA (2001), the land tenure system in these areas is still mainly customary private ownership, a few rich people have leasehold titles and land fragmentation is still a big issue due to the high population densities. Land fragmentation is also said to be escalated by polygamy practices, inheritance where the head of the family divides his land among his sons, land borrowing, land renting and purchasing.

Economy and tourism

Uganda is endowed with various natural resources such as fertile soils, regular rainfall, small deposits of gold, copper and other minerals and oil has recently been discovered. Uganda's economy is dominated by agricultural production that contributes 42% to the real GDP (FINCA International 2010). Agriculture employs over 80% of the population and is commonly carried out by women. Uganda is among the poorest countries that qualified for

Heavily Indebted Poor Countries (HIPC) debt relief in 2000. It has so far received about 2 billion US dollars in multilateral and bilateral debt relief (The World Bank 2011). With such a position, the country has become dependent on various sectors such as agriculture, trade, tourism and forestry to ensure a sustainable economic development. It is important for the viability of foreign tourism and trade relations that Uganda establishes a resilient domestic tourism and trade environment.

Tourism is among the most important factors regarding management of PAs. The tourism sector is responsible for revenue generation in Uganda and in 2008, it contributed 9.2% of the country's GDP (Tumusiime & Vedeld 2011). Tourism is also among the top foreign exchange earners for the country. According to the 2008-2009 UWA annual report, 142,886 tourists visited 7 conservation areas during 2008-2009 and among those, 13,127 visited BINP. The number of those visiting both the conservation areas and BINP increased compared to the previous years due to improved security across the country, increased marketing, stronger synergy in the tourism sector, and better accommodation and transport facilities for tourists (UWA 2009). This has greatly contributed to the socio-economic growth and sustainable development of both the areas surrounding these PAs and the country at large.

The forestry sector is among Uganda's most important economic sectors (Tumusiime & Vedeld 2011). Tumusiime et al. (2011) further argue that forests also provide substantial benefits to local people who have mostly less assets thus significant to their economic livelihoods. BINP is endowed with a large forest upon which its neighbouring communities depend. This forest contributes to poverty reduction and income inequality decline to these people, though to a small extent.

Conservation history

According to Roberts (2003:15), Uganda has a long history of PA management dating back to as early as 1898 and the era before the colonial rule. The kings and chiefs are reported to have set aside some areas such as forests for sport hunting and used as sources for meat, clothing and medicine (Roberts 2003).

The declaration of the first protected forests in Uganda was in 1900 under the Buganda Agreement and the modern wildlife management started as early as 1926 where protection of wild animals was the main focus (Roberts 2003). This was followed by formation of National

Parks with an Act in 1952 in order to further conserve biodiversity and promote tourism (Roberts 2003; UWA 2009). In 1932, the British colonial government gazetted two forest areas- Kasatoro and Kayonza Crown forests in south western Uganda due to their economic and ecological significance (Balikoowa 2008; Tumusiime & Svarstad 2011). The two areas were combined and are now called BINP, and were first protected by the Uganda Forest Department (now known as National Forestry Authority-NFA).

Also before the colonial era, wildlife resources were a crucial element in the lives of the people neighbouring the Bwindi forest (Namara 2006). They saw the forest as "theirs" and they controlled and accessed it without being stopped (Namara 2006:44). And when BINP was first made into a wildlife park, it was a forest reserve with quite unclear boundaries. However, during the early 1990s, the Ugandan government used command and control policing approaches to put in place national parks, wildlife reserves and central forest reserves as PAs. This approach was very strict denying local people access to forest resources even though their livelihoods depended on them. In fact, after 1938, trees were planted along the forest borders in order to emphasize this restriction (Namara 2006).

In 1991, after the establishment of Bwindi Impenetrable National Park, there was a change in policy structure and management styles where it shifted from being a State Forest Reserve to being controlled as a National Park by UWA- a semi-autonomous body (Blomley 2003). This meant change in the park's organisational structures such as rights, duties, and change from direct government rule which is bureaucratic to new types of management systems. It also implied a new legal framework where boundaries were created and armed officers could evict local people from the forest reserve (Namara 2006). The eviction of people without compensation contributed to threat to the wildlife and conflicts emerged between local people and managers of the PAs. For instance, local populations poisoned wildlife and set parts of the PA on fire as protest against the park managers' actions (Namara 2006).

The incorporation of local communities surrounding PAs is among UWA's plans for managing PAs. This is the latest management policy cited in the Uganda Wildlife Policy (Namara 2006; The Republic of Uganda 2009). Local participation is thought to ensure effective natural and wildlife resource management and this is laid out as one of the principles of the National Environment Policy and also a strategy of the National Environment Action Plan (The Republic of Uganda 2009). This strategy emphasizes a bottom-up approach where resource management starts at lower levels from the local communities: from rural farmers, district

staff, ministry representatives, NGOs, the private sector, donors, to research and training institutions (The Republic of Uganda 2009). This community conservation approach is also a measure for enabling gender equality in conservation However, this is to a very small extent in practice since "*gender representation is usually biased towards men*" (The Republic of Uganda 2009).

<u>Local government</u>

Due to the decentralisation policy that began in the early 1990s, local governments in Uganda started to participate in biodiversity management (The Republic of Uganda 2009). The Local Governments Act of 1997 states that the central government is liable for forests and the game reserve policy whereas the District Councils are accountable for decentralised services (UWA 2001). This exhibits that both local governments and local communities are responsible for the management of both the environment and natural resources (The Republic of Uganda 2009). Uganda's communities are managed in the "*five-tier local government system*" which has 5 levels, starting from LC 1, which is at the village level to LC5 at district level (UWA 2001:9). The system is comprised of both legislative and administrative functions with employees ranging from Chief Administrative Officer (CAO) at the district level, followed by the assistant CAO, then Sub county chief and parish chief at the parish level (UWA 2001). These are in charge of "*income tax collection, service provision and aspects of environment management*" (UWA 2001:9). Due to decentralisation, benefit sharing as a result of natural resource development thus strengthened local government supporting biodiversity conservation and development (UWA 2001). This is also because the districts where BINP is located have Environment Action Plans (EAPs) and are therefore supported by many organisations favouring sustainable biodiversity conservation such as National Environment Management Authority (NEMA) and United States Agency for International Development (USAID) (UWA 2001).

4.2.2 Description of study area

4.2.2.1 Geography, Geology, Climate, Demography and Ethnography

This study was carried out in Bwindi Impenetrable National Park (BINP) located in South Western Uganda. It covers the districts of Kisoro, Kanungu, and Kabale, which are densely populated (Plumptre et al. 2007). It is situated between the latitude of 0º53′ to $1^0 8$' South,

longitude of 29°35′ to 29°50′ East. Its topography is extremely rugged and composed of many steep-sided hills and narrow valleys (Babaasa et al. 2004). BINP is part of the Bwindi Impenetrable Forest and is located next to the edge of the western Albertine rift valley in Africa. It borders the Democratic Republic of Congo, next to the Virunga National Park (UWA 2001).
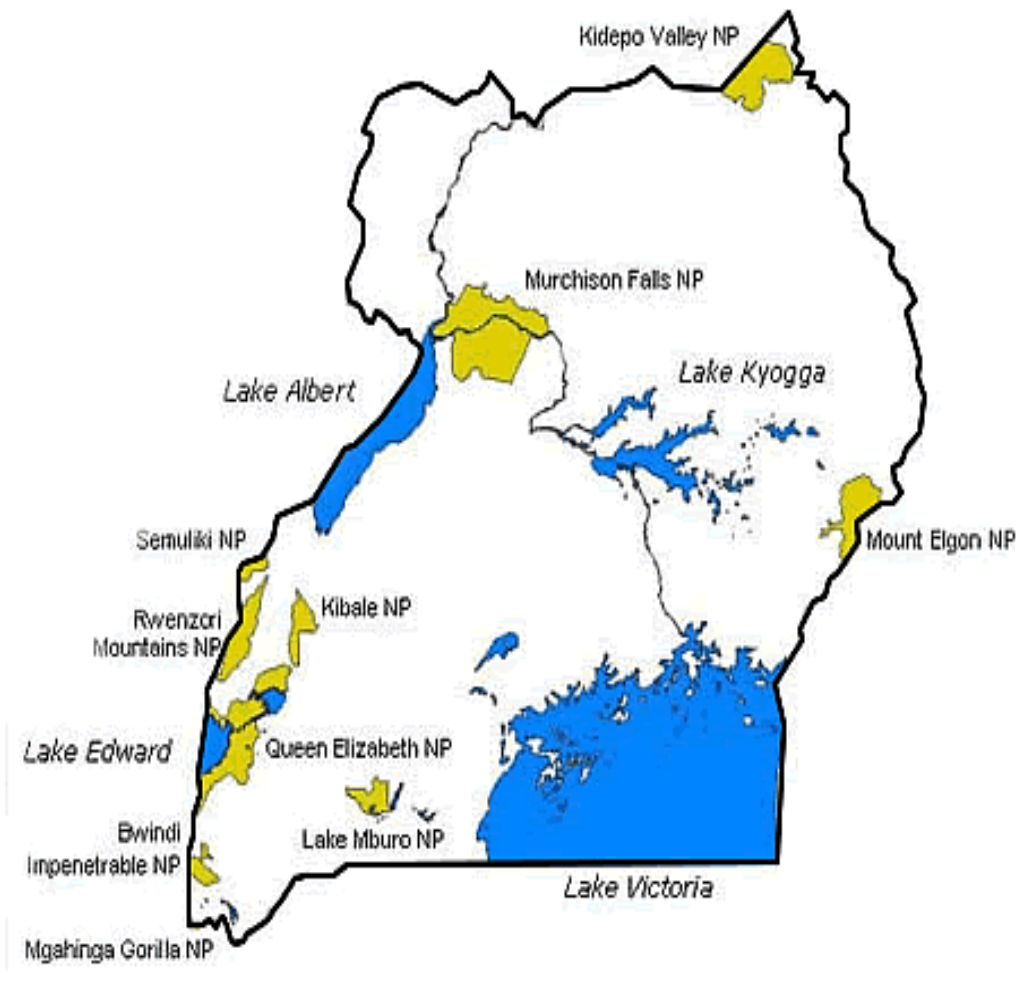
Figure 4.3: Map of Uganda's National Parks

(Source: UWA 2011)

The national park covers approximately 330.8 km^2 and is reported to be the largest forest with natural vegetation because most of the forests have been cleared by people in South Western Uganda. The park is situated in Rubanda County of Kabale District, Mutanda County of Kisoro District and Kinkizi County of Kanungu District (UWA 2001). There are 21 parishes neighbouring the park and a stretch of cultivated land separates it from Mgahinga Gorilla

National Park (MGNP) with which they are a joint Conservation Area called Bwindi Mgahinga Conservation Area (BMCA) (UWA 2001).
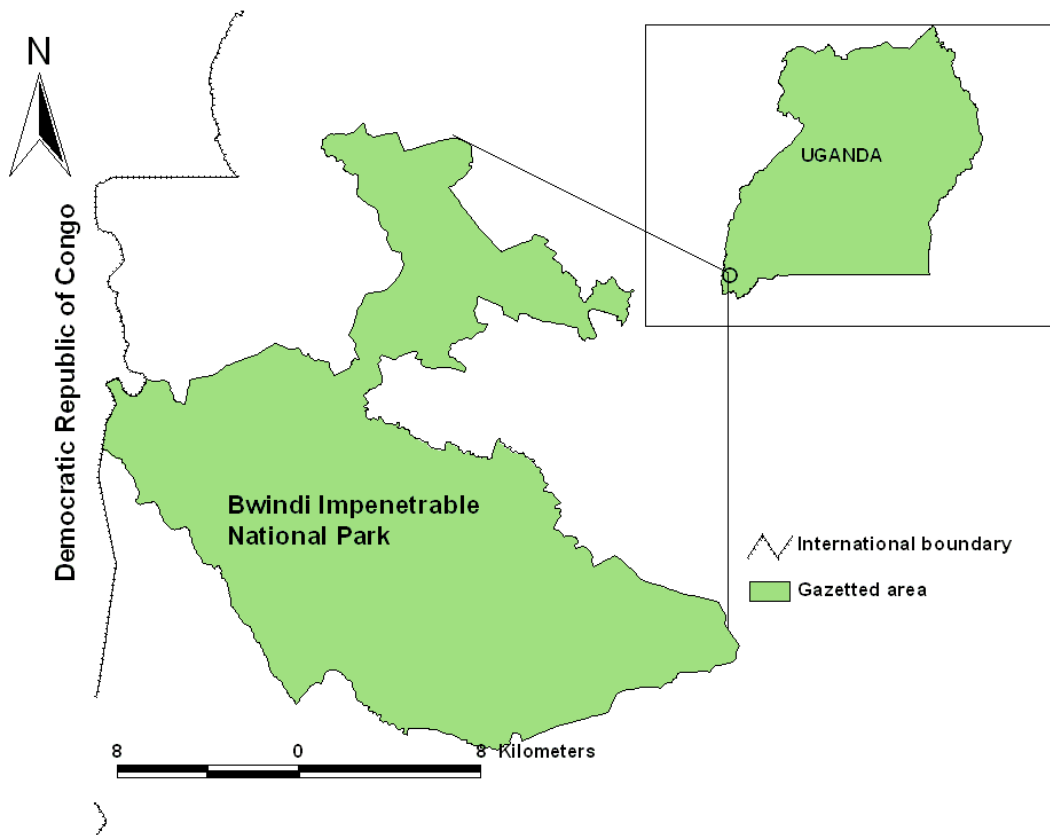
Figure 4.4: Map of Bwindi Impenetrable National Park

(Source: Key informant 2010)

BINP reclines in an altitudinal range of 1,160m at the northern tip to 2,607m above sea level at Rwamanyoonnyi Hill on the eastern edge of the park (UWA 2001). The soils in the national park are loose when dry and can easily be eroded if the forest vegetation is cleared for cultivation, thus agriculture is a negative land use alternative (Butynski 1984 in UWA 2001). The park has a good water catchment area because it is a source of rivers such as Ivi, Munyaga, Ihihizo and Ntengyere that are "*critical to the hydrological balance of the region and the country*" at large (UWA 2001:1). Since BINP is mainly covered by forest, it plays an important role in the area's climate and carbon sink (UWA 2001:14). This is one of the reasons why it is always raining in areas within and around the national park. The climate is tropical with two rainfall seasons from March to May and September to November.

According to the 2002 housing and population census, Kabale, Kisoro and Kanungu districts where BINP is situated were estimated to have population densities of 323, 160, and 290 people per square kilometre respectively. These are reported to be among the highest in Uganda whose average population density is 160 people per square kilometre since 1991 (Namara 2006). Since these figures were recorded in 2002, the human population density is anticipated to be higher because the average increase annually is approximately 2.7% in the 3 districts with Kisoro district having the highest of 3.5% (UWA 2001). This dense population has led to increased pressure on the forest resources especially land, within and around the park since the local populations mainly carry out agriculture. It also escalates illegal access to park resources such as hunting and logging (UWA 2001).

The people living around BINP are Bakiga as the major ethnic group with around 90% of the population, Bafumbira accounting for 9.5%, and other smaller groups such as Batwa (pygmies), Bahororo and Bahunde (UWA 2001). A majority of the population around BINP are rural dwellers carrying out agriculture and a few of the members are rearing livestock (Namara 2006; UWA 2001). Subsistence agriculture is the dominant activity where extra goods are sold off thus making it the major economic activity among these people (UWA 2001). Gorilla tourism is currently another important economic source for BINP. Before Bwindi forest was turned into a national park, people around it considered it "theirs" and collected honey and herbs, hunted animals, mined and carried out bee-keeping and logging as their economic activities (UWA 2001). However, this changed and the local people now regard it as no longer "*theirs but the government's*" and perceive it as only "*benefiting foreigners*" (Namara 2006:44). The Batwa are still reported by Kenrick (2000) to depend on the forest reserves of Bwindi for their livelihoods up to now.

4.2.2.2 Fauna and Flora

According to (UWA 2001:5), in order to sustain forest species during the last Ice Age (approximately 20,000 years ago), BINP served as a "*Pleistocene refugium*" thus regarded as an exceptional biodiversity area.

The national park harbours almost half of the world's population of mountain gorillas (Babaasa et al. 2004). It is also among those protected areas that have the world's most endemic and threatened species (Plumptre et al. 2007). Its biodiversity is large with about 120 documented mammals: 346 bird species, reptiles, amphibians, 7 primate species including

chimpanzees, mountain gorillas, blue monkey, l'Hoest's monkey, olive baboons, red tailed and white nosed monkeys and 3 nocturnal primate species; potto, Demidoff's galago and needle-clawed galago (Plumptre et al. 2007; UWA 2001). The park also hosts elephants, bush pigs, giant forest hogs, black-footed duikers, yellow-backed duikers, clawless otter, side stripped jackal, civet, genet, bats and rodents (UWA 2001). It also harbours 14 snake species, 27 frog and toad species, 6 chameleon species, 14 lizard species, skinks and geckos (UWA 2001).

BINP is among the largest Afromontane forests in Africa because of its moist green vegetation (Babaasa et al. 2004). Its forests are dominated by *Parinari excels* at 1,500m, *Newtonia buchanani* at 2,000m and *Chrysophyllum gorungosanum* at 2,200 (UWA 2001). Various tree species are endemic in Bwindi's forest with 17 having low distribution and 10 being nowhere else in Uganda (UWA 2001).

4.2.2.3 Cultural history

There are no known archaeological sites inside BINP but about 2000 and more years ago, Bantu speaking people who were mainly agriculturalists settled in the Kigezi Highlands (UWA 2001). Due to immigration from Rwanda and Congo (current DRC), the population in this area increased but was controlled in 1943 by the authorities halting such immigration (UWA 2001). It is unclear when these people last lived in the Bwindi forests except the Batwa. When the forest was gazetted in 1932, the Batwa lived at its edges but spent a lot of their time in the forest collecting fruits, wild honey and hunting but this stopped in 1991 when such activities were declared illegal by the Ugandan government (UWA 2001). The Batwa were hunter-gatherers while the non-Batwa people were hunters, blacksmiths, and wood carvers and mainly depended on forest plants, meat and cultivation (Moore 2000).

Various caves and hot springs are part of the cultural and religious values for the people in the communities adjacent to BINP and these are also important for tourism (UWA 2001). Cultures and traditions of the people adjacent to the park, especially the Batwa are usually expressed in their traditional songs, hymns, dance and plays (Moore 2000).

4.2.2.4 Park management and conservation significance

Some reasons normally linked to conservation or protectionism are the need to protect endangered species and to reduce the natural resource depletion (Balikoowa 2008). There are

various exceptional features of BINP that make its forest precious to conserve. The park has rich biodiversity resulting from the fact that the forest was a *Pleistocene refugium* during the last Ice age period when there were climatic changes, and it also covers 1,447m continuum of protected forest between 1,160 - 2,607m (Roberts 2003:56) This altitude supports the habitat for many species that survive on both lowland and Afromontane (Roberts 2003). BINP has 350 bird species, 310 butterfly species, 51 reptiles, 200 tree species, 50 hawk moths, 35 silk moths, and 120 known mammals among which are 10 primates. Having all these varieties of species makes BINP very internationally significant especially in East Africa and Africa since it is among the 29 African forests that are critical for plant conservation and harbours species that are endangered such as the mountain gorillas (Roberts 2003).

Locally, the park supplies water to local communities thus and it is significant in the climate's modification and soil conservation (Roberts 2003). Due to the revenue sharing schemes, projects in these communities are also supported thus boosting their socio-economic development (Tumusiime & Vedeld 2011).

4.2.2.5 Study villages

BINP is divided into various management zones depending on the activities carried out in that particular area as part of the national park's development endeavours. The zones include the tourism zone (Buhoma- Nkuringo, Ishasha gorge and Ruhija tourism areas), the Integrated Resource Use Zone where local people are allowed to access some parts of the park under certain conditions, the administration zone which entails infrastructure of park operations and visitor accommodation, and the wilderness zone (UWA 2001). The research was carried out in Buhoma, Ruhija and Nkuringo areas of BINP. The HQs of the park are in Buhoma and the majority of the park management's stakeholders are stationed here. As such, most interviews were carried out in Buhoma.

PART II

The second part presents findings from our field studies conducted between October 2010 and January 2011. The findings are based on questionnaires, interviews, focus group discussions, observation and secondary sources. This part also discusses the research results in order to understand the two national parks as organisations by looking at their management structures, and cultures, and studying cases that affect their management and how these problems are addressed. The chapters are thus divided following the objectives of the thesis. And each chapter contains a short comparison of MINAPA and BINP.

CHAPTER 5 – PARK MANAGEMENT STRUCTURE

5.1   Introduction

MINAPA and BINP are organisations with interplay of social, physical and cultural structures. These structures interact with each other and contribute to the environment in and around the national park. We used Hatch's (2001) five circle model to examine and understand MINAPA and BINP's interaction of the above structures. The organisational culture will be discussed in Chapter 6. In order to study the social structures of MINAPA and BINP, we used Weber's conceptions of social structure, which consist of hierarchy of authority, division of labour and formal rules and procedures.

Furthermore, we look at the role stakeholders such as park staff, local communities, research groups, NGOs and camp/hotel employees play in the parks' management. The parks' physical structures will be presented and lastly there will be a comparison of the two national parks. Looking at all the above features enables us to check whether they lead to the park's biodiversity conservation; contribute to rural and economic development, and political legitimacy.

5.2   MINAPA management structure

MINAPA is a bureaucratic organisation that is under the central control of TANAPA. The MINAPA management has got both social and physical structures that operate under instructions from the General Management Plan (GMP). Additionally, the management has got various processes that affect the existing strict chain of command. A workforce with a certain expertise is required to guarantee successful delivery from the park.

The national park's physical, social, cultural and technological structures interact with each other and are surrounded by various factors influencing them. In this chapter, we will focus on the social and physical structures. We will introduce the demographic information we sought, such as age, gender, marital status, religion, educational status and job description from the respondents of the questionnaire, followed by the social structure and GMP. Finally we present the physical structure of MINAPA.

5.2.1 Demographic information

We carried out 52 semi-structured questionnaires with MINAPA park staff. 30 were conducted with park rangers, 22 with other park staff.

A total of 83% of the respondents in MINAPA were male and 17% female. The majority of the park staff were between 26-35 years of age. 81% of the respondents were Christians while the remaining 19% are Moslems. 20% of the park staff had a College or University degree. 25% of the park staff, mainly the park rangers; have trained with Tanzania Peoples' Defence Force (TPDF). Over 70% have attended primary school (Standard 7) and Ordinary level of secondary school (Form 4). Additionally, several have attended Advanced level of secondary education (Form 6).

The majority of MINAPA employees were rather young, meaning that they were both energetic and could easily carry out all required chores. However, most duties in MINAPA management did not require one to be neither extremely physically strong, nor male. Nevertheless, MINAPA management was clearly dominated by men, both in the top management and among staff at lower levels. Most MINAPA staff had attended primary and secondary school. All employees in the top management had higher education with either Diplomas from the College of African Wildlife Management (Mweka) or University degrees. The education level in MINAPA contributed to better coordination among the employees in the park. Additionally, implementation of park activities and programmes was easier because of the rather high educational level of park employees.

Alongside the semi-structured questionnaires, we conducted key informant semi-structured interviews with the top management staff, research groups and camp/hotel employees. Most top management staff members are males, but we also interviewed the two women employed. Among researchers and camp/hotel employees, there was a fair mix between female and male employees. 50% of the camp/hotel employees we interviewed were of foreign origin, while the remaining 50% were Tanzanians.

We also carried out several focus group discussions in communities surrounding the park. Nearly all focus groups carried out in surrounding villages of MINAPA were composed of men, except in Doma Village.

5.2.2 Social structure of MINAPA

The following section presents MINAPA's hierarchy of authority, division of labour, formal rules and procedures, planning and management activities, and MINAPA's economic resources and budget analysis. Finally, we provide a summary of MINAPA's social structure.

5.2.2.1 Hierarchy of authority

The Ministry of Natural Resources and Tourism (MNRT) has the main authority over all PAs in Tanzania. The Wildlife Conservation Act of 1974 allows the Tanzanian Government to establish PAs and outline how these are to be organised and managed (TANAPA 2008a). TANAPA is a public institution empowered by an Act of Parliament with the authority to govern, manage and regulate all areas designated as national parks in Tanzania. National parks constitute the strictest level of natural resource protection in Tanzania.

TANAPA's highest body is the Board of Trustees and the head of the organisation is the Director General (DG). The Board of Trustees has the authority to make rules regarding specific actions. They, for example, *"reserve or set aside any portions of such national park as breeding places for animals, and as nurseries for vegetation"* (LEAT 2011). The next level in the organisational structure of TANAPA consists of several departments, each with its own field of expertise, such as Human Resources and Administration, Planning and Tourism, Finance, and Conservation. All departments have a Director and subordinate Managers. These departments monitor, communicate and work closely with the top management in all the parks. The influence of TANAPA on the management of national parks such as MINAPA is thus great. TANAPA gives power to the top management in each of the 15 national parks so they can execute their operational plans. Each national park has a team of professionals to manage and make strategic choices about the park's development.

The management in MINAPA is characterised by having a strong top-down chain of command, similar to the management of TANAPA. The command hierarchy in MINAPA is of military style. Chain of command is a formal line of authority, communication and responsibility within an organisation. According to the chain of command principle, the organisation sets up basis hierarchical relationships with a clear and single flow of authority. This flow is defined as lines of authority from the top to the bottom of an organisation. Orders are transferred downwards to lower positions where the real execution of tasks and duties are

to be done (Rizzo et al. 1970). Regarding reporting and communication, each person in MINAPA management follows a downward and upward technique. The organisational map of MINAPA (Figure 5.1) illustrates how the authority, communication and responsibility are among the different levels in the park management. The map demonstrates that employees mostly interact with others that are either one level below or over them in the chain of command. Additionally, there is horizontal communication, for example between all heads of departments. It also identifies the relationship between the superior and subordinate.
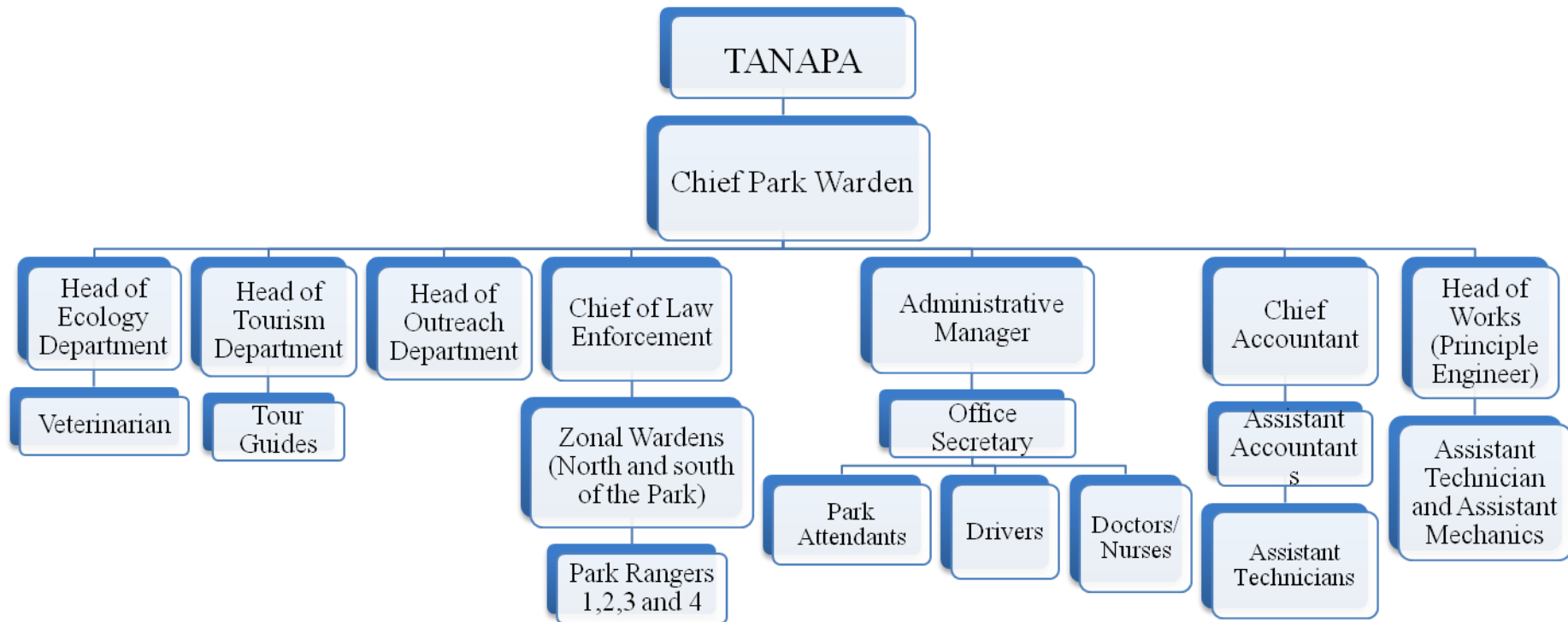
Figure 5.1: Organisational map of MINAPA management

(Source: TANAPA 2007)

As illustrated by the organisational map and observed during our research, the Chief Park Warden has the main responsibility in MINAPA and every other staff is subordinate to him. He reports to TANAPA, meaning he is the leading communication link between MINAPA and TANAPA HQs. The heads of the different departments are authorised to report directly to the Chief Park Warden, while the rest of the staff communicate to superiors above them in the organisational structure. It was much easier for internal stakeholders to report directly to the top management compared to MINAPA staff at lower levels.

During the research, it was observed that employees on a lower level could not directly contact the top management, meaning that there was a clear division of labour and authority between the top management and the rest of the park staff. Once MINAPA employees have signed up to work in the park, they are in the hands of the Chief Park Warden and they would have to leave all authority to him. It was, therefore, important that the Chief Park Warden in MINAPA was capable of making informed decisions and had a strong leader personality. We also noticed throughout the fieldwork that the Chief in MINAPA was highly respected at all management levels. The Chief had worked in MINAPA for over 7 years, which was considered unusually long for Chief Park Warden. The distance between the top management and the workers on lower ranks in the organisational structure was substantial in MINAPA. This was particularly clear when studying the Chief Park Warden and his position. One challenge, especially for park rangers, was the communication between top management and other park staff and the exchange of information within the park management. For example, messages from low ranked park rangers had to pass through several levels in the chain of communication in the park management before reaching its destination. It was, therefore, feared that details and substances in these messages would be lost. Nevertheless, it was never observed that the Chief Park Warden's role and position was unpopular. In fact, several camp/hotel employees and researchers mentioned that the cooperation and communication with the present Chief of the park was good and that he had created a good relationship between them and the park management. Despite the fact that the chief was highly regarded, we noticed that researchers and staff from different private tented camps and inside the park experienced plenty of complications with the park rangers and the staff at the main gate compared to the top management. It

is crucial for the park to have a good dialogue, relationship and cooperation between the park management and internal stakeholders. The Chief Park Warden is an important factor in promoting and building a stable relationship between the park and the mentioned stakeholders.

Regardless of the strict chain of command and dissatisfaction concerning the park's information flow, only 2% of the park staff answered that they were dissatisfied with the management, while 70% were satisfied and 28% indifferent. Additionally, we asked the park staff how the top management treated them. Identical to how satisfied park staff were with the top management, 55% felt that the treatment from the top management was good, 49% fair and only 4% felt they were poorly treated. However, it was observed that several employees at a lower level in the park management felt a certain dissatisfaction considering communication within the park management. Based on observation in the field, we feel that the question concerning satisfaction with park management and treatment from top management were not 100% honestly answered. We, therefore, include our own observations and anonymous sources in our analysis regarding this issue. The observed dissatisfaction towards the park management mainly involved complaints concerning lack of equipment and poor housing. Additionally, several park employees felt neglected and ignored by the top management seeing that communication within the management was difficult and complicated. Dissatisfied staff leads to de-motivated staff. Having employees without motivation often leads to duties not being met and lost engagement. This has a negative impact on the park management performance and delivery.

Several of the top management staff had daily interaction with their subordinates. The Protection Department, for instance, had an assembly every morning together with rangers being present at the HQs. The Chief of Protection and a senior ranger participated where possible. Two zonal wardens were subordinate to the Chief of Protection. They were in charge of each part of the park: the area north of the highway and the area south of the park. Both zonal wardens reported to the Chief of Protection and communicated directly to park rangers on a daily basis. They also supervised all park ranger posts in the park. Within the Protection Department, there were several opinions towards the park's hierarchy of authority. Some park rangers felt that the chain of command could be less strict, while others felt that a military leader style was

the most suitable way to run a national park. Some were also concerned that information would be lost because of all the levels in the chain of command. Even so, we observed a good relationship within the Protection Department. The chain of command provided the top management with effective control and coordination. Since all MINAPA employees received orders from only one superior, it kept them away from crossfire of orders from several superiors.

In the Chief Park Warden's absence, one of the department heads would be appointed to take over his mandate and authority on an acting basis. This arrangement shows trust in both the different departments and the employees. It is very important for an organisation to show trust in employees and their input. The top staff at MINAPA HQs operates, for example, with an "open door" policy. This policy opens up for interaction between the different levels of the organisational structure in the park. It also demonstrates that they are available. If employees are not recognised, appreciated or acknowledged, they would most likely not fulfil the responsibility and tasks that are assigned to them. It is, therefore, beneficial for MINAPA management to appreciate their employees in order to improve their performance.

Several park employees identified the relationship between TANAPA HQs and MINAPA as a "father-son" relationship. In this kind of relationship, TANAPA makes all the decisions, and staff at lower levels cannot question them. TANAPA is at "the top" guarding all the parks in Tanzania. They approve all management plans, collect revenue, distribute money, and monitor and evaluate the parks performance. In other words, MINAPA is fully managed and financed by TANAPA and is in one way simply managing the area for them. All parks in Tanzania follow TANAPA's policy. We found that the top-down hierarchy of authority between TANAPA and MINAPA may create little room for local level decisions. This is also the case within MINAPA management whereas the Chief Park Warden detains all authority. The top-down chain of command from TANAPA to the lower level staff in MINAPA can lead to effective conservation of MINAPA's biodiversity since employees at all levels have access to the consultation they need.

However, once TANAPA has approved MINAPA's budget, MINAPA management is freer to manage on their own. The absolute power in MINAPA remains with the Chief Park Warden, and he holds the authority to make the final decisions in most, if not all,

matters. Concerning financial decisions in MINAPA, he also has the legal and economic power to govern the management of the park.

TANAPA collects revenues from all national parks in Tanzania, including MINAPA. Compared to major parks such as Serengeti and Kilimanjaro National Park, MINAPA is considered to be a small-scale supporter of TANAPA's budget. MINAPA's income is considerably smaller than its costs to run the park. If parks in Tanzania were economically independent from TANAPA, the majority of these parks would not make nearly enough money to be self-supported. This is why all revenues are collected by TANAPA and divided between all the parks.

MINAPA has also received indirect support from ABRU, where office supplies and research equipment was provided for the Ecology Department. There are no donors in MINAPA, compared to Uganda's BINP and other popular parks in Tanzania that have several external funders. This means that MINAPA does not receive any other funds than the support they collect from TANAPA. A consequence is that little research is being done in the park. ABRU and SUA are the main contributors to the research in MINAPA and there is a good dialogue between them and the park management.

5.2.2.2 Division of labour

In this section, we will present MINAPA's departments, employees and their tasks.

Tasks and duties are assigned to the different departments of MINAPA management. MINAPA is divided into 7 departments: Finance and Procurement, Human Resources and Administration, Tourism, Ecology, Works, Outreach Programme and Law Enforcement Department. Each department is equipped with a head, who is in charge of the department and reports directly to the Chief Park Warden. Below is an overview of the 7 departments, the positions, different employees belonging to the departments and percentage of employees in each department.

Table 5.1: Departments and employees in MINAPA

Department	Number of employees (%)	Titles of employees
Finance and Procurement Department	8 employees (7%)	Chief accountant, assistant accountants, accountant technician, purchasing officer
Human Resources and Administration Department	17 employees (16%)	Head of department (Administrative Manager), office secretary, drivers, nurses, housekeepers and park attendant
Tourism Department	4 employees (4%)	Head of department (Tourism Warden) and tourism assistants
Ecology Department	2 employees (2%)	Head of department (Park Ecologist) and veterinary officer
Works (Buildings, roads and garage) Department	7 employees (6%)	Head of department (Principal Engineer), assistant technician and assistant mechanics
Outreach Department	1 employee (1%)	Head of department (Community Conservation Warden)
Protection Department	70 employees (64%)	Head of department (Chief of Law Enforcement), Zonal Wardens and Park Rangers 1,2,3 and 4
Head of all departments	1 employee (1 %)	Chief Park Warden
	Total: 110 employees	

(Source: MINAPA Human Resources and Administration 2010)

The number of employees in MINAPA constantly varies, but this is the number that was provided during the research. All departments in MINAPA have their own field of expertise and experts.

The Human Resources and Administration Department has a broad array of professions, such as nurses, drivers, housekeepers and secretaries. The department is responsible for the residents legally inside the park. The population of these residents was around 300 during the research. The department is in charge of social services, welfare services, water, electricity, and planning and recruitment. They additionally administrate the annual evaluation of MINAPA workers. The Works Department runs the workshop and the garage. They are responsible for maintenance and repairing of all vehicles used by the different departments. The Finance and Procurement Department consists of only professionals with advanced diplomas or University degrees in accountancy. The department is divided into two; the finance component and

procurement component. The Park Accountant is the head of department, has the jurisdiction to make some decisions concerning the park's economy. In addition, the park has a procurement unit that ensures that certain steps are followed in order to authorise acquisition of the park's goods and services. The department also collects revenue and administers submission of returns to TANAPA. Additionally, they are in charge of implementing the budget. We were informed by several key informants that the Finance Department, and MINAPA management often struggled with a budget that created limitations and shortcomings.

The Ecology Department has two employees; an ecologist and a veterinarian. The main responsibility of the ecologist is monitoring the key ecological systems in MINAPA. Because of lack of staff in the Ecology Department, MINAPA did not perform well in ecological monitoring, and hardly any research was done in the park. This was seen as problematic since monitoring MINAPA ecosystem is one of the main responsibilities of the park, and it is additionally one of the four Management Programmes in the GMP. During the fieldwork, we noticed that the park veterinarian was frequently absent, and no substitutes were provided. Internal stakeholders commented that the lack of a veterinarian was problematic. They further stated that a challenge regarding this was that the veterinary had the sole authority of putting animals to sleep. If he was absent, injured animals could not be treated by anyone else. We believe that if the responsibility in the management could be shared more, this would not be an issue.

The Tourism Department administers tourism affairs in the park. In addition to the head of department and tourism assistants, the department has several volunteers that are not listed as officially TANAPA employees because they do not receive payment from TANAPA HQs. It was, for example, observed that several students volunteered as Tour Guides in the park. There are few tourist facilities in the park, and the ones that exist are not run well. Take for example the entrance facilities. They are *non-functional with* lack of service and no sale of souvenirs and snacks. The main entry gate also requires more service for visitors to improve the parks delivery and performance.

The Outreach Department is in charge of the Community Outreach Programme. This programme seeks to improve and maintain a good relationship with internal and external stakeholders in order to protect the integrity of the national park. The programme plans to do this through benefit and responsibility sharing, conservation

and environmental education, capacity building, and information and knowledge sharing. The department also works on projects in villages surrounding the park that are partly initiated and funded by TANAPA. Normally, a few villages are picked per year. When choosing which community to support the park priorities those that can cover 30% of the final project costs.

The greatest challenge for the Outreach Department is lack of employees since it only has one employee; the head of department. Several top staff expressed that this department needed sorely an extension. They also indicated that the Outreach Department should make use of park rangers in the different outreach programmes, and that the rangers should not only do patrols. Park staff expressed that it would be much more beneficial for the park management to have staff, especially park rangers, who could work in other departments than only in protection. The Outreach Department, for example, would like to use rangers in the response to problem animals and crop raiding around the park. This would strengthen the relationship within the park management and between park management and surrounding communities. Nevertheless, MINAPA departments collaborate in some cases. The Outreach and Ecology Department are, for example, collaborating on developing veterinary outreach activities in local communities.

The Protection Department is the most populous department of the park with 70 out of 110 employees. We early identified poaching as a key challenge in MINAPA. This is one of the main reasons why the Protection Department receives a great amount of budget support and management priority. This will be illustrated further under the Section referring to MINAPA's economic resources and budget analysis. During the research, 67 park rangers were working in MINAPA and stationed at posts spread out over the park. 91 % of the park rangers were male, indicating a gender imbalance among the rangers. According to one of our key informants, considering the risks associated with being a ranger, an African husband or parents would not agree to his wife or their daughter getting into that kind of work. He gave this as a possible reason for having less female employees in MINAPA.

The ranks in the Protection Department in TANAPA are of a military form that is used by several uniformed organisations. It is made up of 4 different ranks. The lowest ranks are Park Ranger 4, which can be compared to a Private, and Park Ranger 3 to Corporal.

Park Ranger 2 is a Sergeant, and Park Ranger 1 has the same rank as Sergeant Major or Staff Sergeant. Only the Park Ranger 1 can directly communicate with the Chief of Department, while the Zonal Wardens communicate with all rangers. This implies strict feedback rules and detailed rules for decision-making, leading to a better functioning management.

MINAPA management operates with a reward system. For example, park staff reported that if park rangers brought in poachers, they would receive a reward in terms of money depending on, for example, what animal was poached. This system is quite new and it is mainly to prevent park staff, mainly park rangers, to "sell out" to poachers or become corrupt. The rewards system in MINAP makes it more beneficial to be faithful to the park than abandon one's principles. In addition, it motivates the staff to do a better and more effective job that contributes to the improvement of the park's performance. The salaries of park rangers depend on where they are stationed in the park, where they are patrolling, at what time of the day they are working and if they are exposed to danger.

Only 6 out of 67 park rangers were female. All the female park rangers had the lowest rank, Park Ranger 4, in the Protection Department. This was because women had recently been recruited and it takes time to achieve higher ranks in the Protection Department. In the top management, the percentage of women is somewhat larger, where women hold 2 out of 7 chief posts. The entire park management is clearly dominated by men. The working environment in the park management is controlled by men in all levels; from the top management and down to the lowest positions. It was observed that being a female, and especially young, could to some extent be difficult and challenging in such an environment. However, recently, there has been a clear trend towards more women taking positions in the top management and as park rangers. A key informant informed that a couple of years ago, there were no female park rangers in MINAPA, and very few in any other national park in Tanzania.

Approximately 33 % of the MINAPA employees have worked for 16 years or more in national parks in Tanzania. Only 10% are new[9] in the park management. We believe that these numbers are important to understand correctly. The number of years shows

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[9] We define being "new" in the park management as staff that have worked less than one year.

how many years they have worked for TANAPA and not only MINAPA, which gives us information about how long people usually stay and work for TANAPA. For example, most employees over 40 years have spent their entire careers working in TANAPA. Several senior park rangers had worked in TANAPA for more than 30 years. The data collected on working experience shows that the majority of the employees have worked in TANAPA over an extensive period and that they do not tend to change employer. This may indicate that employees are satisfied with what TANAPA has to offer, such as working environment, salary and residency. However, it could also demonstrate that employees did not change because it was not easy to get an alternative job. Employees being loyal to an organisation can point to the fact that the employees have confidence and trust in the organisation. In our opinion, having a loyal workforce is valuable for MINAPA management since their employees are motivated to do their job. People working long at the same workplace also tend to amass institutional knowledge that is important in the execution of their duties, for example without having to be trained again and consult past documents and plans.

A challenge that was frequently mentioned was lack of staff. Only 13 % of MINAPA employees felt that the park had enough staff. It was also reported that especially in the Ecology and in the Outreach Department, there were severe lack of employees. Several in the top management felt that more rangers were needed in other departments and programmes, but not only in the Protection Department. If staff were absent due to studies, maternity leave or disease, no replacement was provided. This often led to delays in certain management duties and affected the delivery of the park's goals.

We found that TANAPA operates with a system and policy where staff are transferred between the parks. Employees in the top management normally work 4-6 years in a national park before being transferred. Park rangers usually work between 1 month and 6 years in a national park. Recently, employed rangers are more repeatedly transferred than senior staff. The transfer policy is to avoid park staff, primarily park rangers, having regular contact with local communities surrounding the park. One of TANAPA's main arguments is that frequent interaction between park rangers and people living in surrounding areas leads to leak of information regarding anti-poaching. The main agenda of the policy is to avoid corruption in the park management. However, due to the transfer system, park staff have to start afresh in the

park they are assigned to, which is a time consuming process. We witnessed the transfer of the head of Outreach Department to another national park during our research. This policy clearly revealed that local people and internal stakeholders recognised it as a problem in connection with communication and relating to the MINAPA top management. Establishing a good relationship with people in surrounding communities of the park is a difficult and enduring process. The transfer of the head of Outreach Department is for that reason a step backwards regarding the parks management because the relationship with local communities may disappear.

The division of labour in MINAPA reveals that the Protection Department has the highest number of employees. One of the reasons why TANAPA chooses to prioritise this department is that poaching is identified as one of the key challenges facing MINAPA. MINAPA management is divided into 7 departments where each department has a chief officer that holds the main responsibility. The heads of each department report directly to the Chief Park Warden who is subordinate to TANAPA, but is the absolute decision maker in MINAPA.

5.2.2.3 Formal rules and procedures

In this section, we look closer at policies and acts that govern the management of parks in Tanzania in order to understand better the formal rules and procedures in MINAPA.

Wildlife conservation in Tanzania dates back to 1891 when the Germans formulated laws to control hunting. The British Government established the Game Department in 1921 and gazetted the first Game Reserve in 1922. After independence, it was the new Government's responsibility to develop new policies of PAs in Tanzania. The President, Julius Nyerere, released a statement at independence showing that Tanzania had a commitment to wildlife conservation. The statement is known as the famous "Arusha Manifesto", and has been a guide to wildlife conservation in Tanzania since her independence (The United Republic of Tanzania 1998). Parts of the manifesto are quoted in the introduction chapter.

Tanzania has a long history of wildlife conservation, but has never had any comprehensive wildlife policy. The wildlife has been protected by the use of guidelines, regulations and laws executed by the department of wildlife and other

entrusted institutions (The United Republic of Tanzania 1998). At the end of the colonial era, central authorities administered the National Parks and Game Reserves, while other PAs fell under regional control. Tanganyika (today Tanzania) had at this time gazetted three national parks, six game reserves, the Ngorongoro Conservation Area and a large number of game controlled areas. The process of establishing these PAs was assisted greatly by, for example, the tsetse flies since the human population had reached low at the turn of the century, cultivation was less extensive and the wildlife in Tanzania was less controlled. This is one of the reasons why wildlife populations recovered and wooded habitat was re-established and allowed tsetse flies to increase their range and spread to new areas. Sleeping sickness appeared and spread throughout the country from around 1920 and resulted in a policy of concentrating previously scattered human populations in cleared areas. The spread of tsetse flies was particularly great in miombo-woodland. The effects trypanosomiasis outbreaks had upon conservation policy was far-reaching, and it explains why large areas of miombo-woodlands were reserved as protected areas (Prins et al. 2000). Furthermore, at the time of independence, the population in Tanzania was relatively low with around 8 million inhabitants (The United Republic of Tanzania 1998). Today, the population in Tanzania is about 42 million and the matter of land use make a wildlife conservation policy to a greater extent necessary (UNDP 2010b).

In 1998, the Ministry of Natural Resource and Tourism (MNRT) formulated a wildlife policy that would supervise its administration and organise the development of the wildlife sector in Tanzania. The wildlife sector is a division under the MNRT that aims at promoting conservation of biological diversity and to develop wildlife resources. The wildlife sector further advocates for poverty alleviation and seeks to improve the quality of people's life in Tanzania (The United Republic of Tanzania 1998).

The Wildlife Policy that was approved in 1998 planned to address several national challenges. It states an ambition to;

> *"conserve areas with great biological diversity which are representative of the major habitats of Tanzania. Enlarge PA network as the core of conservation issues. Promote involvement of local communities' participation in wildlife conservation in and outside the PA network. Increase foreign exchange earnings and integrate wildlife conservation with rural development. Minimise*

human-wildlife conflicts wherever they occur" (The United Republic of Tanzania 1998:14).

Additionally, the policy aims at involving a broader section of the society in wildlife conservation, particularly the rural communities and the private sector. PAs are devoted to wildlife conservation in Tanzania and they are vested with the Directorate of Wildlife in the ministry, which is responsible for the wildlife sector. When PAs implement the policy, the policies also interplay with other policies such as tourism, agriculture, water, minerals and environment. The following section presents the main policies relevant for MINAPA.

The Vice-President's Office in 1997 had the overall responsibility of establishing the new National Environmental Policy. The policy aims at providing a framework for making fundamental changes that are needed to bring environmental considerations into the mainstream of decision making in Tanzania. The policy involves numerous sectors and interest groups, its scope is broad, and the implementation and monitoring of the policy is therefore complex. The policy promotes individual and community participation in environmental action (The United Republic of Tanzania 1997).

The National Environment Management Council (NEMC), which lies under the Vice-President's Office, came into existence when the Government of Tanzania approved the National Environment Management Act No.19 of 1983. The Act of 1983 was repealed by the approval of the Environmental Management Act No. 20 of 2004, which also re-established NEMC and gave them the authority and *"mandate to review Environmental Impact Statements (EIS) and conduct environmental monitoring and auditing of projects and facilities"* (NEMC 2011). The Environmental Policy together with this Act and subsequent regulations and guidelines recognise the importance of implementing conservation actions by actors from local level to national level. (The United Republic of Tanzania 2009a). The Policy reveals that biodiversity policies, strategies and programmes are only relevant when they are in a national association and context, and they are therefore integrated into sectoral and cross-sectoral policies, strategies and programmes. The environmental impacts of action in one sector often appear in other sectors and that is why environmental goals, objectives and actions cannot be understood separately from the development and policy sector in which they originate. An example of sectoral policies is wildlife and that its *"resources shall be*

protected and utilized in a sustainable manner on the basis of careful assessment of natural heritage in flora and fauna fragile ecosystems, sites under pressure and endangered species, with participation of, and benefits to, the local communities" (The United Republic of Tanzania 1997:28). For instance, environmentally harmful projects in national parks and wildlife conservation areas will be kept to a minimum by Environmental Impact Assessment (EIA) studies (The United Republic of Tanzania 1997).

The Government of Tanzania has signed several international and regional environmental treaties that play an important role in the conservation of Tanzania's biodiversity (The United Republic of Tanzania 2011). They are as follows:

- Convention on Biological Biodiversity (CBD) in 1992. Tanzania is committed to join other global partners in conserving biological diversity and promote measures of sharing accrued benefits across local, regional, national and global stakeholders.
- United Nations Framework Convention on Climate Change ratified in April, 1996. This is an international treaty that considers what can be done to reduce global warming and to cope with whatever temperature increases are inevitable (UNFCCC 2011).
- Convention on Biological Diversity ratified on 8 March 1996. The convention's objectives are conservation of biological diversity, the sustainable use of the components of biological diversity and fair and equitable sharing of the benefits arising out of the utilization of genetic resources.

These international and regional environmental treaties and conventions play an important role in the conservation of biodiversity in Tanzania since they allow support to national park rules and make communication easier.

Additionally, the first National Tourism Policy of Tanzania was adopted in 1991. Its intention was to provide the overall objectives and strategies needed to ensure sustainable tourism development in Tanzania (The United Republic of Tanzania 1999). Achievements included the establishment of the Tanzania Tourist Board (TTB), improvement of private sector participation and approval of several new tourism-

related projects collaborated with the Tanzania Investment Centre (TIC)[10].

There have been considerable political, economic and social changes in Tanzania over the last decades. The private sector has expanded and the Government is no longer the sole owner of tourist facilities. The Tourism Policy was revised in 1999 as a result of involvement from various stakeholders through workshops conducted between 1994 and 1998. Tourism in Tanzania has traditionally relied on natural tourist attractions and the environment, such as national parks, NCA, game reserves and other sites of great natural biodiversity. The tourism industry still depends on genuine and regulated conservation and a sustainable management of the environment. The Tourism Policy states that the tourism industry is devoted to see that the environment is conserved. Additionally, the Policy has Community Participation strategies seeing that most tourist attractions in Tanzania lie within local communities or co-exist side by side with communities, for example in national parks. One strategy is for instance to educate and sensitise communities, individuals, institutions and stakeholders about how to appreciate, value, understand, develop and protect tourist attractions (The United Republic of Tanzania 1999).

The National Policies for Tanzania National Parks provide a direction on how to mandate national parks and are prepared by TANAPA National Policy Committee. The goals of the policies are stated in the Arusha Manifesto. The National Policies recognise that all parks are complex mixtures of values and resources, each with its own unique qualities and purposes, requiring specific treatment in the development and implementation of management plan strategies and operational systems. The National Policies use the terms "resources and values" to mean the full spectrum of tangible and intangible attributes for which national parks have been established" (TANAPA National Policy Committee 1994:2). For a national park to fulfil its mandate it is important to consider the areas outside the boundaries of the park as well. TANAPA support the practice of compatible land use practices around the park. They will also cooperate with surrounding communities, local and district governments and other agencies and departments of government, organisations, and individuals to ensure that actions outside the parks do not impair park resources and values (TANAPA National Policy Committee 1994).

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[10] Formerly known as the Investment Promotion Centre (IPC).

related matters" (The United Republic of Tanzania 2009b:9). The Act is enforced by the Wildlife Division and covers wildlife outside national parks and the Ngorongoro There are also several strategies for the administration of national parks and wildlife in Tanzania. Wildlife conservation legislations such as the Wildlife Conservation Act No.*12* of 1974, I Ordinance CAP 413 of 1959 and the Tanzania National Parks Ordinance CAP 412 of 1959 took part in the establishment of laws for protecting national park and conservation areas.

The Wildlife Conservation Act of 1974 was reformed in 2009 and has served since as the principal legislation for the Wildlife Department. The Act also allows the Government to establish protected areas and outline how these are to be organized and managed. The Wildlife Conservation Act is to *"make better provisions for the conservation management, protection and sustainable utilisation of wildlife and wildlife products; to repeal the Wildlife Conservation Act Cap.282 and provide for other* Conservation Area[11]. National parks and the Ngorongoro Conservation Area are PAs with the strictest conservation regulations in Tanzania.

The Tanganyika National Parks Ordinance of 1959 established TANAPA in 1959 and has been amended by several Acts, for example the Game Parks Laws. The Act's amendment number 12 established Arusha National Park (LEAT 2011). The Ordinance did not allow settlement, even people born or ordinarily resident, within the national park. The Ordinance was revised in 1974 and it is frequently referred to as the National Parks Act. The Act shall be read as one with the Ordinance. This Act *"provide [sic] for the establishment, control and management of national parks and for related matters"* (The United Republic of Tanzania 1959:3). The Act also established a mechanism where the President can declare, with the consent of the Parliament, a national park. After a national park is declared, only Acts of the Parliament can alter the declaration. The Act also creates a management authority of trustees for TANAPA. The Trustees are under the authority of the Minister and their powers, duties and functions are to control, manage, administer and maintain national parks. TANAPA, being under the National Park Ordinance, has no legal mandate to manage wildlife that is outside national parks.

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[11] The Ngorogoro Conservation Area *"is a multiple land use area, designated to promote the conservation of natural resources, safeguard the interests of NCA indigenous residents and promote tourism"* (NCA Authority 2011).

The different departments and programmes within MINAPA management implement the policies and rules introduced above. The management programmes and the different policies used will be presented in the next section.

The national parks in Tanzania also have strict rules that apply to visitors that are made by TANAPA. These rules may vary between the parks, but most rules are typical and similar for all parks, for example:

- The speed limit is 50 km per hours.
- Driving off-road or driving at night is not allowed.
- Everyone is to keep a distance to the animals and not to disturb, follow or feed them.
- No one is allowed to go outside the vehicle, apart from areas such as picnic sites and observation points.
- Bringing animals, plants or other natural object into or out of the park is strictly forbidden.
- Farming, grazing cattle, logging or collecting wood etc. is not allowed inside the park boarders.
- The only humans that are authorised into the parks are tourists, researchers and park staff.

These rules are strict guidelines about what visitors are not allowed to do in the park. Instead of only showing what is prohibited, the different national parks should provide guidelines concerning what is actually allowed to do in the park. The park, therefore, needs to provide practical and visitor-oriented information to improve their tourism service.

5.2.2.4 Planning and management activities

A General Management Plan (GMP) formulates and plans the formal rules and procedures in national parks in Tanzania. The GMP is a complete plan prepared and developed by TANAPA in collaboration with the individual parks. It is supposed to constitute a basic management philosophy for the national park and provide it with the strategies necessary for solving problems and achieving identified management objectives. A GMP is prepared every 10 years, and assessed after 5 years. Two types of

strategies are presented in a GMP; the one which is required to preserve and manage the park's resources, and the one that is required to provide for appropriate human benefit and enjoyment (TANAPA National Policy Committee 1994). The GMP for MINAPA was produced using the TANAPA Strategic Planning Process and is the first GMP for MINAPA. This GMP is expected to guide the day to day management needs of the national park and its purpose is defined as to *"conserve and protect the MINAPA, its habitats, biodiversity, migrations of large mammals and birds, and its endemic and threatened species, while enhancing tourism service"* (TANAPA 2007).

The Core Planning Team in MINAPA, which consists of the Chief Park Warden, Planning Department Staff and Heads of all the departments, started the GMP planning process with meetings and an intensive period of information collection and stakeholder consultations, which led to the production of a Resource Base Inventory (RBI)[12] report. In developing the GMP, the Core Planning Team had a GMP Stakeholders Planning Workshop held in March 2005 to develop long-term strategic framework for managing MINAPA. In addition, they did an analysis of stakeholders to develop a simple participation and communication strategy for the planning process. The Core Planning team brought together key MINAPA stakeholders such as Employees from TANAPA HQ in Arusha, MINAPA management staff, Sokoine University of Agriculture (SUA), ABRU manager and researcher, Tanzania Wildlife Research Institute (TAWIRI[13]), hotel operators, scientists, district government and the local communities. The process of developing the GMP involved several specialist working groups and interdisciplinary planning team meetings. These stakeholders were assigned to categories according to the degree of participation in the planning process. In other words, the planning process was a multi-layered approach to participation. The present GMP in MINAPA covers a 10-year period from 2007 to 2017 (TANAPA 2007). That said, during the research, we still found that several stakeholders, such as local people in the communities surrounding the park and managers of accommodation in and around the park felt excluded in the development process of the GMP. This has led to several of these stakeholders not contributing in the implementation of the GMP.

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[12] The RBI presents an up-to-date synthesis of key background information and the state of knowledge on MINAPA that is used in the development of the GMP (TANAPA 2007).
[13] Tanzania Wildlife Research Institute (TAWIRI) *"is a parastatal organization under the Ministry of Natural Resources and Tourism responsible for conducting and coordinating wildlife research in the United Republic Tanzania"* (TAWIRI 2011).

It was observed in the national park that all offices in MINAPA were equipped with the GMP, and all of the top management staff that was interviewed stated that the GMP was the "manual" for running the park. Some compared it to a "conservation bible" that everyone was expected to follow.

The GMP is organised into four major Management Programmes[14], where each has a management strategy and is aligned with the different departments in MINAPA management. Each Programme consists of a long-term strategy, which includes management objectives, targets and actions to address MINAPA's management problems, issues and challenges. A three-year action plan was also developed for each Management Programme. These plans were mainly designed to be regularly rolled forward and monitored throughout the implementation of the GMP, and would help ensure strong linkages between the management actions prescribed by the GMP and the Annual Operation Plans developed by MINAPA management. All four Management Programmes also use and base their strategies upon different policies and laws such as: the National Policies for National Parks in Tanzania (1994), the Wildlife Policy (1998), the Wildlife Act 1974, the Environmental Management Act of 2004, the Environmental Impact Assessment, the revised National Tourism Policy (1999), the Integrated Tourism Master Plan (2002). Table 5.1 below shows what the different Programmes are, their key features and their associated and responsible departments.

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[14] The Management Programmes are also identified as Management Strategies.

Table 5.2: MINAPA's Management Programmes

Management Programme	Department
Ecosystem Management Programme • 8 conservation targets that capture the unique biodiversity of the park • Ensure that MINAPA resources are conserved • Fire management • Provide a framework for the development of an Ecological Monitoring Plan	Ecology Department Protection Department
Tourism Management Programme • Aims to provide an outstanding experience for both local and international visitors, optical benefits to the nation, TANAPA, private sector partners and local communities and minimal impact on the Parks resource values. • Minimise disturbance to key habitats and wildlife • Diversification and dispersal of tourism activities	Tourism Department
Community Outreach Programme • Aims to bring forth the support and collaboration of the communities surrounding the park in safeguarding the integrity of the parks resource values • Scaling-up conservation education programmes • Improve park-community communication and cooperation • Improve the Support to Community Initiated Projects (SCIP) scheme	Outreach Department[15]
Park Operations Programme • Enhance efficiency and effectiveness of MINAPA operations • Anti-poaching main priority • Build capacity and motivation of MINAPA staff through relevant training, provision of better medical services and improve education	Protection Department Human Resources and Administration Works Department

(Source: TANAPA 2007).

The GMP for MINAPA follows the generic GMP structure[16] established by TANAPA. The Core Planning Team in MINAPA has made several adjustments to the planning process and taken experiences from previous planning exercises in TANAPA into consideration. Emphasis has been placed on making the GMP more relevant to the day-to-day management needs of MINAPA managers.

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[15] Previously known as Community Conservation Service (CCS)
[16] The TANAPA structure is described in the TANAPA Strategic Planning Process Manual.

The Ecosystem Management Programme uses the ecosystem management strategy which states that MINAPA management will work to "maintain all components and processes of the naturally evolving Park ecosystem" (TANAPA 2007:17). Nevertheless, because of the complexity of these natural systems, and the limited resources available, it is impossible for the MINAPA Ecology Department to monitor and manage each individual ecosystem component. In response, an ecosystem management planning process was developed to identify representative ecosystem components and prioritise strategic decisions regarding their conservation. The intention was that this approach would ensure the optimal allocation of time and resources for implanting conservation strategies to protect and monitor the long-term health and function of MINAPA ecosystem (TANAPA 2007). It was evident during the research that the Ecology Department still had a severe lack of staff and therefore was not able to carry out the ecological monitoring that were intended. Not enough research leads to insufficient knowledge about the park and poorly formulated strategies, and as a result nothing is done to improve the conservation of biodiversity resources.

The Tourism Management Programme implements the tourism management strategy, which seeks to align the long-term development of tourism in the park. For MINAPA management to be able to achieve an outstanding experience for visitors with minimal impacts, all tourism facilities and activities must be compatible with the park's conservation objectives to ensure that environmental quality is maintained. The tourism in MINAPA will be seen as a conservation tool that proactively assists the park management. All development within MINAPA has to be according to the park's Zonation Scheme, or fit within the overall strategy of the GMP. The Tourism Programme will determine the number, type, location and size of all tourism facilities and activities located in the park according to management zones (TANAPA 2007).

In order to diversify visitor experience, the Tourism Programme planned to introduce new tourist products in the park. In Table 5.3, the tourism activities will be described by zone.

Table 5.3: Tourism activities described by zone

Zone	High Use Zone	Low Use Zone	Wilderness Zone
Activities	Game viewing by vehicle, short guided walks, night game drives and balloon safaris	Game viewing by vehicle, short guided walks, bird watching, canoeing and sport fishing	Hiking, walking safaris, fly camping and vehicle-supported wilderness camping

(Source: TANAPA 2007)

The programme planned to introduce new tourist activities in the High and Low Use Zone, but almost none of these has yet been implemented. Game viewing by vehicle was the only activity that was operative. We also noticed that several of the top staff predicted that these activities would never be carried out. The exception is walking safaris that were carried out almost immediately after the GMP started operating. Unfortunately, this activity was stopped shortly after an elephant killed a woman during a walking safari in Ruaha National Park. If the planned activities were to be carried out the tourism revenue in MINAPA could be much higher.

The Tourism Programme also proposed to improve its visitor facilities by establishing more accommodation facilities. 4 new facilities, a lodge, permanent luxury tented camp, special campsite and public campsite, were to be constructed near the different ranger posts. Relocation, improvement, establishment of picnic sites, public and special campsites was also proposed under the Tourism Programme in the GMP. Today, the Park Bandas[17] are the only park management accommodation, and they are up to date and of good quality. The hostel that was previously operating in the park is now closed and run-down. MINAPA management clearly has inadequate accommodation facilities for visitors. The consequence being that most visitors look for alternative accommodation in private camps inside the park or outside the park borders. When visitors stay outside the park, it results in loss of concession and camping fees for the park, and further creates limitations for tourism revenue collection. Therefore, the economic growth of the park is reduced.

From 1991 to 1995 TANAPA developed a park outreach capacity after carrying out pilot work during the 1980s (Bergin 2001). With the raising population in Tanzania and increasing conservation management costs the need for cooperation between TANAPA

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[17] A Banda is a type of tourist accommodation

and different stakeholders were needed. According to TANAPA, they were the first protected area management authority in Africa to actively embrace outreach activities for communities surrounding the national parks. Outreach activities evolved rapidly after the late 1980s, and they are now fed into Tanzanian policy (TANAPA 2007). By reading the policy, community conservation may seem easy, but it is much more complex seeing that local community members and national park staff has got to overcome years of hostility and organisational habits to even be able to cooperate together. It is for example difficult for park rangers to have local people inside the park. When a person that is not a tourist or a park employee cross the border into the park, that person becomes a intruder or a poacher, and different rules now applies to that person. In the start, during the 1980s, the *"Community Conservation (CC) programme was focused on the ethical imperative for improving the relationship between park staff and people by restoring a human face to the park management, and by bringing park staff into contact with the village community as citizens rather than potential criminals"* (Bergin 2001:89). 25 years ago a workshop in Serengeti called for the establishment of 'extension and education' activities with local communities. By 1991 TANAPA had expanded the CC programme to several national parks. The call for a transfer of authority in wildlife management to local level was seen as a result of external influences and internal pressure (Nelson et al. 2007). In the beginning of the 1990s a small CCS support unit was set up in the TANAPA HQs and in 1991 a steering committee for CC activities across all parks were created (Bergin 2001).

MINAPA management has a Community Outreach Management Programme that was established alongside the GMP. The programme seeks to align the long-term development of community outreach in MINAPA and its purpose is *"to reduce threats to MINAPA and support livelihoods whilst maintaining good relationships with adjacent human communities for sustainable conservation"* (TANAPA 2007:65). The programme's objectives are to improve and maintain the relations between park management and local people, reduce threats to MINAPA resource values and educate local communities and other key stakeholders on the park resource use and preservation. In order to meet its management targets, accompanying action plans and management activities are to be implanted. Examples of management activities are: attending relevant meetings, organise regular meetings, seminars and workshops, and develop community profiles. They also planned to provide assistance to problem

animal control and keep detailed data of problem animals. The Outreach Department has only one employee, which is one of the reasons why the department and programme does not seem to fully reach its goals. Even if MINAPA management concentrate little on community conservation, it is still considered by TANAPA that increasing the value of national parks to local people is important. It is also recognised in the National Policies for national parks in Tanzania. This policy states that *"TANAPA will extend its activities into surrounding communities with a focus on the local people and governments up to the district level"* (TANAPA 2007:66). TANAPA has developed PA outreach programme that is based around the inviolable nature of PAs (Barrow et al. 2001). These programmes consist of different activities and projects that aim to reduce conflict, demonstrate that the park and its staff can be good neighbours and assist communities around the park. Additionally, the outreach programme is supposed to give TANAPA and conservation in Tanzania a more human face. However, we found that in several villages around the park they claimed to have never heard about CC or any outreach programme in MINAPA. Additionally, Wapalila (2008) reports that services from TANAPA were minimal observed in one of the communities around MINAPA and few residents from this community knew about benefits coming from TANAPA. We believe that MINAPA management would benefit from increasing the value of national parks to local people, just like TANAPA aims at.

Programme number four is the Park Operation Management Programme, which aims at enhancing the efficiency and effectiveness of MINAPA park operations. The programme intends to support the park infrastructure, services and operations. Additionally, the programme seeks to assure safety for visitors, motivate staff, and maximise park revenues and supplies. The programme aimed to provide necessary equipment for anti poaching activities, and training on the use of the new equipment (TANAPA 2007). Several park rangers and other staff reported that there were still a severe lack of equipment in the Protection Department. The programme also wanted to establish cooperation with traditional leaders in raising local community awareness on anti-poaching issues. In Kiduhi village, where we carried out focus group discussions, we met with one of the Masai elders who had been brought into the park HQ to attend an anti-poaching seminar and later a game drive in the park. He expressed that the seminar taught them ways to identify and handle poachers, and when to report to the park. Additionally, the game drive made him appreciate and better understand the value

of conserving the area of MINAPA. However, he was the only leader that we met that had been brought into the park. Most people in communities surrounding the park had not heard any anti-poaching activities, and admitted that they would most likely not report to the park if they saw poachers due to poor communication between them. Creating a cooperative relationship with the communities surrounding the park would be beneficial for the park management, and especially the Protection Department. It could, for example, lead to a decrease in poaching and encroachment of MINAPA area.

To assess and consider what the MINAPA GMP has accomplished or not accomplished is a complicated and difficult process. The GMP has been operational for 4 years and in 2012 the first official five-year report and assessment of the MINAPA GMP will be prepared. Nevertheless, we found that several tourist activities were still not operating, equipment for anti-poaching was missing and accommodation facilities inside the park were not improved. Additionally, there is still a severe lack of staff in several departments, especially Outreach and Ecology Department. This led to a large number of the park staff being dissatisfied with the park management and carried out their tasks poorly.

The GMP presents a 5-year plan for infrastructure, equipment and facilities requirements, which describes what and how much the different departments requires from 2007 to 2012. In the following section this plan will be introduced briefly together with MINAPA's income resources and budget analysis.

5.2.2.5 MINAPA economic resources and budget analysis

We found that MINAPA has a variety of economic resources. The absolute main contribution to revenue generation in MINAPA is tourism, meaning the revenues collected from entry fees for vehicles and visitors, and concessions fees from lodges, hotels and camps. The main attraction in MINAPA is game driving in the northern Mkata plains. Since the park is rather close to the capital and other large cities, it is common for visitors not to spend the night in the park and only pay for daily entry fees. Therefore, the collection of entry fees is fairly higher than the revenues from concessions. Table 5.3 presents all income sources for MINAPA. The amount is presented in US Dollars (USD). Nevertheless, MINAPA and TANAPA managements only operate with Tanzanian Shilling (TZS). 1 USD was equivalent to 1,533 TZS at the

time of compiling this paper.

Table 5.4: Income sources for MINAPA (2009/2010)

Income source	Amount for 2009/ 2010 (in USD)
Concession Fee from lodges, hotels and camps	57,067 USD
Non Citizen Entry Fees	183,010 USD
Citizen Entry Fees	13,119 USD
Expatriate Entry Fees	109,031 USD
Vehicle Entry Fees	65,041 USD
Camping Fees	12,482 USD
Guide Fees	10,511 USD
Landing Fees	2,628 USD
Professional filming	7,884 USD
Huts and Banda Fees	11,169 USD
Compound offence	7,217 USD
Sale of books and Souvenirs	7,217 USD
Total amount for 2009/2010	486,061 USD

(Source: MINAPA Finance and Procurement Department 2010*)*

MINAPA is 100% economically dependent on TANAPA, meaning that all revenue collection goes directly to TANAPA. MINAPA develops their own budget that is approved by the TANAPA board together with the Chief Park Warden and the Chief Accountant. Some national parks under TANAPA earn less than others; so surplus parks have to provide for deficit parks. Serengeti National Park and Kilimanjaro National Park are TANAPA's main income sources, while other parks such as MINAPA, Ruaha National Park and Katavi National Park do not collect enough revenue to sustain themselves without external funding. If MINAPA made more money and increased their amount of income, they would still not receive more money from

TANAPA since it (TANAPA) decides how much each park gets. According to a key informant in MINAPA (2010) the park management is not forced to perform well since all the collected money goes directly to TANAPA. Park staff reported that it was demotivating not to get anything back for the good job they were doing. They further wished for better staff housing or more equipment. We believe that a consequence could be park employees not carrying out their tasks effectively and in the end the park performance will not improve. Although the Tourism Department could do more to increase the parks income, we observed that not much was done. Services such as sale of books and souvenirs are a minor income source. Camping fees are also a small income source for the park. These services could be much more profitable if the park management promoted the park better and, for example, had a souvenir shop in the park by the entry gate. In order to strengthen MINAPA's visibility outside, external advertising and promoting the park in souvenir shops, at airports and in promotional films could be carried out. This would increase the park's service and income.

MINAPA income depends heavily on tourists visiting the park, especially non-resident visitors. The numbers of non-resident visitors in MINAPA increased from less than 1,000 in 1987 to more than 13,000 in 2006. Nevertheless, the number of resident visitors significantly declined from more than 16,000 in 1990 to approximately 6,000 in 2002 when the Mikumi Wildlife Lodge was privatised, eventually closed and later burned down (TANAPA 2007). The number of accommodation facilities outside MINAPA has also significantly increased. This has contributed to the increase of the number of local visitors to the park. Table 5.5 shows the number of visitors during 2009/2010.

Table 5.5: Number of MINAPA visitors (2009/2010)

Month	July 2009	Aug 2009	Sep 2009	Oct 2009	Nov 2009	Dec 2009	Jan 2010	Feb 2010	March 2010	Apr 2010	May 2010	June 2010
No. Visitors	4874	4132	2531	3393	2475	3933	2166	2388	1775	2180	1324	2219
TOTAL from July 2009 to June 2010					**33 390 visitors**							

(Source: Finance and Procurement Department 2010)

MINAPA management plans to advertise the park more by developing brochures,

calendars, tourist maps and posters that could be used to provide more information about the park and attract more visitors. Compared to other Tanzanian parks, MINAPA still experiences a low number of visitors. The park therefore needs to be promoted both locally and internationally (TANAPA 2007).

The budget for MINAPA in 2009/2010 was set for July 2009 to June 2010. In 2009/2010, the total income for MINAPA was approximately 489,000 USD. In 2010/2011, MINAPA was projected to collect around 652,000 USD, a 6% rise from 2009/2010. The total expenditure in 2010/2011 was set to 1.1million USD, including building, maintenance, salaries, and housing, among others. This illustrates that the cost of running the park is much higher than the park's income. The park's top staff also claimed that the budget has no balance. The park's expenditure seemed to be much higher, nearly twice as much, compared to what TANAPA provided MINAPA with.

In 2007, together with the GMP, a plan for infrastructure, equipment and facility requirements was introduced. This plan included all what MINAPA departments required over a five-year period.

Table 5.6 Infrastructure, equipment and facilities requirements for a period of 5-years

Departments	Total costs (USD) and percentages (%)	Requirements
Accounts	106,299 USD **1%**	• Vehicles, computer and checker machine • Tables, chairs and steel cabinet
Administration	419,778 USD **4%**	• Staff welfare centre (Social centre) • Computer, printer, HR software, camera and TV set • Generator and water pump machine • Vehicles • Construction of laboratory
Tourism	1,047,271 USD **10%**	• TV sets and radios • Construction of self catering tourist bandas, rest houses, hostel, visitor centre, museum and curio shop • Modern toilets at camp and picnic sites
Ecology	99,160 USD **1%**	• Vehicles, tents, camping gear, binocular and compass • Camera, GPS and computer • Weather station and tsetse fly target • Dart gun injections and needles
Works (garage)	680,058 USD **6,5%**	• Welding-, grinder-, wheel balance-, wheel alignment- and tyre wheel remover machine • Torque wrench, hand bench vice and workshop jack • Fuel tanks, diesel and petrol pump
Outreach (CCS)	48,000 USD **0,5%**	• Vehicle • Computer and small generator
Protection	1,642,139 USD **15%**	• Houses, garage, office and armoury in every ranger post • Rain water harvest, underground tank, boreholes and pump in each ranger post • Airstrip shelter and toilet facilities • Vehicles, tents, radio, camera, TV set, satellite dish and solar power system
Roads and buildings	6,621,254 USD **62%**	• Motor grader and wheel loader • Computer, GPS and camera • Vehicles and tents • Concrete mixer, water bowser • Grid Project – TANESCO Electricity • Construction of Office block • Construction of staff house at Park HQ • Rehabilitation of the garage, bailey Bridge and Mikumi- Selous road
	Grand Total: **10,663,959 USD**	

(Source: TANAPA 2007)

Additionally, each department had staff requirements. The Protection Department required 74 park rangers within 2010 and 91 within 2012. The different ranger posts also needed maintenance and construction. The department has almost met staffing requirements with 67 park rangers in 2010. The different needs at the rangers' post have so far not been fully implemented. The Tourism Department planned to have 11 tourism assistants, 4 caretakers, 3 assistant tourism officers and 3 tourism officers by 2010. Yet, in 2010 the department consisted of 3 tourism assistants and 1 assistant tourism officer, just like 4 years earlier. The Park Ecologist required 2 assistant park ecologists by 2009, but the department still consists of one ecologist and one veterinary. The Outreach department also needed assistants, who have not yet been recruited. The Finance and Procurement Department had 6 employees in 2007 and required 14 more by 2010. The department had only 2 more employees by 2010. The overall trend shows lack of staff in most departments, and there are still gaps in the park management.

The lack of employees, inadequate equipment and projects not being implemented are a clear sign of an unbalanced budget. It leads to dissatisfied and unmotivated staff. In several areas, such as community conservation outreach and ecological monitoring, the park management has not delivered due to lack of staff.

5.2.3 Physical structure

The physical structure of MINAPA illustrates both division and connections within the park management. It includes location, buildings, roads, gates, trails and equipment.

MINAPA, as mentioned earlier, is located in southern Tanzania and is roughly a 4-hour drive by car on tarmac road from Dar es Salaam via Morogoro. The TANZAM highway crosses straight through the park and it has both positive and negative affects. It creates easily accessibility to the park for both visitors and employees in the park. However, park staff and researchers reported that road kills, speeding, changes in animal behaviour, vegetation changes and introduction of foreign species were challenges resulting from the highway.

Figure 5.2: Photo of road kill on TANZAM highway crossing MINAPA

(Photo: Hana Jurikova)

A zoning scheme divides the park into three zones. The High Use Zone covers 32.8% of the park and is mainly the area north of the highway. Generally, this part of the park has the strongest human impact, highest levels of tourism infrastructure and facilities, and main concentration of tourists. Game viewing by vehicle is the principle visitor activity and all tourist accommodation inside the park is found in the High Use Zone. The Low Use Zone covers 35.4% of the park area and has got a low number and density of visitors than the High Use Zone. Lastly, the Wilderness Zone covers 31.8% of MINAPA and incorporates the mountainous and forested areas of the park (TANAPA 2007). This is the area is south of the highway and down towards Selous Game Reserve. This zone is subject to minimal disturbance, and there is a very limited road network and facilities. Game viewing by vehicle is prohibited in this area and MINAPA management is the only one using the roads. The High Use Zone has several local communities located close to the park border. Both Masai pastoralists and farmers live in this area. In the east and west of the park there are several villages.
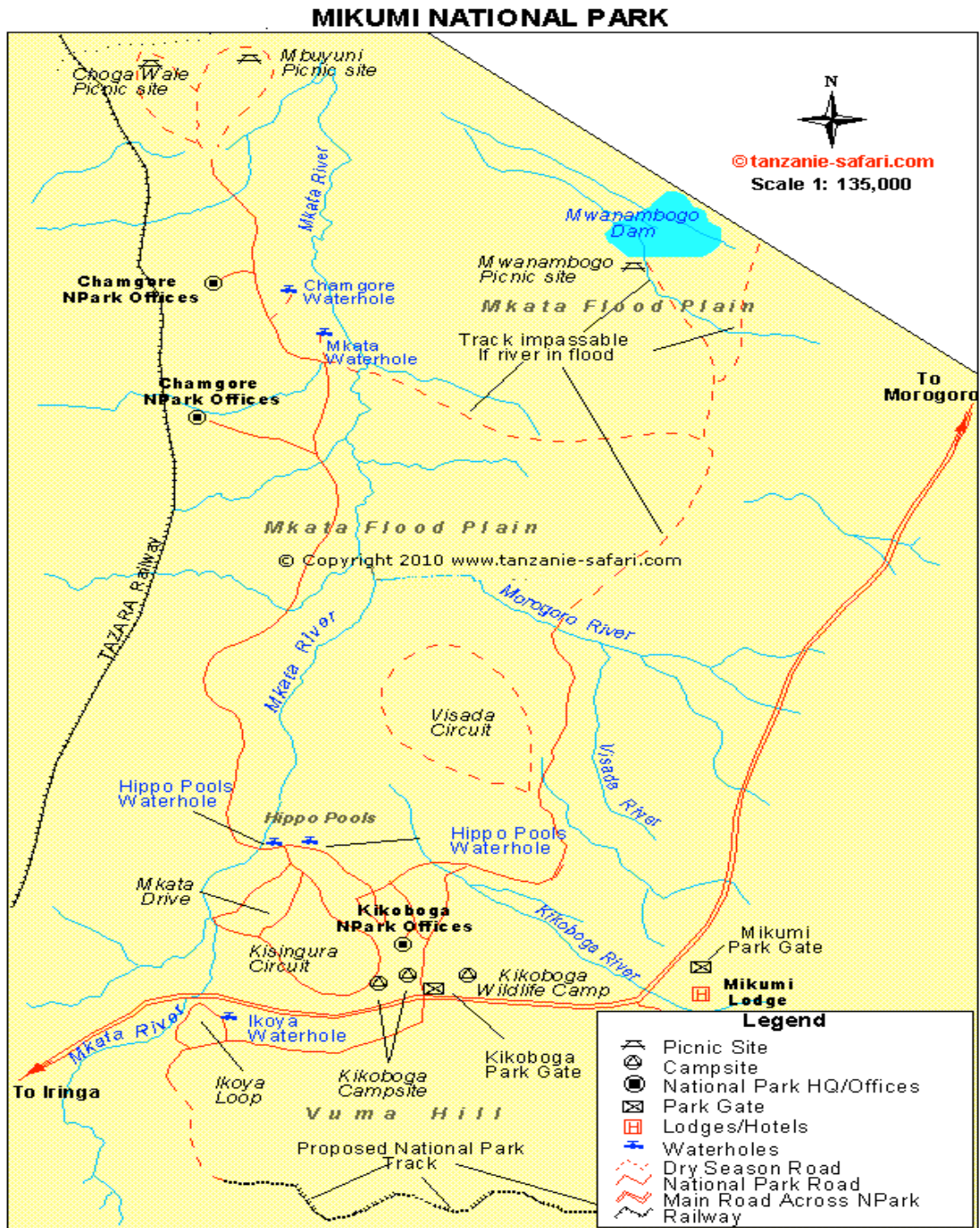
Figure 5.3: MAP showing MINAPA's physical features

(Source: Tanzania-Safaris 2002)

MINAPA has infrastructure and equipment used by the staff. The field equipment included uniforms, firearms, cooking utensils, backpacks, warm clothes, fire management equipment and tents among others. This equipment makes it possible for park rangers to carry out duties in the field and conduct the necessary fire management activities. The park also has transport equipment such as cars, four-wheel drives and trucks. The Law Enforcement Department also had a radio communication system,

while the rest of the park operated with telephones, e-mails and faxes. Additionally, the Ecology Department has a photo camera used during fieldwork. However, MINAPA park rangers complained about lacking equipment such as GPS, updated maps, communication tools and vehicles. Several park rangers did not feel safe patrolling without a car in fear of the wild animals in the park. Park staff reported that the lack of vehicles made patrolling less effective and difficult. Furthermore, poor infrastructure in the Low Use Zone Wilderness Zone made anti-poaching patrols very difficult in these areas.

The MINAPA HQs are situated in the heart of the park, only a couple of hundred meters from the highway and the park main gate. Regarding administrative structures in the park, the park management offices are found in the HQs and consist of two main buildings that are situated opposite each other. All departments have offices in the HQs, including the Chief Park Warden. The short distance between the two buildings and offices makes communication and interaction among staff of different departments and the top staff easier. Almost all the main offices in the HQs operate with an open door policy during working hours. This does not mean that you can walk straight in at any given time, but it gives a feeling that the top management staff are available and can easily be contacted. The Chief Park Warden has the largest office with possibilities for meetings and conferences. He also has a secretary working for him with her own office. The buildings in the HQs are not of top quality, and several in the park management require renovation. Some offices are small and for departments sharing offices, space can to some degree be challenging. The Tourism Department and Community Conservation Service share an office. The garage and Works Department are located next to the HQs. The garage is easy to locate, staff are always present and the Chief of Works has his office there and not at the HQs.

The main entry gate to MINAPA is located in the middle of the park, 3 km from the park's border with Doma Village, and 3 km from the border outside Mikumi Village. This gate is the main entrance to the northern part of the park, which has the most popular game viewing scenery and routes. The second gate is based 200 meters south of the main gate on the southern zone and is known as Vuma Gate. The gate consists of a reception and information desk for visitors and a small museum. The main problem with the gate is the entrance service. Park rangers working at the gate have not been

trained in tourist service or English, leading to dissatisfied park visitors. Additionally, it leads to the gate being unattractive. Next to the main gate, is a small kiosk. This kiosk is managed poorly and has incompetent service. Several visitors complained about the service at the main gate and claimed not to feel welcome to MINAPA. The gate is the "face" of the park; it is the first impression every visitor receives. It is, therefore, important to maintain a certain standard and provide proper services at the main entrance. The main entrance establishes people's perceptions towards the park, and it is therefore crucial for the park to appear attractive and hospitable. A result of the park being unwelcoming may lead to visitors preferring other national parks in Tanzania. This affects the park's performance and reduces tourism revenues.

The majority of MINAPA staff lives inside the park border, only 700 meters from the main gate and approximately 400 meters from the HQs. Several hundred people are legal residents inside the park, but a definite number was not found, since the number constantly varies. This area consists of resident houses, a primary school, a dispensary, a "social club"[18], a small shop and a soccer field. A standard resident house contains a water and sewage network, three bedrooms, kitchen, living room, and bathroom, but was of a simple standard. Several park staff and residents considered the staff houses to be in poor condition and felt that improvement was necessary. We also realised that there was lack of social arenas and a poor access to commodities. Living inside a national park involves that one is only allowed to move in restricted areas during the day and after dark, it is prohibited to walk outside. During the dry season, the whole residential area would be without water for days and baboons and elephants would become more aggressive in this period. Elephants would destroy and dig out water pipes. A dangerous, unsuitable and inadequate living situation de-motivates staff. It leads to most employees not performing their best, which affect the park's delivery. MINAPA has planned to stop all construction of staff buildings inside the park. This is to maintain the natural environment of the park and avoid disturbing the wildlife.

The park resident housing area is furthermore divided into separate parts relating to the chain of command in the park. The Chief Park Warden's house is located a distance from the other staff houses. Additionally, 4 warden residents are located in a private location, but close to the HQ. These accommodate staff members such as the Park

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[18] The social club was an open-air bar where mostly park rangers meet during evenings.

Veterinary, Administrative Manager and Chief of Protection. The rest of the top management and Park Wardens have residences in the main park settlement, but their houses are bigger and with a better location than remaining staff houses.

The physical structure of the park shapes and clearly demonstrates the status and ranks of the different staff members of the park management, which is also shown by the social structure of the park. During our research, we found that limited resources were put into facilities for the staff at the lower level, which created dissatisfied junior staff and produced dissatisfaction in the park management as a whole.

Staff housing and management buildings in MINAPA is scarce, old and of poor quality. The need for more accommodation for staff is a huge challenge. Nevertheless, the management has stopped all construction of new residences. The planning process of moving staff and park resident to a campus just outside the park border is under development, and several park staff expressed a desire for having this campus instead of the village inside the park. Consequently, there is no construction of new staff houses in MINAPA today, only maintenance of existing houses. Additionally, TANAPA has been allocated 200 ha[19] land outside the park that is planned to be the new campus. The community that has appeared inside the park has grown to become more or less a small village. The amount of people living in this village brings goods such as cars, petrol, diesel, plastic and buildings into the park. This pollutes and disturbs the environment and the wild animals in particular. Having a village in the middle of a national park is bad for the environment of the park's ecological system and challenging for the natural resource conservation the park is carrying out. Finding a suitable area outside the park that is not too close to other communities and enough funding seems to be the main challenge for establishing a new campus.

5.2.4 Summary of MINAPA management structure

In this section, we have presented and discussed the research results of the first objective. Organisational theories were used to find out what kind of organisation MINAPA is and we further looked at the social and physical structure of the park. MINAPA is under the control of TANAPA. We found that MINAPA is a centralised organisation with a strict top-down chain of command and clear bureaucratic

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[19] 200 ha is identical to 2 km²

characteristics. Park staff at lower level, internal and external stakeholders had minor, if no influence on the decisions that were made regarding the park management. Their involvement and contribution towards the planning of the GMP was also insignificant. There was a clear division between the top staff and the staff at lower level in MINAPA. The employees at the lowest level often felt excluded and not fully recognised. The Chief Park Warden has the main responsibility in MINAPA and reports directly to TANAPA. Only the heads of the different departments are authorised to report directly to the chief, while the rest of the staff communicates to superiors above them in the organisational structure. Several employees felt that the organisational structure and chain of command made communication within the management challenging. However, we observed that several in the top management operated with an open-door policy, which had a positive effect by establishing a closer relationship between the top staff and the ground level staff.

Our research results show that the majority of MINAPA employees have attended primary education. All top staff has college or university degrees, or Diplomas from Mweka. The majority of the park rangers have served in the Tanzania People's Defence Force or undergone ranger training. The competence and level of skills in MINAPA are high, and together with a solid chain of command, the management is efficient in executing duties. The park management also operates with a transfer policy to primarily control corruption and to regulate contact between park staff and local people. This policy makes it difficult to maintain a firm relationship between the park staff, local people and internal stakeholders.

The physical structure of MINAPA clearly reflects both the chain of command and division of labour in the park.

Conclusively, we found that MINAPA management is performing and delivering more in the biodiversity conservation area than in the tourism and outreach sectors. We believe that this is a result of the park management having less staff in both departments and for the case of the Outreach Department, only 1 staff is employed

5.3   Park management structure in BINP

BINP is a bureaucratic organisation under central control of UWA. It has both administration and physical structures that operate under firm guidelines steered by the General Management Plan. It also undergoes various processes that influence its chain of command and it requires staff with various skills and knowledge in order to ensure competence in its activities. The national park's physical, social, cultural and technological structures interact and are surrounded by factors influencing them. This section will focus on the social and physical structures. First, the demographics sought during the research will be presented, followed by the social structure and GMP, and the physical structure.

5.3.1 Demographics

BINP staff management include senior staff such as the Conservation Area Manager, wardens, warden assistants, accountants and their assistants, secretary, and junior staff such as rangers who include law enforcement rangers, tourist guides and gorilla trackers, and drivers among others.

52 semi-structured questionnaires were conducted among BINP staff and among those, 30 were park rangers and 22 were other park staff. The majority of those interviewed were males amounting to 86% and only 12% were female. Most of the interviewees were between 31-40 years of age. 52% had stayed around the park for 2-5 years and had working experience of 2-5 years. All BINP staff had some kind of education; majority had attended primary and secondary school amounting to approximately 75%, and in addition to these two levels, over 30% had further achieved certificates or diplomas in courses such as Tourism and Hotel Management. Over 20% had College or University degrees such as wildlife conservation and management, biology, forestry among others. All rangers attended ranger training and military service. Of the respondents, 75% were Christians and 2% were Moslems.

Additionally, key informant semi-structured interviews were conducted with senior staff and internal stakeholders such as research groups who mainly included natural science researchers, NGO representatives, local politicians, and camp employees. Males still dominated the senior park staff and only 1 woman was interviewed. We also

conducted 4 focus group discussions with local people in the communities that border the park.

Generally, all research methods employed show that BINP management is dominated by men. Its workers have some degree of education and training. Senior staff had University degrees and junior staff at least primary and secondary education. This eases communication and coordination among and deployment of workers. Therefore planned activities could be executed easier than if they all had no form of education at all. Since the majority of BINP staff are men and between 31-40 years, they are still energetic, making it more efficient for them to carry out activities in a rugged and steep impenetrable forest that would otherwise make it more difficult for women to operate in. The rangers carry out activities such as patrolling and guiding tourists into the park, while senior staff coordinate such activities. These demographics thus helped us identify what role education, age and gender play toward contributing to biodiversity conservation and tourism promotion.

Regarding internal stakeholders of the research, males still outnumbered females and the majority were Ugandan. Only 2% were of foreign origin.

5.3.2 Social structure of BINP

In this section, we present a discussion of BINP's hierarchy of authority, division of labour and formal rules and procedures. Furthermore, the planning and management activities, BINP's economic resources and budget analysis, and summary of the first objective will be examined.

5.3.2.1 Hierarchy of authority

Uganda's wildlife in its wild habitats is under the government on behalf of and for the benefit of all Ugandans (The Republic of Uganda 2000). No individual has the right to possess protected wildlife unless granted permission by the Minister of Tourism, Trade and Industry (MTTI) who also seeks advice from the Board of Trustees. The board is appointed by the MTTI, follows the prescribed procedures in UWA's schedule, may regulate its own proceedings according to the Uganda Wildlife Act and is responsible for the discharge of the business and functions of UWA. It is guided by regulations in

the Act and the established body with authority to govern wildlife in Uganda is UWA. UWA is headed by the Executive Director (ED) and has the right to acquire and hold property, sue and be sued, and do all acts and things that corporate bodies may lawfully do or suffer (The Republic of Uganda 2000). The ED is the Chief Executive Officer appointed by the MTTI on recommendation of the board. He is responsible to the board for the day-to-day operations of the authority and the administration of the Act (The Republic of Uganda 2000). He is also supported by other staff of the authority. Senior staff are appointed by the board and junior staff appointed by the ED. The board with the advice of the ED often review staff positions and determine their terms and conditions of service (The Republic of Uganda 2000:4257). Additionally, the board, on the advice of the ED, appoints honorary wildlife officers. These are to assist in the implementation of the Act (The Republic of Uganda 2000). Furthermore, local government wildlife committees are appointed by the local government council to advise UWA on the management and utilisation of wildlife within the local jurisdiction (The Republic of Uganda 2000).

The above illustrates that there is a firm line of command regarding management of Uganda's wildlife particularly that of BINP. The chain is top-down from the ministry to the junior park staff and the laws also reflect protection of wildlife outside PAs. The chain of command can, therefore, lead to effective conservation of BINP's biodiversity because park workers are chosen with consultation from a group of trusted people at all levels. A senior staff stated that this is a level of competence where workers are appointed according to what they are expected to perform best. Furthermore, the levels of authority influence decisions made by the park management as will be elaborated below.

Decisions governing BINP start at national level. The MTTI and board of trustees make the policies, and the remaining decisions are made by the management and staff of UWA under which BINP administration staff fall. The Uganda Wildlife Act, the Uganda Wildlife Policy and other policies set the legal frame for these decisions. The Bwindi/ Mgahinga Conservation Area (BMCA) comprises of BINP and MGNP and they have a common management under a Conservation Area Manager (CAM). Therefore, BINP's decisions are further made at the Conservation Area level. The management committee for BMCA and the top management is at the HQs of UWA in

Kampala. UWA gives power to the management committee of BINP to execute their approved and operational plan. The park has a General Management Plan (GMP) that the CAM, Head of Departments and other park staff use to guide them in what activities to be carried out. The activities are geared towards achieving objectives of gazetting Bwindi as a national park. Regarding BINP's financial decisions, BINP suggests a budget, which is then discussed and approved by the UWA board of trustees as will be elaborated later.

Concerning the park's personnel management, BINP has the authorities to manage the affairs of its personnel in terms of disciplinary issues, deployment and supervising different activities. The CAM is the administrative head officer for the national park. There are 6 departments in BINP and each department makes its own decisions. The departments are guided by the park's objectives or plan. Each department is headed by a warden, has an assistant and other park staff according to their positions in the organisation's administrative structure.

Most decisions in BINP are made in a top-down way with the CAM approving the decisions. Different park staff report to senior officers regarding issues related to park management. Communities surrounding the park are to some degree consulted regarding how best to manage the park, even if people reported that this practice was more common when the park was first gazetted. The park is divided into zones where various activities that are guided by different policies are carried out. This will be elaborated under the planning and management activities section.

We observed during the research that there is a protocol followed by BINP staff regarding communication and transfer of orders when performing duties. Junior staff report to their heads, and the latter report to the wardens who take the message further to the CAM who makes most final decisions. This exhibits a clear distinction among staff according to their position of authority. This in one way enables control of how things are done in the park thus leading to effective execution of duties by different park staff. On the contrary, top down systems such as from UWA to BINP makes local variation difficult to cater for because management is controlled from top levels and has procedures to follow. Local people's views may not be recognised because they are at much lower levels.

Mapping BINP as an organisation demonstrates the relationship among staff and among management factors such as authority, communication and responsibility. These as well reflect distribution of power at different levels of the organisation. Below is an organisational map of BINP management.

```
                          UWA
                           |
                Conservation Area Manager
                           |
  ┌──────────┬──────────┬──────────┬──────────┬──────────────┬──────────┐
Warden      Warden      Warden     Warden Law  Administrative  Accountant
Monitoring  Community   Tourism    Enforcement Secretary and
and         Conservation                       writer/photographer
Research
  |           |           |           |                         |
Monitoring   Community    Gorilla     Law                    Accountants
and Research  Conservation Trackers   Enforcement            Assistant
Rangers      Rangers      and Guides  Rangers                    |
                                                              Accounts
                                                              Clerks
                                                                 |
                                                              Drivers
```
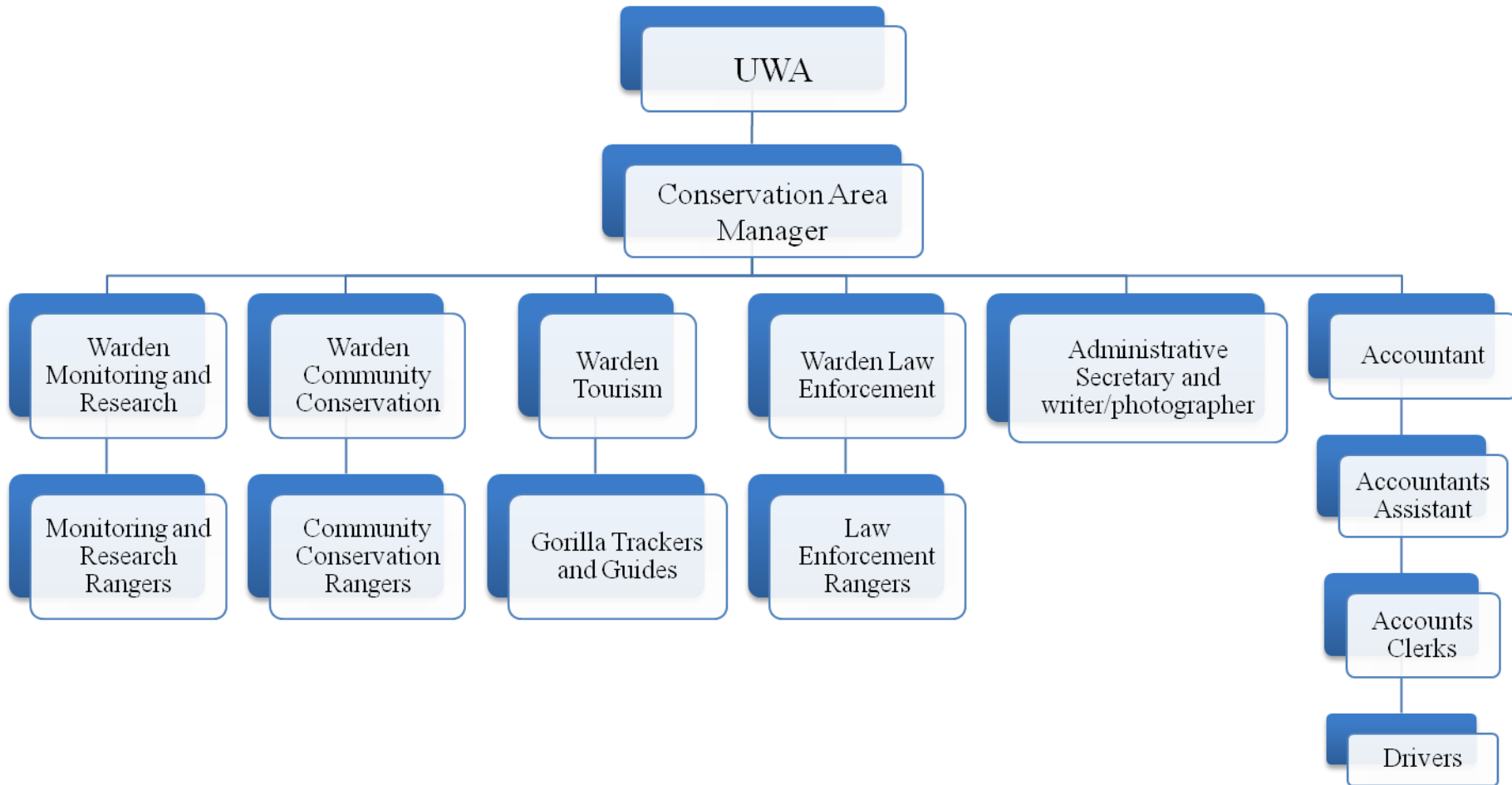
Figure 5.4: Organisational map of BINP management

(Source: UWA 2001)

The CAM has the overall responsibility in the park management and under him are other staff in accordance to their position. He is accountable to UWA for the park's performance and is the link between BINP and UWA HQs, as well as the overseer of both BINP and MGNP. Internal stakeholders report directly to the departments they associate with and can as well communicate to top staff directly where necessary.

Just like with TANAPA and MINAPA, the relationship between UWA and BINP can be compared to a "father-son" relationship. The Ugandan state has given UWA a mandate to manage wildlife resources in the country and UWA is thus the overarching manager of the park. Its influence on BINP management is mainly on the planning for how the conservation area should be managed, developing policies, providing guidelines of resource management and also imposing operating procedures. UWA provides guidelines for the areas and gives strategic directions for BINP, but it does not necessarily influence its entire management. The UWA management is structured through a board of trustees and a top management who implement decisions of the board. These decisions then have effect down to other staff and senior management.

Economically, a key informant staff stated that UWA has strong influence and stake in the activities of BINP. All the revenue is collected at UWA head office. She said that BINP supports about 48% of the re-current budget of the whole of UWA. BINP makes a budget that has to be approved by UWA which fully finances it. Thus UWA is in charge of BINP's budget allocation and control. Additionally, BINP gets indirect support from NGOs, the government, Bwindi/Mgahinga Conservation Trust Fund (BMCT) among others donors. The BMCT Fund gives the public a chance to take part in management of the park and its wildlife through donations to the Fund. Countries such as USA, Germany and UK are reported to support the Fund. This facilitates the park's financial sustainability in the long term (UWA 2009:18). It also leads to economic development of the park and protection of its biodiversity.

37% of the park staff respondents were dissatisfied with the general BINP management. 52% reported to be satisfied and 11% were to some extent satisfied with the management. The majority expressed that senior staff treated them fairly good. Only 1% complained about poor

treatment.
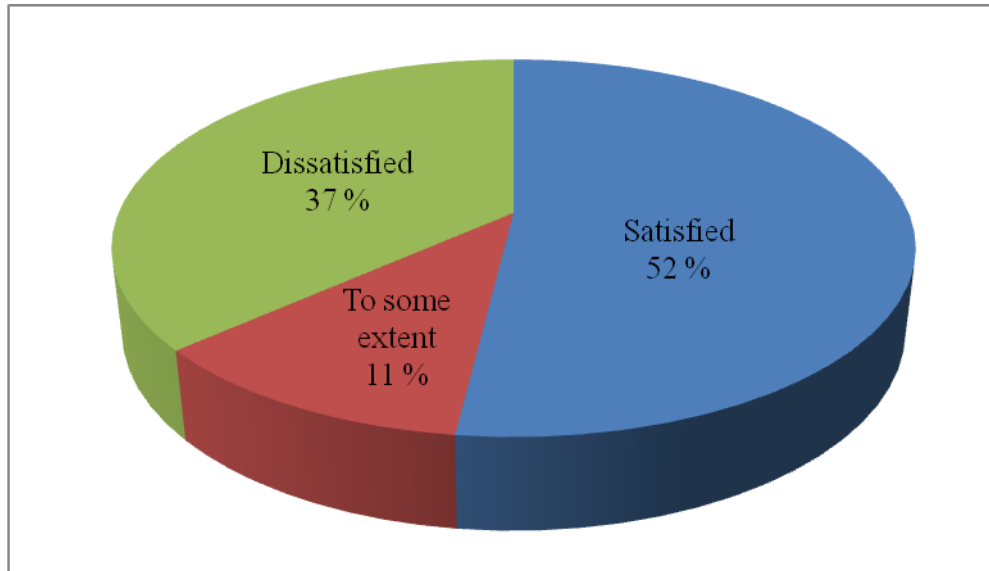
Figure 5.5: BINP staff's level of satisfaction with management

(Source: Own fieldwork 2010)

It was observed while conducting in-depth interviews that some of the interviewees had particular concerns with the park management. For example, some junior staff revealed that they lacked equipment such as headgears, warm sweaters, GPS, proper rain boots and coats while carrying out their duties. These are requirements they are entitled to while in the field executing their duties as BINP is a forest, and it is often raining and cold. Others reflected on poor accommodation facilities in some of BINP's outposts such as Ruhija where some staff share rooms and complain of lack of privacy. They reported that such cases affected the quality of how their work was done. Junior staff also complained about not being heard and that information and ideas paved up seldom resulted in altered on new decisions and actions.

Due to the different levels information has to pass in an organisation such as BINP, it to some extent becomes complicated to share because it only depends on how it is stored and shared by all the different people (Liberti & Mian 2009). If not well shared, it may be nuanced thus affecting the ideas meant to be put across. Eventually, performance and delivery of the park could be affected because some issues may be left out while planning on what activities to

execute.

The hierarchy of authority in BINP is based on a top-down chain of command. Decisions are made at higher levels and the organisation is under UWA control and supervision. The relationship among BINP workers is good and different staff report to their superiors. We found that UWA and BINP as well have a good relationship. All these may result into efficient biodiversity conservation because each staff knows their assigned duties and top management supervises them. Biodiversity conservation has continued to attract tourists to the park who bring in foreign exchange thus boosting its economic development. According to park staff, neighbouring communities also benefit from the gate collection and gorilla tracking fees which result in the reduction of poverty cases.

5.3.2.2 Division of labour

In this section, BINP's departments, employees and their tasks will be presented. BINP assigns various duties to the different departments of its management. The departments are Law Enforcement, Community Conservation, Tourism, Research and Monitoring, Finance/ Accounts and Administration. They are headed by wardens who report directly to the CAM. Below is the current staffing for BINP in the listed different departments.

Table 5.7 Departments and employees in BINP

Department	Number of employees (%)	Titles of employees
Finance/ Accounts Department	5 employees (3%)	Warden Accounts and Accounts clerks
Administration Department	8 employees (5%)	Administrative secretary, writer/ photographer and drivers
Tourism Department	51 employees (30%)	Warden Tourism, Assistant Warden, tourist guides and gorilla trackers
Monitoring and Research Department	2 employees (1%)	Warden Monitoring and Research (WMR), Monitoring and Research assistant/ranger
Community Conservation Department	5 employees (3%)	Warden Community Conservation, Assistant Warden and Community Conservation Rangers (CCRs)
Law Enforcement Department	97 employees (57%)	Warden Law Enforcement (WLE), Assistant Warden and Law Enforcement/ SWIFT rangers
Head of all departments	1 employee (1%)	CAM
	Total: 169 employees	

(Source: BINP key informant 2010)

The number of BINP's employees changes over time, but the above figures were provided during the study. The above departments correspond to different programmes in the park.

The Administration Department has staff with different skills such as drivers, secretary and writer/photographer. BMCA has one common accountant known as Warden Accounts, but each park has an Accounts Assistant in charge of its daily financial issues. BINP's Accounts Assistant deposits and withdraws the organisation's money. The department is in charge of revenue collection and timely submission of returns to UWA HQs, preparation and implementations of budgets and accountability for funds released by UWA HQs and donors. The 2008-2009 UWA annual report reveals that the organisation's (UWA) financial performance improved and contributed to the reduction of its previous year's financial deficit from 1.4million USD to 504,000 USD. This is a sign of all PAs' effective economic development due to putting more effort in their activities and having efficient financial systems. Consequently, BINP contributed to this financial development. Having a good financial system, therefore, ensures that both

revenue and assets are preserved within BINP or UWA management and that capital resources are well utilised (UWA 2001). According to UWA (2001), The Monitoring and Research Department has staff that mainly focus on research according to particular operational guidelines. BINP as an organisation does not undertake research. They work with research institutions, academic institutions and independent researchers who help to generate information that the park management wants. For example, considering gorillas, the policy in place is that only 8 people are allowed to go tracking at any given time. Therefore, not so much monitoring and research can be done by the tour guides that go along with the tourists thus leaving the work to other groups. Research groups such as Institute of Tropical Forest Conservation (ITFC) and Conservation Through Public Health (CTPH) have specialised employees in research. These gather all the relevant information about the park and its resources and share it with the park management. Such information enables BINP to have control over its biodiversity and know how best to manage it. Additionally, these groups also employ local people from the neighbouring communities to collect data according to the targeted required information. This is a source of income to the people and therefore improves their economic status. According to one of the researchers, if more local people are employed, their living standards improve leading to poverty alleviation in their communities.

The Tourism Department has 51 staff and is responsible for tourism development. This unit also employs local people who are usually youth or students as porters to carry tourists' luggage while tracking gorillas, bird watching among other park activities. These porters are referred to as support team by the park management. All tour guides, gorilla trackers, law enforcement and community conservation rangers are trained in guiding, tracking, community conservation and law enforcement to ensure easy deployment to different activities (UWA 2001).

Under the Law Enforcement Department, there is a ranger force known as the Special Tourism Protection Force (SWIFT) that carries out law enforcement work and security. There are 26 traditional UWA rangers and 73 SWIFT- Uganda People's Defence Force (UPDF) rangers. This department is also supposed to collect ranger-based data. The rangers patrol and ensure reduction or alleviation of illegal activities inside the park. This department has the most staff accounting 57% of the total number of BINP employees. Occasionally, staff under this department, especially rangers are called upon to carry out other activities such as those related to tourism.

The Community Conservation Department has Community Conservation Rangers and Human Gorilla (HUGO) team. The HUGO are volunteers from adjacent communities to the park who support BINP management in patrolling the forest especially when gorillas and other animals get out of park boundaries, thus qualifying them as problem animals. This team links BINP management to the communities and educates them about the importance of the park. The Community Conservation Department is also responsible for the collaborative management part, which consists of use and access of resources.

Some of BINP's staff positions such as Information clerks are being phased out. Earlier, radio operators were employed as a separate group from rangers, but those duties have been given to the rangers. Camp and office attendants are employed on casual basis.

We observed that BINP's administration set-up is dominated by men. Out of 80 rangers, approximately 8 are women. This indicates a gender imbalance among the park staff. There were very few top female leaders. Some women had even resigned for various reasons such as it being difficult to stay away from their families for long periods and also the harsh weather conditions. Losing such employees in the middle of running programmes may affect the level of delivery of the park's goals. However, BINP has a system where if one of the staff is absent or resigns, the next in position takes over responsibility. This is a point where training, education and experience of staff in various fields related to park management play a crucial role. It becomes easier for the park management to continue with its progress if the workers taking over responsibility have sufficient knowledge of their new and extra duties. BINP staff are recruited basing on academic qualification and performance, and refresher training is also administered (UWA 2001). 52% of the respondents reported that BINP staff have to some extent enough training and 37% declared that they have all the required training qualities of a PA worker. Only 10% said they did not have enough training. According to UWA (2001), all park staff undergo some kind of military service or training and rangers and guides attain across-the-board training. This enables them to be deployed to any section or department whenever needed thus leading to effective and efficient performance and delivery.

Additionally, enough staff, their trust and working experiences are aspects to consider when there is need for substitute workers. Extra workers fill in the gap of those unavailable and ensure

efficient performance for the national park.

54% of BINP staff reported that the park had to some extent enough staff and 29% claimed that there were few. Only 17% stated that they were enough staff. The majority of the staff also stated that when a department lacks enough staff, they call upon those from other departments to share the workload. The majority have been employed by UWA for over 10 years to work in Uganda's PAs and in BINP specifically, between 2 to 5 years. Many people have therefore long working experience with UWA. Only 2% have worked for less than a year.

We found that UWA has a policy of changing its top staff in different periods. Many internal stakeholders identified this as a big problem regarding how to relate with BINP's top management staff. They complained that whenever they started to get along with the CAM and had laid strategies on how best to deal with their association to certain areas of park management, the CAM would be transferred to another national park. They frequently had to start afresh regarding creating a relationship with the new appointed head of park management. This is one of the factors they mentioned as majorly affecting their affiliation to the park regarding management. Transfer of staff may affect the way park managers relate to local people and internal stakeholders as mentioned above, however, it may also reduce corruption in park management. For instance, one of the key informants in BINP stated that one of the main reasons why park staff are always transferred to different PAs under UWA is to avoid corruption. He mentioned possibilities of some park staff being close to local people and if such local people are poachers, they may not be reported, yet this reduces the number of species in the park. He further said

> "*Every institution has its own challenges and human beings are not excellent. There are some tendencies of corruption in the management of BINP and that is why there is an investigating or tracking team under law enforcement to try and fight corruption. Timber logging and poaching by the communities for food could be some of the examples related to corruption*" (BINP key informant 2010).

Additionally, he said that BINP has other measures for fighting corruption such as strengthening their monitoring including people from local communities reporting such cases. NGOs in the

communities give additional monitoring systems and UWA top managers make abrupt frequent visits to BINP. The staff transfer policy is what they refer to as environmental checks to avoid staff with corruption tendencies to be unable to carry them out. Such individuals are also counselled and criticised. In one of the senior staff's opinion, this could be an effective way of fighting corruption. This, therefore, enables management to sustainably conserve BINP's biodiversity.

This section portrays that the Law Enforcement Department has the largest number of employees. BINP's major economic resource is tourism especially gorilla tracking. This could be the reason for the park's utilisation of more funds on tourism as will be elaborated under budget analysis section. According to some senior staff, the park has to some extent enough trained staff who have contributed to efficient biodiversity conservation, growth of tourism and reduction of poverty among local communities adjacent to the park. Furthermore, UWA established the Reward and Bonus Scheme in the financial year of 2008-2009 as a means of boosting the morale of its staff for their great performance. This scheme motivates the competitive will among staff which leads to improvement of the organisation's performance (UWA 2009:19). Some of the senior staff reported that BINP definitely follows this scheme and promotes staff to higher positions whenever possible. This has also facilitated a better relationship among its staff. We believe that such initiatives not only contribute to the UWA's socio-economic, administrative, ecological and political development, but also BINP's. In addition to their calibre, staff welfare and morale are vital as indispensable pre-conditions to attaining efficient park management. This influences the success of the park as an organisation thus BINP should ensure such aspects because they determine how its vision will be met.

5.3.2.3 Formal rules and procedures

This section presents laws and policies authorising BINP to conserve and manage wildlife under UWA. For many years, the Ugandan government has put in place various policies, legal frameworks and plans to ensure sustainable management of resources. Emphasis has mainly been on biodiversity conservation while mainstreaming the environment (The Republic of Uganda 2009).

According to (UWA 2001), the establishment of BINP has quite a long history. Initially, Bwindi Forest was established as Bwindi Impenetrable Forest Reserve in 1932. The Forest department was the first to protect it. However, in 1961, it was established as a Gorilla Sanctuary. In 1991, its status was converted into a National Park due to the ruling of the National Resistance Council thus its current name of Bwindi Impenetrable National Park. BINP is currently under UWA.

The constitution, which is the supreme law of Uganda, encompasses the overall government policy on conservation of natural and wild resources (UWA 2001). It declares that the "*state shall protect important natural resources such as land, water, wetlands, minerals, fauna and flora on behalf of the people of Uganda*" (UWA 2001:15). This is one of the major reasons why PAs such as national parks and reserves are created to protect Uganda's biodiversity.

As earlier mentioned regarding conventions as means of easing communication in park management and enabling adherence to national park rules, international treaties play an important role in the conservation of Uganda's biodiversity. According to BINP's GMP of 2001-2011 (UWA 2001), the conventions of significance to the park's maintenance include:

- Convention on Biological Diversity (CBD), 1992, which Uganda became a part of in 1993 and is obliged to manage PAs that conserve its species.
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). This pact requires Uganda "*to adhere the recommendations of the Conference of the Parties with respect to trade in endangered species.*"
- Ramsar Convention on Wetlands, 1987, which stresses the importance of wetland conservation.

All PAs' management is based on the 1996 Uganda Wildlife Statute and especially their general matters. The Statute has all the agenda for the Preservation and Control Act and the National Parks Act under which all statutory characteristics of national parks, wildlife reserves and wildlife sanctuaries are made (UWA 2001). Each park has its own particular by-laws that govern it to emphasize their uniqueness. Like any other institution therefore, BINP's legal and economic rules are national laws made by the Ugandan government. The Uganda National Parks Board of Trustees approved the park's by-laws in 1993 and these laws have been overtaken by the

endorsement of the Uganda Wildlife Statute of 1996 (UWA 2001). These national legislations include those regarding taxes, the domestic park laws that deal with the payment of staff and holding of taxes among others.

There are subsidiary laws and policies that enable the 2000 UWA Act to address management of wildlife resources. The government is not directly involved in park management, but the budgets are presented to it because it is the government's responsibility to give UWA – regardless of it being semi autonomous - support in terms of a subvention budget support to fulfil the mandate it has given the organisation. The constitution is very clear that the government has to set aside certain areas as national parks to preserve representative samples of these resources so as to protect the natural heritage of this country's resource root (The Republic of Uganda 1995). BINP, as an organisation, will report what it anticipates to generate in terms of money and also what costs they have so that the government can give them a subvention through UWA. This is crucial because BINP has no incentive directly for increasing income as all goes to UWA. According to a key informant, BINP has a fixed budget under UWA regulation and, therefore, there is no motivation for the park to increase its revenue. He, however, argued that having such fixed laws enables BINP to operate according to plans and be able to receive more funding. Furthermore, when all income generated by BINP is sent to UWA, and UWA only provides a fixed amount of money to support BINP activities, there is a possibility that BINP staff will be uninspired. For example, BINP workers see the park generating a lot of income from its activities and their efforts, but realise few developments such as their accommodation facilities, which remain in poor conditions. Additionally, BINP always operates with stringent budgetary allocations and staff especially those at lower levels complained about receiving low salaries and rarely appraised by receiving rewards. Some of the park rangers reported that it is only the senior staff that usually get rewards at the end of year. The junior staff also reported that this de-motivates them while working hence reduces the level of performance of the park.

The following are some of the examples of policies used by BINP. First is the National Environment Management Policy (NEMP) (The Republic of Uganda 1994). This policy is supposed to ensure sustainable biodiversity conservation and management so as to contribute to national socio-economic development. It also provides for establishment of collaborative PA management with local communities. Many Ugandan policies including the Wildlife Policy have

to comprise provisions for this policy and for biodiversity conservation (The Republic of Uganda 2009). Biodiversity conservation is among the main goals of BINP.

Secondly, BINP employs the Uganda Wildlife Policy of 1999 that was revised based on the draft Uganda Wildlife Policy of 1995 (The Republic of Uganda 1999). This policy is to mainly ensure that the majority of Ugandans acknowledge and put measures in place for wildlife management. Wildlife resources are, therefore, to benefit both present and future generations. The policy also aims at conserving areas with vast biological diversity, especially those with various species. These are to represent the major habitats of Uganda.

Another policy used by BINP is the Tourism Policy of 2003. This policy seeks to support endeavours promoting the Ugandan economy and people's livelihoods through poverty mitigation by encouraging sustainable and quality tourism development. The mountain gorilla is still among the main tourist attractions in Uganda, placing BINP among the most spectacular economic sites of the country (The Republic of Uganda 2009).

The Decentralisation Policy (1994) is another important policy utilised by BINP. This policy was made by the Ugandan government as a way of bringing services closer to people. District and sub-county levels are considered priority in planning and implementation at lower levels. The policy supports empowerment of actors and institutions to manage natural resources at lower levels, ensuring community sharing of benefits and costs of natural resource management, increased community participation and decision making in natural resource management and providing for natural resource management planning at those lower levels (The Republic of Uganda 2009).

The Community Conservation Policy only relates to the community. It provides for awareness and education of local communities adjacent to the park. The approach is a means of making local people appreciate the value of the park's existence. This also enables them to voluntarily protect the park's resources alongside BINP management. Another approach UWA uses to enhance this policy is to involve people in the resource management. This facilitates UWA to get a buy in. Local people acquire benefits by working for the park. For example, regarding resource use and access, there are resources inside the PA, but when local people work with the

management of the park, they sign a memorandum of understanding which binds them to follow the given guidelines, and then benefit from resources such as medicine plants.

Additionally, BINP has the Community Protected Area Institution (CPI) policy of 2000 at parish level which plays a major role. This policy promotes the effective partnership between local governments, local communities, and BINP in the management of its wildlife (UWA 2001). The CPI has a policy known as the revenue sharing policy, which is used when sharing the revenue among communities. This policy explains what should be the composition of the projects looked at, who the beneficiaries are and how they are selected. It also decides the amount of funds to be distributed per project. Such a policy, therefore, stipulates everything in planning and management. It also ensures that funds from revenue sharing are not diverted to programmes that are not planned for. This facilitates efficient distribution of park revenues and contributes to the socio-economic development of the local communities.

The park also has a host of other strategies in place, one of which is the problem-animal control and management strategy. This strategy defines the approach UWA uses when animals disturb people.

All the above policies are implemented in different programmes within BINP's management. These policies are often reviewed to ensure better and effective management and performance of the park. For example, one of the park staff stated that, if a management plan is being made, a policy framework is also looked at. The programmes must reflect the GMP so that their relevance is in line with the objectives of the park. He further explained that policies, therefore, streamline as well as initiate management actions depending on the issue on ground. The management actions affect policies and vice versa. And in order for most issues to be relevant to the park's objectives, its management has to particularly consult relevant groups such as research teams, pro-biodiversity conservation, pro-tourism and outreach organisations.

Rules and regulations are crucial drivers of activities carried out in a national park. Through observation, we found out that some of the respondents do not fully understand certain laws and their importance. Furthermore, some key informants reported that some of the junior staff just follow what they are told and do it only to enable themselves earn a living. It is, therefore,

important for rules and regulations to be clear not only in their phrasing, but also on what purposes they are meant for. BMCA's GMP clearly states that by-laws should be positive and visitor-oriented by not only providing information on what is prohibited, but also on what is allowed (UWA 2001). Such laws have to be revised in order to make them relevant to the country's present legislation.

Numerous laws have been passed by the Ugandan government to control the environment and management of its natural resources. The Uganda Wildlife Act, chapter 200, as mentioned earlier, is the law governing resource protection and there are repercussions if this law is broken (The Republic of Uganda 2009). An example is if one is caught illegally hunting, one would be arrested and taken to court and prosecuted according to the relevant sections of the Act. The kind of power used to govern BINP is thus established by law and statutory rules. A GMP is prepared for each PA, the community is indebted to abide by all the statutory obligations of wildlife management and environment impact assessments, audits and monitoring are carried out (The Republic of Uganda 2009). All these are for purposes of sustainable biodiversity conservation and utilisation.

Conclusively, UWA is a semi-autonomous with a heavy bureaucracy culture. This affects the implementation of matters such as the resource access agreements. Another example is how BINP has to get an approval from the UWA Executive Director, which goes to their director, then to the managers, then to other staff, and other stakeholders such as politicians, donors and local people. This affects both the way things are done and communication flaws. As a result, work may be negatively affected.

5.3.2.4 Planning and management activities

Formal rules and procedures of BINP are governed by the GMP whose details are as follows. According to the Uganda Wildlife Act (2000), the GMP is a comprehensive plan prepared by UWA for BINP as a way of trying to attain the park's set goals and objectives and fulfils its purpose. The ED, with approval of the board prepares it. Since BINP is under one Conservation Area with MGNP, and their conditions and management challenges are similar, they have a common GMP. The plan is to be implemented in a period of 10 years and the current one is from

July 2001 to June 2011 (UWA 2001). One of the park staff stated that there are plans to craft a new 10-year GMP. BINP's goal to be achieved by 2011 is; "*Biodiversity, physical and ecological process of BINP conserved for the benefit of the people of Uganda and the global community*" (UWA 2001:iv) and its purpose is to strengthen gorilla protection and its habitat and is also because of its other ecological and economic importance.

Specific guidelines are indicated in these objectives. Most of the guidelines are driven towards PA management, tourism and self-generated revenue, community conservation and benefits, wildlife management outside PAs, donor funding and co-ordination, security and law enforcement and performance accountability (UWA 2001).

The GMP is planned and structured through zonation and programmes and implemented through actions during the specified period (UWA 2001). It is divided into management zones where activities are to be carried out in different areas of the park as shown in the Table below.

Table 5.8: Zonation of BINP

Zone	Activities to be carried out in these areas
Tourism zone	Gorilla tracking, nature walks and scenic viewing.
Integrated Resource Use zone	Adjacent communities may be allowed to harvest park resources basing on the Memorandum of Understanding.
Administrative zone	Park operations infrastructure, visitor accommodation and related facilities.
Wilderness zone	Highly protected to ensure minimum human activities. Research and nature walks allowed but no tourism trails to be developed (Zone covers 70% of the park).

(Source: UWA 2001)

The plan consists of 6 management programmes that address the park's problems, issues and opportunities (UWA 2001). These include:

- Resource Conservation and Management: This programme is based on the park's problems of flora and fauna degradation due to human population pressure. Here, park boundaries are continuously defined and marked, increased law enforcement, collaboration with stakeholders to stop degradation, application of EIA procedures in

128

management and collection of data by rangers and its analysis using Management Information System (MIST).

- Tourism development: This plan is to diversify and sustainably manage tourism by marketing and publicising tourism information, improvement of visitor facilities and services and incorporation of communities in tourism by training and introducing them to a broader tourism stakeholder network.

- Community Conservation: Due to the improved relations among park authorities and neighbouring communities as a result of national and international partners that link them, an institutional framework that resolves conflicts between the two groups is established. These relationships are to be strengthened by educating and developing the communities through a revenue sharing programme that supports community projects, benefit distribution, capacity building while planning projects, implementation and fundraising.

- Park Operations and Maintenance: Conflict resolution and avoidance in park management has been identified to be possible by ensuring effective co-ordination of park activities with the local government, NGOs and other partners. Cooperation with communities and security organs such as the UPDF is to be enhanced through different strategies.

- Monitoring and research: Approaches to access, disseminate and implement research and monitoring information are proposed especially dealing with threat to gorilla health.

- Regional Co-operation: There is need to effectively collaborate with the management of contiguous parks of DRC and Rwanda in order to take advantage of their 'complementarity.'

The GMP is implemented through actions carried out by different park staff. For example, regarding protection and management of BINP's flora and fauna, the actions to be carried out were surveillance, law enforcement, development and establishment of an effective boundary maintenance plan, identification of sections of the boundary that need markers, identification of appropriate boundary markers (preferably live markers), reorganisation of ranger deployments, regular patrols including boundary surveillance, ensuring prosecution of culprits and carrying out EIAs for all proposed infrastructural developments (UWA 2001). Different stakeholders such as

BINP wardens, Deputy Director Field Operations (DDFO), Procurement Officers (PO), Planning and Environmental Impact Assessment Coordinator (PEIAC) and other developers were given various responsibilities to enact these actions (UWA 2001).

BINP follows these plans, but to varying degrees. Mid-time (after 5years) evaluation of the GMP is done to check whether they are on track or have gone astray. The plan is further broken down to 1 year, 3 months and weekly strategic plans under which different activities are carried out to achieve the set goals. The park staff reported that each BINP staff has specific duties to conduct in a given and scheduled period of time after which a report is prepared. In order for BINP authorities to ensure that the integrity of the park and its conservation status is protected, they engage staff to implement the programmes. They work with them to support the management programmes. They also include the political leadership and local people in the neighbouring areas. They also have management systems and procedures that are applied in managing the conservation area. The CAM and other senior staff implement the GMP because these plans have been developed in a participatory manner, reflecting the aspirations of all the involved parties. However, when it comes to management, styles vary. According to several park staff, BINP authorities emphasise a team approach in management. This can secure productivity by giving people the opportunity to participate. For example, in every outpost, there is currently an In-charge and under him, there are other junior staff thus he is the manager at that level. The CAM supports this outpost In-charge by giving him powers to take certain decisions around that outpost and also gives him guidance.

BINP has so far managed to achieve some of the plans it had in the 2001-2011 GMP. According to results from the 2001-2005 strategic plan, it has in place administrative offices, visitor accommodation and related facilities, tourism zones for gorilla tracking, nature walks and scenic viewing such as Buhoma, Ruhija and Nkuringo, and highly protected zones for research. Additionally, through the multiple resource use programme, it allows local people to access some areas for bee-keeping, weaving materials and bamboo rhizomes (Atuhaire 2009). All these have to a certain extent contributed community conservation of its biodiversity, tourism development and monitoring and research. The relationship between park staff and local communities has also

improved to a limited extent. Such factors contribute to some extent to effective and efficient performance of BINP. Below is a map showing the multiple use zones of BINP.
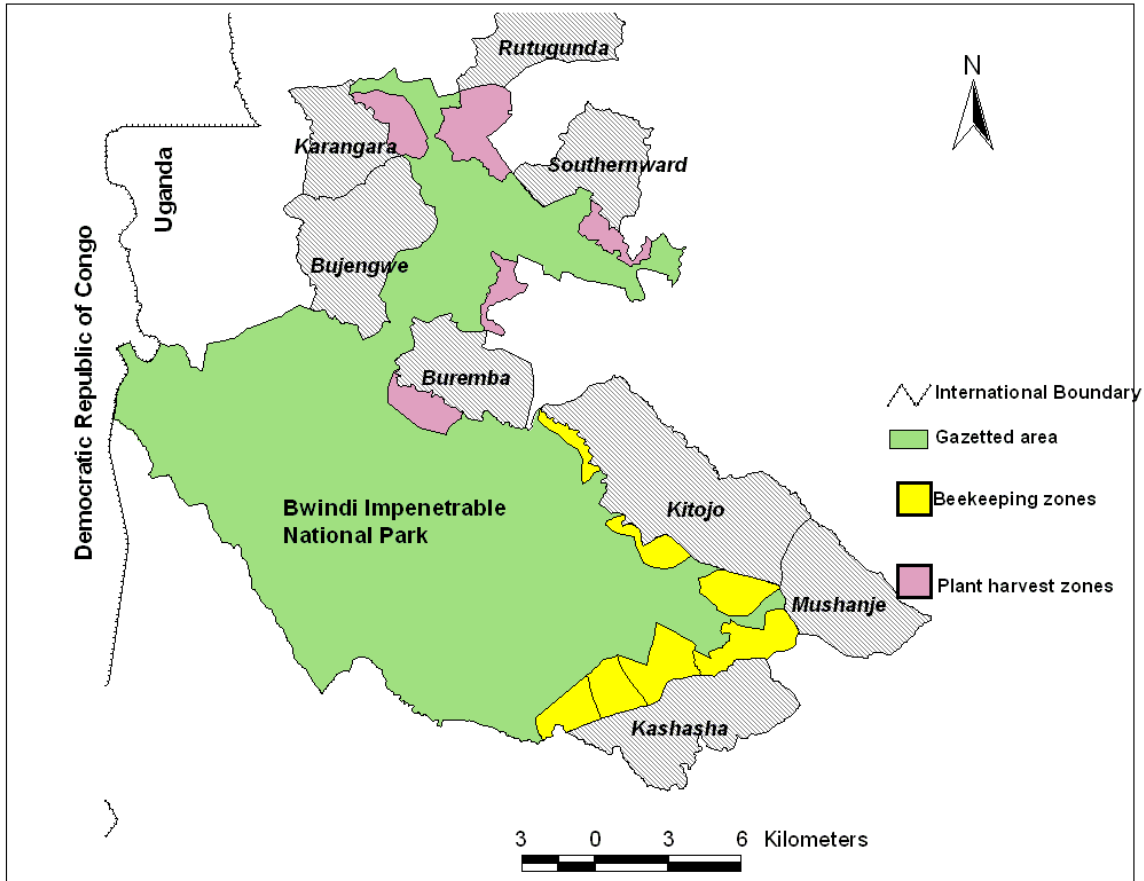
Figure 5.6: Bwindi Impenetrable National Park multiple use zones

(Source: Key informant 2010)

A key informant at UWA HQs stated that joint effort by park staff, internal and external stakeholders has enabled BINP to address its challenges from political, social and economic angles. The key informant reported that politicians educate local people on the importance of the park and at the same time propose community projects to be supported by BINP. The local people as well communicate to the politicians in case there is a message to take to BINP. The key informant further stated that BINP in turn includes local people to some extent through the collaborative approach from which they benefit 20% from gate collection in addition to the gorilla levy. She also mentioned that this kind of collaboration leads to participatory conservation and management of BINP. It also leads to economic development of the local communities and

131

political legitimacy. However, local people and social science researchers had totally opposite responses regarding collaborative management as will be elaborated in Chapters 6 and 7.

Additionally, it is crucial for park managers to empower junior staff to make decisions for managing the lower levels so as to ensure effective monitoring of the area. Having a Monitoring and Evaluation framework, which BINP has, facilitates appraisal of workers. This further enhances the effective management of the park.

BINP's 2001-2011 GMP ends this year and will be revised soon. According to a BINP senior staff, this will enable the park management to know what they have achieved and what they have not. They will, therefore, adjust the policies being used in order to address different management related issues. He emphasized that the purposes of these are to ensure continuous progress and functioning of the park.

5.3.2.5 BINP economic resources and budget analysis

BINP has various economic resources as earlier presented under Chapter 4. Park staff reported that there are a number of activities from which revenue is derived such as gorilla trekking, nature walks, walks to the waterfalls and resale of items to customers. However, the main economic resource for BINP is tourism that is centred on gorillas. The majority of the park staff said that gorillas attract tourists to the park and this also brings some kind of benefits to the local communities. They further explained that when tourists come, the communities perform for them in form of music, dance and drama based on their traditions and cultures, and they sometimes provide accommodation. This economic benefit goes directly to them. Additionally, BINP shares revenue from tourism with adjacent communities to support community enterprises and other projects. 20% of the gate collection is set aside for community projects. A BINP senior staff reported that communities have committees that are responsible for receiving and allocating these resources to certain community projects.

The above resources need a good functioning financial system in order for their production capacity to be realised and maximised. This can be done by making and implementing budgets

that support them. The section below elaborates our budget analysis of BINP, but first, an analysis for UWA will be presented.

Financial management is central in determining the progress of any organisation through supporting its core functions. Budgets, which include periodic activities and expenditure areas, influence the economic performance of any organisation such as BINP. UWA only releases necessary funds to BINP as indicated in the plans and later analyses its annual funds for all PAs in Uganda as shown below.

UWA's financial statements for the year 2008/2009 show that the organisation's economic performance greatly advanced compared to the previous years as shown in Table 5.9.

Table 5.9: A summary of UWA's financial statements as at 30th June 2009

Statement of income and expenditure (Deficit for the year in Uganda Shillings)		Balance sheet		Cash flow statement (At end of year)	
2008	2009	2008	2009	2008	2009
1,382 USD	510 USD	12,232 USD	18,933 USD	4,654 USD	6,550 USD

(Source: UWA 2009)

Additionally, the report discloses that the number of tourists visiting PAs in Uganda increased from 134,486 visitors in 2008 to 142,886 in 2009 with BMCA having 13,127 visitors in 2009 (UWA 2009). BINP received 12,100 visitors in 2009 (B&L 2011). UWA's internally generated revenue thus increased from 5.6 million USD to 7 million USD. Gorilla trekking and park entry fees for visitors and vehicles made the greatest contribution to this internal revenue generation (UWA 2009). BINP is endowed with gorillas thus generates a great amount of money for UWA. In order to maintain such internal revenue generation, the organisation planned to conduct promotional campaigns and advertisements focussing on both domestic and foreign tourists (UWA 2009). With such endeavours, tourism and economic development which is supposed to contribute to poverty alleviation are enhanced by BINP under UWA. This also influences donors to respond positively to assistance requests by BINP or UWA if the money is well spent and accounted for. In a nutshell, BINP has economically developed its tourism activities as a means of amplifying its revenue base. This has not only boosted its other activities, but also contributed

to the development of its neighbouring communities. For example, the Uganda Wildlife Statute of 1996 states that the board of trustees of a PA, in this case BINP, has to pay 20% of park entry fees to local communities through the local government. In addition to this, the gorilla levy fund was introduced where 5 USD from each gorilla trekking permit is to be put aside for distribution to local communities (Atuhaire 2009). Such allocations lead to economic development of rural areas adjacent to the park and at the same time protects local people's commitment to BINP (Tumusiime & Vedeld 2011). Thus, the park's conservation integrity is also ensured.

Some key informants reported that BINP has a good financial management system that has facilitated the increase of its revenue. We found that the park has mainly invested in tourism activities whose growth has previously shot up. A senior park staff reported that this has enabled the park to contribute over 30% of UWA's revenue. According to the 2010/2011 Expenditure Budget, BINP distributes its funds among the different departments as shown in Table 5.10. BINP and UWA managements operate with Uganda Shillings (UGX). 1 USD was equivalent to 2,405 UGX at the time of compiling the thesis.

Table 5.10: Total amount of money allocated to BINP's departments (2009/2010)

Department	Percentage	Amount allocated to each department
Tourism	33%	40,753 USD
Law Enforcement	28%	35,311 USD
Finance and Administration	14%	17,498 USD
Community Conservation	10%	12,274 USD
Monitoring and Research	15%	18,653 USD
Total		**124,488 USD**

(Source: BINP 2011)

The above Table shows that the Tourism and Law Enforcement Departments receive the most amount of money. According to a key informant, the Tourism Department is allocated the most money because the activities under this sector are expensive. For example, he mentioned that installing a tourism trail for nature walks, constructing briefing bandas and other installations, their repairs and maintenance is expensive. Other park staff reported that since BINP's main economic source is tourism, more funds are set aside to support this department's activities in

order to increase productivity and economic growth. Additionally, they disclosed that the Law Enforcement Department is allocated more funds because it also caters for elements such as food rations, at times protective clothes and huge patrol allowances because its employees are charged with protecting the integrity of the park which has several dimensions. Furthermore, the Community Conservation Department was reported by park staff to receive the least amount of money because it mainly provides for subsistence allowances in nature and has no expenses such as repairs and maintenance. Below is a breakdown of the Community Conservation Department activities as per 2010/2011-budget/work plan.

- Support and Monitoring implementation of problem animal control programmes – 1,760 USD.
- Implement integrated resource use programme and promote alternative – 848 USD.
- Carry out gorilla and other primate health sensitisation programmes – 1,041 USD.
- Support and implement revenue sharing programmes – 1,247 USD.
- Facilitate and monitor the HUGO activities – 2,495 USD.
- Carryout community cons education and awareness programmes – 2,994 USD.
- Conduct school cons education and awareness programmes – 1,287 USD.
- Support community development activities – 601 USD.

The total amount of money budgeted for the above conservation activities are 12,274 USD. However, according to a key informant in BINP, the above figures do not reflect the actual expenditure because it may slightly be less or more depending on the world market situations such as inflationary rates and other factors. He further said that the activities are budget guided and the way the park management plans for them, is the way they are executed and further analysed in the park's financial management.

As a conclusion to BINP's budget analysis, the most funds are allocated for tourism activities, while the least for community conservation. We conclude that activities by the park management to support local communities are low and this could be reason for the continued tensed park-local community relationship. However, the park's tourism sector has shown continuous progress as elaborated in the UWA 2008/2009 annual report, thus portraying economic growth.

5.3.3 Physical structure

According to a BINP senior staff, the physical and administrative structures of BINP are to some extent inter-twined because physical structures support management, which are mainly the administrative structures. Physical infrastructure includes buildings, roads and signage, entry and exit gates, trails and equipment. The following section will present BINP's physical structures.

Looking at the terrain of the park, it is rugged and mountainous making transport difficult. Poor transport means reduce the number of tourists to visit the park leading to reduction of its revenue generation. BINP has been divided into management zones; Buhoma, Ruhija, Rushamba, Kitahurira, Ndego, Rushaga, Nkuringo, and Iremera (UWA 2001). From a biological perspective, we look at Bwindi forest itself and how it is structured. In these zones, there are outposts where rangers are stationed. Also under physical structures, network of trails and tracks connecting these out posts or zones are considered. There are also roads and gorilla trekking trails. To get to Buhoma, one has to use the Ikumba-Kitahurira road which passes through some sections of the park via Ruhija. The only stretch passing inside the park is a small neck and the one that is through Ndego to get out of the park. This means that the road network is mainly outside the park, from Buhoma to Nteko (UWA 2001). There are also bridges used to cross the rivers inside the park. The above indicates that however difficult transport is to BINP, the park management has put structures that enable visitors to still enjoy the park's nature, particularly gorillas, thus contributing to its economic growth.

Besides the out posts, there are camps, which are resident areas for the park staff. The camps have equipment and power plants such as generators. The equipment includes woollen sweaters, binoculars, compasses, raincoats, first aid kits, tents, fire management equipment among others. These enable workers to carry out their duties in the field and prepare for actions that may negatively affect the forest such as fires. A BINP key informant stated that regulating fires facilitates the protection of the park's biodiversity and their habitat.

Several park staff mentioned that binoculars are used to locate gorillas and other species that tourists or researchers may want to see, compasses are used for direction purposes in the park, and rain coats and woollen sweaters are used during rainy and cold seasons. However, some of

them complained about lacking adequate warm sweaters, headgears and gloves. They mentioned that this slows down their work, particularly patrolling, due to the weather conditions that are sometimes harsh exposing them to diseases such flu, cough and malaria. Generators provide staff with energy for light and for operating machines such as computers, photocopiers and scanners. These support administrative work thus contributes to the effective performance of the park.
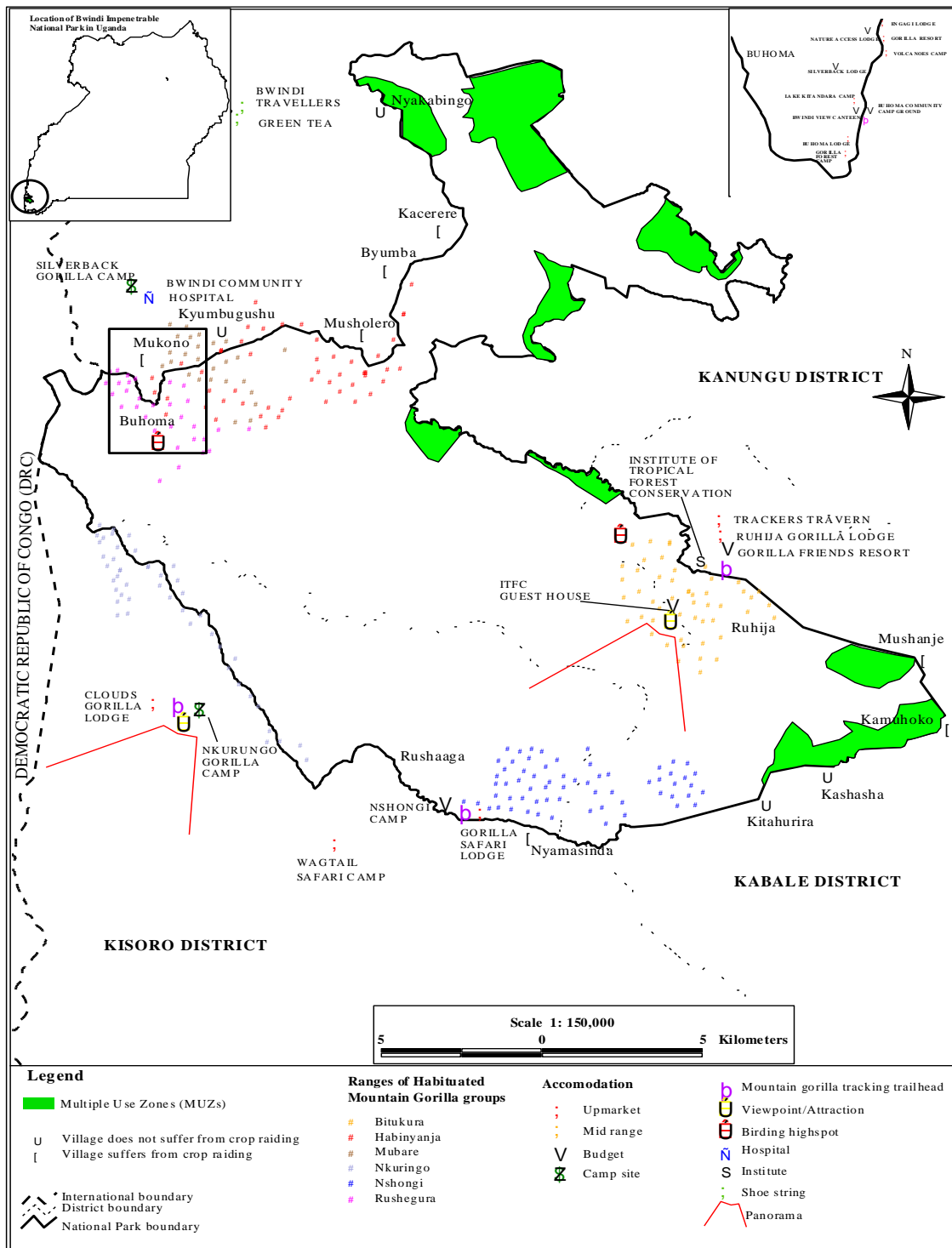
Figure 5.7: MAP showing BINP's physical features and surrounding parishes

(Source: Tumusiime & Vedeld 2011)

Regarding administrative structures, BINP's HQs are located at the park edge in Buhoma, where the park offices are situated (UWA 2001). There are also visitor infrastructures such as huts where visitors are received. There is also a place where visitors are briefed about the park and its guidelines. The park has a reception/ booking office for visitors at Buhoma HQs. In terms of visitor accommodation, one of the senior staff stated that the park management mostly enters into concession arrangements with the private sector. These include Gorilla Forest Camp which is the only accommodation facility inside the park. A private investor manages it to provide accommodation to the visitors. We were unable to identify the exact relationship between this private investor and BINP management in terms of revenue generation because we were not provided with the percentage this investor remits to the park. Other accommodation facilities are found outside the park. The park's entry gates are Ndego, Buhoma and Ntebeko and this is where you find information centres. However, BINP does not have well designed gates yet these are places that give an visitor the first impression of the park. Tourists, therefore, get an initial overview of the park as being underdeveloped, thus unattractive. This affects marketing for the park, as other people wishing to visit the park may prefer national parks in other areas that may have better welcoming structures. BINP management should, therefore, construct gates with a better blockage, a house, an office and courier shop according to UWA's approved gate structures and standards. In our view, this will capture tourists' attention and change their perception towards the park.

We observed that the physical structures such as administrative buildings and accommodation for staff is not well developed. As mentioned earlier, some BINP junior staff up to now share rooms, which are dormitory form structures with their colleagues and the offices in some outposts are very small. Family accommodation is only constructed in Buhoma where the park's HQs are. Workers in other outposts thus have to live far away from their families. Such living conditions de-motivate staff who may eventually not perform duties to their best. This affects the effectiveness of the park's delivery levels. Additionally, BINP management has tried to avoid construction of many new roads because gorillas do not like roads (UWA 2001). This is then done to maintain their habitat and avoid disturbing their home ranges. This reduces the number of tourists visiting the park, but at the same time secures the gorilla's habitat.

The following section summarises findings for our first objective regarding BINP.

5.3.4 Summary of BINP management structure

We have presented and discussed results of the first objective of our study. Relating these findings to organisational theories has enabled us to reveal what kind of organisation BINP is. We sought to analyse the social and physical structures of BINP and found that the park has a general policy of using centralised command-line. The park has a top-down chain of command under the control of UWA, hence a bureaucratic organisation. We have also sought to find out who makes BINP's decisions and evaluated if local people are part of the decision making process. We found out that both junior staff and local people's views and ideas are seldom reflected in the park's final decisions thus their participation was not replicated. This affects their empowerment in park management because their pressing demands may never be addressed. It also portrays that the park's governance needs to be improved because some people feel excluded or not recognised. Management of BINP is done through following various rules and procedures that are guided by the GMP. The policies change over time because they are regularly revised by the park's top management. This is done to improve the park's performance and delivery by increasing its efficiency and effectiveness.

The research results reveal that the majority of park staff have at least attended primary education and senior staff have some kind of degree from college or university. They all undergo military training upon working for UWA. This influences their levels of competence when they employ different skills while executing their duties. The park's internal management is efficient due to the firm chain of command. The park also uses the transfer policy to regulate corruption attempts in order to ensure continuous progress of its performance. However, this affects the relationship between park authorities, local people and other internal stakeholders.

Regarding physical structures, BINP has administration blocks that enable park staff to carry out their administrative duties such as accounting. It also has equipment that enables workers to carry out their tasks. However, junior staff complain about lack of equipment such as rain coats, head gears and warm sweaters that would otherwise make their work easier and more conducive in such a rainy cold place. We found that that tourism has high priority and is the major economic resource of the park. Most of the funds and administrative work are invested in tourist activities.

In general, we found that BINP is performing and delivering more in the sectors of biodiversity conservation and tourism, than in the outreach sector. In our opinion, the cause could be the less focus put on this sector, which is evident in aspects related to the amount of money set aside to support outreach activities and the number of employees under that department.

5.3 Comparison of organisational structures in MINAPA and BINP

MINAPA and BINP organisational structures have both similar and different patterns, characteristics and dimensions. In this section, the main characteristics and dimensions of the two parks will be presented in two Tables and a brief comparison of both parks will also be described.

Table 5.11: Characteristics of MINAPA and BINP

Characteristics	MINAPA	BINP
Year of establishment	Gazetted in 1964. Extended to current size in 1975.	Gazetted in 1991
Territory	3,230 km^2	330.8 km^2
Location	4-hour drive from Dar es Salaam on tarmac road	Approximately 9-hour drive from Kampala, whereas some road parts are of poor condition
Climate	One rainy season and one dry season	Two main rainy seasons
Ecology and physical area	Large plains, large savannahs and rock formations	Rainforest with afromontane vegetation
Buffer zones	Restriction in land use	Multiple use zones ()
Adjacent PAs and nature	Ruaha and Udzungwa National Park, Selous Game Reserve, and Udzungwa and Uluguru Mountains.	Mgahinga Gorilla National Park, Virunga National Park of DRC and the Great Rift Valley
Human presence around the park	18 villages surrounding MINAPA, which vary in size and distance to the park boundary (Gunn 2009)	21 parishes surrounding BINP and distance to the park boundary.

(Source: TANAPA 2007; UWA 2001)

The next Table presents the different dimensions and variables of the organisational structures of both MINAPA and BINP.

Table 5.12: Dimensions and variables of the organisational structures of MINAPA and BINP

Dimension and variable	Unit of measurement in MINAPA	Unit of measurement in BINP
Management system	Strong institution	Strong institution
Size (employees)	110 employees (Whereas 70 Park Rangers)	169 employees (Whereas 148 Park Rangers)
Administration component	16% of employees work with administrative tasks	5% of employees work with administrative tasks
Span of control	109 employees are subordinate to the Park Chief Warden	168 employees are subordinate to the Conservation Area Manager
Specialisation	Accounting, ecology, veterinary, engineering, military, driving and tourism	Accounting, biology, forestry, military, driving, photography and tourism
Standardisation	Daily patrols[20], morning assembly for Park Rangers and regular meetings (budget, strategic plans, workshops and conferences)	Daily patrols[21] and regular meetings (budget, strategic plans, workshops and conferences)
Formalisation/ Formal and legal framework	MINAPA GMP 2007-2017. Quarterly and annual Reports. Daily and weekly records. MINAPA depends on the GMP	BINP/MGNP GMP 2001-2011. Quarterly and annual Reports. Daily and weekly records. BINP depends on the GMP
Ecological pre-conditions	Hunting ground, less people living around the park	Impenetrable, less important resources, less people living around the park
Number of visitors	33,390 visitors (2009/2010)	12,100 visitors (2009)
Entry fees per person (Adult)	Citizen: 0.6 USD Non-citizen: 20 USD	Citizen: 2 USD Non-citizen: 30 USD <u>Gorilla tracking Fee</u>: Citizen: 102 USD Non-citizen: 500 USD
Total income amount	486, 061 USD (2009/2010)	2,400,955 USD[22] (2005/2006)
Centralisation	Under TANAPA since 1964	Under FD since 1932-1960s, and currently under UWA

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[20] Daily patrols; poaching patrols, checking the highway
[21] Daily patrols in the forest
[22] (Source: Bush & Mwesigwa 2011)

Complexity/ Division of labour	7 departments (Finance and Procurement, CCS, Resources and Administration, Tourism, Ecology, Works and Law Enforcement) Vertical differentiation Hierarchy levels: Circa 3-6	6 departments (Finance/Accounts, Administration, Tourism, Monitoring and Research, Law Enforcement and Community Conservation) Vertical differentiation. Hierarchy level: Circa 3-5
Surroundings	External influence from a Research group, academic institutions, politicians, local communities, private businesses	External influence from Research groups, NGOs, academic institutions, politicians, local communities, private businesses, media
Outcomes	Biodiversity conservation, particularly the elephant population. Economic development through tourism, though local benefits are marginal. Political legitimacy. Poaching: High.	Biodiversity conservation, particularly mountain gorillas and Afro-montane vegetation. Economic development through tourism, though local benefits are marginal. Political legitimacy. Poaching: Reduced

(Source: Own fieldwork 2010)

In many ways, MINAPA and BINP are similar in relation to organisational structures, chain of command, budget allocations, staff uniforms, some infrastructure, and local people surrounding the parks. Both parks are bureaucratic and centralised organisations, with a firm top-down chain of command. The management structure in both parks is difficult to change and the routines are strictly followed. The parks are organised with a hierarchy of positions, where each has an own area of competence. Both parks also have a clear distribution of responsibility and tasks. All the above mentioned characteristics enable both parks to effectively perform by conserving their biodiversity. However, the departments working with community conservation in MINAPA and BINP are understaffed and underfunded. We believe that this is one of the main reasons why the parks are failing to create a good relationship with local people and delivering in rural development. In order to build a better relationship with local people and reduce poverty in their communities, their involvement in the park management is therefore important.

MINAPA were considered to be a small-scale supporter to TANAPA's budget compared to BINP that contributed as much as 48% to UWA's budget and 30% to its income.

There are several variations around both parks and these include ecological variations, local people, and some infrastructure. MINAPA consists of large plains, large savannahs and rock formations, whereas, BINP is a rainforest with Afro-montane vegetation. MINAPA is only a 4-hour drive from Dar es Salaam on tarmac road whereas BINP is approximately 9 hours from Kampala by car. From Kampala to Kabale, the road is fairly good because it is tarmac; however, the stretch from Kabale to the park's HQs in Buhoma takes around 2-3 hours and is of very poor condition. Nevertheless, BINP still has more visitors and higher incomes than MINAPA. The economic returns to the local communities surrounding both national parks are almost insignificant compared to the losses they incur from crop raids by the parks' animals. Additionally, neither MINAPA nor BINP offers compensation for damages on crops and property.

CHAPTER 6 – PARK MANAGEMENT CULTURE

6.1 Introduction

Organisations are formed through cultural processes established by an environment of different actors. The closest source of influence on the organisational culture is found within the organisation; that is to say its employees (Hatch 2001; Jacobsen & Thorsvik 2007; Strand 2007). In this chapter, we use Schein's (Hatch 2001) three level-culture model to study and understand MINAPA and BINP management cultures.

MINAPA and BINP's management cultures can be described as the parks' "personality", as management culture encompasses values, norms, practices, ideas, beliefs, understandings and knowledge that individuals or groups in the park have in common. Additionally, it includes how the park management addresses particular cases. Through experience-based norms and practices, administration set-ups in both MINAPA and BINP have many features in their management culture that are common elements of national parks. These management cultures combine both formal and informal guidelines and cultural and economic procedures and practices that are present in the parks. If the parks aim at attaining success in biodiversity conservation, economic development and community conservation, investigating their management culture is important.

In this context, the type of management under which the organisation is, will highly influence the management culture it will have. To analyse MINAPA's and BINP's management cultures, Schein's model help identify visual organisational structures and processes (artefacts). More specifically, the analysis takes a closer look at the values, norms, practices and perceptions, beliefs, thoughts and feelings of the different stakeholders in the parks' management. This will enable us to explore what the different park stakeholders consider as right or wrong, and also to identify the their behaviour, knowledge and qualities that they share. Furthermore, it will help us understand the parks as institutions.

At the end of this chapter and based on our analysis, we present some suggestions or recommendations on how to improve the management culture of MINAPA and BINP.

6.2 Management culture in MINAPA

The management of MINAPA has been under TANAPA ever since its establishment in 1964. This means that its management culture has not changed drastically over time. However, several adjustments have been made. TANAPA has to recognise that when organisational change occurs, it includes not only changes in the structure and processes of the park, but also changes in the corporate culture. The organisation has been operating based on a traditional way of doing business, and this situation has led to delay the adoption of new changes in the use of appropriate technology and more modern ethos of conservation. The culture of doing business in the organisation is therefore insufficient (TANAPA 2008b).

As mentioned above, the management culture of MINAPA is basically the personality of the park and it is comprised of features such as artefacts, values, norms and attitudes of park members and their behaviour. Below, we analyse in greater detail each of these features as specified by Shein (Hatch 2001) in his theory on management culture

6.2.1 Values

The values MINAPA as an organisation embrace in order to achieve its purpose, and the value its employees hold are to a certain degree reflected in the mission of TANAPA.

The mission of TANAPA is:

> "*to sustainably conserve and manage park resources and their aesthetic value, for the benefit of present and future generations of mankind, as well as efficiently provide high class tourism products and services*" (TANAPA 2008a:40).

TANAPA's main mission involves ecological, environmental, economical and social values.

MINAPA, being an organisation under TANAPA, follows the same mission. They have additionally constructed a similar purpose statement that is based on the exceptional resource values of the park, historical considerations, and prevailing national and TANAPA policies. The

park purpose is:

> "*to conserve and protect MINAPA, its habitats, biodiversity, migrations of large mammals and birds, and its endemic and threatened species, while enhancing tourism services*" (TANAPA 2007:12).

TANAPA's mission is an accurate description of what the organisation does and a definition of why TANAPA currently exists. Their main objective is to conserve biodiversity, improve economic growth and ensure rural development. Additionally, TANAPA has values that are extracted from the mission statement and reflected in all 15 of Tanzania's national parks, including MINAPA.

For MINAPA to be effective, they have clarified together with TANAPA, the core values that the employees shared, understand and contribute to. They further embrace these values in order to achieve its purpose. MINAPA as an organisation has values that are connected to sustainable conservation of its biodiversity, economic development through providing high quality services and efficient use of resources to exceed tourists and visitors expectations. These values also involve ensuring that local communities have a sense of ownership and a vested interest in the future of the parks (TANAPA 2008b). These are all important ecological, economic and social values, which affect major aspects of the organisation.

In terms of the ecological values of MINAPA, these values is the main reason to conserve the park. The area of MINAPA harbours a complex collection of vegetation and its heterogeneous habitat ranges from open grassland to woodland. The Maludwe Mountain lies at the heart of MINAPA and is part of the Eastern Arc, which is considered to be of exceptional biodiversity value. MINAPA and Selous Game Reserve form a unique ecosystem and together they hold one of the largest populations of wild elephants in Africa. There are over 60 mammal species in MINAPA, and the park is particularly known for its population of giraffes, zebras, greater kudu, wildebeest and the world's largest antelope, the eland. Around 450 bird species have been recorded in MINAPA and the park further shelters more than 1,600 species of plants. The national park management therefore aims for the conservation of the area in order to preserve its most natural form and protect MINAPA's biodiversity as best as possible. MINAPA management

seeks to maintain all components and processes of the naturally evolving ecosystem of the park, including the natural abundance, diversity, and ecological integrity of plants and animals.

The economic values of MINAPA are connected to identification of the park's goods and services. We have used concepts of total economic value (Phillips 1998), such as use and non-use values to identify some of MINAPA's values. Part of the use values of the park, are the direct use values. In MINAPA, there are values obtained from the direct use of the area from activities such as tourism, recreation, education and research. The leading income and one of the principal values for the park's management is the revenue from tourism. For example, game driving in the northern areas of the park is a popular activity. Additionally, MINAPA's option values are gained from the possibility of using the park area and resources sometime in the future (Phillips 1998). The future uses of the park implies indirect use and are mainly related to the value of information, mostly about biodiversity, that could be gained from the park.

The non-use values in MINAPA are the values employees' hold for the national park. The most common non-use values are bequest values and existence values. First, a clear majority of MINAPA employees hold bequest values, meaning that they know that others benefit or will benefit from the park in the future. A large number of the park staff expressed that protecting the area of MINAPA is important because it benefits future generations. For instance, one of our key informants stated,

> "*the conservation of MINAPA is of great value for the whole country, including all Tanzanians. I see conservation as something that benefits both present and future generations*" (MINAPA key informant 2010).

Additionally, 98% of MINAPA staff stated that local people were not allowed to use or extract any of the parks resources. Based on this, it was clear that the park management did not want local people to have any kind of access to the resources inside the park.

Guarding the resources of the park is seen as extremely important for successful park management. At the same time however, we argue that a successful management also relies on cooperation with the parks' neighbours. In that sense, MINAPA values a good relationship between the park management and the local communities around the park. For instance, certain

amount of park revenues is used to assist community development initiatives, such as construction of classrooms, dispensaries, water schemes and roads. This indicates that it is important for MINAPA to teach and show the surrounding communities the value of wildlife conservation.

After looking at the values of MINAPA as an organisation as well as its economic values, it is clear that several core values are embedded in the perception that employees have of what is understood as successful management. Out of the 52 park staff that were interviewed, 34 responded that 'wildlife conservation' was a main reason for protecting the park. 'Benefits for future generations' were also mentioned frequently. We observed that conservation of the park's biodiversity was the absolute dominant value among park staff, both at the top management level as well as among employees at a lower level.

Regarding tourism, it is predominantly through game viewing MINAPA generates most of its revenue. Tourism is therefore of great value for both park staff and the park management. 11 park staff interviewees indicated that tourism is the main reason for protecting the park. Figure 6.1 below illustrates what park employees' regarded as main reasons for protecting MINAPA.
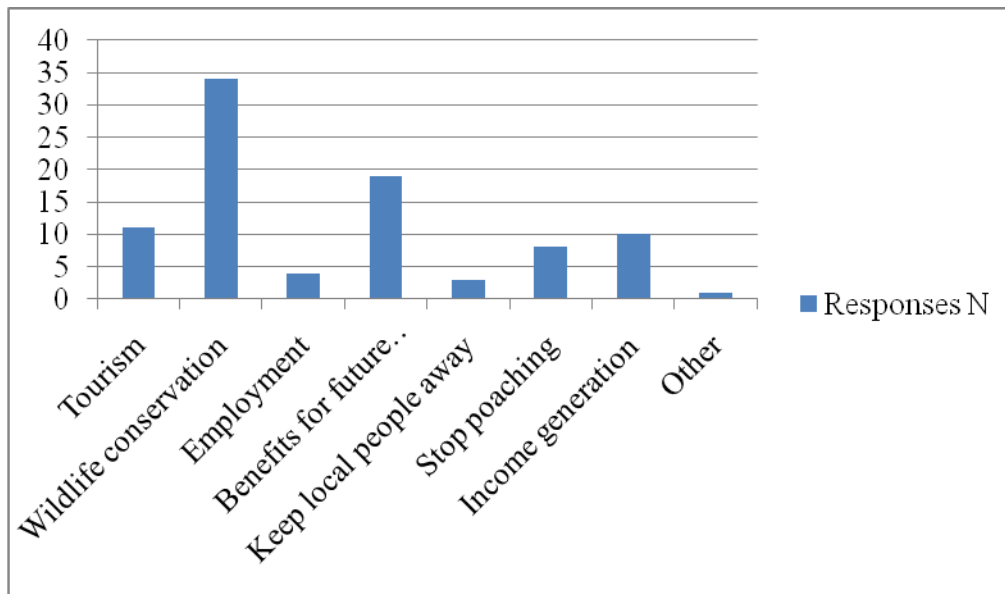
Figure 6.1: MINAPA employees' responses to the reasons for protecting MINAPA

(Source: Own fieldwork 2010)

Based on the above Table, the majority of MINAPA employees and MINAPA as an organisation embrace biodiversity conservation and tourism as top values. These reported values rest on what park employees describe to care about and to find important. However, values of MINAPA staff may occasionally differ from the organisational values of MINAPA management. For example, MINAPA staff and TANAPA do not share an appreciation of a good relationship with local communities. In the National Policies for National Parks in Tanzania, TANAPA stresses the importance of increasing the value of the national parks to local people, while hardly any of MINAPA employees are concerned about this relationship and cooperation. While discussing with park staff about the main challenges in the park and reasons for protecting it, we found that there was practically no one mentioning community conservation or the communities surrounding the park. The value of having a good relationship with communities around the park did not appear to be of great importance for any of the employees at the lower levels in MINAPA. In our opinion, creating a close and well functioning relationship between the park management and the local communities are important in order to improve the management culture and crucial for the park to deliver and perform well along with all objectives.

We further found that most MINAPA employees have a broad knowledge about conservation and that they shared values with MINAPA management.

One of the reasons for park staff sharing values with TANAPA could be that one has to become part of the organisation in order to remain employed. In other words, employees who do not share the same values as the organisation they work for, tend to resign.

Turning to communities surrounding the park perceptions on values regarding MINAPA, people shared a variety of values linked to the park. For example, the park area consists of valuable resources to local people and to which they have no access. Utilisation of these resources is of both economic and normative value for the local people. For that reason, it is important for the park management that local people understand the bequest and existence values of the park; meaning its benefits for future generations and not utilising its resources in destructive ways. We discovered that many local people in surrounding communities did not value the conservation of MINAPA's biodiversity and the protection of the area, but rather saw potential for economic development.

Moreover, local people indicated numerous reasons supporting the dissatisfaction of living near the national park. For example, in several villages, people reported that animals from the park were a huge burden because of crop raiding and for the harm caused to the population. In particular, human-elephant conflicts are frequently reported in communities around MINAPA. The government or TANAPA do not provide the local population with any compensation for the loss of crops or the injuries caused to people (Gunn 2009; Vedeld et al. 2011).

Past generations that have been resettled and they have lost land when MINAPA was established as a park was also a major factor contributing to local people's dissatisfaction. Some felt the park had taken their or their forefathers land and left them with nothing. Such reasons influence how local people value and approach MINAPA. Even though the park management had carried out Outreach Programmes in several of the villages visited, the majority of the community members indicated that the scale of interaction between them and the park management were too low and it did not provided any tangible benefits to them. Nevertheless, some community members treasured and valued the park's resources and understood the importance of conserving the area. Still, this number was relatively small.

We believe that if local communities received more benefits from the existence of the park, they would assist in defending and valuing it more.

6.2.2 Norms

All societies, including Tanzanian national parks, hold various norms defined as unwritten rules, expectations and pattern of appropriate behaviour that show members of the park what is acceptable and socially desirable. Accordingly, we have taken a closer look at park employees and "residents", and local peoples' conceptions of what is viewed as right and wrong in MINAPA. To describe and analyse the variety of views and the existing and partly conflicting norms in MINAPA, we chose one specific example. We examined the responses obtained from park staff, park "residents," and local people in the surrounding area as well as internal stakeholders regarding their conceptions of poaching. In this section we outline/discuss some of these findings.

MINAPA staff, internal stakeholders and local people identified poaching as a huge challenge for

the park management. They had however, quite varying responses and norms towards poaching. One of such norm relates to the actual reporting of poaching activities when one witnesses them.

Park employees have a clear and consistent standpoint concerning poaching. For them, it is an illegal act and should be severely punished. The entire MINAPA staff claimed reporting all observed poaching activities or those which may resemble it to the park management. This norm is followed up by the majority of the park staff and most would additionally ensure that everyone else in the park follows it. As a result, this norm makes it difficult for employees to engage in poaching activities. This is a norm that is maintained through both punishment and reward systems. As mentioned in chapter 5, TANAPA has established a reward system for park employees capturing poachers. The punishment for poaching is laid down in the Wildlife Conservation Act. The majority of park employees claimed that this norm is being followed by 100% of the management. However, among local people in surrounding communities the issue of corruption is perceived differently. Several stated that especially park rangers were corrupt given that poachers could easily pay them to avoid being punished. Concerning issues of corruption within MINAPA's management, we were unable to obtain further legitimate information.

On the other hand, we discovered that local people in villages around MINAPA held different norms in this respect. Many would not report poaching to the park management if they witnessed it. The motive behind this was partly attributed to a lack of information; they did not know who to report to. Furthermore, many local people felt that they did not get anything from the park but trouble, so they did not wish to assist the park in any way. The fear of confronting the poachers was also a major factor for not reporting them. However, there were still local people in villages around MINAPA that to some degree engaged in the protection of wild animals in the park through a system of informants. In Chapter 7, we will provide a more comprehensive description of the collaboration between the park management and external stakeholders related to anti-poaching activities.

Concerning camp/hotel employees, the majority of them are adhered to this norm in the same way as park staff. Camp/hotel employees had on several occasions contacted the management regarding poachers.

Conflicts over norms regarding the reporting of poaching are evident. MINAPA management, and camp, lodge and hotel employees interpret it differently than local people in communities surrounding the park. It is possible that if the park management improved its cooperation and established a closer and more mutually rewarding relationship with communities around the park, it could lead to a change in local people's reaction towards poachers.

In addition to the poaching norm mentioned above, many other informal social norms in MINAPA were identified during the fieldwork, and the researcher got exposed to several as a result of living over 2 months inside the park. For example, having a car and driving from the HQ to the gate or to nearby villages it felt relatively mandatory to pick up people needing a ride. It would be perceived as extremely impolite and unfriendly if one decided not to give people a ride. This norm illustrates that MINAPA employees look after each other and that there is good social coherence between the staff and park "residents" inside the MINAPA.

Another example would be the sharing of water. If there was lack of water, the park employees and park "residents" would share whatever water was available. If someone hid and "saved" water, it would be regarded as lack of cooperation and as an immoral act.

Other illustrations of social norms have to do with the dress code among the park management. In MINAPA, all park rangers dress in uniforms of a military type while employees working in the HQs dress more formally. The park uniform made it possible for us to recognise the different ranks among the park rangers. The way in which park staff dressed, also reflect the chain of command in the park and determined where people worked, such as ecology, protection or works department.

'Greetings' were another apparent social norm we observed in MINAPA. Using the correct title according to staff's position was common and whenever one did not use the proper title, it would be noticed. . These titles, just like dress codes, clearly reflected the hierarchy of authority in the park management. The communication between the researcher and employees at lower levels were simple, direct and informal. The dialogues with the top management staff were more formal, but still friendly.

6.2.3 Perceptions

MINAPA aims at ensuring that different park staff, internal and external stakeholders are given an appropriate opportunity to contribute to the park management, such as the design of the GMP. This is supposed to encourage the park staff, internal and external stakeholders to take ownership of the planning processes in MINAPA, and ensure that the different plans become both realistic and appropriate (TANAPA 2007).

In this study, we chose to look at park stakeholders' interaction with each other. In the following section we seek to analyse the perceptions of internal stakeholder and local people towards the park management. We further present the park management and employees perceptions towards different internal stakeholders and local people. Additionally, we look at the participation of different internal stakeholders and local people in MINAPA management.

6.2.3.1 MINAPA staff's perceptions of internal and external stakeholders

The international community's presence in MINAPA is limited compared to other national parks such as in the Northern Circuit of Tanzania. TANAPA expects the international community to support conservation efforts in all their parks. The Wildlife Conservation Society (WCS) has been working in Tanzania since 1956 and has been involved in training, research, monitoring, institutional support, education and planning. The International Union for Conservation of Nature (IUCN) has also been operating in Tanzania for several decades. The IUCN implemented international conventions such as the Convention on Biological Diversity (CBD) in Tanzania where the main aim is to conserve biological diversity, sustainable use and fair sharing of the benefits arising from utilisation of genetic resources (The United Republic of Tanzania 2009a). Furthermore, the IUCN asserts that the elephants in the MINAPA and Selous ecosystem are part of the largest wild elephant population remaining in Africa (ABRU 2008).

ABRU, which was established in 1974, is currently the only research group operating in MINAPA. Research on the elephants in MINAPA is today part of ABRU's routine work and through the Darwin Initiative Elephant Project; ABRU is helping to establish a continuing training and educational programmes within the park. In 1992, ABRU set up a long-term Ecological Monitoring Programme which has integrated animal studies, long-term climatic

records, educational courses and the development of management plans aimed at conserving the park's biodiversity (ABRU 2008). The Darwin Initiative is additionally funding scientists from Anglia Polytechnic University (Anglia Ruskin) to carry out field research within TANAPA to monitor, manage and protect Mikumi elephants. Nevertheless, MINAPA is one of the many national parks in Tanzania that does not receive much international attention. Compared to Serengeti national park for example, which obtains great support from non-profit organisations, NGOs, trust funds such as Frankfurt Zoological Society, and several research groups, MINAPA receives little recognition and hardly any external economic funding. The park management expressed that they plan to promote the park to further achieve increased domestic and international recognition and support. It is important for the park management to change the international and national perception that MINAPA is not as impressive as for example parks in the northern circuit. If the park could gain more positive attention, the park could profit from an increase in tourists, funding and research.

ABRU has operated in MINAPA for over 35 years, and it is clear that ABRU has gained a certain trust from the park management. Park staff stated that they have a close collaboration with both researchers and rangers from ABRU. The park authority further expects the research findings to support conservation activities, and ABRU works on several research projects where all information gained is shared with the park management. ABRU provides the Ecology Department with temperature details each month for example. The Ecology Department, along with all of MINAPA departments, are not funded sufficiently. A key informant at the top management level explained why MINAPA did not receive international attention or support by stating:

> "*the park is without a status. People are therefore not attracted to it*" (MINAPA key informant 2010).

During the fieldwork, it was evident that the park had relatively few visitors, little research, and hardly any NGOs or international donors compared to other parks in Tanzania and BINP.

MINAPA cooperates with academic and training institutions such as Sokoine Universtiy of Agriculture (SUA), University of Dar es Salaam (UDSM), Mweka and VETA. MINAPA expects

that these academic institutions provide trained students to the park management. MINAPA perceives the research carried out by these institutions as useful and constructive. Today, several students from the institutions mentioned above are hired in TANAPA. The institutions are further identified not only as training institutions, but also as nationally recognised educational and research institutions. TANAPA and MINAPA managements express positive attitudes towards SUA, UDSM, Mweka and VETA. However, it is important to mention that TANAPA is not as encouraging to foreign students and researchers to carry out fieldwork in their parks.

Regarding internal stakeholders such as camp/hotel employees, the park management cooperates and interacts with several. While most tourist accommodations are located outside the MINAPA, 3 private and 1 owned by TANAPA are found inside the park borders. According to the Tourism Policy, while the private sector has to take responsibility for developing tourist facilities inside the park, TANAPA regulates, promotes and facilitates such development (TANAPA 2007). The camps inside the park are the main accommodation facilities for visitors and as such, they play an important part in attracting tourists to the park. The private camps pay concession fees to the park management for each visitor spending the night there. Thus, TANAPA considers these private actors to be crucial for their income generation and hence, have attempted to create and maintain a better relationship with them. However, some MINAPA employees expressed concern about the camps inside the park as they consider them to be disturbing the park's ecological system. Employees in the top management were the only ones expressing that they considered the camps inside the park to be positive due to tourism revenue. Seeing that MINAPA receives an annual budget from TANAPA few park staff would be concerned about the parks revenue collections as their salaries do not depend on it.

The park management has little contact with tourist accommodations groups located outside the park borders. These groups do not pay any concession fees, and therefore, are of less interest for the park management.

MINAPA management aims to bring forth the support and collaboration of the communities surrounding the park. However, the park employees' attitudes towards local communities around the park vary considerably. Some feel that community conservation and establishing a close relationship between the park management and the local communities are crucial for the park to

156

deliver and perform well. Several stated that the local communities are suffering by living close to the national park and the only viable solution for them would be resettlement. Others expressed that the local communities were a burden leading to encroachment, poaching and damage of the park's biodiversity. A key informant in MINAPA management expressed that,

"The locals should not stay close to the national park border. It is impossible for us to keep the animals in one place and to protect the local people from the wild animals. A new location for the local people should be found" (MINAPA key informant 2010)

A majority of park employees perceived that surrounding communities benefits substantially from the park through outreach projects. For example, most MINAPA staff were familiar with the Outreach Programme, and several stated that the programme was operating in all villages around the park. The general perception by park staff towards local communities was that the local people benefitted in a substantial manner from the park in terms of conservation education, constructions and maintenance of schools, dispensaries, police station and roads. Accommodation and selling of handicrafts to tourists were another indirect benefits for local communities. However, it was observed that the villages of Doma and Mikumi seemed to benefit considerably more than other villages.

According to the majority of the park employees and the GMP (TANAPA 2007) the communities surrounding the park receive significant amounts of support from the park. From 1993 to 2009 the park management indicates having carried out 30 projects in neighbouring villages. The costs of these projects amount to more than 320 000 US (TANAPA 2007). According to Vedeld et al. (2011), these projects do not always reflect local peoples' needs or priorities. In addition to this, we discovered that several of the villages had never received support for the planned project. In all the focus group discussions that were conducted, we found out that the majority had never heard about the outreach projects that MINAPA supports. Several working in the top management claimed that because of local communities, including local leaders, did not have enough knowledge about the park, they consequently did not understand how the park management administered the park and its resources. A key informant in the top management of the park stated:

"The budget of TANAPA does not correlate with what local people are saying. We need to educate them. We have money, but the money is committed to protecting the area. The local people around the park don't have the knowledge. They don't understand where the money is going. We therefore need to teach them where the money goes" (MINAPA key informant 2010).

Since poaching is identified as one of the main challenges in MINAPA, the assistance that local people provide to the park to stop this, affects the park employees' attitudes towards them. If local people cooperate, park employees would perceive them as helpful, cooperative and not automatically blame them for poaching. Additionally, there are people in the different communities around the park that work as informants for TANAPA. We were told by a key informant that:

"these people work as "secret agents" and they work hand in hand with the park management" (MINAPA key informant 2010).

According to MINAPA staff, the park management has informants in every village around the park. These informants do not expose themselves to anyone except the Zonal Wardens in the park. MINAPA does not pay the informants a salary; they are only paid for the information they provide. A key informant in the top management declared that the village leaders also helped the park by disclosing poachers.

Poaching, the TANZAM highway and problems associated to wild animals are identified as main challenges by the majority of park staff. The park employees' perceptions towards poaching and problem animals will be carefully analysed in the next chapter as we look at them in the form of case studies.

During an analysis of internal and external stakeholders in MINAPA in 2005, the park management recognised that politicians were important stakeholders who needed to be actively consulted (TANAPA 2007),. For example, in the making of the GMP, their inputs were directly incorporated. The consultations with politicians were carried out through interviews (TANAPA 2007). A MINAPA key informant identified politicians as very powerful stakeholders. The district government was still more involved than politicians in governing the park management.

They participated in and contributed to the main GMP planning workshops and management programme working groups. However, during the research, we found that the park's relationship to politicians was not mentioned much, and people did not wish to discuss it.

Arriving to MINAPA, the researcher was suspected to be a reporter and was consequently denied access. Park employees, especially park rangers, were quite sceptical towards the media. Several MINAPA employees informed us that this was because of an episode where the media had reported and published a negative story about the park, and where the journalists had in addition pretended to be tourists and researchers. In TANAPA's Corporate Plan (TANAPA 2008b), they state that they expect that media groups support the park by enhancing public awareness on biodiversity conservation. It was evident that MINAPA management mainly used the press to promote the park. We additionally got the impression that MINAPA and the media had a strict business relationship.

6.2.3.2 Internal and external stakeholders' perception of MINAPA

In TANAPA's corporate plan, it is stated that the international community expects that Tanzanian national parks *"are conserved for the benefit of present and future generations of mankind"* (TANAPA 2008b:21). As mentioned earlier, MINAPA is not well recognised internationally, and they hardly receive any support for conservation efforts. The park has virtually no international focus compared to the parks in the northern circuit in Tanzania.

During our fieldwork, the only research group operating in MINAPA was ABRU. The ABRU staff consisted of two research assistants and three research rangers that were based permanently at the ABRU field station near the MINAPA HQs. Ever since its establishment; ABRU and its researchers have been totally dependent on full access to the park and a close collaboration with the park management. Several of the ABRU employees stated that the cooperation with the Chief Park Wardens that has worked in the park since the 1970s were one of the reasons for the good relationship today. The transfer system of employees in the top management of the park was perceived as challenging since the employees, whom they cooperated closely with, were frequently transferred to other national parks in Tanzania. However, based on our observation, we identified the relationship between ABRU and the park management to be good in general.

We identify SUA, UDSM, Mweka and VETA as academic institutions that are involved in MINAPA's management. These institutions send students to carry out fieldwork and practice in the park. SUA has also worked with MINAPA and several other parks concerning the development of their GMP. A professor at SUA stated that they enjoyed a good relationship with the park. However, several of the SUA professors that we interviewed reported being to some degree disappointed with the park's performance. , They identified several failures of the park, especially those regarding community conservation. Still, both SUA and UDSM collaborate closely with all parks in Tanzania and given that their students do research through the University, it is easier for them to gain access to the park.

Camp/hotel employees' perceptions of MINAPA depended to a great extent on whether they were situated inside or outside the park. The camps located inside the park are "borrowing" land from the park management and they advertise and run everything themselves. Additionally, most camp/hotel employees expressed that the park management did not influence them in a substantial manner. All camp/hotel employees we interviewed, both inside and outside park borders, reported that the relationship between them and the park management was good and that they cooperated well. However, the main issue that concerned them was the bad service provided at the entrance gate as well as the absence of a veterinarian in the park. These issues affected the camps since visitors complained about bad service and injured animals. Camp/hotel employees further stated that the lack of funds led to the park not being able to deliver in certain areas, such as in tourism and ecology. Despite these issues, we recognise that their general attitudes towards the park management were generally positive. This has led to a better relationship between the camp/hotel employees and the park management.

We observed that a great number of the local people in the villages surrounding MINAPA held negative or to some extent neutral attitudes towards the park management and its employees. Many were resentful and to some extent expressed more anger towards the park's employees, especially to the park rangers, compared to the park itself.

There are several factors that affect the perceptions local people have towards the park management and its employees. The villages that the MINAPA management has visited seemed to have significant more positive attitudes among local people. It is therefore important for the

park to have both formal and informal contacts to break down the existing mistrust between local people and the park authority. There is also a clear difference between local people perceptions in communities where MINAPA has had an outreach programme activity and those where these programmes have not been implemented. We noticed that in the villages where local people had been brought into the park and offered for example game viewing and learned about anti-poaching and offered conservation education, the attitudes towards the park management were far more positive.

We conducted two focus groups in two different villages north of the park. The majority of local people in both villages felt they should have the opportunity and right to use MINAPA areas for animal grazing during the peak of the dry season. They also claimed that some years back, they were allowed to go into the park and look for lost cattle, which is strictly forbidden today. Additionally, a majority in both villages expressed that there were 'no relations' with the park management and that they did not agree with the conservation strategies being implemented by the park management. However, in one of the villages where MINAPA had offered conservation education and completed an outreach project, the attitudes towards the park management were far more confident and positive than in the other villages. We discovered that that the village with no contact or relations were condemning and disappointed with the park and looked at the management more as an enemy than a friend.

Furthermore, we found out that local people's perceptions towards the park management are influenced by whether they feel that they are engaged in controlling the park or not. This goes in line with Newmark et al (1993), where they argue that if one takes part in the decision making, he or she is more likely to hold more positive attitudes than the ones that feels excluded. We also observed that the majority in the communities held the park management and its employees responsible for their wildlife problems. It is the Tanzania Wildlife Division that has jurisdiction over the wildlife outside the national parks, and not MINAPA, but this distinction is not clear for many living in areas around the park.

Moreover, the distance between the communities and the park border also affects the attitudes of local people. We found that people in villages that shared its border or were located the closest to the park hold more negative attitudes toward the park management than the ones living in

communities further away from the park. The latter were especially worried about the park's expansion and the possibility of losing their land. In addition, the amount of time that local people had lived in the area also affected their attitudes towards the park management. We observed that the ones who had lived in the village for a long time had more negative attitudes towards the park and its employees than younger generations and the ones that had recently moved to the area.

Problems related to animals, predominantly crop destruction, are perceived as serious constraints for local people surrounding the park. This leads to local people around the park facing numerous opportunity costs related to conservation. The loss of income in relation to the benefits obtained from the park strongly influenced local people's perceptions of the park. This is consistent with Wapalila's (2008) observation on how the loss of income creates high costs for local people, and that they therefore tend to develop overwhelmingly negative attitudes towards wildlife conservation. We also observed that in villages where crop raiding was a common phenomenon, local people generally perceived the existence of the park as negative. A participant in one of the focus group discussions expressed both disappointment and anger when he stated:

> *"the park value the life of an elephant more than ours. If our government think an elephant can vote they should continue valuing the elephant"* (Focus group participant 2010).

He and many others in Doma, Mikumi, Kiduhi and Parakuyo villages felt that TANAPA had negatively affected their ancestors by evicting them from the area where MINAPA was gazetted and later on extended. Few local people in the focus group discussions had knowledge about the park management, its staff, structure, culture and processes. A majority of all focus group participants, however, agreed that a good relationship between the local communities and the park management was necessary to solve the problems that existed between them.

As specified by TANAPA's corporate plan, the politicians expect MINAPA to provide employment, generate revenues and support communities adjacent to the park. The politicians are engaged through consultative gathering for information sharing (TANAPA 2008b).

6.2.4 Recommendations to improve MINAPA's management culture

In order for MINAPA to be deliver in biodiversity conservation, economic development and poverty alleviation, its management culture needs to be organised effectively. In this section, we will identify what can be done to improve the management culture of MINAPA.

Improved relationships between the park management and internal stakeholder and local people are recommended to develop and improve the management culture in MINAPA. To achieve better relationships, the park management needs to work on the values, norms and attitudes that local people have towards the park and its employees. Simultaneously, there is a need to further improve values, norms and attitudes that park employees have towards the surrounding communities.

If MINAPA employees have positive attitudes, for example towards local people, it can help create productive actions that would assist them in reaching MINAPA's organisational objectives. If MINAPA employees have general negative attitudes towards internal stakeholders and local people it will affect park employees' focus and commitment to the park, and naturally their performance. Therefore, the park management has to make sure that all park stakeholders collaborate in good terms with the park and thereby circumvent the possibility of conflict between the parties. The involvement and treatment that internal stakeholders and local people get from the park management assist in determining their attitudes towards the park and its employees. It is important for MINAPA management not only to create positive and optimistic attitudes among their staff towards internal stakeholders and local people, but also to maintain a good relationship so the park management can reach their management goals and carry out community conservation objectives.

During the research, it was observed that local people's attitudes towards the park and its employees were quite negative. Therefore, it is recommended that the park management works to improve this. First, more frequent competent contact with communities surrounding the park is recommended to change local people's negative attitudes into positive ones. It is important that they become familiar with how the park is run and the people running it. Second, it is recommended that local communities should be brought meaningfully into the decision-making

processes of the park. *"Participation of local communities in decision-making processes regarding land and other resources that directly impact their livelihoods should be recognised as a basic human right"* (Goldman 2011). People that are engaged and involved in the running of the park are more likely to contribute to the management of the park. Third, local people need to learn more about the park and the importance and reason for protecting it. It is therefore recommended to offer extensive community conservation education. Additionally, it is recommended that further research should be done exploring the methodologies and participatory approaches that are being implemented in such conservation education programmes. Coercive (or non-meaningful) participatory approaches could potentially fail to contribute in changing people's negative attitudes into positive ones.

6.2.5 Summary on MINAPA management culture

We have used Schein's three levels of culture to study MINAPA's management culture and to look at features such as values, norms and perceptions.

MINAPA's values are connected to sustainable conservation of its biodiversity, economic development through tourism and ensuring a good relationship with local communities. These main ecological, economic and social values affect all aspects of the organisation. However, conservation of the park's biodiversity was the dominant value among all employees in the park.

We discovered that MINAPA's values as an organisation is strongly rooted in the park employees. Conservation of the park's biodiversity and tourism development were the dominant values among park staff. Contrastively, the value of a good relationship with communities around the park was not a priority for many park employees, especially not among the ones at a lower level.

People living in the communities around the park have a variety of values linked to MINAPA. For example, utilisation of park resources that people at present have no access to was of great value to them. We observed that a great number of local people did not value MINAPA's biodiversity as much. Human-wildlife conflicts, previous resettlement and lack of communication between them and the park management were some of the reasons why many local people did not value the park or its employees. However, there were still community

members that valued the park and its resources.

We further looked at norms in MINAPA. Since norms are often associated with the park's challenges. We chose to focus on the formal norms concerning poaching. Additionally, we identified several informal social norms in the park. Park employees had only one reaction to the act of poaching; it was illegal and the act should be punished. This norm also makes it difficult for park employees to engage or support poaching activities. Camp/hotel employees and media basically followed the norm the same way as the park management. However, local people in villages around MINAPA interpreted the norm differently. Some would not report poaching if they witnessed it because they felt poorly treated by the park management, not knowing whom to report to and in fear of confronting poachers. There were several people in villages surrounding the park that were engaged in the protection of wild animals through a system of informants. We found that the park management would benefit from a better and closer relationship with the local people in the communities around the park regarding for example the battle against poaching.

It is further important for MINAPA management to have employees holding positive perceptions towards local communities around the park and that external stakeholders perceive the park and its employees as something good and beneficial.

MINAPA does not receive much international attention or economic funding. The only research group in the park is ABRU, which has had close collaboration with the park management for over 35 years. We noticed that the park management and its staff have a positive attitude towards natural science researchers and the national academic institutions they cooperate with. However, park employees' perceptions of social science researchers, politicians and media were much more critical and scepticism was evident as several staff members tried to cover this.

Park employees' perceptions of local communities around the park were diverse. Some claimed that local people were a crucial component in the conservation of the park and hence, that a close relationship between them and the park was important for the park's performance and delivery. Others stated that having local communities near the park border posed many challenges and the only solution would be the resettlement of these into other areas. Additionally, some park staff

expressed that the communities were only a burden that led to encroachment, poaching and damage of the park's biodiversity.

In general, we perceived attitudes towards local communities as neutral, and most of the time a non-issue. However, hardly any MINAPA employees gave the impression of identify the relationship between the park staff the local communities and reduction of poverty around the park as a key value in protecting the park. Therefore, MINAPA employees in general do not share the same values as TANAPA who regards the relationship with local communities to be important for the conservation of national parks. In addition, one of TANAPA's goals is to efficiently provide high-class tourism products and services. We observed that MINAPA management and its employees did not have a substantial focus on the service provided to visitors. We believe that this is one of the reasons why MINAPA does fully deliver in terms of service to visitors.

The external stakeholders in MINAPA had different perceptions of the park management. Since the park seriously lacked international focus and status, they received almost no financial and technical support. As mentioned, ABRU was the only research group operating in the park, and they collaborated closely with the park management. The majority of local people in communities surrounding MINAPA held to some extent negative perceptions of the park. However, these negative attitudes were generally against park staff and not necessarily the park itself. These attitudes strongly influenced local people's perception about the park and biodiversity conservation.

During our research, we found that key stakeholders, especially local communities, with positive perceptions of biodiversity conservation in MINAPA were influenced by the amount of interaction they had with the park authorities, human-wildlife conflicts, knowledge concerning conservation, distance and the amount of time living close to the park. Their perceptions were also correlated to the benefits they obtained from the park, and if they took part in the decision-making.

6.3   Management culture in BINP

Since its creation, Bwindi forest has been under different management regimes. This leads one to argue that different management cultures have prevailed in it; i.e. the qualities and characteristics of the park such as artefacts, values, norms and attitudes of park stakeholders and their behaviour. One major aspect in BINP's changing management culture is the fact that throughout time those in charge of its management have come from different disciplinary fields and training.

Bwindi forest was first protected by the Forest Department - FD (now NFA) as a Forest Reserve from 1932 until the 1960s. In 1961, it became a Gorilla Sanctuary, and currently it is under UWA (former Uganda National Parks) as a national park. . In this section, a further discussion of the characteristics of the management culture of BINP is provided.

6.3.1 Values

According to Phillips (1998), identifying and assessing the goods and services of PA's is a complex task. Also, knowing who values them is complicated. In the case of BINP's management, values are usually linked to what the park as an organisation conceives to be important for its existence, for example in terms of biodiversity conservation. Additionally, stakeholders in charge of its management hold values that are not necessarily compatible, but nevertheless reflected in the vision of the park's management. These values include; ecological, economic and social values. In this section, we present and explain these three kinds of values in the context of BINP.

Regarding Biwindi's first management as a Forest Reserve, its initial managers were foresters under the Forest Deparment (FD). According to Ditro (2003), foresters grow trees, nurture them with "silvicultural operations" and cut them for timber. Bwindi was therefore originally established to preserve the forest cover while sustainably producing timber (UNEP & WCMC 2005). Years later, when Bwindi forest was turned into a national park, Wildlife Officers from UWA specialised in wildlife management became in charge of it. For the effective management of the park, UWA saw the need to recruit foresters as well as officers with different educational backgrounds, among them biologists and ornithologists (Ditiro, 2003). The purpose was to guarantee a level of competence that would bring about efficiency in the national park's

performance.

As an organisation under UWA's jurisdiction, BINP's values reflect UWA's mission,

> *"to conserve and sustainably manage the wildlife and Protected Areas of Uganda in partnership with neighbouring communities and other stakeholders for the benefit of the people of Uganda and the global community"* (Uganda Wildlife Authority 2001).

To be exact, BINP's values are linked to sustainable conservation of its biodiversity, realising economic development through tourism growth and ensuring partnership with local communities and other internal stakeholders such as research groups.

Making conservation values a prime concern in the park's management has to do with the attention that BINP has received by several renowned environmental and ecological guidelines. BINP is considered of great international importance by UNEP and the World Conservation Monitoring Center (WCMC) for instance and is today considered a World Heritage Site by UNESCO (UNEP & WCMC 2005)). In East Africa, BINP is known to have the richest faunal community and its unique flora is known as 'Afro-montane,' because of its extensive low-land-montane forest continuum. Within Uganda, BINP is considered the most significant area for species conservation due to its outstanding biodiversity. In addition, the area shelters several endemic species of the Albertine Rift and is habitat to more than a third of the world's mountain gorillas, which are threatened species (Balikoowa 2008). Indeed, these were some of the features that encouraged BINP's management to protect the area in the first place. The following section will further describe the conservation values of BINP.

In terms of biodiversity, BINP holds particular conservation values. These values are put forward by different stakeholders ranging from UWA and BINP staff, to internal and external ones, who include; natural and social science researchers, academics, NGO representatives, the media, politicians and local people. A majority of these groups believe that the mountain gorillas are the most precious value for the park and thus take pride in sustainably protecting them and their habitat. Besides mountain gorillas, some of our key informants also identified Bwindi forest itself as another conservation value supporting the park.

The park managers see the need to preserve the forest in its natural form (without changing its main composition) particularly as a way of providing home to the gorillas who are considered endemic to the area. These perspectives on the park's conservation priorities lead to focus mainly on gorilla and afromontane forest conservation, which are in turn associated to direct use values such as the promotion of tourism, among other activities, within the national park.

According to park staff, there are various direct use values in BINP. Besides tourism, these include activities related to natural resources harvesting, research, education, and recreation, among others. These activities are both commercial (i.e. tourism, research and resource harvesting) as well as non-commercial (i.e. fuel-wood collection). The park staff revealed that through tourism, especially, gorilla tracking, BINP generates most of revenue from which the park and UWA benefit. They further mentioned that local communities also benefit from it to some degree through the revenue-sharing scheme and gorilla levy fund. In that sense, BINP is able and willing to use its economic values to generate economic resources that not only develop the park, but also improve the livelihoods of people adjacent to it, particularly through the revenue-sharing system.

Moreover, BINP staff pointed out that in addition to embracing the park's values; they also have their personal values related to the park. Such values vary from professional to social, cultural, economic and political. For instance, a BINP senior staff supported the idea that the management of the park should be based on a 'technical standpoint'; i.e. founded on scientific findings. For example, if communities were to be given access to resources, he considered that studies must be carried out and a resource database must be established. He believed that only after such studies would it be possible to avoid any detrimental impacts to the park's resources if open access to local people was to be given. Overall, his argument put more weight to scientific value and undermined for example, the importance of establishing a good relationship between park officials and local people on a collaborative management initiative that could serve to strengthen BINP's performance and delivery. According to recent studies conducted around BINP, this collaborative aspect would be indispensable. Particularly when taking into account the high number of conflicts between local people and park authorities such as those related to crop raiding for example and where park staff seem to be doing little in order to propitiate good relations (see for example: Balikoowa 2008; Hodosi 2010).

Another example of values based on personal perspectives, is the way in which a staff member considered the understanding of the resources that he manages as vital knowledge. He affirmed that 'when an individual knows about something, he/she manages it better.' For instance, he mentioned that one needs to know the ecology and behaviour of gorillas in order to conserve them. Additionally, one should know what gorillas eat, what ecological conditions they need, what factors may lead to their death, what makes them move out of the park and go to other places (e.g. is it because they are disturbed or is the habitat not good enough and perhaps there is not enough food?). Conclusively, he argued that park staff have to implement a scientific perspective in its management by being well informed of what they are conserving. According to him, this would allow for healthier species' populations as well as an overall healthy ecosystem within the park, which would in turn lead to economic development through eco-tourism and contribute to poverty reduction within neighbouring communities by supporting local community projects.

Nevertheless, it is common that individuals claim values, which may not necessarily reflect their behaviour. Through our observations and some semi-structured interviews, we were able to detect that the values held by some BINP staff do not necessarily correlate with what they do while executing their duties. For example, according to most of the workers that were interviewed, tourism is one of the most important values for BINP management. However, we were informed by a park staff member about a past incident where two operators had tried to enter into collusion with park staff for the illegal tracking of gorillas. This does not reflect the values associated to managing the park and it negatively affects tourism development, as revenue is lost in such incidents. In addition, one of the social science researchers we interacted with argued that some people, especially rangers, take the job because they have no other choice or a wider variety of job opportunities. According to him, park staff in general, "work in national parks to survive" and, therefore, easily become influenced by park values. The social researcher concluded that the fact that park employees work against their own will tend to influence park values. In response to such forms of collusion between rangers and illegal tourist operators, a senior staff mentioned that BINP management dismisses rangers who are found guilty as well as monitoring all the workers' activities. In view of these kinds of incidents, this study sheds light

on the importance for individuals to demonstrate their values in their actions.

Another important value identified by several NGO representatives that were interviewed, is associated to the inclusion of local people's human rights and particularly, the Batwa minority ethnic group in the park's management. This NGO takes pride of their collaboration with park authorities to ensure the Batwa people's increase access to public services, such as health care and education. More specifically, the NGO representatives advocate for the park's management to support the ability of the Batwa to practice their cultural traits, while adapting to the social patterns of the areas where they were transferred to when Bwindi became a national park.

Interviews with some researchers revealed that their disciplinary background affected the values held concerning the park. The natural science researchers and the academic for instance, valued the biological conservation of BINP's environment and ecosystem. The social science researchers on the other hand prioritised values linked to the utilisation of park resources by local people.

Local communities neighbouring the park also reported to have values linked to BINP management. In general, these values were associated to forest resources upon which local people's livelihoods depend on. For example, the park hosts bees that enable people to produce honey as well as medicinal plants and animals such as duikers and wild pigs that provide meat. Among other resources, local people also benefit from bamboo shoots as a source of food. In addition, many participants (a majority of whom were part of our focus group discussions) recognized the importance of forests in the formation of clouds and rain. This, according to them, has facilitated the continuous flow of water springs, from which they collect most water.

Some of these same participants, particularly the Batwa, indicated that their aspiration was to use forest resources to satisfy their livelihoods. This demonstrates that the conservation concept, which is BINP management's major value, is not in line with local people's traditional perspectives. In other words, there is a clash between BINP management's and local people's main value. Regarding how local people's perspectives will contribute to the park's management will greatly depend on whether and how BINP management will allow local people to access the area's resource biodiversity.

For instance, over 87% of park staff respondents asserted that duikers are the most commonly poached animals (by people carrying out this practice). Through multiple resource use programmes, BINP management allows local people's access to herbs, bamboo rhizomes while keeping bees on a regulated scheme. However, in the information disclosed by the park's management, they mention that BINP's main biodiversity concern is the conservation of gorillas and their habitat. Although according to BINP's management, poaching is an illegal activity, duikers are not their main conservation target (or value). Thus, if people hunt duikers and limit themselves to access the areas where they are allowed to, this will not affect the management of the gorilla directly. This study considers that such an arrangement could enable the park to sustainably conserve what they consider as valuable (i.e. the gorillas), while maintaining a good relationship with local people. A much more problematic scenario could be fomented if local people would for example, clear the forest for cultivation or other related activities. In such scenario, there is a strong need to acknowledge the importance of the forest's biological value including its significance for gorillas' habitat protection.

Furthermore, regarding community conservation, it became evident during the research that BINP management often did not practice what it claimed as part of their public image . For example, its mission clearly states that its purpose is to ensure close partnership with local communities. However, the fact that local communities are benefiting through the revenue-sharing scheme and gorilla levy, has not ensure (or arguably, has deteriorated) their participation in the decision making regarding park management. According to our findings, most of the local people felt that their views were taken into consideration only after the establishment of the park through meeting between their representatives (local leaders) and park officials. Also, they had recently realised that consultation meetings have become less common and still, there has been many changes concerning the park's management over the last few years. Even though they still hold few meetings with park staff, they feel that their inclusion in decision-making is not perceived as necessary. As one of the participants in a focus group discussion said,

> *"The people who make the decisions are those from UWA headquarters so community members are not part of the decision making. Sometimes, we do not agree to or like the decisions made by UWA and this creates tension between us and them. For instance, if a gorilla destroys someone's crops, there is no compensation to that person, but if a local*

person is caught cutting a tree from the forest, he or she is arrested. This is unfair because park managers decide measures that only favour them" (Focus group participant 2010).

With respect to the decisions taken by BINP staff, local people indicated having contributed only to a few of them. In contrast, 35% of the park staff respondents reported that local people participated in the decision making process of BINP in addition to 17% who mentioned that local people participated to some extent. Still, 46% declared that local people were not being part of the decision making process. Such contrasting views concerning the degree of local people's participation in the park's management is yet another factor affecting the relationship between local people and park staff. Moreover, it makes communication and coordination between the parties difficult. Overall, it serves to weaken a form of collaborative park management as well as reduces effectiveness in park performance and delivery.
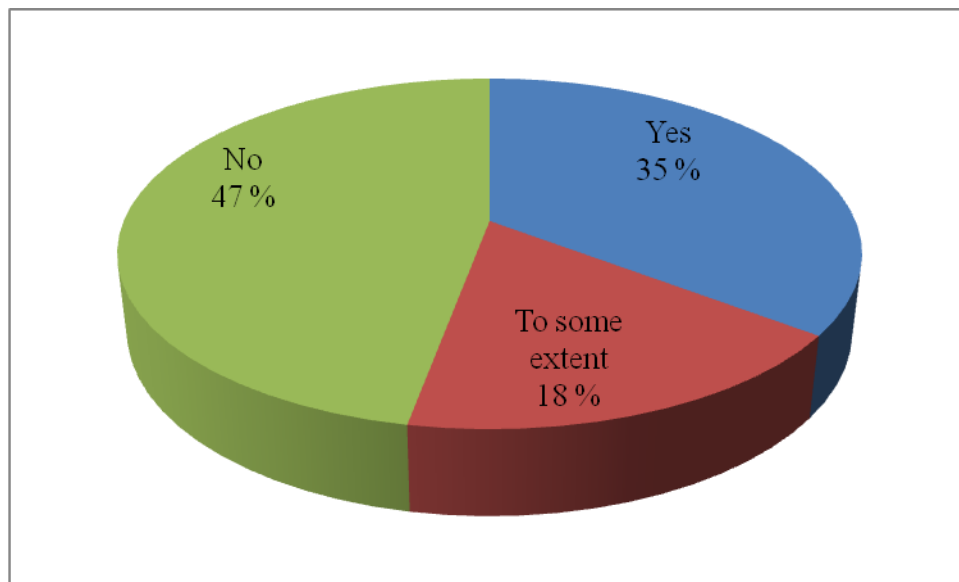
Figure 6.2: BINP staff's responses about local people's participation in decision making

(Source: Own fieldwork 2010)

With respect to the apparent limited local people's participation in the park's management, some of BINP and UWA's top officials pointed at particular constraints restricting their ability to do as they would otherwise want to (particularly regarding community conservation). Some of these limitations include financial restrictions whereby there is insufficient budget to meet all

demands, obtain adequate communication equipment, among other issues. A related example was given by one of our interviewees;

"No incentive is given to the Conservation Area Manager to run the park well since all BINP money is sent to UWA. This has implication on the social institutions of the park's management culture; for example, workers may not have the will to work more to generate income. They may not easily address issues pressing the park because they have budget limitation" (Social science researcher 2010).

In sum, we found out that environmental and biological values are BINP's key concerns. However, the values associated to local people's benefit and participation remain underestimated. Prioritising the former values over the latter is to a large extent understandable, because the former are the park's main conservation values. If gorillas died, for example, it would make less sense to maintain BINP under high protection since they are the major tourist attraction. In this sense, a social science researcher pointed out to the fact that most BINP workers are biologists and foresters, and this creates a bias in the amount of knowledge that there is concerning agriculture and livelihoods of local people depending on the park's resources. The fact that local people's livelihoods are not taken into great consideration leads them into conflict with the park's management; for example when park wildlife damages their crops and people is not compensated for it. Therefore, the researcher recommended, the recruitment of more staff with knowledge about extension services[23] as this could contribute to a better understanding of agriculture and the costs related to the park's impacts on people's livelihoods.

6.3.2 Norms

In this section, we use Hatch (1997) (2001)'s definition of norms to describe and examine how they contribute to the management of BINP.

"Norms are closely associated with values. They are the unwritten rules that allow members of a culture to know what is expected of them in a wide variety of situations" (Hatch 1997:214).

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[23] *"Important element within the array of market and non-market entities and agents that provide human capital-enhancing inputs, as well as flows of information that can improve farmers' and other rural people's welfare"* (Anderson & Feder 2003:2).

BINP as an institution has both formal and informal norms. These norms are usually associated to problems that the park experiences and the ways in which it solves them. Therefore, these are considered social norms.

For example, when BINP was declared a National Park in 1991, new restrictions were imposed on local people's access or entry to the park. Since most local people's livelihoods, especially the Batwa, depended on Bwindi's forest resources, conflicts quickly emerged between them and park officials. UWA therefore devised means of improving their relationship with local people particularly because the conflicts affected their overall management objectives. They established a Community Conservation Policy as a mechanism of initiating collaborative management of BINP resources. This policy enables local communities to benefit from the park's existence by accessing some of its resources (Atuhaire 2009; Namara 2006). This reflects the park's adherence to their own norms of improving park-local people relationships, which indeed led to an improvement in the relationship between park officials and local people. Additionally, the economic status of both the local people and the park's officials advanced evidencing the park's progress in their management.

However, BINP's Community Conservation Initiative also reflects some conflicting norms. One point in case is the revenue-sharing scheme which allocates 20% of the fees collected at the park's gate for local community projects. The purpose behind this initiative is to improve local communities' economic position and generally develop their infrastructure. However, during a focus group discussion with local people, we got to know that in fact BINP decides how this revenue should be used, even if people in principle were to decide themselves what to use it for. The majority complained that it was their leaders and a few well-off local households who were mainly benefitting from this scheme, *"leaving the poor to get poorer."* One of them mentioned,

> *"Another issue is that, the money from tourism revenue [that is] set aside to support local communities is taken directly to the 'Gombolola[24].' The goats bought using that money end up in the hands of the richer people such as local leader, so the poor do not end up benefiting, yet they are the ones normally closer to the park where [they have] problems [with] animals [constantly] raiding their crops"* (Focus group participant 2010).

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[24] A 'Gombolola' is a parish.

In relation to this, a BINP senior staff commented,

> *"It is always very difficult to change the attitudes of communities [even if] they have been given a lot of money. There is still a good proportion of the community [questioning] why that place [Biwindi] is a park simply because they are being stopped from hunting, accessing traditional resources, [even though] these are things given by God. Therefore they wonder who the park managers take themselves to be"* (BINP key informant 2010).

Some of the local people have started collaborating with park managers by notifying people attempting to carryout illegal activities such as poaching and logging. Much of this has been the result of the increasing awareness by local people of the park's importance as well as by the recent improvements in the relationship between adjacent communities and park managers. However, illegal activities still subsist as will later be discussed in Section 7.4.2.

Regarding social norms furthermore, people living close to the park also have various informal or social norms. For example, after 7 o'clock in the evening, no one is allowed to walk alone a long a certain border of the park because of fear of dangerous animals such as elephants. If people see someone doing it, it is their obligation to warn them about it and if one is driving, it is compulsory or required to offer them a lift.

Another example of local informal norms (although in some contexts also considered formal) is the way in which one responds to and reports problems with wildlife (problem animals) and poachers. Park staff stated that it is a rule for them to respond hastily to any cases of problem animals and poaching by either chasing the animals back to the park area or by reporting poachers. They argued that this was in order to ensure local people's security and property such as their crops. Another reason was to ensure the conservation of the park's biodiversity (i.e. the animals being poached). Moreover, they asserted that local people were also expected to report any cases of poaching and notify park staff in case there were animals raiding their properties, especially crops. According to the local people, this was an unwritten rule. If any person would see a crop raider in a garden that was not theirs, they would try to chase this animal back to the park and at the same time notify park authorities about the case so that they could respond immediately. This would not only save their crops and lives, but also enabled park staff to

efficiently carry out their duties. Such joint collaboration contributes to both the conservation of the park's biodiversity as well as saving local people's crops and lives; all of which are of BINP's management.

6.3.3 Perceptions

It is imperative to understand people's involvement in park management in order to identify their perceptions towards each other or towards the park itself. According to some senior staff, BINP as an organisation implements most of its programmes through both direct and indirect collaboration. They have a partnership policy based on the engagement between stakeholders. The management of BINP together with the stakeholders are all guided by the General Management Plan (GMP). In this sense, if a stakeholder wishes to work with BINP, they have to look at the GMP and concentrate on maintaining or even uplifting the integrity and conservation status of the park. Once a stakeholder who does not work for BINP management suggests that they are interested in helping the park with some particular aspect, then the park authority considers the request. As mentioned earlier in Section 5.3 on park management structure, what happens in BINP is reported to UWA's top management even reaching the ministry level. Similar cases, the park authorities also interact with other internal and external stakeholders such as NGOs, research groups, the international community, local communities, politicians, academic institutions, camp and hotel employees and the press/ media in various ways. This interaction forms certain attitudes among the park's management staff towards internal and external stakeholders and also vice versa. The section below presents the involvement of different stakeholders in BINP management and what perceptions the park authorities have towards them regarding their contribution to its management and the other way round.

6.3.3.1 BINP staff's perceptions of internal and external stakeholders

Internationally, BINP is a world heritage site governed by the World Heritage Convention, which Uganda as a state party ratified in 1972. The convention has particular principles and it has developed operational guidelines for managing BINP as a world heritage site. It means that some of BINP's decisions and activities are influenced by the international community. Additionally, the mountain gorilla is a critically endangered species. The Wildlife Conservation Society (WCS)

and the International Union for Conservation of Nature (IUCN) have a list of species that are considered endangered. To help save these species, they have also through CITES banned the trade in any of their product of these species. CITES and Ramsar conventions are some of the conventions identified in the policies and laws section, and as long as Uganda ratifies these international conventions, it is also bound to follow their regulations. BINP management is positive about these interventions by the international community and recognises their strong input to the park's effective management. It also uses these conventions in its conservation policy approach. Through such guidelines regarding endangered species, BINP is able to easily enforce laws that protect them without much opposition from other parties such as local communities or hunters. Additionally, the international community, through organisations such as WCS and IGCP donate money and equipment to BINP and facilitate research among other interventions. This contributes to the park's economic development and sustainable biodiversity conservation, which are part of the park's goals.

Furthermore, in terms of support, many NGOs reported to usually give assistance to programmes that are pro-the community (supporting the communities) and pro- tourism (supporting tourism). They expressed that these sectors especially, that supporting the local communities was ineffective and so endeavour to improve local people's benefits from the park. Following the plans and conditions these NGOs lay down, the park's achievements and performance becomes better. Regarding financial and technical support, they for example train BINP staff in carrying out census, fund problem animal control interventions such as digging trenches to control animals like elephants from jumping or going to areas outside the park and intervene in issues concerning local people's involvement in park management such as being a part of the decision making process.

However, some park authorities stated that they at times see NGOs as not being neutral especially regarding perceptions on local communities' involvement in park management. For instance, when deciding how much resources local communities could access from the park, Cooperative for Assistance and Relief Everywhere (CARE) was an intermediary institution between park officials and local communities. However, park staff felt that CARE was mainly siding with local communities (Blomley 2003). Such circumstances create tension between park officials and NGO representatives, which may affect how they relate. Communication and

coordination between these two groups may eventually have a negative impact on local communities' participation in park management as the park authorities may take advantage of their position during such negotiations.

The research groups mainly contacted in this research were ITFC and CTPH. According to our BINP key informants, research groups answer to requests by UWA and particularly the ones that manage BINP. Any questions that these parks have regarding vegetation, animal life and conservation issues, are responded to by research groups. The research groups are asked to set up experimental sites when a certain resource is being considered to be accessed by local communities. They also carry out research on gorillas and together with UWA, they do research on the possible impacts of tourism on the life of gorillas. Due to the increasing human population around the park, there is a lot of research centered on diseases, which can be transmitted between the gorillas and people. Diseases are the greatest threat to gorilla conservation. The research groups mainly advise BINP to use the well informed information they have researched about. They also train people who sometimes end up working with BINP or UWA, especially those in management and research. ITFC and CTPH provide information to BINP authorities to make decisions that enable them to carry out their activities. BINP senior staff pointed out that research groups contribute substantially to its management by providing information that enables the park to effectively function through sustainable biodiversity conservation. The information also enables park officials to know how to best manage the park's resources.

According to most park staff, academic institutions are rather powerful regarding their contribution to BINP management. They have carried out a lot of research that has benefited the park. For instance, a senior park staff reported that the work on regeneration forest has been strengthened by Makerere University staff that have done studies in BINP. A Makerere university staff reported that the university has also conducted some training on fire protection for rangers in BINP. Additionally, several university staff have worked with some neighbouring communities such as Nyundo to develop a management plan for a forestry part outside BINP. This was done with the aim of reducing pressure on park resources. During the university staff's research on plants, the rangers got to learn more and identify plant species which is an advantage to the park's conservation and tourism endeavours. This reflects that the research carried out by academic institutions fits within the park's management thus contribute to its development. The

park staff also affect research in that research priorities are often decided upon by the park management. BINP's perception of researchers is that they play a significant role in the management of the park, and it is because of their activities that the park's developmental adjustments are made. In general, we learned that there are many common perceptions between park staff and researchers regarding research being carried out to support park management.

Regarding accommodation groups, BINP staff perceive them as a very important category that supports the park's management in relation to tourism. They provide accommodation to the park's visitors and through these, guests develop attitudes towards the park. People often judge whether their visit to the park was good or bad by gauging how they were treated by the hotel, camp or lodge employees. Therefore, these people have an important responsibility regarding handling park visitors. They are to ensure that visitors are satisfied with their services in order to minimise complaints. This can be done through good planning and preparations. BINP staff interviewees mentioned that the accommodation facilities around the park are doing their level best and new developments are frequently seen. They have not heard many complaints from visitors. Additionally, BINP receives money from them in form of concession fees as payment for operating in collaboration with park management. Furthermore, the park staff actually encourage lodges, camps and hotels to provide employment to local people. Therefore, they do not only contribute to the park's socio-economic development, but also to the economic development of local people.

The majority of BINP officials affirmed that the collaboration between them and local communities has to a certain extent generally improved, not only regarding their relationship, but also the park's management. These communities are reported to support BINP management in protecting the park's resources. For example, one of the park's senior officers mentioned,

> *"If you have a very good relationship with communities, they actually police the resources themselves. Before rangers are even sent to arrest the poacher, the people in the communities will be the ones to caution the poacher for being a problem in their village, since they know that they benefit from the park. This solves a lot of problems for the park staff; it also reduces the park's management costs because they do not have to employ many people to go find the poachers or illegal plumbers"* (BINP key informant

2010).

According to another park staff, there were recently some poachers who handed over their poaching equipment to the park staff and promised never to poach again. Such people have been sensitised by fellow community members and now realise the importance of the park's existence. She reported that this had helped to reduce operational costs and also enhanced protection of these resources due to working side by side with local communities. She further said that having such a cordial relationship had facilitated local communities to achieve socio-economic development through receiving money from the revenue sharing scheme and gorilla levy fund which supports their projects. There are six gorilla groups in BINP and from each tracking permit, 5 US dollars is put aside to support community projects. This is in addition to the 20% total gate collection. According to her, such an amount of money would be able to address some of the local people's problems, thus alleviate poverty and bring about rural development, which are among the park's top most objectives.

The increasing local population has some consequences since growth has policy implications. First of all, the land adjacent to the park becomes fragmented because of the growth as the terrain neighbouring the park is also very steep. Cultivation leads to loss of soil fertility and lower land productivity which escalate poverty. Park managers argue that tourism could help to complement livelihood economic activities and compensate food insecurity.

One of BINP's approaches to ensure better performance and delivery is the community conservation strategy in which local communities are incorporated in the park's management. According to several park staff, there are various activities that local people are involved in as for example being employed as BINP workers and holding meetings with them. These activities help local people appreciate the importance of the park. They do, to some extent, look at the park as being a part of them. The park officials and local people hold many meetings. The park authorities need the reactions and suggestions of the communities because the issue is generally to ensure that the communities support the conservation programmes of the fauna and flora. Community committees are set up from the district level down to the local level. This makes the local people, to some extent, part of the management of the park. The park's management appreciates this especially when it comes to animal problems so that they can better know how to

handle such issues. According to park staff, the conservation department in BINP sensitises local people to know and relate to the conservation activities. In this way, the communities inform, to some extent, park decisions and actions. The effect of involving local people in the park is that it brings the communities in better relationship with the park management. They also become a supplement regarding operations in the park thus strengthening its management. The park staff, therefore, perceive local people as significant players in the management of the park.

Politicians were recognised by BINP staff to be of great significance to the management of BINP. They were reported to support and sensitise local communities by informing them about the importance of the park and the need to protect it. They also play a major role regarding decisions of the revenue sharing fund. According to park staff, they are involved as members of the local environment committee through the CPI institution. The park management declares the money they have as part of the revenue sharing to programme committee and the committee expends it after identifying what projects to support. The committee screens the presented projects and when they agree, they meet the criteria set up by the park management so as to support those identified projects. Several park officials argued that, together with these committee members, the park management also identifies important pressures on the park. For instance, if the pressure is that people use trees from the park to support their livelihood, then the park management finds a way of addressing such an issue by supporting income generating projects so that the pressure on park resources reduces. Another example given was, if people are losing crops to animal raids, the park management could look at interventions such as planting hedges, thus the funds could go to such areas. The community representatives who are politicians could therefore make such decisions. According to park staff, the politicians' work facilitates assurance of the communities of what BINP management is doing and this adds some weight to the management of the park. It also helps the park managers to balance their performance and delivery thus politicians act as mediators among the three groups. By doing this, park staff argued that they could reduce tensions between park officials and local communities making management easier. It also facilitates collaborative management, which is one of the park's approaches to improve its performance. However, some social science researchers who have carried out research around BINP argue that this is not exactly the way it is (See for example: Tumusiime & Vedeld 2011).

In real life, politicians were perceived by park staff as at times affecting the park management

negatively. For instance, a BINP key informant said,

> *"Whenever politicians are told that they interfere with park management, they resist saying that it is political influence. When they are campaigning for leadership positions, they are aware that people's problems are inadequate resources and land because of the high population. Therefore, they promise people that when they are voted into power, they will talk to the government to de-gazette part of the park so that local people can get more land for cultivation"* (BINP key informant 2010).

He further argued that it is obviously not easy to de-gazette a national park, as it is a costly process both in money and time. Such policy issues, where politicians put forward population measures is perceived well by local people, but strains the relationship between both park management and local people, and between politicians and park management. It also reflects different perceptions of what is sustainable development.

The press/ media were identified by the park staff, as also playing an important role in influencing the decisions and activities that manage BINP. They normally intervene if a key threat to the conservation area is highlighted. But mostly, this comes up with strategies and it depends on the nature of the threat. For example, a ranger reported that, a few years ago, DRC rebels killed gorillas and a park staff in BINP. This became an international event, partly because media highlighted the problem. She argued that such cases at times lead to the government and the international community interceding. Another example she gave, is when the press highlighted the increase of poaching and insecurity in PAs. The government then had to intervene to strengthen security in those areas. In fact, UWA has special Uganda People's Defense Force (UPDF) soldiers in all PAs to improve security and ensure that wildlife is protected. Such awareness by the media enables the concerned parties to intervene regarding addressing park challenges as well as progress. The park management, therefore, perceives media as sharpening people's interests and views about BINP.

BINP has a media focus with a Public Relations Manager, a Tourism Officer and wardens that all send the information to the UWA HQs. At the HQs, this information goes to the Public Relations Manager who uses this with the media. BINP officials perceive the media as very important to

the park's management because they provide the public with information regarding the national park's situation. This exposes both developments in the park and also the areas that need extra management support to improve performance.

6.3.3.2 Internal and external stakeholders' perception of BINP

At the global level, BINP is considered an important area because of its biological diversity. It is composed of a forest which is considered to be a vital carbon sink which helps in reducing the accumulation of green house gases that could lead to global warming and eventually cause unfavourable climatic changes (Bush & Mwesigwa 2011). It also harbours gorillas that are endangered species, more than 300 bird species, and trees, among other valuable species. These have also led to tourism growth which has also boosted the park's economic progress as well as that it offers.

NGOs perceive the park staff to sometimes misunderstand their intentions. For example, during the negotiations for local communities' access to park resources, CARE was a mediator. They felt that BINP officials saw them as favouring the local communities. CARE always did all its interventions considering its main goal, which is to ensure poverty alleviation and rural development (Blomley 2003). The NGOs also consider the park management to be successful because the park's resources are still there, especially the forest and animals such as gorillas.

Some NGO representatives pointed out that park authority have not included human rights sufficiently in the management of the park. On the ground, many NGOs stated that park managers do in the best that they could, given available resources. There is a lot of pressure from the local community issues.

According to a worker in one of the NGOs, the national parks of Uganda have been formed without much respect of indigenous communities and their livelihoods. He further stated that this is not only Uganda's situation, but also a global situation. BINP conservation endeavours have not really tackled human rights issues well and indigenous people's needs are not prioritized which is an injustice to them. This, according to him, does further not portray what BINP says in its mission about including local communities in park management, thus there is a weakness in its delivery efforts. Furthermore, he argued that there is a coalition between indigenous

communities and biodiversity. In his view, indigenous communities tend to protect and manage the biodiversity so they are the best people to protect and manage the park. Therefore, excluding or denying them the rights to land and livelihood is a big mistake in terms of creating a successful park management. This is partly for right-based reasons, but also because they devise means of illegally accessing park resources, which will have a negative effect on the park. Additionally, he states that on one level, there are management issues, meaning that the indigenous people's access is also a management responsibility by park officials. To him, enabling the communities to access the park should not be perceived as a negative act, but as a right in order to better manage the park and avoid activities such as poaching and illegal timber collection.

According to the research groups that participated in our study, BINP provides them with research ideas thus giving them relevance in the park's management and development. The park also assists them by providing rangers to ensure their security. One research group reported that almost 99% of its activities were in some way influenced by the park. All the gorilla samples they got and analysed were collected by the park staff.

Some of the samples were also collected by HUGO, which is a park innovation. This research group is a charity organisation and depends on grants. They plan to seek financial support from the park management. Another research group stated that the park does not control their activities, but felt that their research influence the park's decisions. They also stated that some of their findings are used as justifications to influence park management. An example, they looked at by-law changes regarding multiple use zones.

Furthermore, both research groups perceive BINP management to have a positive influence on local people. For example, according to park staff, there has been development of multiple use system of the park resources and a development of agriculture outside the park. Additionally, they stated that areas which came into tourism much earlier such as Buhoma, their communities have transformed. But the areas such as Nkuringo, have not yet been much influenced. According to park staff, the Batwa are, to some extent, now proud and comfortable with identifying themselves as Batwa in public, which was not the case before. For example, the park stuff stated that no one in other communities such as Bakiga wanted to earlier associate

themselves with Batwa, but they are now recognised in society. Currently, there is local people's access to health services, to some extent electricity, and they are also improving economically by keeping some animals, which was not the case before. According to a group of Bakiga in a focus group discussion, there is an increase in production except that it is difficult to link this production to tourism. However, they also mentioned that there are people who have suffered from losing access to park resources and benefiting nothing from the new opportunities from community conservation. Recent studies around BINP reveal that local communities, especially, the Batwa, are living in poor conditions and their benefits from the park, especially; from revenue sharing are almost insignificant (See for example: Hodosi 2010; Tumusiime & Vedeld 2011).

An in-depth interview was done with a professor in faculty of Forestry of Makerere University as a representative of academic institutions. He stated that the university as an institution generally relates well with UWA and the various parks. The university mostly seeks permission for research and when they have research findings, they share them with BINP. As an academician, he sees his work affected positively by the park decisions and activities. For example, he mentioned that if the permission to carry out research is granted quickly, the whole research becomes simplified. Additionally, he stated that they continuously collaborate with ITFC and carry out joint research that also fits into management of the park. However, if the park raises the research fees for students and university staff, it becomes more difficult to continue much work.

The professor's general perception of BINP is that its management is progressing as its forest and the neighbouring forests and fauna are still there. He stated that he has not heard of or seen any conflicts with UWA and Makerere University or the park management and he does not see any reason for conflicts because they complement each other's activities. Broadly, the relationship between academic institutions and BINP was reported to be close. However, there are worries by some Makerere University staff if this will stay the same due to the many changes in UWA and BINP's top management.

When conducting semi-structured interviews with some of the camp/hotel employees, perceptions they have towards the park and its management were mapped. Decisions and actions made by park authorities affect them in different ways. For instance, when the park management

improves infrastructures such as roads, visitors travel safely and on time. They also benefit from this because they are able to plan and coordinate their responsibilities regarding accommodation and customer care efficiently. This also boosts economic returns as they heavily depend on the number of visitors coming to the park. The park's decisions to limit the number of gorilla tracking permits per day and the high prices of these permits as compared to other national parks also limit the number of customers to their business. Most camp/hotel employees reported that the park staff normally hold meetings with them and are given the chance to raise issues that can effectively improve not only their business, but also the park management.

The internal stakeholders interviewed under this category said that their relationship with park staff is generally good. Some of the park staff's decisions and actions still affect their activities. They mention that the success of their businesses is based on the availability of tourists in the park and the collaboration they have with the park management. Additionally, they expressed appreciation to the park management because of the advisory services on what is expected from them as park management stakeholders. They thought the management of the park was successful and this is reflected from the progress of their businesses and the improving conditions of the surrounding areas to the park.

The local leaders interviewed in this study revealed that they hold various meetings with park staff as representatives of the local people in the areas surrounding the park. If there is something that the local people are dissatisfied with, they talk to their leaders who then report to the park staff. Through this, opinions of the people are presented to the park management. Also as leaders, they reported that they are consulted by the park staff over management issues concerning the community such as security matters in the areas. The park staff also support local leaders while carrying out their duties as politicians. Some of the leaders said that they relate well with the park management regarding conservation of the park resources.

However, they also reported that this close relationship is being reduced especially regarding decision making. As a result, they at times feel that their contribution towards park management is neglected. One of the leaders put it this way,

> *"Well, initially, we were part of the decision makers. Local people caught in any illegal*

acts in the park would be brought to us to seek justice. We and the park staff would reach a mutual understanding upon what punishment to give the culprits. However, this is to no longer the case; the park authorities themselves decide upon what to do" (Local leader 2010).

As leaders, they feel a duty to have a hand in solving issues arising in their respective areas. The local leaders blame the planners of the revenue sharing scheme for increasing the negative attitudes of local people towards the park. They stated that when communities started receiving goats for instance, the numbers were small and not at all catering for all local communities. One of the leaders mentioned that it could take more than 20 years to cover all members in one community. Similar studies around the park reveal the same (See for example Tumusiime & Vedeld 2011). Many who have never received any benefit from the revenue scheme are quite bitter and unhappy with the park. They tell their local leaders to tell the park management about their need to also benefit. If they notice no change, they blame local leaders for not carrying out their duties. Eventually, the relationship between local people and their leaders is affected due to the fact they feel that local leaders are working hand in hand with the park staff. Additionally, the relationship between park staff and local leaders will also be affected in a way that local leaders may have their loyalty towards their community members, thus avoid informing the park about issues that may affect its management, such as reporting poachers.

The local people involved in park management include both Bakiga and Batwa ethnic groups. 4 focus group discussions were conducted with them. Their perceptions of BINP were mixed as will be elaborated below.

The majority said that their relationship with the park management is currently better and it improved after the introduction of a collaborative resource management approach where multiple use zones were established. The local people's involvement in the park management has been described above, under BINP staff's perceptions towards local communities. According to UWA (2001), all decisions are made by the top management of the park and the local people participate in conservation because they are adjacent to the park. Nonetheless, some of the local people claimed that the relationship with park authorities is slowly deteriorating because they are not benefiting much from the park compared to costs. Additionally, they feel that their involvement

in park management is being reduced. Some of them have started questioning the revenue sharing scheme because they have either never received any benefits on that it is not regularly received by their parishes as stated in the revenue sharing policy. One of the interviewees said;

> *"Our housing conditions are very poor, yet we live adjacent to the park. All that revenue we hear about being earned from tourists, why don't they use it to improve our living standards? All we hear is that people received goats, but it is only our leaders and the rich benefiting from this. The park and its management are to some extent successful, but the policies they use have weaknesses"* (Focus group discussion participant 2010).

Some local people do confirm that they had received goats the previous year from the revenue sharing scheme and said that the park was fulfilling what they had promised them. One of them put it this way,

> *"We appreciate the presence of the park because it has brought in outsiders we would have never met. They have supported us by educating our children. The hospital established by Dr. Scott and the craft shop under the Batwa Development Programme are all results of the park. We receive all these benefits because of the park"* (Focus group discussion participant 2010).

Additionally, they mentioned that Mgahinga/ Bwindi Impenetrable Forest Conservation Trust (MBIFCT) under the park management bought land for the Batwa settlement. The goats distributed among individuals were given with the conditions that if these goats reproduced, the kid, if female was to be given to another person in the village and the sequence was to continue like that so that other people also benefit from the revenue sharing scheme.

During an in-depth interview with another Mutwa[25], she mentioned that settlement for the young generation is still a big problem since the small pieces of land (0.25 hectares) given to their parents by the park staff can no longer sustain the growing population. She urged BINP management to also consider them as a marginalised group. To support her point, a man in one of the focus group discussions with the Batwa said,

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[25] A Mutwa means one person from the Batwa group of people

"The park workers only come in to educate people when they have heard that some people are illegally going into the park and poaching. Or, in case they hear of any insecurity from the neighbouring countries such as DRC. There are only two Batwa employed as rangers in areas of Mpungu and as tour guides in Nteeko. However, the jobs they have are those awarded with low wages such as potters and cannot enable them to buy bigger pieces of land" (Focus group discussion participant 2010).

In general, the relationship between the local people, especially, Bakiga and park authority, was reported to have improved during the last few years. However, there are some concerns, particularly, by the Batwa have regarding employment in and around the park, costs from problem animals, and extent of benefits from the revenue sharing scheme, and access to land.

6.3.4 Recommendations to improve BINP's management culture

There are particular challenges that BINP faces regarding its management. These will be presented as cases in chapter 7. In order for BINP's management culture to improve, there needs to be adjustment in its management styles. The following recommendations were drawn both from suggestions from our respondents and also based on our own interpretations when looking at the problems that the park faces.

For BINP to operate successfully there is need for an advancement of staff capacity, logistics, vehicles, and equipment. Resources such as reasonably sized budgets, sufficient vehicles and competent staff that are needed to implement different programmes should be looked at. According to both natural and social science researchers that participated in this study, the education type and level considered while recruiting park staff should be relevant to park management in one way or another, so as to ensure competent skills applied while executing activities. This could help in ensuring that park staff have basic principles and practices of dealing with other internal and external stakeholders, particularly, local people so that better and cooperative park-local community relationships are established and maintained. Effective communication among park staff and other stakeholders could contribute to better and accurate analysis of park management situations, thus, positively affecting their values and perceptions towards park management.

Ugandan tourism is not internationally well known. BINP's management is trying to improve its products such as habituating more gorilla groups and introducing more activities such as canopy walks, so that more revenue can be generated. There is need to market the park internationally so as to attract more tourists. The park staff should also care more for their visitors. As an example, they could put up a visitors' centre with more entertainment such as Music, Dance and Drama shows. According to a few tourists we interacted with, it is also important for the park to either stick to or even reduce permit prices to attract more tourists.

There is a vast interest in BINP, especially due to the existence of the gorillas. There are donors ranging from those who are conservation-oriented, to those who are development-oriented and those who are trying to do businesses. There are different organisations with different outlooks and backgrounds. These organisations are not working against one another, but there is need for more collaboration among them because not all of them are working towards the same goal. If there is little collaboration, achieving park goals may prove difficult. This lack of coordination has impact on the park's performance.

Regarding the sharing of revenue, the percentage given to the neighbouring communities is only from gate collection and the gorilla levy fund. The park management could include a percentage from the concessions fees and other activities. This is because the gate collection and gorilla levy are a very small fraction of what goes into the community. But even then, the mechanisms of utilising these resources within the communities are still a problem. This is because some local people would like cash money and not things such as social services. A particular issue pointed out by local people is compensation for crop raiding. They want compensation and perceive this as a right to enhance their livelihood. This could improve the relationship and perceptions between them and park management.

According to one of UWA's top managers, the GMP which is the guiding document for BINP should be included in all activities to avoid losing track. Additionally, she saw more conviction with the government and writing proposals to the international community to fund UWA to be important. According to her, this will indirectly benefit BINP, by UWA allocating more funds to support its activities. This could also be a way of increasing park staff's salaries thus strengthening their will and attitude towards work. Finally, she argued that this could also lead to

the improvement in the park's performance and delivery.

Another suggestion is to involve the local people more, especially the Batwa in the planning process, allowing them to access minor park resources and develop more employment opportunities. Since most of them are uneducated, the park management should work with other Batwa development programmes to improve living conditions. This will not only improve the local people's well-being, but may also improve their attitudes towards the park.

According to one of the NGO representatives we interviewed, the inclusion of human rights principles regarding local people's participation in park management should be strengthened. He argued that this could be done to improve the minority group's living conditions, especially the Batwa who lost their homes and livelihood to the park's existence. Additionally, he stated that this could further improve the relations between park officials and local communities. Furthermore, he argued that this could reduce individual discrimination and encourage a society that is characterised by equity, inclusion and empowerment.

Regarding gorilla migration, some studies need to be done so as to understand why they move from BINP to other areas within DRC and Rwanda. According to a BINP senior staff, animals normally move for different reasons such as looking for better forage. He, therefore, reported that there is need for research to be undertaken to provide answers to some of those questions leading to gorilla migration. Furthermore, he mentioned that questions of habituating the gorillas and other animals could be answered so as to improve performance because they keep arising. What to habituate and what not to habituate, and where to habituate could be answered so that both park management and other people are aware. The park staff therefore thinks that this could enable both parties to know if the park's main values are conserved.

6.3.5 Summary on BINP's management culture

In this section, we have discussed the findings regarding the management culture of BINP. Quotations have been used to elaborate different interviewees' values, norms and perceptions concerning their involvement in park management. We have related these findings to Schein's organisational culture model. This was to show that BINP is a social institution encompassing particular social values, norms and perceptions.

This study exhibits that there are various stakeholders in BINP management, and they have different values, norms, and perceptions towards the park. The values differ between being biological, ecological, social and economic. BINP has been under different management schemes and therefore has had substantial changes in the management cultures. The change in management includes the different values the park's managers have had. While the park was under the FD, the foresters valued Bwindi as a forest and aimed at conserving the forest from a sustainable use perspective. When under UWA, BINP has been managed by workers with different educational backgrounds and skills such as Wildlife Officers, Foresters, and Biologists, among others. All these have rather strong conservation values that not only consider Bwindi forest, but also its biodiversity such as gorillas and birds.

We have looked at formal and informal norms in BINP. Many norms in BINP are associated with the park's problems. As a means of devising the conflicts between park officials and local communities due to the establishment of the park, BINP staff reported that the park's management introduced the Community Conservation Policy. Several of the park staff stated that this reduced the conflicts to some extent and also improved their relationships with the local people. Furthermore, they stated that this collaboration has further contributed to the improvement of the management of the park and demonstrates that the park is to some extent achieving its goal of working in partnership with neighbouring communities.

However, it was discovered that the community conservation approach is normatively perceived differently by different groups. For example, through the revenue sharing scheme, local communities are involved in it as beneficiaries of the gorilla levy fund and 20% of the total gate collections. They reported to have received goats; their children have been supported to attain education and employment in the park and other businesses associated to the park. Nevertheless, there is still dissatisfaction by the local communities regarding their participation in park management. They believe that their leaders who are in charge of the disbursement of these funds misuse them, leaving the poor poorer.

Due to the above dissatisfaction, local people reported to still perceive the park as not delivering as they promised regarding incorporating them into park management. On the other hand, NGOs, research groups and academic institutions believe that the park's management has improved

since they now have a better collaboration regarding research from which results enable the park management to make adjustments that may bring about outcomes that will develop the park. Most of them also still think that the park has not incorporated a reasonable emphasis on human rights of local people who have lost much of their livelihood to the park in park management.

6.4   Comparison of management cultures of MINAPA and BINP

In the next section, we will give a short description and comparison of the differences among MINAPA and BINP stakeholders' values, norms and perceptions.

The management in MINAPA and BINP confirm that they have clear biodiversity, tourism and community conservation values. Employees in both parks shared the core value, biodiversity, with their authority. However, park staff in BINP valued tourism and economic development to a greater extent than MINAPA staff.

We further found that the greatest difference was between the values of park employees and local people surrounding the parks. This was the case for both MINAPA and BINP, where park staffs' conservation values conflicted with local people's use values of the park's resources.

The Table below further describes and compares values park staff, and internal and external stakeholders embrace.

Table 6.1: Description and comparison of park staff, internal and external stakeholders' values in MINAPA and BINP

MINAPA	BINP
Park management: • Biodiversity • Tourism • Partnership with neighbouring communities and other stakeholders *Park staff:* Biodiversity *Natural science researchers:* Biodiversity conservation *Social science researchers:* Pro-communities *Academics:* • Biodiversity • Local people's benefits from the park. *Camp/hotel employees:* • Tourism *Local communities:* Economic gain from the existence of the park. *Masaai pastoralists:* Grazing areas inside the park	*Park management:* • Biodiversity • Tourism • Partnership with neighbouring communities and other stakeholders *Park staff:* Same as the park management values *NGOs:* Biodiversity. Pro-communities Tourism *Natural science researchers:* Biodiversity conservation. *Social science researchers:* Pro-communities *Academics:* • Biodiversity. *Camp/hotel employees:* • Tourism *Bakiga:* Park resources Economic gain *Batwa:* • Park resources • Economic gain • Empowerment.

(Source: Own fieldwork 2010)

Various norms were followed in MINAPA and BINP. An example is the report of poaching. It was apparent that all internal stakeholders in both parks viewed the act of poaching as wrong, illegal and punishable. They all therefore, claimed to report witnessed poaching to the park management. On the other hand, local people around the parks interpreted this norm differently. Several of them felt poorly treated by the park authorities and would therefore not report poachers, and further not assist the park in anti-poaching activities. Some local people were also

scared of the poachers, while others would not know who to report poaching to.

How park staff and local people act towards poaching is shaped by their values and perceptions of the subject and how they perceive each other.

The perceptions MINAPA and BINP staff have towards local people surrounding the parks were more or less the same. The majority of the staff in both parks perceived local people to generate challenges to the conservation of the park. Others further expressed that local people were a burden that often resulted into encroachment, poaching and damage of the biodiversity in the parks. Only a few park staff saw local communities as a crucial component in conservation. Local people surrounding both parks generally had a negative perception of the park management, especially regarding its employees. We believe that MINAPA and BINP management and staff's negative perceptions towards local communities, and vice versa, are one of the reasons why both parks' management partly fail in delivering in terms of community conservation.

We conclude that the management cultures in MINAPA and BINP mostly have striking similarities with regard to park staff, internal and external stakeholders' values, norms and perceptions towards conservation.

CHAPTER 7 – CASE STUDIES

7.1 Introduction

In this chapter, we use case studies to reflect and cast light on our first two objectives. The aim is to analyse the structures and cultures of MINAPA and BINP managements by means of the cases. This will enable us to evaluate elements of the effectiveness, efficiency and legitimacy of the management of the two national parks.

We present the legislations and responsibilities regarding each case. Given that values and norms are usually associated with what people or organisations believe is important to them, values and norms are constantly portrayed in their daily activities or actions (Hatch 2001). Therefore, we have chosen cases to further understand the structures and cultures of MINAPA and BINP managements.

We utilised semi-structured questionnaires, key informants semi-structured interviews, focus groups and secondary sources to gather information related to these cases. Seventy-seven semi-structured questionnaires were conducted in each park. The internal park respondents and key informants interviewees were park staff, NGOs representatives, researchers, camp/hotel employees and park "residents." Additionally, we carried out focus group discussions among local communities surrounding the parks.

7.2 Key management challenges facing MINAPA and BINP

There are several challenges facing MINAPA and BINP organisational structures and management cultures. The following section presents the main challenges.

Staff shortage

During the research, we found that staff shortages were a challenge in both MINAPA and BINP. Approximately 80% of the respondents in both parks expressed that, to some extent, not enough staff members were available to manage the parks. This would include the Ecology/Monitoring and Research Department, as well as the Outreach/Community Conservation Department in

MINAPA and BINP. Departments working with community conservation have got 1 employee in MINAPA and 5 employees in BINP, while the biggest workforce in both parks is involved with anti-poaching activities. This challenges the parks' ability to impose laws, protect the wildlife, and cooperate, communicate and educate surrounding communities surrounding the two parks.

Climate

MINAPA and BINP have shifting climates: BINP with two rainfall seasons and MINAPA with a single rainy and dry season. The climate in both parks leads to challenges for the park management and its employees. Drought in MINAPA was the main difficulty regarding climate, which frequently caused severe scarcity of water. Both park staff and animals in the park would suffer under these conditions, leading to dissatisfied staff members and animals migrating out of the park. In BINP, the heavy rains cause major challenges for the park management and its employees. The rain led to harsh working conditions in addition to creating delays and destructions.

Infrastructure

Poor infrastructure in transport means were recognised as MINAPA and BINP's challenges by our respondents. The road leading to BINP is in poor conditions and obstructs access to the park. This has affected tourism negatively by reducing the number of visitors. In contrast, access to MINAPA is excellent; MINAPA is only a 4-hour drive from Dar es Salaam using the TANZAM Highway. However, MINAPA employees and researchers in the park reported that the highway interfered with biodiversity conservation and tourism.

Staff accommodation

Park staff in both MINAPA and BINP complain about the accommodation facilities available to them. They stated that the structures they lived in were small and, therefore, lacked privacy because they shared rooms with colleagues. This limited them from residing with their families, which de-motivated their will to work. The lack of social arenas and inadequate modern equipment and supplies such as GPS, Internet, radio systems, maps and vehicles for monitoring the park, among others, were other challenges mentioned by the parks' staff. The park staff

advocated for infrastructure and equipment development in order to avoid problematic errors regarding efficiency in park management performance.

Funding

Insufficient funding is among the major challenges facing MINAPA and BINP. The money that the two national parks receive is not enough to implement their strategies, and is inadequate to successfully manage the parks according to ambitions. Furthermore, since TANAPA and UWA centrally control MINAPA and BINP, respectively, approvals of budgets are usually delayed. It is up to the top management to allocate what economic resources they endorse. Additionally, both parks depend on donor money, which may become a problem when the donors discontinue funding. All these identified challenges make it difficult for the two national parks to effectively implement their initiatives.

Additionally, research about MINAPA's changing ecosystem is limited. In-depth knowledge about its ecosystem could enable the park to achieve its biodiversity management objectives.

Poaching

Poaching is a huge challenge to wildlife conservation in PAs. It has been a concern for national parks in Tanzania and Uganda since they were established. During the 1970s and 1980s, an increase of poaching swept through great parts of the African continent (Klenzendorf 2007). Today, it is still seen as a major challenge for the management of national parks.

Muth and Bowe define poaching as *"any act that intentionally contravenes the laws and regulations established to protect wild, renewable resources, such as plants, mammals, birds, insects, reptiles, amphibians, fish, and shellfish"* (Muth & Bowe 1998:11). Most of the time, these behaviours are illegal harvesting activities, but they can also be illegal sale, purchase, transport, possession, and use of wildlife resources. This definition does not include violators who unintentionally or accidentally break acts and regulations. As Muth and Bowe write: *"to qualify as poaching, the illegal act must have a conscious intent"* (Muth & Bowe 1998:12). There are different classifications of poaching. Commercial poaching, which is for purposes of financial gain is often carried out by outsiders. Subsistence poaching is for domestic

consumption and is frequently carried out by local people. The total effect of poaching is still among the main threats facing PAs in Africa. (The United Republic of Tanzania 2009a). Our findings show that poaching still exists and constitutes a huge challenge in MINAPA and BINP. We will take a closer look at poaching as case studies in both parks in Chapter 7.

Community Conservation

Traditional conservation in Africa has been based on preventing human impacts on nature in PAs. PAs build on an exclusionary and militaristic model and surrounding communities barely have any involvement in the conservation and management of these areas. In Tanzania and to a lesser extent Uganda, national parks are largely managed according to the traditional definition of no habitation of consumptive use (Bergin 1995). In the beginning of the 1980s, new ideas related to community-oriented conservation approaches were introduced and "the community" became the catch-all solution for effective conservation and development (Goldman 2003; Hulme & Murphree 2001). However, there are several difficulties associated with community conservation and it poses complex challenges for PA managements.

A key challenge facing MINAPA and BINP is that the two national parks lack legitimate management in relation to the local people residing in the surrounding areas. Our findings show that local people have little say in decision-making, planning and implementation of management programmes in both national parks. Additionally, the communication between park officials and local people was reported by local people to be very poor, thus accounting for the negative perceptions of local people towards the park and vice versa. This could be a result of inadequate access to park resources by communities and park staff claiming that excessive access of local people into the park interferes with their conservation principles.

Local communities and social science researchers identified Human-Wildlife Conflict as among the gravest problems facing both MINAPA and BINP. According to Gunn (2009:45), human-wildlife conflict mainly refers to the damage to food and crops and recently involves contemporary concerns such as *"wildlife-borne diseases, environmental damage caused by invasive species, and automobile collisions."* The cause of this conflict is usually due to competition for resources (e.g. land) by people and wildlife. Crop raiding animals are, therefore,

categorised as problem animals because they cause physical insecurity to human beings. Furthermore, local people surrounding the parks are in turn hostile to these animals. As a result of the human-wildlife conflict, local communities around MINAPA and BINP face fear, injury and loss of lives, destruction of their crops and destruction of their farm property or infrastructure. Additionally, local people blamed the poor community-park relationships in both national parks for this conflict.

In the next sections, we will present problem animals and poaching as cases, which we identified as the key challenges facing both parks.

7.3   Case studies in MINAPA

Due to internal and external pressure, MINAPA faces several significant management challenges.

Internal pressures, such as lack of funding, inadequate money for outreach activities and community conservation, and the public infrastructure in MINAPA that incorporates 50km of the TANZAM highway, are declared by the park management to be challenges. Human activities adjacent to MINAPA incorporate problem animals, poaching, farming, grazing and settlements, which all are external pressures to the park (TANAPA 2007).

We have chosen two identified challenges as cases in MINAPA, problem animals and poaching. We will use these cases to reflect and analyse the management structure and culture of the park.

7.3.1 Problem animals

TANAPA was one of the first PA management authorities in Africa to include outreach activities for communities around the parks in their management plans. However, the practice of community conservation in Tanzania has experienced both successes and failures. (TANAPA 2007). A common challenge regarding community conservation that park management in Tanzania encounters is problem animals, particularly parks that are surrounded by local communities.

In this section, we will look at legislation on management of problem animals. Further, we will present the nature and extent of the issue and people's values, norms and perceptions towards it. Additionally, we will focus on different actions carried out by people operating within the park and local people to address problem animals. Finally, we will present various recommendations to deal with the challenge and summarise the case.

7.3.1.1 Legislation on management of problem animals

The Tanzanian government formally owns all wildlife in Tanzania. All wildlife existing outside national parks are governed by the Ministry of Natural Resources and Tourism under the Wildlife Division, while national parks are under the control of TANAPA. Furthermore, the Wildlife Conservation Act include all laws for the management, protection, conservation, development, regulation and control of wildlife (The United Republic of Tanzania 1974). The Act further aims at conserving the wildlife and its animals for the benefit of present and future generations. The national parks in Tanzania has an unique act, the National Parks Act of 1959, that contain all laws for controlling, establishing and managing national parks (The United Republic of Tanzania 1959).

Hunting, capturing or killing animals are strictly forbidden in all of Tanzania's national parks. However, outside the national parks the Director in charge of the Wildlife Division is the responsible and can automatically grant any person a licence that authorise them to hunt or capture any animal if it is not protected by any other written law. The Wildlife Conservation Act still cannot empower the Director to grant permission for hunting, killing, capture or wounding animals in any national park since it would be in violation of the National Parks Act (The United Republic of Tanzania 1974). Since animals migrate it is a challenge for national parks to control and protect them. If animals wander out of the national park area, they are no longer under the legislation of the National Park Act, but the Wildlife Conservation Act. Hunting or killing an animal that is outside a national park without having a licence is a crime, and conviction leads to imprisonment or a fine of an amount depending on the value of the animal hunted or killed (The United Republic of Tanzania 1974). However, if one kills an animal in self-defence different

laws apply. The Wildlife Conservation Act state that it is not a crime,

> *"to kill any animal in defence of human life or property or for the owner or occupier of such property or any person dependent on or employed by such owner or occupier to drive out or kill by any means what- so-ever any animal found causing damage to such property"* (The United Republic of Tanzania 1974:28).

The Wildlife Conservation Act further indicates that any person wounding an animal shall use reasonable efforts to kill at the earliest opportunity. If a dangerous animal that is wounded enters a national park, the person wounding it is suppose to report such entry to the nearest Park Warden which shall take necessary measures in killing the animal. If someone kills an animal in self-defence, the person must report the incident to a Game Officer and additionally remove ivory, horn, tooth or any other valuable trophy from the animal and hand it over to a Game Officer. Such trophy removed from an animal shall be the property of the Tanzanian Government (The United Republic of Tanzania 1974).

According to regulations, it is the Wildlife Conservation Act, and not the National Parks Act, that is responsible for protecting, regulating and controlling animals outside national parks. In other words, within the law, they are fully in charge of all wildlife movements occurring outside national parks (The United Republic of Tanzania 1974).

7.3.1.2 Nature and extent

According to TANAPA (2007), human-wildlife conflicts are widespread around MINAPA. Jody Gunn (2009) considers the human-wildlife conflicts in the park to be increasing both in frequency and severity and further seen as a major conservation concern.

MINAPA is surrounded by patches of human settlements that vary in size of agricultural land, human population density and distance of agriculture to the park boundary. Crop production is one of the main economic activities in these settlements. TANAPA reports that the human-wildlife conflicts around MINAPA frequently take place, especially in areas with abundant crop production, good pastures and permanent water sources during the dry season (TANAPA 2007). Human-wildlife conflicts are common in MINAPA and we identified them as a big challenge for

both communities surrounding the park and for the park management.

The main human-wildlife conflict in villages around MINAPA were reported to be crop raiding done by problem animals (Gunn 2009). Animals such as elephants, baboons, bush pigs, wart hogs, hippopotamus, buffaloes, birds, crocodiles, kudus and elands were species recognised as problem animals. However, internal park respondents and focus group participants reported that elephants and primates were the main culprits.

The Figure below shows main problem animals identified by internal park respondents in MINAPA and how many responses each animal obtained.
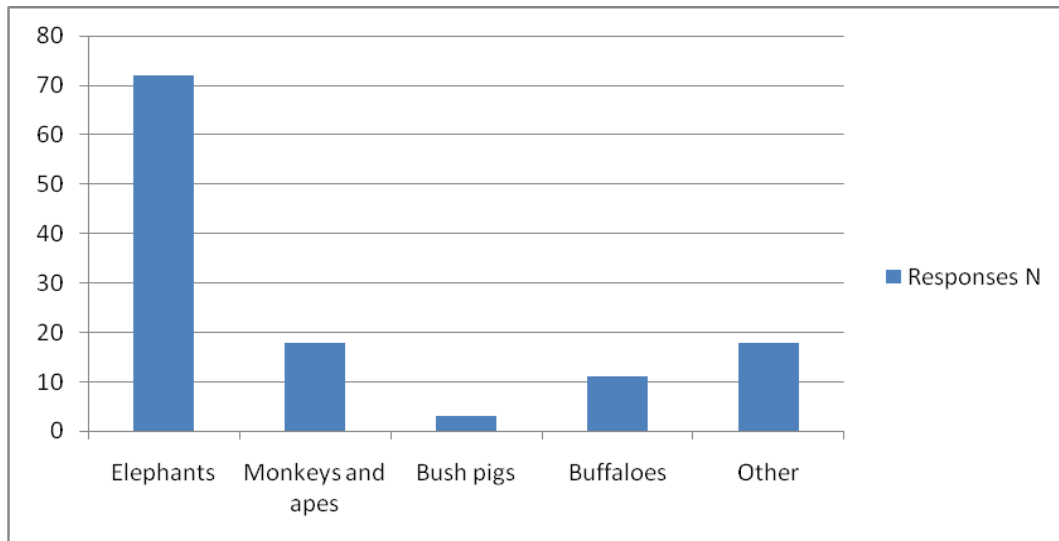
Figure 7.1: Identified problem animals in MINAPA

(Source: Own fieldwork 2010)

In 2009, Jody Gunn did the first quantitative evaluations of human-wildlife conflict around MINAPA. She found that even though the park has an abundance of wildlife with the potential to raid crops, almost 100% of crop raiding events recorded were from three species: elephants, primates and bush pigs (Gunn 2009). She confirmed that out of these three, elephants raided crops the most frequently (Gunn 2009). Our focus group discussions further verified this.

The wildlife movement outside MINAPA causes several challenges for both the park management and local communities. We found that they all perceived problem animals

differently, which together with their values shape how the problem is addressed. It additionally affects the relationship the two parties have to each other and how well they are able to collaborate.

The section below presents the different values, norms and perceptions dealing with the issue of problem animals.

7.3.1.3 Values, norms and perceptions

Park staff, internal and external stakeholders' values in MINAPA contribute to establishing their perceptions and actions towards problem animals.

As mentioned in Chapter 6 under Section 6.2.1 we present park staffs' values and it is clear that their core value is biodiversity, particularly the wild animals in the park. To further illustrate various park stakeholders' values we will present how these perceive punishment of killing a problem animal.

All internal park respondents state that hunting should not be allowed inside the park and wild animals strayed from the park should not be killed. Despite the fact that 94% of our internal park respondents declared that problem animals were rarely or never shot and killed, all still found it important to punish people for shooting problem animals if such an incident were to happen. Legally speaking, shooting a problem animal is illegal unless it is categorised as self-defence. The punishment measures for shooting a problem animal in Tanzania would be court, imprisonment or fines. We found that the preferred degree among internal park respondents of punishment varied, where some meant that fines or imprisonment were the best punishment, others preferred education to local communities. Local communities on the other hand did not feel that punishment was important. They further expressed that when someone killed a problem animal, it was self-defence, hence punishment was not necessary. Internal park respondents' perceptions of punishment with regard to killing problem animals illustrates that these respondents highly value the park's wildlife, thus the majority hold basic conservation values. Local communities made it clear that for them, it was their land and crops that were valuable and not the animal trespassing and ruining their crops. They furthermore expressed that park employees did not give the impression of understanding their situation or contributing enough in

protecting them and their property from problem animals.

Our findings reveal that people working within the park and local people clearly hold conflicting values. This creates a relationship with low levels of mutual understanding, communication and collaboration.

We found that local people around MINAPA often viewed wild animals in MINAPA as a threat and not as a value. As mentioned above, one of the main challenges local people adjacent to the park face are crop raiding. In most villages, people complained about problem animals causing reduced harvests and minimal incomes from agriculture. Vedeld et al. (2011) state that as much as 93% of households around MINAPA reported that crop raiding influenced their earnings. And as a result, 7.4% of total farm incomes and 4.1% total household income were lost (Vedeld et al. 2011). Crop raiding was reported to be the main problem, but not the only; killing and injuring of people and livestock, and disease transmission from wildlife to livestock and vice versa also occurred. We did not find confirmed documentation of human death concerning problem animals, but several participants in each focus group reported such events. Elephants and buffaloes were declared as the animals responsible for most injuries and death. This was also confirmed by Gunn's findings (Gunn 2009).

Local people additionally informed us that problem animals compromise the social situation in the village. Some people were actually scared by the domestic animals; especially they feared for their children. Additionally, protecting the farms during both day and night creates challenges on farmers' ability to carry out normal social activities and it increases the risk of diseases such as malaria (Gunn 2009).

Several people in each focus group discussion complained about not being acknowledged by the park management. Consequently, human-wildlife conflicts in MINAPA produce hostilities between the park management and local communities surrounding the park. Problem animals and the challenges they cause, such as crop raids, property damage and lost income, affected local communities perceptions toward the park. A great number of people in each village we visited expressed disappointment in MINAPA management. They identified problem animals as one of the key challenges for the park. However, perceptions concerning human-wildlife conflict

were different among people such as park staff, internal stakeholders and external stakeholders. Only 3% of internal staff respondents identified problem animals as one key challenge for MINAPA. Even though the GMP and TANAPA declared human-wildlife conflict as a challenge and a priority for the park management, we discovered that a clear majority of MINAPA's employees did not recognise it as a major problem. It was evident that the respondents inside the park had a greater focus on poaching when we mentioned the subject of 'park management challenges'. The respondents did however understand that problem animals were problematic for communities surrounding the park. In other words, most people working within MINAPA would not identify problem animals as a key challenge for the park management, but still have some sympathies with the local communities.

In the debate about problem animals, the issue of responsibility is evident. An elephant may destroy an entire farm in a single night, which evokes not only fear, but also anger and a sense of helplessness (Gunn 2009). The disagreement regarding the bearer of responsibility for animals migrating out of a national park is present in MINAPA.

Two key informants informed us that an animal outside the park border is under the district's responsibility and not the national park. Another key informant further reported that the government had game officers in every district and a special unit for assisting communities with for example problem animals. However, over 95% of internal park respondents believed that local people would report problem animals to the park management, and not to the district officer. This was reasoned by the shortages that the local government face in terms of facilities, firearms, vehicles and funding. TANAPA and MINAPA were therefore in practice, the ones assisting communities with problem animals. If problem animals were reported, the park would send rangers to the village, and the rangers would together with the villagers attempt to scare the animals away. The park authorities could not provide us with data about how often they responded to reports of problem animals. The impression we got, therefore, is that the park staff do not frequently respond to such reports. For example, the majority in each focus group discussion expressed that the lack of communication with the park management resulted in not knowing whom to report problem animals to. Others would not report because they felt that the park management never responded as well as helped them if needed.

We observed that the focus group participants in all villages perceived MINAPA as the responsible for problem animals, meaning predominantly crop raiding, regardless of how far from the park the village were located. Farmers and pastoralist also gave the impression of sharing the same perceptions. Participants in focus groups conducted in villages located north of the park with Masaai pastoralists, Parakuyo and Kiduho, villages, stated that wild animals from the park occasionally hurt or killed their cattle. They expressed that they considered MINAPA management as a greater problem than the wild animals in the park. They claimed that the park management did nothing but harm them, mainly in terms of denying them access to grazing land inside the park. During the fieldwork, we discovered that this had led to a dispute between Masaai pastoralists and the park management. Masaai pastoralists further claimed that park rangers had been shooting cattle that they had lost inside the park. However, the park authorities refused to be held responsible for such actions. Park staff further stated that all cattle found inside the park were brought to the police station in Doma, and could be realised after the owner paid a certain amount of money as a fine. Neither the Masaai or park staff provided legitimate proof of their claims. It was clear that the dispute had led to a poor relationship between the park authorities and Masaai groups located north of the park. Furthermore, the level of cooperation and communication had become deficient. It is important for the MINAPA management to find a solution to this dispute since it has an enormous affect on how the Masaai behave towards the park, perceive and value it and collaborate with the park authorities.

All focus group participants expressed a consistent desire for compensation regarding loss of crops and human life. TANAPA, however, does not offer communities compensation. Several key informants in the top management gave reason to this by saying that problem animals were not TANAPA's responsibility and that the government did not allow them to pay any compensation. However, both MINAPA staff and local people informed us that the park management provide a condolence in case of deaths. The family of the deceased would receive a certain amount of money as a consolation scheme. However, damage of crops was not compensated.

7.3.1.4 Actions and effects

According to all research participants, several actions are carried out to prevent crop raiding done by wild animals from MINAPA.

In MINAPA management it is the Outreach Department that has the main responsibility regarding the communication and collaboration with local communities adjacent to the park. Additionally, the department dealt with issues concerning problem animals in villages surrounding the park. However, several key informants in the top management informed us that all park staff and departments were supposed to be involved in creating a closer relationship between the park and local communities and assist in dealing with challenges concerning problem animals.

We found that the organisational structure of MINAPA created certain constraint for the park management when dealing with problem animals. The Outreach Department in MINAPA consist of one person and receive minimal of support from the park's budget. There is no programme working independently with problem animals, and we did not discover any well-functioning system dealing with reports or complaint regarding problem animals. Furthermore, the educational and training background MINAPA employees hold clearly influenced how they perceive and act towards problem animals. The majority of the park staff have got conservation backgrounds and military training with modest instruction regarding community conservation; in particular problem animals. We believe that this could be reasons for why the park is partly failing in addressing the issue of problem animals.

However, various measures were carried out by various park staff and people in communities surrounding the park to address challenges following problem animals.

The park staff reported that the park management raises awareness of the importance of protecting the park through outreach action. According to the Wildlife Policy of Tanzania, the government gives attention to the economic value of wildlife to rural communities (The United Republic of Tanzania 1998). Park staff further claim that park rangers respond to reports of problem animals by going to the village and scare the animals away. Nevertheless, local people stated that this was not the case, and that preventive measures had to be carried out by

themselves since the park management did not contribute much.

Measures used by farmers around MINAPA were simple, cheap, and immediate forms of protection against wildlife (Gunn 2009). Farm guarding techniques such as noise, whip, fire, dogs, torches and gunfire were used in protection against wildlife. However, we discovered that many felt defenceless especially against elephants and therefore did not carry out any serious measures to scare them away. Several also expressed that they wished and expected park rangers to come and scare the animals away preferably with gunshots.

7.3.1.5 Recommendations and summary

A number of measures to better deal with problem animals were suggested by various research participants.

Park staff and natural science researchers proposed prevention measures such as alternative crops in agriculture to prevent crop raiding by problem animals. Interviewees at SUA also suggested this as an effective measure. Another prevention measure mentioned by academics was fencing of the park and farms. Furthermore, several internal stakeholders mentioned that placing chilli around agricultural areas could assist in keeping animals away from agricultural land. A leading recommendation from several internal park respondents was keeping local people away and resettling them in a different area. The same respondents further stated that this was the only durable solution to the issue of problem animals. The Figure below shows recommended measures towards the issue of problem animals given by internal park respondents and how many responses each measure obtained.
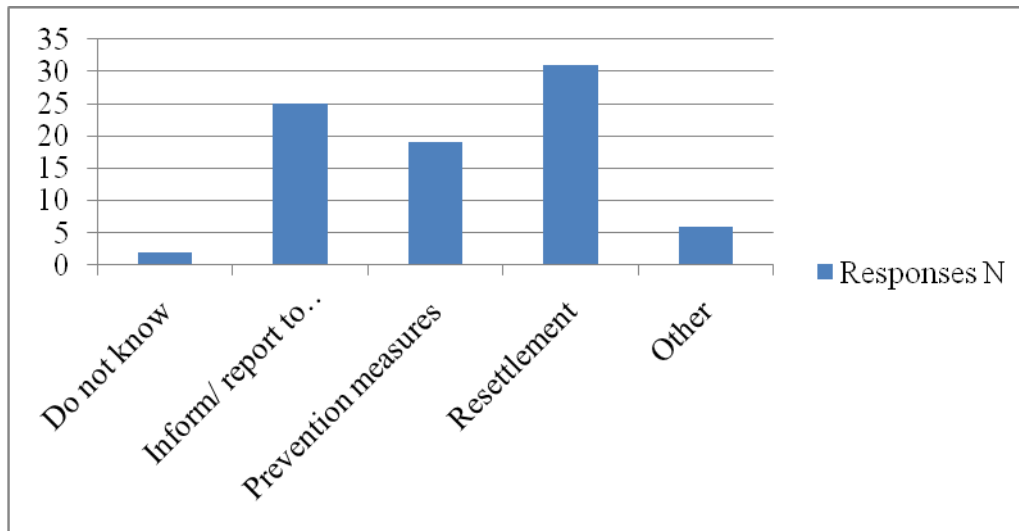
Figure 7.2: Recommended measures to address problem animals in MINAPA

(Source: Own fieldwork 2010)

Researchers in the park recommended MINAPA management to provide farmers with tools, knowledge and options for mitigation. Several camp/hotel employees encouraged the management to construct waterholes inside the park, both to keep the animals inside the park and also to attract more tourists. 90% of internal park respondents agreed and suggested that waterholes would be beneficial for the park. They further suggested border patrols, where park rangers could guard border locations that were exposed to migrating and crop raiding animals.

Local people also advised the park management to respond faster and more frequently to reports regarding problem animals.

Problem animals are common in communities around MINAPA. We identified it as an increasing problem and a constraint for the park management. How people within and around the park view the issue of problem animals is shaped by their values regarding the park and its biodiversity. Local people perceive problem animals as the key challenge facing the management of the park. Because of the losses they face due to the challenge, wild animals were seen as a threat and not as a value. On the other hand, we found that park staff and internal stakeholders did not recognise problem animals as a huge concern for MINAPA management. Internal park respondents, particularly, park employees, claimed that the present and main problem for the park is poaching. This will further be presented in the next section.

211

7.3.2 Poaching

The Government of Tanzania recognises illegal hunting and poaching as,

> *"a result of increasing demand for meat coupled with persistent and widespread poverty among the local communities adjacent to PAs. Poaching for trophies is one of the main threats facing effective wildlife management in the protected areas"* (The United Republic of Tanzania 2009a:25).

Through different programmes and initiatives, the Government of Tanzania now attempt to conserve the wildlife by imposing various restrictions. For example, in national parks, all consumptive exploitation such as hunting, grazing and tree felling are strictly prohibited (The United Republic of Tanzania 2009a). Nevertheless, poaching is still identified as one of the main threats facing ecosystems, biological resources and wildlife management in protected areas in Tanzania.

In the following section, we will present the legislation on hunting in PAs, the nature and extent of it in MINAPA and how various people perceive it. Furthermore, we will describe different actions carried out to address challenges related to poaching and recommendations of addressing it.

7.3.2.1 Legislation on hunting

Throughout the 19th century, the Arab slave and ivory trade created a tremendous drop in the population of several animal species, especially the elephants and rhinos. This led to the establishment of PAs and, in 1891; the first hunting regulations were introduced into the colony's laws. By 1896, the wildlife legislation required a license for carrying out hunting. Then the Germans started to establish game reserves as strict hunting areas, and in 1913, there were 14 such reserves. In 1918, the British took over and introduced further restrictive hunting rules. By 1930 they had re-gazetted most of the German reserves and defined them as 'complete' game reserves where no hunting was allowed. (Nelson et al. 2007). Still, illegal hunting continued in Tanzania and up to the early 1970s, it had become an increasing problem in and around Tanzania's national parks. Poaching led to an extreme decrease in the elephant and rhino

population. For example, the elephants population were estimated at approximately 100,000 plus in 1970s and in 1989 they were down to less than 30,000, meaning a speed of 5000 or more dead elephants a year (Baldus et al. 2001). Towards Independence the problems regarding poaching resulted in the National Park Act No.11 declaring that,

> *"no person shall, save under and in accordance with a permit in writing signed by an authorized officer, hunt, capture, kill, wound or molest any animal (including fish) or disturb any egg or nest within a national park or be in possession or control of any animal, egg or nest within the confines of any such park, or remove any animal, egg or nest from such park"* (The United Republic of Tanzania 1959:10).

For the offences of Act No.11, the Wildlife Conservation Act of 1974 was to be applied in the investigation, prosecution and trial. This Act is still operating; if a person is declared guilty of hunting, capture or killing an animal, the punishment is specified by the Wildlife Conservation Act. The punishment depends on the extent of the crime and compromise penalties such as imprisonment and fines (The United Republic of Tanzania 1974). In Tanzania's national parks, all consumptive exploitation such as hunting, grazing and tree felling are prohibited (The United Republic of Tanzania 2009a). The problem regarding poaching is no exception for MINAPA and anti-poaching is an essential element in the park management. The park has experienced and is still dealing with poaching and challenges relating to this issue. Poaching does not only imply 'dead animals; ' it can also generate and expand corruption among park employees, a dangerous working environment, scared employees and visitors, and poor cooperation between local communities and the park management.

7.3.2.2 Nature and extent

According to Shauri, the former Ministry of Tourism, Natural Resources and Environment in Tanzania revealed in 1995 that *"in protected areas the black rhino was almost extinct and two-thirds of elephants and increasing numbers of buffaloes had been lost to illegal hunting"* (Shauri 1999:2). This has led to the existence of the black rhino being so precarious that the Tanzanian government and different conservation agencies have started to bring in rhinos from zoos in Germany and game reserves in South Africa to reintroduce them into the areas where they existed before. In MINAPA, the rhino is extinct, and both commercial and subsistence poaching

continue to threaten other species in the park and creating huge challenges for the park management.

We found that poaching was an issue that occupied and concerned nearly everyone operating within MINAPA. Over 60% of the internal park respondents identified poaching as a problem, while 30% felt it was a problem to some extent. Even though the majority of the respondents stated that poaching was one of the key challenges in the park, more than 65% expressed that they were pleased with the job the management did in the fight against and control of poaching. Only 1% complained that the poaching control measures in the MINAPA management were poor. Furthermore, no internal park respondents mentioned or complained about anti-poaching activities and the Protection Department receiving too much emphasis or funding.

Several key informants in the top management stated that poaching was carried out in all areas of MINAPA. They further reported that subsistence poaching was mainly found in the High Use Zone, while illegally collection of firewood and timber was carried out in the Low Use Zone and Wilderness Zone. Since large areas of MINAPA are unreachable by road, we found that park rangers struggled with controlling certain areas, especially the ones adjacent to Selous Game Reserve. Consequently, large parts of MINAPA are quite difficult to protect against all poaching.

Internal park respondents viewed subsistence poaching north of the highway as the park management's absolute main challenge. Animals such as buffalo and various antelope species were identified as the main animals poached for subsistence use and local people from surrounding areas were identified as carrying out this act. The Figure below shows internal park respondents' identification of the most frequently poached animals in MINAPA and how many responses each animal received.
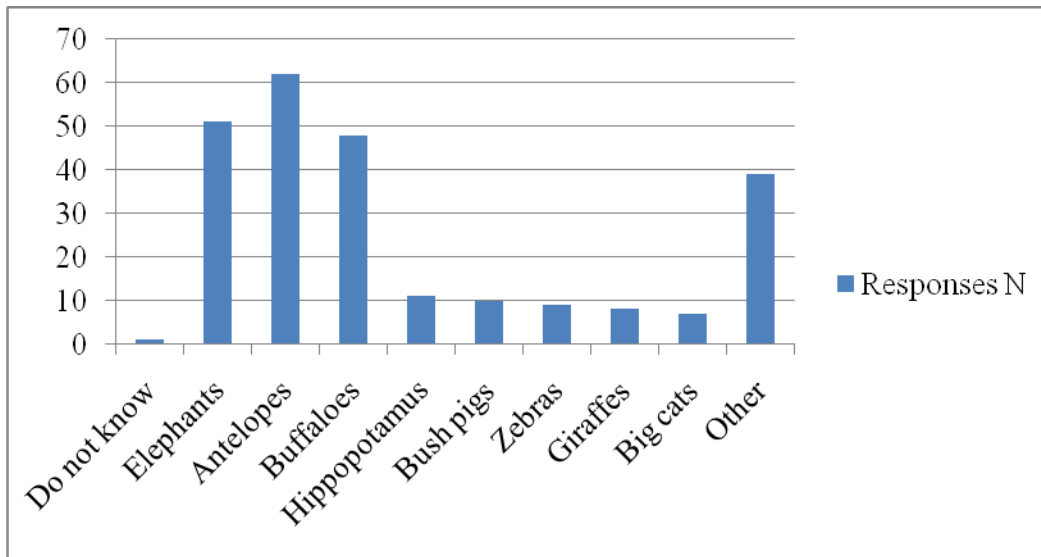
Figure 7.3: Identified poached animals in MINAPA

(Source: Own fieldwork 2010)

Figure 7.3 further reveals that the majority of internal park respondents regarded elephants as a common animal to poach in MINAPA. Together with external stakeholders, they declared commercial poaching as present in the park. Park staff further reported that commercial poaching was mostly carried out by businessmen from Dar es Salaam. TANAPA additionally claims that elephants are increasingly threatened by human intrusion and poaching in Tanzania (TANAPA 2008c). A key informant stated that out of 10 elephants poached in Tanzania in 2010, 3 were killed in MINAPA in the period from June to October. Nevertheless, numbers and data concerning poaching in MINAPA was difficult, if not impossible, to get hold of.

7.3.2.3 Values, norms and perceptions

The internal park respondents had strong values and perceptions concerning both poaching and the punishment of poaching. They further showed that they shared strong conservation values with MINAPA management. Most of them would therefore work hard to curb poaching. It is beneficial for the park management that the park staff share the same perception about poaching. We believe that this may lead to that the whole park working together to reach a common goal in the fight against poaching. MINAPA employees, as mentioned in the previous chapter under norms, also strictly followed the norms, rules and policies regarding poaching. To avoid

215

corruption related to poaching, the Protection Department had also established a reward system where rangers received a bonus for capturing poachers. Park staff stated that the value of catching a poacher is now bigger than what the poacher can pay to the ranger. Park staff further claimed that park rangers captured the poacher and subsequently handed him/her over to the police. However, local people reported that park rangers frequently captured non-poachers in buffer zones and Masaai pastoralists further claimed to be accused of poaching while looking for lost cattle inside the park. We discovered that local people did not trust the park authorities, particularly park rangers, and that several disputes between them had occurred. We further found that responsibility and blame regarding poaching were factors that strongly influenced local peoples' values and their relationship to the park management.

Key informants in the Protection Department reported that it was mainly local people from the surrounding communities that carried out subsistence poaching. There are 18 villages surrounding MINAPA, and some have no buffer zones, meaning that there is a zero distance between the park and several villages. The distance between villages and the park resulted in several challenges for the park management, such as easy access to park resources for poachers.

We observed that the majority of internal park respondents blamed the local communities for poaching and encroaching on the park. We further found that their opinions towards local people's perception of poaching were divided. Out of all internal park respondents, 33% believed that the local people living around the park recognised poaching as illegal and that they were willing to support MINAPA management in fighting poaching. Furthermore, 38% assumed that the local people perceived poaching as a right and that it was not an illegal act. The remaining 13% believed that local people saw the act of poaching as a necessity. Additionally, we got the impression that the majority of our internal park respondents thought local people did not have enough knowledge regarding the problem of poaching, and that this was the reason for why they poached or did not report poachers.

The Figure below shows internal park respondents' opinions of local people's perception towards poaching and how many responses were given on each opinion.
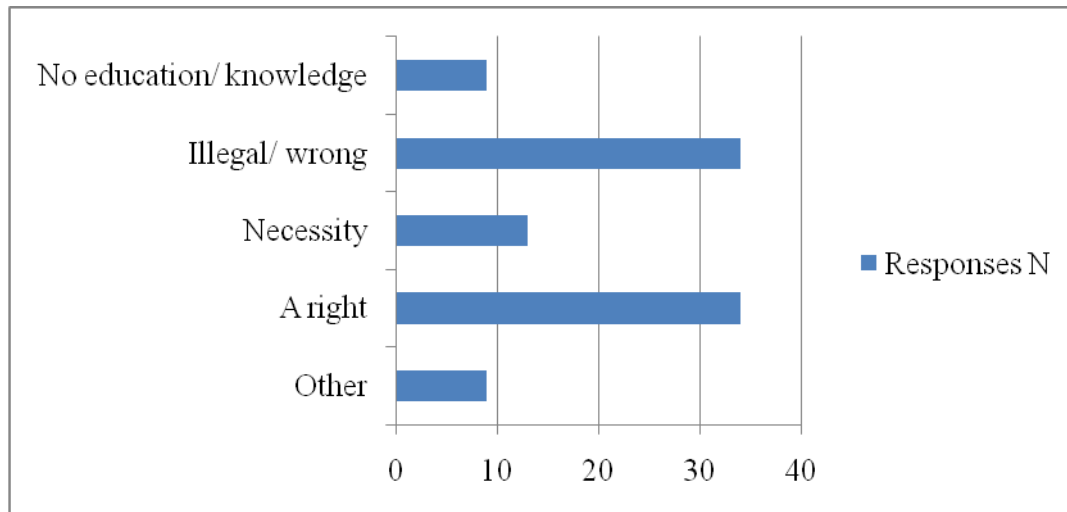
Figure 7.4: MINAPA respondents' opinions of local people's perception towards poaching

(Source: Own fieldwork 2010)

Compared to internal stakeholders, local people in the villages surrounding the park had completely different perceptions regarding the issue of poaching, such as whom to blame, where poaching took place, cooperation between the park and punishment of poachers. The majority in all 6 focus groups conducted, agreed that poaching was a major challenge in MINAPA and that the park management was doing a fair enough job controlling it. However, many complained about poor cooperation in the fight against poaching. Only one participant in one of the focus group discussions mentioned that people from his village were sent into the park to learn how to identify poachers, who to report to and how to generally handle poaching cases. According to the National Policies for National Parks, TANAPA declared that they will,

> *"cooperate with local communities around the national parks and the public in general in order to win confidence and support of the people in the fight against poaching, other illegal activities within parks, and activities occurring outside park boundaries that may have impact on park resources"* (TANAPA National Policy Committee 1994:64).

TANAPA further claims to provide support to village governments in training Village Games Scouts (VGS). These VGS would contribute in the protection of the park (TANAPA 2008b). However, we discovered that in the villages where we conducted our focus group discussions this was not the case. The local people were dissatisfied with especially the communication with

the park authorities. They stated that MINAPA staff blamed them for participating in poaching, and they refused to be held responsible. Local people further stated that they had no cooperation with VGS, but claimed to give information about poaching to the VEO (Village Executive Officer), which again contacted the park management. Additionally, several believed that it was difficult to conduct poaching in the village and a focus group participant stated that,

> *"it is not easy for a person to poach, because if someone is just eating meat it may be reported to the VEO"* (Focus group participant 2010).

However, it was never confirmed that the VEO frequently reported poaching to the park management. The main, and only collaboration dealing with anti-poaching we discovered was the informants MINAPA had in each village. Park staff reported that these informants' main task was to inform the park management about illegal activities inside the park. They would be paid depending on the information they delivered to the park.

Regarding the punishment of poaching, we found that all internal park respondents saw punishment as both important and necessary. In addition, 98% were aware of the different types of punishment that existed, but few knew the extent of it. The internal park respondents identified the court of law, imprisonment and fines as measures of punishment. Only 2% mentioned physical punishment as a used measure, and especially park rangers would not consent to park employees using these kinds of measures dealing with poachers. The majority of the internal park respondents further expressed that they found imprisonment as the best way to punish poachers. The Figure below displays the different punishment measures our internal park respondents thought were the most appropriate and how many responses each measure obtained.
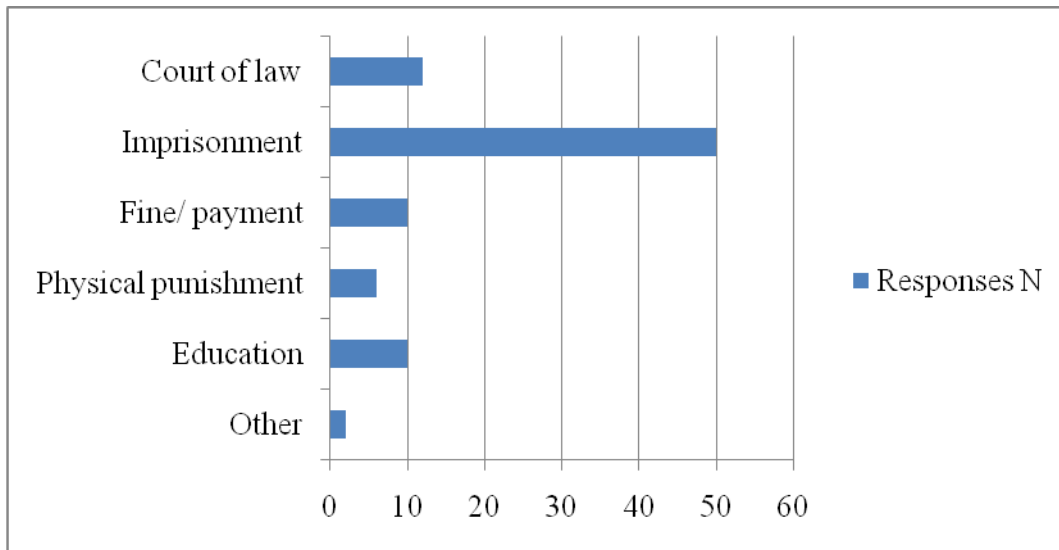
Figure 7.5: Preferred punishment measures for poaching in MINAPA

(Source: Own fieldwork 2010)

We discovered that all park stakeholders views on the punishment of poachers would to a certain degree depend on which and how the animal was killed, captured or wounded. The majority of internal stakeholders expressed a desire for stricter punishment for commercial poachers, in particular the ones killing elephants.

Local people, however, seemed to view punishment of poaching differently. The majority in all focus group discussions claimed that rangers performed physical punishment. Some even stated that rangers killed poachers and buried them inside the park. No evidence related to this claim was presented to us during the research. When we further asked the focus group discussion participants what punishment they felt was appropriate for poachers, the perception was the same as that of the internal park respondents. They indicated imprisonment to be an appropriate punishment; however, it should depend on the animal poached.

How people perceive poaching and the punishment related to the act reflects the values these people hold. Those working within MINAPA value the life of an animal to a much greater extent than local people. People within MINAPA therefore perceive poaching as extremely illegal, punishable and particularly important to prevent. On the other hand, local people have strong use values and several perceive hunting as either a necessity or a right.

In order for MINAPA to prevent poaching and ensure protection of its resources, a ranger unit is operating in the park. This unit consists of 67 rangers and is by far the largest in the park. It is further featured by a paramilitary discipline led by the park management and there is a strict chain of command among the rangers. The rangers aim is "*to protect and preserve the national and cultural resources within the national parks against unlawful humans acts and to provide general enforcement of the provisions of the National Park Act*" (The United Republic of Tanzania 1997:63). Furthermore, according to MINAPA authority, the park rangers are supposed to cooperate with local communities around the park to gain support in the fight against poaching and other illegal activities within the parks. The Protection Department compromises 64% of the total workforce in MINAPA. However, 100% of all the employees are committed to protect the park against poachers. We observed that park rangers were not the only one being active in the fight against poaching, but internal stakeholders were also highly dedicated. The fight against poaching is in forms of anti-poaching, which consists of strategies and operations seeking to prevent and prohibit poaching. According to the park authority, these operations form an essential part of the wildlife protection management in MINAPA. It is not a separate Management Programme in the GMP, but anti-poaching is integrated in the other four programmes and nearly all management matters (TANAPA 2007).

According to park staff is MINAPA management also working on improving the infrastructure in the park and open up the area lying adjacent to the Selous Game Reserve. This area is regarded as unreachable and the management states that with new access, they will be able to better police the region and by that, reduce poaching. According to the previous head of Protection Department in MINAPA the management has built two ranger posts and a road has been built in the process of tackling poaching problems (Borner 2010).

Local people claimed to report poachers to the park management, but said that this was to some extent difficult beacuse they did not know who to report to. They also expressed that because park rangers often blamed them for poaching, they did not want to report or assist the park management in catching the poachers. As mentioned in the previous section, we were told by several key informants that the park operated with informants in each village. These were paid

by TANAPA and seen by the majority of park staff as the main mediators between the management and local people against poaching. Nevertheless, the low level of communication and collaboration regarding anti-poaching activities between park authority and local communities weakens MINAPA management efforts in preventing poaching.

7.3.2.5 Recommendations and summary

Recommendations on how to stop poaching were provided to us by various research participants. The majority internal park respondents stated that more resources needed to be invested in anti-poaching operations. Improvement of the accessibility in the park, such as infrastructure, was also a frequently mentioned recommendation by these respondents. They also suggested more and better equipment such as vehicles, GPS and maps to improve the Protection Department.

Local people in communities around the park were more concerned about raising awareness around poaching. Several recommended that the park management should put a greater focus on conservation education and teach local people anti-poaching techniques.

Conclusively, park staff, internal and external stakeholders all identified poaching as one of the main challenges facing MINAPA. Nevertheless, the majority of them announced that the Protection Department was doing a good job in protecting the park against poaching. It was observed that the park staff mainly blamed the local people for the poaching in the park, while the local people stated they were not involved in poaching activities. Additionally, we noticed that the main cooperation between the park management and communities surrounding the park concerning anti-poaching was in form of informants working for MINAPA.

The perceptions and knowledge local people surrounding the park held regarding poaching is crucial for MINAPA management. If local people perceive poaching as morally wrong and illegal, it could be easier for the park management to collaborate with them and bring about success in the fight against poaching. It is also important for the park management to gain knowledge about poaching, for example, underlying reasons behind the act. The respondents of the questionnaire, key informants and focus group participants identified poverty, trade, traditions and human population growth as the main reasons behind the act of poaching. Considering the underlying reasons for poaching could enable MINAPA management to prevent

poaching.

7.4   Case studies in BINP

BINP management is faced with several challenges such as poor infrastructure, budget limitations, problem animals and poaching that are due to internal and external forces (UWA 2001). We chose problem animals and poaching as practical cases in BINP to examine the park's management challenges and reflect their significance in both the park's structure and culture. The following sections will examine the two cases.

7.4.1 Problem animals

National parks' managements face a challenge of problem animals especially when the parks are surrounded by human settlements (Bush & Mwesigwa 2011). In such circumstances, protected animals are exposed to the risk of losing their lives and health through catching diseases or being injured by communities. On the other hand, local people risk their lives, health, food, property and the closeness also reduces the value of their land that is adjacent to the PAs (Zikusoka 2005).

In this section, we will present the legislation on management of problem animals, the nature and extent of this issue, and park staff's, internal and external stakeholders' values, norms and perceptions towards problem animals. Furthermore, we will look at the park staff and local people's actions to address problem animals, what effect these actions have had on this challenge and suggestions from the above different stakeholders to reduce this challenge will be described.

7.4.1.1 Legislation on management of problem animals

Uganda has established national legislation on the management of problem animals in its PAs. The legislation encompasses various policies and practices that in one way or another link to local communities surrounding the PAs. One aim of the legislation is to ensure the success of biodiversity conservation for which the different areas are protected. The Ugandan government still owns the country's wildlife as is stated under the Uganda Wildlife Statue of 1996 in Section 4:

"The ownership of every wild animal and wild plant existing in its wild habitat in Uganda is vested in the Government on behalf of, and for the benefit of, the people of Uganda" (The Republic of Uganda 2000:4252).

The Statute directs the management of all wildlife within and outside PAs in Uganda. This is to ensure a diversity abundance of wildlife under different land uses. Crop raiding control measures are also implemented under its guidance. Additionally, Section 3 (1) (f) of the Statute advocates for the endorsement for the control of problem animals (Biryahwaho 2002).

According to the Uganda Wildlife Act of 2000, UWA is in charge of protecting Uganda's wildlife on behalf of all Ugandans. Therefore, it is also responsible for monitoring and controlling problem animals and giving advice on how to control vermin. In case of damage caused by these animals to local communities, the Act states that action should immediately be taken;

"*where the vermin animals are of value, the executive director shall, at all times, advise the local communities of the value of the animals and recommend the appropriate methods for taking the animals*" (The Republic of Uganda 2000:4288).

Additionally,

"the Executive Director, with the approval of the UWA Board of Trustees, can enter commercial or collaborative arrangements with any person for the management of a species or class of species of animals or plants" (Biryahwaho 2002:49).

The Act also permits people to kill problem animals only if in self defence or defence of another person. And, they should be able to prove it. Regarding reports of damage by protected animals, the Act states that;

"any person having reason to believe that any protected animal is causing or may cause material damage to any land, crop, domestic animal, building, equipment or other property may report the facts to an officer" (The Republic of Uganda 2000:4289).

Any park staff who receives such report is supposed to assess the extent of the damage caused by the park animal and take immediate action. This officer can then decide whether to kill the

animal, but only with very good reason.

If a protected animal is killed through an accident or by mistake, it should be reported to the nearest park officer who will receive the carcass or its parts. This is the same for circumstances where a protected animal is wounded for various reasons. Furthermore, the killed animal must be reported to the park authorities who decide whether the carcass can be retained or taken by the authorities.

Through the Local Government Act of 1996, emphasis is placed on Community-Based Natural Resource Management (CBNRM) where both local communities and Community-Based institutions respond to ecological and social conditions together with park management (The Republic of Uganda 2009). This means that local communities are given the responsibility of contributing in managing crop-raiding animals that are declared vermin by UWA. This kind of responsibility is given to the local communities' leaders at the district level; however, UWA remains the overall manager of problem animals.

7.4.1.2 Nature and extent

According to UWA (2001), problem animals, including vermin, were identified as a menace to BINP management. Crop raiding was indicated by park staff and several internal and external stakeholders such as local people and researchers, as the most pressing problem faced by the park. Internal park respondents reported that elephants, bush pigs, gorillas, buffaloes and primates such as L'Hoest monkeys, chimpanzees and baboons were the animals causing the main problems to local communities regarding crop raids. They were also a problem to the park management as it is very difficult to control them. Furthermore, the findings reveal that only big animals were blamed for destroying local people's crops while small ones such as rats, mice and birds which may have long-term negative effects were not mentioned at all. The Figure below shows the main problematic animals identified by internal park respondents in BINP and how many responses each animal obtained.
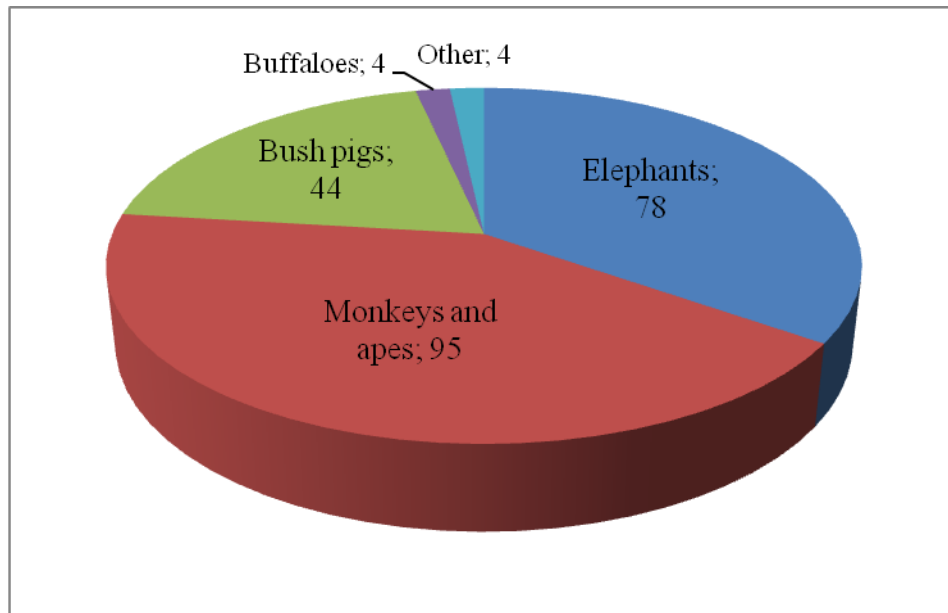
Figure 7.6: Identified problem animals in BINP

(Source: Own fieldwork 2010)

Internal park respondents and external stakeholders said that wild animals move out of the park boundaries and destroy local people's crops. Therefore, both the animals and people's lives were at risk in this scenario (Tumusiime & Vedeld 2011). For example, apart from crop and property damages, local people reported to physically be at risk regarding being harmed by animals such as elephants. They stated that loss of harvests and reduced incomes from agriculture because of crop raids were the biggest costs. According to Tumusiime and Vedeld (2011), a farmer from a neighbouring village of BINP would likely lose 472 USD in *"the 10 years life of a banana plant."* Additionally, both park animals and local people become vulnerable to diseases that can be contracted from each other (Zikusoka 2005). Diseases contracted from people to animals such as primates include polio, measles, scabies and intestinal parasites while those contracted from primates to people include Ebola (Zikusoka 2005). This according to all our research participants, and other related studies around BINP (see for example: Biryahwaho 2002; Hodosi 2010), creates human-wildlife conflicts. Local people who participated in our research reported that their livelihoods were negatively affected whereby their food and income sources were destroyed by the park animals. On the other hand, park staff stated that BINP management also incurs costs to address the problem animal issue.

Problem animals make local communities become hostile toward the park staff because the local people blame the park animals for loss of their crops and livestock incomes (Biryahwaho 2002). According to the focus group participants, animals destroy the farmers' crops, yet there is no compensation from BINP management. Even if a few local people benefit from the revenue sharing scheme and gorilla levy fund, the amount they receive does not cover their losses from crop raids thus intensifying the tensions between the park-local people relations (Tumusiime & Vedeld 2011). Our results show that eventually, this further complicates the communication, coordination and collaboration between park staff and local communities. The latter retaliate by either carrying out illegal activities such as poaching or harming the park animals that may attempt to raid their crops (Baker 2004).

The impact of problem animals on local people does not only undermine their economic position, but it also has social effects. For example, children are kept out of school to guard their families' gardens and this deprives children of education and some elders also seek for casual labour to guard people's gardens against crop raids (Bush & Mwesigwa 2011). The park thus fails to deliver, as one of its major goals is to alleviate poverty through development of adjacent communities. On the contrary, local people are severely hurt (Biryahwaho 2002). People's lives are furthermore physically insecure due to the dangerous wild animals and this has forced some families to migrate far away from the park (Biryahwaho 2002). This research's results reveal that because of all the above problems associated with park animals, dissatisfaction of local communities towards BINP has intensified. Local people further feel that BINP management does not put enough effort into addressing crop raids concerns (Bush & Mwesigwa 2011). The following photo shows some of the local people's cultivated land whose location we observed to be too close to the park's boundary and therefore prone to being raided by park animals.

Figure 7.7: Photo of clear border between BINP and local people's cultivated land

(Photo: Ritah Katusiime Bitariho 2010)

Our findings show that there are several values and norms that influence the perceptions of BINP staff, local people and other internal stakeholders towards problem animals and these will be presented in Section 7.4.1.4 below.

7.4.1.4 Values, norms and perceptions

BINP's main management values are related to biodiversity conservation, particularly, the preservation of the endangered mountain gorillas (UWA 2001). However, the gorillas were identified by all our research participants as being among the park animals that raid local people's crops in gardens that are adjacent to the park's boundary. The law according to the Uganda Wildlife Act of 2000 does not permit any individual to hurt or kill any protected animals by shooting or using any measures, unless declared vermin and not threatened species. Injuring or killing a protected animal as shown in Section 7.4.1.1, is only not regarded as an offence when an individual is defending him or herself or a colleague being attacked by the animal.

Additionally, if park animals are seen damaging people's crops or property, the local people are supposed to report immediately to park officials who are expected to respond by chasing the animals back into the park (The Republic of Uganda 2000).

Local people reported that whenever they report to park officials about park animals damaging their crops, the park staff take long to respond leading local people to incur crop losses. Our results from the second objective indicate that the local people's main values are utilisation of available park resources and protection of their crops and property from damage so that they are able to sustain their livelihoods. Local people identified crops as their major source of both food and income. They further reported that they felt that park authorities do not prioritise their values, but instead focus on issues that benefit the park's main conservation goals. Such findings reveal that park stakeholders, particularly, park staff and local people have different values which may conflict and also influence their perceptions not only towards each other, but also towards the issue of problem animals.

Considering the problem animal control measures presented in Section 7.4.1.1 and reflecting on the research results regarding local communities' values, norms and perceptions towards BINP management and vice versa in chapter 6, made problem animals an interesting case to look at.

First, our findings in chapter 6 show that politicians/local leaders complained about being consulted less by park authorities compared to the previous years. Secondly, other studies reveal that UWA position through the Wildlife Act contradicts with the Local Government Act of 1996 that states that animals in each district are under that district's control (Biryahwaho 2002). There is thus legal ambiguity here. The consultation that the leaders mentioned did not only include educating local people about conservation, but also about the management of problem animals. As a result of not being consulted by UWA, local leaders reported to be reluctant towards taking the responsibility of managing problem animals. Additionally, many of the local leaders reported that there are no funds allocated to staff at the district or local levels regarding vermin control, and this made them uncertain about their role in controlling problem animals. According to the local leaders, such circumstances make the issue of problem animals thus become institutionally difficult to address leading to the creation of conflicting perceptions of park officials and local political authorities. And local people are caught in the field of fire between the two.

Around 83% of the internal park respondents thought that local people perceived crop raids as a big problem. In our view, this shows that the park staff especially are aware of local people's challenges concerning problem animals. However, according to the local people, the park staff do not work hard to reduce the costs of problem animal damages and therefore believe that the BINP management does not care to improve their relationship with them or even endeavour to change these local people's negative perceptions towards them.

According to some of the park staff, there are incidents when domestic animals such as goats and pigs destroy people's crops. However, they reported that local people at times still blame park animals to cause such damages. During our interactions with local communities, they never mentioned damages caused by domestic animals. Our findings show that it was difficult at times to tell whether the extents of crop and property damage by park animals were genuine. We felt that the local communities sometimes exaggerated. Other studies around BINP such as Byamukama Biryahwaho's studies about community perspectives towards management of crop raiding animals in 2002 also reveal the same. His findings show that some local people provided information related to crop loss estimates that seemed quite high (Biryahwaho 2002).

Most park staff reported that, it becomes a challenge for the park management when animals such as gorillas are among the problem animals because of their high conservation value. It limits park management from fully achieving their goal of effective management of problem animals. Additionally, local people reported that they recognise the importance of the gorillas regarding their economic significance to both the park and their communities; however, they indicated that they were fed up of the outcomes they incurred from crop raids. They further expressed bitterness by the fact that the park staff were not controlling non-threatened species such as bush pigs, which were among the greatest crop raiders. In the following section, actions by both park staff and local people to reduce the costs incurred by problem animals will be presented.

7.4.1.5 Action and effects

The results of this research show that there are various measures carried out by both park staff and local communities to address the challenge of problem animals. According to the findings

regarding the structure of BINP, the Community Conservation Department is in charge of the management of problem animals. The department consists of only 3% of the entire park's workforce and in the park's financial year of 2010/2011, this department was allocated merely 10% of the park's total budget. These results show that the Community Conservation Department has the lowest economic support, and together with a small number of personnel, limitations regarding problem animal management arise.

We also discovered that the majority of the park staff have different educational backgrounds such as biology and Forestry, and they all reported to undergo some kind of military training. In our opinion, this could be a reason for why the park is to a certain extent failing to totally address the problem animal issue because the measures employed by park staff reflect their educational and training backgrounds. For example, the park staff reported that they scare shoot, try to dig trenches and make noises to chase animals back to the park. Additionally, those who are ecologists hold values related to wildlife and are therefore against shooting of park animals. It becomes difficult to do away with problem animals that are not endangered species such as bush pigs. According to the majority of social science respondents, the park management could recruit staff with extension service knowledge because they are more acquainted with matters related to agriculture and could therefore advise local people about the best ways of not being affected by problem animals such as growing crops that certain animals dislike eating such as cotton and chilli.

Incidences of problem animals are reported by local people directly to the management of the park, which according to procedure should respond back by sending rangers to chase them back into the park. Park staff also mentioned that there was an initiative called the Human Gorilla Conflict Resolution where there are volunteers from the neighbouring communities who chase the gorillas back into the park.

According to park staff, BINP management, through the revenue sharing scheme of the community conservation initiative, has tried to incorporate local people in the park's effort to alleviate the issue of problem animals. The majority of internal park respondents amounting to approximately 80%, stated that there was no compensation to damages caused by park animals. One of the park staff actually mentioned that the law was still silent on compensation and

whatever BINP did was humanitarian. The internal park respondents further stated that the only benefits that the communities gain from BINP are through revenue sharing and the gorilla levy fund. According to them, this is a form of indirect compensation. However, local people stated that they preferred compensation to go to those whose crops are destroyed and not just revenue sharing benefits to anyone. This is because they believed that some people who had benefitted did not actually face any crop-raiding problems. According to Tumussime and Vedeld (2011), the present policy puts local people affected by crop raids more at risks of economic losses than others creating negative attitudes to the park as a whole. Furthermore, it affects the way these two groups cooperate regarding conservation of the park's biodiversity, which is mostly poor.

Local people stated that they grow Mauritius thorns, make noises with sauce pans and guard their gardens and property to try to avoid their crops and property from being destroyed by park animals. They also reported that they usually call the nearest park officer to come and chase the crop raiders back into the park. However, they complained of park staff not responding immediately leading to severe damages by crop raids.

7.4.1.6 Recommendations and summary

Various suggestions were given by our research participants regarding possible future ways of handling the problem animal issue. They are as follows:

- Internal stakeholders suggested that the park management should find better means of controlling problem animals by not only establishing policies, but also following the guidelines and considering the type of biodiversity in the park. According to them, this will enable better implementation of the problem-animal control measures.
- According to local people, park officials should build fences around the park, employ more guards to protect the animals, plant more thorny trees around the park and dig more trenches that could also help control animals from leaving the park boundaries. On the other hand, internal park respondents also advocated for local people to particularly employ preventive measures such as planting Mauritius thorns and trees around their gardens, growing crops that park animals do not prefer to eat such as cotton, and avoiding cultivation too close to the park boundaries. The internal park respondents reported that

this could reduce the extent of crops being damaged. The Figure below shows the different measures the internal park respondents suggested for addressing the problem animal issue and how many responses each measure obtained.
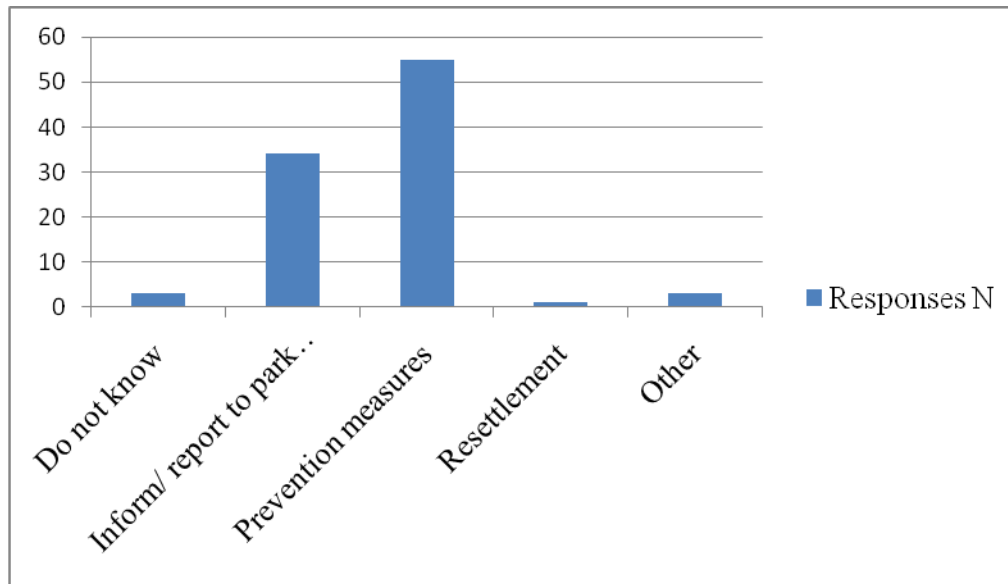
Figure 7.8: Recommended measures to address problem animals in BINP

(Source: Own fieldwork 2010)

- Better means of compensating people who lose their crops to problem animals should be devised. Local people advocated for development of a policy where the people affected by crop raids are compensated by the extent of damages caused.
- More park staff should be employed to improve the security of people around the park and their property.

Generally, problem animals were identified by the internal park respondents and local people as the major challenge facing BINP management and local people surrounding the park. The conservation of park animals, particularly, gorillas was discovered to be of high value for BINP. For the park authorities, wildlife conservation was for economic reasons in relation to tourism growth, protection of cultural resources, and eradication of environmental degradation and loss of habit for various species. However, local people identified these animals as a threat to their livelihoods.

Crop raiding was found to be among the main causes of poor community-park relations in BINP. Furthermore, it was blamed by local people for increasing poverty among their communities. Local people felt that their concerns were not entirely considered by the park management. They also believed that the park authorities had inadequate effective arrangements for addressing the problem animal issue. Such problem animal control measures influenced local people's attitudes towards the park as being mostly negative.

7.4.2 Poaching

As a means of ensuring protection of Uganda's wildlife, the Government established PAs such as national parks to preserve its species. However, the abundance of the country's biodiversity has declined because PAs are commonly challenged by deforestation, poaching, human population and human encroachment which expose wildlife to a risk of extinction (Kaggwa et al. 2009).

In this section, we will present the legislation on hunting and the nature and extent of poaching in BINP. Values, norms and perceptions of park staff, internal stakeholders and local people towards poaching will also be illustrated. Furthermore, we will look at the park's actions to address the challenge, what effect these actions have had on this challenge and suggestions from different BINP stakeholders to reduce this problem will be described.

7.4.2.1 Legislation on hunting

According to the Uganda Wildlife Act of 2000, any person with the right to hunt a specific specie shall not be charged since there will be no offence committed regarding killing that animal. However, whoever contravenes this law is regarded as committing an offence. This shows that hunting is partly allowed, but only when one has a professional hunter or a trapper's licence. Additionally, anyone who falsely deals in hunting or assists other people to hunt commits an offence. In circumstances where licence holders fail to comply with given conditions, the Executive Director can either suspend or cancel the culprits' licences depending on the offence. Hunting in PAs is prohibited as stated in the Act,

> *"A professional hunters license shall not authorize the licensee to hunt any protected animal except as may be necessary in defence of human life or property as provided by*

this Act or to prevent the escape of an animal wounded by his or her client, that client being himself or herself a licensee under a licence valid for that animal" (The Republic of Uganda 2000:4285).

A similar law was made regarding the prohibition on using any snares, poisoned weapons or poisoning of protected animals. Using domestic animals for hunting was also forbidden and anyone caught breaking the law would be punished accordingly.

All kinds of hunting punishments depend on the extent of the committed offence and they include being taken to the court of law and charged or fined and imprisonment.

Poaching in BINP still takes place though at a reduced extent. To reduce the problem, park management carries out various efforts. For instance, there are 97 employees under the Law Enforcement department, and their duties include patrolling the park to ensure that there are no illegal activities. However, there is need to collaborate more with local communities and encourage them to report poaching to the park management. This will enable effective patrolling of such illegal activities. Our discussions with local communities and park staff show that local communities appreciate the efforts of the park management to stop poaching. An individual's perception of poaching contributes to the general attitudes of the communities towards the park management. Therefore, their views and suggestions are crucial in the park management's efforts to stop poaching.

7.4.2.2 Nature and extent

Hunting in Uganda can be traced back more than 400,000 years. People hunted for various reasons such as the need for food, animals for traditional ceremonies, economic purposes such as barter trade, leadership purposes, community formation, language development and use of tools (Gwayaka 2007).

Over time and due to the fear of extinction of many wildlife species, the Ugandan government protected areas where hunting took place. It became illegal to hunt in defined areas and this was referred to as poaching. In the 1970s and 1980s, poaching was among the main causes for Uganda's reduction of wild animals and this also affected the tourism industry (Gwayaka 2007).

234

In this study, 43% of the internal park respondents stated that poaching was to some extent still a major problem faced by BINP management. Although 47% of them indicated that it had reduced and was currently not the biggest problem, they further mentioned that they were still poaching activities in the park. The majority of park staff stressed that following the establishment of BINP, local communities' access to the park was limited, guarding increased and poachers accessed the park less frequently. They further stated that poachers resorted to setting larger snares whenever they accessed the park and after the creation of harvest zones, they avoid areas with most regular patrols (also see Baker 2004). However, there are a few reported cases where some poachers handed over their tools and stopped the act and this was mainly because of beekeepers who promised to report to park staff any poacher they saw (Magara 2006).

Park staff reported that poaching was carried out in many sections of the park, but is presently high in the low harvest zones. Other studies claim that this could be a result of many park rangers mainly patrolling the high harvest zones and not the low harvest zones (Baker 2004). The methods used for poaching as identified by the internal park respondents include; use of spears, bows and arrows, dogs, snare wires, trap nets and pitfalls.

Park staff mainly blamed local people for poaching within the park. According to the internal park respondents and other studies conducted around BINP (see for example Baker 2004), the most poached animals are duikers and bush pigs and the Bakiga were identified as the main poachers. All our research participants reported that meat from poached animals was for both subsistence/domestic and commercial purposes. They stressed that bush meat was either consumed by family members of the poachers or sold to earn income. In our opinion, the mentioned reasons could be the basis why poaching was identified by particularly park staff as still a problem to BINP management.

7.4.2.3 Values, norms and perceptions

As mentioned in Section 7.4.1.4, BINP's vital value is biodiversity conservation while that of local people is the utilisation of park resources. This therefore indicates that several groups have different values and interests regarding poaching. Our results show that park staff share the same values as those of the park and therefore aim at protecting the park's biodiversity.

The majority of the internal park respondents stated that poaching had reduced mainly because of the increased guarding efforts inside the park, but still existed. Only 9% of them reported poaching to be a major challenge for BINP management. Although most participants in this research identified poaching as a problem for BINP management, some of them still stressed that the park authorities were performing quite well regarding the alleviation of the act. Only 1% complained that the efforts done by the park management to reduce poaching were poor.

Almost all the internal park respondents reported that poaching was illegal and were aware of the poaching punishments. The majority (64%) stated that it was important to punish poachers because they found it crucial to protect the park's wildlife. The punishment types they mentioned included; court of law, imprisonment, fines and only 4 responses indicated physical punishment as will be elaborated in Section 7.4.2.4. These results show that in addition to park staff, internal stakeholders have common conservation values, norms and perceptions and indicated that they supported the arrangements made by park management to control poaching.

When asked about local people's perceptions towards poaching, the majority of the internal park respondents answered that they thought that local people see poaching as illegal. Others answered that they believed that local people thought that poaching was both their right to hunt and that it was done out of necessity. The Figure below shows internal park respondents' opinions of local people's perceptions towards poaching and how many responses were given on each opinion.
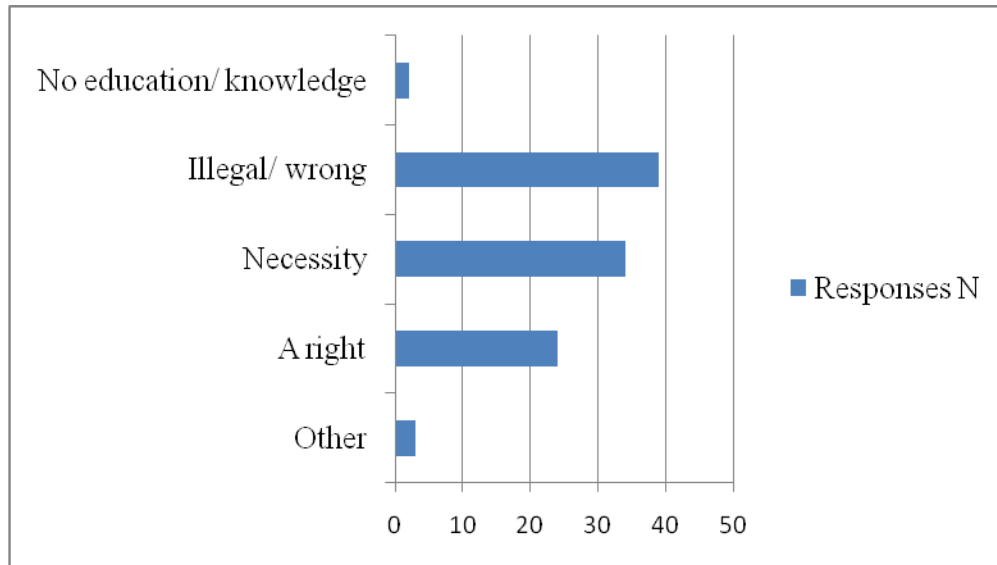
Figure 7.9: BINP respondents' opinions of local people's perception towards poaching

(Source: Own fieldwork 2010)

The above Figure shows that internal park respondents are to some extent aware of how local people perceive poaching. The results also illustrate that the internal park respondents know local people's values towards poaching such as assuming that local people think hunting is their right and a necessity. The majority of the internal stakeholders stated that it could be of great significance if the park authorities used this awareness to work basing on an idea of establishing incentives that can benefit local people more than they gain from poaching. For such reasons, park authorities could be able to implement programmes that would reduce poaching, which eventually leads to better preservation of the park's biodiversity, as well as promoting tourism.

During our interactions with local communities, they disclosed several opinions regarding poaching. Some reported that they knew that the practice was illegal and claimed to report any individual seen with a net or spears to park authorities. They mentioned that they were afraid of being punished and so did not attempt to poach. Additionally, some local people reported that park management was putting in much effort in dealing with poaching and that is why the act had reduced. Others stated that the park officials should be blamed for poaching because they do not make sufficient arrangements that could bring about better cooperation between the park management and local people. We found that due to the denial of access to park resources; some local people retaliated by purposely poaching. Many expressed bitterness for being denied access to park resources, yet benefit nothing from the park's revenue and therefore stated that they

would never report any poacher they saw to the park officials. According to Zapulla (2008), poaching is a threat to biodiversity and snares trap gorillas by mistake, which puts these endangered species at higher risks of extinction. In our view, the above different opinions that park staff and local people have towards each other and towards poaching could be reason why these two groups have conflicting values that influence their perceptions and motives towards the management of BINP.

Eco-tourism which is one of BINP's main objectives was identified by natural science researchers as being one way of exposing park animals to poachers. They explained that animals such as gorillas usually have instincts that make them go away from humans who approach them. However, the researchers stated that when gorillas are habituated, they become accustomed to tourists and park rangers, which make them lose their instincts of fleeing from poachers. This according to the researchers has threatened the security of many park resources, especially the lives of gorillas, which are BINP's greatest conservation value. Additionally, several park staff reported that poaching has led to the migration of animals, particularly, gorillas to neighbouring countries such as DRC and Rwanda, which have similar afro-montane vegetation like BINP.

The above results show that values and norms of different park management stakeholders, particularly, local people and park staff, influence their perceptions of poaching and vice versa. Therefore, there is need for various actions to be carried out by these people, especially park staff, in order to address the problem of poaching.

7.4.2.4 Actions and effects

We found that BINP management has the Law Enforcement Department which is in charge of protecting the park's biodiversity by carrying out regular patrols in the park to alleviate illegal activities such as poaching. The department encompasses 57% of the total workforce and was allocated 28% of the park's 2010/2011 expenditure budget. A senior park staff told us that this department also conducts law enforcement and has a spying system in the areas where the poachers go. By employing the above measures, the park officials reported that poaching has greatly reduced. The majority of our respondents, amounting to 62%, confirmed that the control of poaching in the park was good while 35% said it was fair. Only 1% stated it was poor.

According to the New Vision Newspaper in 2006, 54 poachers in BINP denounced poaching by handing over their tools to UWA and revealing that they had sold their hunting dogs to DRC (Magara 2006). The former poachers also formed a Reformed Poachers' Association to jointly fight against poaching together with the park management. As a reward, the Mountain Gorilla Conservation Fund (MGCF) gave them crossbreed goats and offered to financially support them in establishing a micro finance company (Magara 2006).

According to the park staff, such an experiment shows that BINP management is willing to incorporate local people in its conservation and development initiatives. They hope that their relationship with local communities could improve through such actions. Furthermore, internal stakeholders stated that such effects of park actions that lure poachers into denouncing the vice could persuade other poachers to stop the act as well and contribute to the protection of wildlife.

As earlier mentioned, there are various punishment measures to those caught poaching and these measures were regarded vital by the internal park respondents. The majority of the internal park respondents preferred court of law as the best punishment measure as shown in the Figure below.
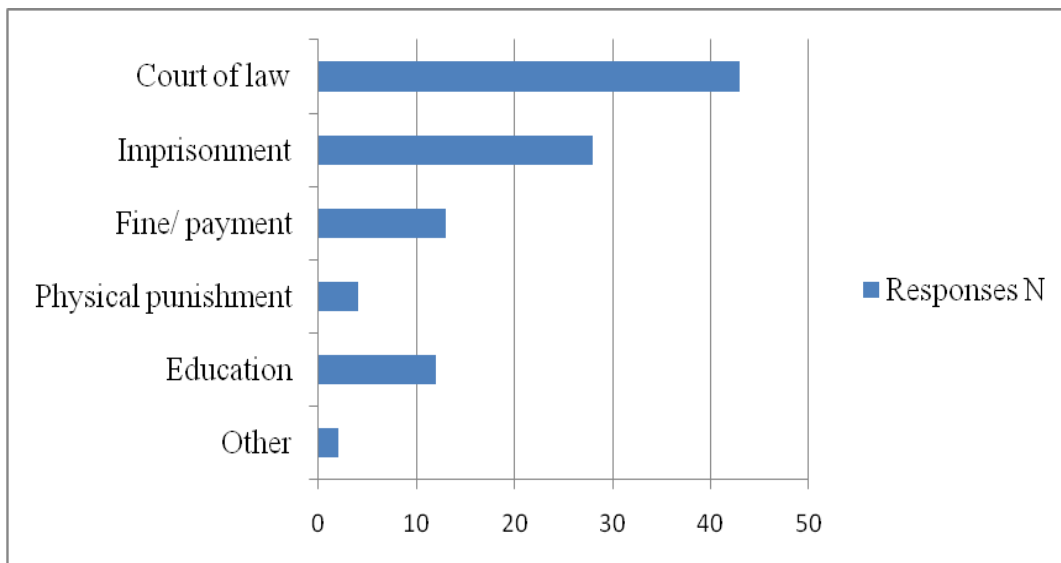
Figure 7.10: Preferred punishment measures for poaching in BINP

(Source: Own fieldwork 2010)

7.4.2.5 Recommendations and summary

Our research participants suggested the following recommendations to further address poaching.

Most of the internal and external stakeholders advocated for looking at each poaching case separately and that BINP should use examples from other PAs where poaching is very minimal due to the effective measures they employed. An example given by a Makerere University professor was the experience of Budongo forest where people who used to set snares were employed to search for poachers. He stated that this may not necessarily be the case with BINP, but could be a good strategy to handle such issues. According to him, such employees should be used as examples to other people planning to attempt poaching. This could change local people's perception of poaching and the vice may be reduced. As a result, the park-community relations may also improve leading to joint biodiversity conservation of BINP.

Internal stakeholders stated that BINP management should engage local people more into its activities and provide incentives to them that are better than the proceeds from poaching. One of the ways is to find the alternatives. There are studies that have shown that poaching can be a habit. However, there are many people who poach because of the need and culture. Therefore, a particular strategy to address the cause is needed. For example, if a cause of poaching is for sustenance needs for food or proteins, then the park management could help the communities by promoting and advising them to practice breeding poultry and goats as alternative to hunting in the forest for wild animals. The park should support local people to develop such alternatives and to train them how to look after such animals.

According to the natural science researchers, more efforts by park authorities could be put into sustaining BINP's wildlife populations in order to enhance its earnings and increase the country's economic growth through its tourist potential. More staff especially rangers should be recruited to ensure security of park resources.

Some of the internal stakeholders suggested that increased and improved agriculture could contribute to the reduction of poaching. Therefore, they suggested that park staff could recruit workers whose specialisation fields are extension services and agronomy in the Community Conservation Department. The internal stakeholders also emphasised that this is because such

workers are capable of relating better with local people than people who have had military training due to the fact that they understand what local people go through when it comes to means of surviving. Such workers with agronomy backgrounds could advise local people on what crops to grow and what domestic animals to breed that they could use for both consumption and sale to support their well-being.

In conclusion, the extent of poaching in BINP is most likely small. The main reasons given by research participants as to why some local people still poach are for both commercial and domestic consumption. It is however, a paradox for people to destroy the environment. To a certain extent, this paradox is a sign of management failure because poaching is still a problem faced by the park. Park staff blame local people, especially, the Bakiga for poaching, while some local people react to being denied access to the park by poaching. Such a finding shows that the two groups have conflicting values which influence their perceptions towards each other and towards poaching. It is therefore important for BINP to devise means of changing local people's perspectives of the park and poaching, and also collaborate more with local people to protect its biodiversity. Law enforcement by park staff was recognised by almost all research participants for endeavouring to alleviate poaching. Some local people reported to know that poaching is illegal and a few now recognise the importance of wildlife protection. The changing attitude is attributed to the integrated resource use programme where local people are allowed to access some park resources. Additionally, the awareness programmes under the community conservation initiative have enabled local people to acquire knowledge about the importance of the protection of wildlife species in BINP.

7.5   Comparison and summary of cases in MINAPA and BINP

In this chapter, we have tackled our third objective by looking at cases, which are major challenges facing the management of MINAPA and BINP. We have evaluated how the parks' managements address problem animals and poaching, by analysing the institutions within them. Furthermore, we have described the legislations guiding how to approach such issues and examined the different park management actors' values, norms and perceptions towards problem

animals and poaching. In the following section, a comparison and summary of the status of problem animals and poaching in MINAPA and BINP will be presented.

7.5.1 Problem animals

Our results from interacting with park staff, and internal and external stakeholders such as researchers, NGO representatives, academics, camp/hotel employees and local people show that problem animals are still a problem for both MINAPA and BINP management, and to local communities.

Park staff, internal and external stakeholders operating within BINP identified problem animals as a major challenge, while in MINAPA the park staff indicated that this was not the main concern for the park's management. Local communities around both parks indicated that problem animals were the main challenge they faced. They stated that they report problem animal cases to park staff, who are supposed to respond by chasing the animals back to the park by either scare shooting or making noises. Local people also reported that they try to chase the animals back to the park by making noises with pots and saucepans and planting chilli and Mauritius thorns to prevent park animals from destroying their crops.

Local communities around both parks tended to blame the park management for the damage of property, loss of crops, income and human lives. They additionally felt they should be included more in decision-making, planning and implementing of problem animal control measures. They also preferred stronger park management actions addressing the issue of problem animals.

We believe that a closer collaboration between the park management and the local people could help change local people's values and perceptions towards conservation and contribute to solving the issue of problem animals.

Table 7.1: Comparison of the problem animal issue in MINAPA and BINP

Case	MINAPA	BINP
Problem animals	Local communities and social science researchers identified it as a major problem. Park staff, natural science researchers and camp/hotel employees did not recognise it as the main concern.	Park staff, social and natural science researchers, NGOs, camp/hotel employees and local communities identified it as a major problem
	Responsibility: *Local communities*: Blame park management and staff *Park staff*: Under district authority	**Responsibility**: *Local communities*: Blame park management and staff *Park staff*: Are aware that animals do not know boundaries between the park and local communities' land
	Compensation: *Local communities*: State no compensation is provided *Park management and natural science researchers:* No compensation should or is provided	**Compensation**: *Local communities*: State no compensation received and funds from revenue sharing do not cover their total losses caused by problem animals *Park staff*: The law is still silent on compensation. *Natural science researchers:* No compensation is provided

(Source: Own fieldwork 2010)

7.5.2 Poaching

During our research, we recognised poaching as a management challenge in both MINAPA and BINP. However, we discovered that MINAPA employees emphasised poaching as the absolute prime concern for the park, while it was seen as a reduced, but still an existing problem in BINP. Both parks have a department dealing with anti-poaching activities. The Protection and Law Enforcement Departments in MINAPA and BINP, have the biggest number of employees and are therefore capable of dealing with challenges concerning poaching rather than problem animals.

Our research participants identified *poverty, trade, traditions, loss of land/property, religious values, human population growth and greed* as reasons for poaching. We found that the majority of research participants inside the park shared the value and norms concerning poaching.

Table 7.2: Comparison of the poaching issue in MINAPA and BINP

Case	MINAPA	BINP
Poaching	Park staff, local communities and researchers identified it as a major problem. Local people see it as an option.	Park staff, local communities and researchers reported that poaching has reduced, but still a challenge for BINP. Local people see it as an option.
	Responsibility: *Local communities*: State that businessmen and people from the city are responsible for poaching. *Park staff*: State that most poaching is carried out by local people.	**Responsibility**: *Local communities*: Other local people in the villages. *Park staff*: Poaching is mainly carried out by local people, especially the Bakiga.
	Values: *Park staff*: Biodiversity conservation *Local communities*: Resource utilisation	**Values:** *Park staff*: Biodiversity conservation *Local communities*: Resource utilisation
	Punishment: Court of law, imprisonment, fines	**Punishment:** Court of law, imprisonment, fines

(Source: Own fieldwork 2010)

Both MINAPA and BINP protect their biodiversity in terms of employing a large unit of park rangers. The unit in both parks uses firearms and force to keep people out of the park, particularly in activities such as anti-poaching. The departments in charge of contributing to poverty alleviation and creating a better relationship with communities around MINAPA and BINP are understaffed and underfunded. Both parks are therefore failing to deliver in the area of community conservation. This further shapes various park stakeholders' values, norms and perceptions regarding conservation of MINAPA and BINP. For example, we found that park staff in both parks and local people around the parks held conflicting values, norms and perceptions in regard to poaching. We believe that if park staff and local people shared the same values, followed the same norms and had more positive attitudes towards each other, it would be easier for both parks to effectively carry out anti-poaching activities.

In our opinion, it would be better to create a social fence of protection around the park instead of using firearms and force to conserve the park's biodiversity. Additionally, for both park managements to improve performance and delivery in the area of community conservation, we suggest that more staff are employed in the Outreach Department in MINAPA and Community Conservation Department in BINP.

CHAPTER 8 – CONLUSIONS AND RECOMMENDATIONS

Both MINAPA and BINP are bureaucratic organisations under control of centralised semi-autonomous bodies- TANAPA and UWA. Their administrative and physical structures are guided by management plans, particularly, the GMP, and several processes influence the parks' management chain of command. The management plans are regularly reviewed to improve performance. Both parks operate with a firm chain of command, which affects the relationships within the park management and also between park staff and internal and external stakeholders such as NGOs, camp/hotel employees, research groups and local people regarding communication and collaborative conservation. The chain of command provided the top management with rather effective control and coordination measures and it facilitated competent performance among park staff. However, employees in MINAPA and BINP expressed that the strict chain of command also led to poor information flows within the park management. Both parks employ a system and a policy where staff are frequently transferred between different national parks within their respective countries. The stated aim of this practice is to regulate corruption within their park management. It can however, also impact on staff's relation to and ability to work with local people.

MINAPA and BINP are divided into different departments determined by expertise. The Protection and Law Enforcement Departments clearly form the parks' largest workforce consisting of 64% of all park staff in MINAPA and 57% in BINP. Departments linked to ecology, research and community conservation have a minimal focus and very few employees. Because of the parks' structure, the park managements are much more equipped to deal with anti-poaching activities and protecting the park than with biodiversity management and community conservation, and research. However, the majority of employees in both parks expressed that there were still not enough staff working even with anti-poaching activities. The park staff however, did not complain about shortage of staff in the community conservation department. It was evident that park employees' emphasis and focus was on protecting the park from trespassers and not on creating a better relationship with neighbouring communities. As such, the statements reflect perceptions and values of a particular management culture.

Park staff in MINAPA and BINP are required to have attained certain educational levels and also

military service/training was a primary factor, especially in BINP. We found that the educational levels were rather high in both parks, which facilitated better communication, coordination and deployment of workers. Additionally, activities were executed easier than if they had no form of education.

Regarding physical structures, MINAPA and BINP have administration blocks and equipment that enable park staff to carry out their administrative and field duties such as accounting and patrolling the parks. However, staff at lower levels/junior staff complained about lack of equipment such as up to date GPS, radio systems, Internet and maps that would otherwise facilitate their work.

MINAPA and BINP are 100% economically dependent on TANAPA and UWA. Both parks have fixed annual budgets. All revenue is sent to TANAPA/UWA. There is no motivation and factors for the park to increase their revenues. Tourism is still a major economic activity in MINAPA and BINP, but suffers from a lack of investments. Compared to BINP, less effort is invested in the tourism sector of MINAPA.

Concerning the Outreach and Ecology Departments in MINAPA and Community Conservation Department in BINP, they receive the least amount of money, and can be an important reason for both parks' management lack of delivery in these areas. In general then, the parks' organisational structure is well designed to protect biodiversity and control poaching, but less equipped for a dynamic take on tourism and performing successfully on outreach and local community development activities. This shows that the policies for these activities are present in the parks' management, but their implementation is ineffective, leading to institutional failure

This study provides several important insights regarding MINAPA and BINP's management cultures. Aspects of values, norms and perceptions are entangled and influence on harmony and conflict among the park staff, internal and external stakeholders.

MINAPA and BINP's evolution processes are shaped by and have shaped their management cultures. MINAPA was first a hunting ground, before becoming a Game Reserve and finally gazetted as a national park under TANAPA, all the time with shifts in organisational form and staff. Compared to BINP, the management culture in MINAPA has not experienced such major

changes. The Bwindi area has been under different management schemes and therefore has experienced substantial changes also in the management cultures. Different types of officials according to their disciplinary fields and training will look at various management issues, such as biodiversity conservation, tourism and local participation in different ways.

MINAPA and BINP employees hold strong conservation values and follow strict norms relating to the conservation of the park area. In addition to biodiversity conservation, TANAPA and UWA in principle have community conservation as one of their core values. However, employees in both parks did not share this core value with the leading park authorities. The majority of park staff did not mention the relationship with local communities as either valuable or positively challenging. On the other hand, local people's values are linked to the practical use of resources. Such values clearly conflict with the park management and the park's internal stakeholders' values. Their conflicting values form a fertile ground for conflicts.

The norms we looked at were based on how park staff, internal and external stakeholders treat certain people-park issues such as rights to access park resources, poaching and problem animals.

Park staff in MINAPA and BINP have a clear standpoint when it comes to the reporting of poaching, where all see it as extremely illegal and punishable. We found that local people perceive this norm differently. Many would not report poaching to the park management if they witnessed it because of resentment to the park, fear of poachers and, and for the case of MINAPA, they did not know who to report to. The conflict over the norm regarding poaching is evident in both parks. If a closer relationship between the park authorities and local people were established, it could lead to a change in local people's reaction towards poaching. One could also see possibilities in the future for controlled hunting in specific buffer zones.

MINAPA and BINP's park staff, internal and external stakeholders' perceptions can be linked to conservation, and to various economic and social interests.

We found that park staff's perceptions towards local people surrounding the park were mixed. Some claimed that local people were crucial components in the conservation of the park, while others stated that they were a burden because of encroachment and poaching. However, all park

staff seemed to perceive that local communities benefit substantially from the park through outreach projects.

Local people in both parks reported that the benefits they received from their respective parks could not cover the costs they incurred due to the wildlife. Their general perceptions towards the park were to some extent negative. Nevertheless, these negative perceptions were mostly directed to the park staff and not the park itself. The perceptions local people hold towards MINAPA and BINP management and vice versa, influence their relationship and weaken abilities and willingness for their collaboration and communication.

Internal stakeholders mostly reported to have a better relationship with park authorities. On the other hand, some NGO representatives and social science researchers tended to disagree with certain of the park management actions. They expressed that the national parks have inadequate and not competent personnel for collaborative management in particular. The majority of park staff are more involved in law enforcement and anti-poaching activities than prioritising their relationship with local people. The negative attitudes that park staff, internal and external stakeholders hold towards each other create situations where they do not collaborate well and they do not work towards any common goal. Understanding park staff and internal and external stakeholders' values, norms and perceptions could help reduce local conflicts, improve collaborative conservation and tourism development.

Our findings reveal that the different park management stakeholders' perceptions towards MINAPA and BINP are partly shaped by their personal history and experiences such as culture/traditions, educational levels, benefit levels from the park and the working environments.

All research participants in MINAPA and BINP revealed awareness of major challenges facing the parks and different measures used to address them.

Gunn (2009), Vedeld (2011), Biryahwaho (2002) and Tumusiime et al. (2011) identify human-wildlife conflict as one of the major challenges facing MINAPA and BINP. This conflict mainly refers to problem animals and crop raiding.

All research participants within and around BINP reported that problem animals were the main

challenge facing both local people and the park's management. Local people surrounding MINAPA also perceived this as a great challenge for the park. However, perceptions concerning problem animals were different among the park and camp/hotel staff and park "residents". Hardly any of these identified problem animals as a key challenge for MINAPA management. They instead recognised poaching as the gravest problem. BINP staff also indicated that poaching had reduced, but that it still is an existing problem. According to local people around both parks, poaching is a social institution carried out by hunting groups, age groups, neighbours and friends, but to park managers, it is seen as a crime that is punishable. Problem animals and poaching were examined as cases because they reveal several park staff, and internal and external stakeholders' values, norms and perceptions towards conservation. Challenges in MINAPA and BINP involve conflicting values between park staff and local people. This further complicates the relationship between the park managements and local communities and their biodiversity conservation efforts.

MINAPA and BINP authorities claim that local people and internal stakeholders are part of collaborative conservation and often use this to show that these stakeholders are participating in park management. However, this is not at all seen in the same way by local people. As shown in our study and other studies around both parks (see for example: Atuhaire 2009; Gunn et al. 2005; Gunn 2009; Hodosi 2010; Vedeld et al. 2011; Wapalila 2008), local people are seldom really involved in decision-making processes, planning or even implementation of management programmes. Supreme power still remains with TANAPA and UWA, leaving local people un-empowered and their pressing demands unaddressed.

Research results reveal that biodiversity conservation, economic development, socio-economic benefits and collaborative concerns are park management goals that are not easily compatible. Conflicts among different park management stakeholders arise and prevail, particularly, between park authorities and local communities adjacent to the parks. The major clashes are between biodiversity conservation and collaborative management.

Our research participants suggested several ways of addressing these challenges, as a way to improve MINAPA and BINP management structures and cultures. The recommendations included more involvement of local people in decision-making, planning and implementing the

park programmes, improved wildlife management to prevent park animals from destroying local people's crops and property, and establishment of conducive management cultures that could reduce poverty among local people and interact with local people in competent, skilful ways. There is also a need for an organisational and institutional change of the park as an instrument in the direction of improving the collaborative resource use management, particularly including local people more in decision-making.

Finally, more research in MINAPA and BINP should be done as a continuation of this study to examine national parks as organisations and institutions. Technology is one of the features of an organisation but was not detailed in this study. This is an aspect that plays an important role in park management and from our general observations; it is an area that needs to be addressed to improve management and development of MINAPA, BINP and other national parks.

Transboundary collaboration between MINAPA and the Selous Game Reserve, and among Bwindi/Mgahinga Conservation Area of Uganda, Virunga National Park of DRC and Volcanoes National park of Rwanda, could be an interesting area of study. Focus cou ld be on their management structures and cultures, and how they relate regarding management cooperation of the natural resources they share.

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ANNEXES

Annex 1: Semi-structured questionnaire

This interview is part of a research study in Mikumi National Park (MINAPA) and Bwindi Impenetrable National Park (BINP) on park management; its structure, culture, values, norms and challenges within the two parks. The result of the questionnaire will be used to write a master thesis as partial fulfilment of the academic requirement of a Masters degree in International Development Studies at the Norwegian University of Life Sciences (UMB). A copy of the thesis will also be submitted to *Protected Areas and Poverty In Africa (PAPIA project), the Uganda Wildlife Authority (UWA), Tanzania National Parks (TANAPA), BINP and MINAPA.*

We would also like to point out that all participants and answers submitted will be treated with complete confidentiality and anonymity, feel free to ask if you have any questions, and in advance... Thank you for your participation :)

Part A – General Information

Questionnaire number:

Date:

1. Gender o Male o Female	2. Age
3. Country	4. Village/home place
5. Civil status	6. Religion

7. Education/ practical training
8. Period of stay in the park
9. Job description/ what is your profession?
10. Working experience
11. If park management, which department do you belong to? o Finance and Procurement Department/ Finance and Accounts o Human Resources and Administration Department/ Administration o Tourism Department o Ecology/ Research and Monitoring Department o Works Department o Outreach Department/ Community Conservation Department o Protection Department/ Law Enforcement Department o Other (specify: _____)

Part B: For park management staff

Look at the park as an organisation and examine its management resource use patterns. How well it is to conserve biodiversity, and serve local people.

12. Who makes the decisions in your department?

    ....

13. Do local people take part in the decision making in the park management? What do they decide? How do they decide it? And when?

    ....

14. What impact does the management of the park have on the livelihoods of the local people?

    ....

Part C: Park culture, value and norms

To assess the management culture of the National Park by looking at the park as a social institution and the value of protected areas/national parks

15. How important is it to protect the area of the National Park?

Important _____
Not important _____
Indifferent _____
Do not know _____

16. What do you see as the main reason for protecting the National Park?

    ....

17. Does the park management deliver what they promise?

Yes _____
To some extent _____
No _____
Do not know _____

Comment
    ....

18. Do you consider the management of the park regarding environmental benefits successful?

Yes ____
To some extent ____
No ____
Do not know ____

Comment

....

19. How satisfied are you with how the park is being managed?

Satisfied ____
Medium ____
Dissatisfied ____
Do not know ____

Give reason for your answer

....

20. Are there enough people/staff employed to manage the park?

Yes ____
To some extent ____
No ____
Do not know ____

If comment:

....

21. Do you think the park staff is well enough trained/ is there enough training for the staff?

Yes ____
To some extent ____
No ____
Do not know ____

If comment:

....

22. How does the top management treat you?

Good ____
Fair ____
Poor ____
Do not know ____

23. What do you think are the key management challenges facing the National Park?

....

....

....

24. What do you recommend to be done so as to improve the management of the park in order to improve its performance and delivery?

....

....

25. Do local people access resources from the park?

Yes ____
No ____
Do not know ____

Comment

....

26. Do you think local people around the park should have access to the park's resources?

Yes ____
No ____
Do not know ____

27. How do local communities contribute towards the conservation of the park?

....

....

28. Do you consider the National Park a good place to live?

Yes ____
No ____
Do not know ____

Comment

....

Part D: Practical cases
Poaching, problem animals, fire management and the TANZAM highway

29. Is poaching a big problem in the Park?

Yes (very much)   ____
To some extent   ____
No   ____
Indifferent   ____
Do not know   ____

30. How well is poaching controlled?

Good   ____
Fair   ____
Poor   ____
Do not know   ____

31. What is the punishment for poaching?

....

32. How important do you find it to punish poachers?

Important   ____
Not important   ____
Indifferent   ____
Do not know   ____

33. What do you think the punishment should be?

....

34. What animals are normally poached today?

....

35. How do local people perceive the act of poaching?

....

36. What are problem animals, define?

....

37. Identify the problem animals in your area

....

38. Are problem animals reported?

Yes _____

No _____

Do not know _____

If yes, how does the system function in the park when problem animals are reported?

....

39. How often are the problem animal's shot?

Very often/ regularly _____

Occasionally/ sometimes _____

Rarely/ hardly _____

Never _____

Do not know _____

40. What is the punishment for shooting problem animals?

....

41. What do you think should be the punishment for shooting problem animals?

....

42. How important do you find it to punish the people who shoot problem animals?

Important _____

Not important _____

Indifferent _____

Do not know _____

43. How do you think local people perceive of the issue of problem animals?

....

44. What can they (local people) do to overcome this problem?

....

45. What could be a future way to handle this issue

....

46. What are the compensation measures for the damages made by problem animals?

....

47. Are the fires in the Park controlled?

No _____
Yes _____
Do not know _____

If yes, who controls them and how are they controlled?

....

48. Should the park stop the fire management they are practicing today?

No _____
Yes _____
Do not know _____

49. Are the fires in and close to the National Park a problem?

Yes _____
To some extend _____
No _____
Indifferent _____
Do not know _____

50. What do you think is the main reason for carrying out the fires in the National Park?

....

51. Have there been any conflicts regarding fires in the National Park?

....

52. Is the TANZAM highway a big problem in Mikumi National Park?

Yes (very much) _____
To some extend _____
No _____
Indifferent _____
Do not know _____

53. What is the main problem resulting from the TANZAM highway?

....

....

54. What can be done to solve the problems regarding the highway?

....

....

55. Are injured animals the park management responsibility?

No   ____
Yes   ____
Do not know   ____

56. What do you think is the best way to deal with an injured animal?

....

Part E: Different Statements
What do you think of the following statements on a scale from 1-3?

57. The park should be open, with free access for local people

Agree (3) Indifferent (2) Disagree (1) Do not know (0)

58. The park's main responsibility/duty is to keep people out of the park

Agree (3) Indifferent (2) Disagree (1) Do not know (0)

59. Hunting should be allowed in the park

Agree (3) Indifferent (2) Disagree (1) Do not know (0)

60. The park staff should live inside the parks boarders

Agree (3) Indifferent (2) Disagree (1) Do not know (0)

61. Should the park management make man-made waterholes

Agree (3) Indifferent (2) Disagree (1) Do not know (0)

Annex 2: Checklists for key informant interviews

Checklist MINAPA/TANAPA and BINP/UWA staff

- Influence on the park management from above and outside
    - How do TANAPA and UWA influence MINAPA and BINP management?
    - What role do politicians, research groups, local communities, media and NGOs have in the management of MINAPA and BINP?
- Community conservation
    - Types of outreach/ community conservation projects
    - Nature and extent
    - Access to the park and its resources
- Regulations, policies and plans
    - What regulations, policies and plans are used in MINAPA and BINP?
    - Decision-making arenas
- Park economic resources, income and budget
    - What economic resources are available in MINAPA and BINP?
    - Park budget
- Education and training of staff
- Management challenges and recommendations
- Cases: Problem animals, poaching, fire management and the TANZAM highway
    - Challenges
    - Conflicts
    - Recommendations
    - Punishment

Checklist hotel/camp employees

- Involvement in MINAPA and BINP management
    - How does the park management and TANAPA/UWA influence and affect your business?
    - How is the cooperation with the park management?
    - Concession
- Evaluation of the park management
- Tourism service and programmes in the park
- Knowledge about the park and the park management
- Community-Based Conservation
    - Types of outreach/ community conservation projects
    - Nature and extent
    - Access to the park and its resources

- Cases: Problem animals, poaching, fire management and the TANZAM highway
  - Challenges
  - Conflicts
  - Recommendations
  - Punishment

Checklist academic institutions, research groups and NGOs

- Involvement and cooperation with MINAPA and BINP management
- Participation in MINAPA and BINP management
  - How does the park management influence and affect you/the NGO or research group?
  - How is the cooperation with the park management?
- Key challenges facing the park management
- Evaluation of the park management
- Research in the park
  - Extent
  - Challenges
  - Recommendations
- Community-Based Conservation
  - Types of outreach/ community conservation projects
  - Nature and extent
  - Access to the park and its resources
- Cases: Problem animals, poaching, fire management and the TANZAM highway
  - Challenges
  - Conflicts
  - Recommendations
  - Punishment

Annex 3: Guides for focus group discussions

Date: Village:
Ages: Sexes: Number of participants:

Checklist
- The park management of MINAPA and BINP
- Decision-making areas
- Management challenges and improvements
- Reasons for the protection of the national park
- Community Conservation and Outreach Programmes
- Boundaries and relating challenges

Question guide
1. Do you take part in decision-making for the park management? How do these made decisions affect you and the local people in your area?
2. Do you agree with the park management regarding conservation?
3. Do you think the park management is successful?
4. What do you think are the main challenges facing the park management?
5. What do you recommend to be done so as to improve the performance and delivery of the park management?
6. Does the park meet any of your needs?
7. What resources can you access from the park?
8. What resources do you wish to access from the park?
9. What is the main reason for protecting the national park?

Community Conservation/ Outreach programmes
10. Are there any community development projects in your area being supported by the park management?
11. Does the management of the park steer/ guide/ educate you or your children?
12. Are people from your area employed in the park or work together with the park management?
13. How much do you benefit from the park?

Cases; problem animals and poaching:
14. Are the wild animals from the park a problem to your area?
15. Are people killed? How many?
16. How much crops are damaged?
17. Do you report problem animals to the park management?
18. How does the system work in the park when problem animals are reported?
19. How does the park management perceive and deal with the problem?
20. What could be a future way to handle the issue of problem animals?
21. As community members, what have you done to solve the above problems?

22. Is poaching a big problem in the park?
23. Is poaching well controlled?
24. What is the punishment for poaching?
25. What animals are normally poached?