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PROSPECTS FOR SUSTAINABLE WILDLIFE RESOURCE UTILISATION AND MANAGEMENT IN BOTSWANA: A CASE STUDY OF EAST NGAMILAND DISTRICT

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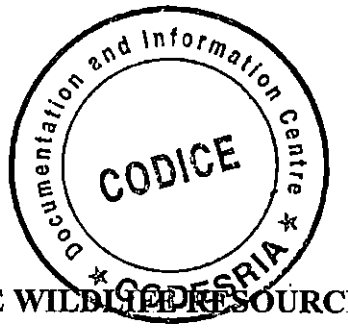

PROSPECTS FOR SUSTAINABLE WILDLIFE RESOURCE UTILISATION AND MANAGEMENT IN BOTSWANA: A CASE STUDY OF EAST NGAMILAND DISTRICT

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PROSPECTS FOR SUSTAINABLE WILDLIFE RESOURCE UTILISATION AND MANAGEMENT IN BOTSWANA: A CASE STUDY OF EAST NGAMILAND DISTRICT

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SEPTEMBER 1999

DEPARTMENT OF ENVIRONMENTAL SCIENCE
UNIVERSITY OF BOTSWANA

Dedicated to my late elder brother Abednigo (AJ) and to my dear wife Onaletshepho (Tshephi).

APPROVAL

This Dissertation has been examined and is approved as meeting the required standards of scholarship for partial fulfillment of the requirements for degree of Master of Science in the Environmental Science.

Internal Examiner_____

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Name Date

Dean of Faculty_____

Name Date

Statement of Originality

The work contained in this dissertation was completed by the author at the University of Botswana between July 1998 and September 1999. It is original work except where due reference is made. It has not been and will not be submitted for the award of any degree or diploma to any other institution of higher learning.

_____ _____

Author's Signature Date

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Abstract

This study aimed at investigating the prospects for sustainable wildlife resource utilisation and management in Botswana with special reference to East Ngamiland District. It traces the historical development of the wildlife industry from the pre-colonial period to the present time. Particular attention is paid to the current patterns and policies of wildlife resource utilisation and management and their associated problems and to the attitudes and perceptions of the local communities towards wildlife conservation and tourism. Wildlife community-based projects, land use conflicts and integrated wildlife management in East Ngamiland District are also closely examined.

The data in this study was obtained from both secondary and primary data sources. Secondary data sources included the published and unpublished wildlife reports and government policy documents. Primary data collection involved the administration of structured and semi-structured questionnaires to respondents in East Ngamiland District. Interviews were also conducted with relevant key informants in the wildlife industry in East Ngamiland District, Maun and Gaborone. A stakeholder analysis was performed to identify the various groups and land use activities that are affected by the wildlife industry and areas of actual and potential conflicts among them. Finally, data was analysed mostly by using the Statistical Package for Social Sciences.

The key findings of the study are as follows:

1. The Pre-colonial wildlife resource utilisation and management in East Ngamiland District was sustainable. This was possible mainly because of the traditional wildlife management institutions and customs that directed wildlife use amongst the societies.

2. The European trade expansion in the area commercialised wildlife resources. The result was the overharvesting of wildlife by both the European traders and tribal rulers and their people in pursuit of individual gains.

3. During the British Administration in Botswana from 1885 to 1966, wildlife management became centralised. The British Administration passed statutory game laws to apply to Europeans while tribal rulers were forced to pass decrees for their people. Protected areas such as Moremi Game Reserve and Chobe National Park were established in hunting and gathering lands of local people without their consent. The result of these new developments in wildlife management resulted in negative attitudes and perceptions of local communities towards wildlife conservation and state institutions and policies on wildlife utilisation and management.

4. Even after Botswana's independence in 1966, wildlife resources are still centralised. The local communities have no major role in decision making regarding wildlife management. They also derive little or no benefits (e.g. income, employment and infrastructure services) from wildlife or tourism in the area. Negative attitudes towards wildlife conservation and tourism have, therefore, been perpetuated.

5. The study area is also characterised by land use conflicts between the traditional stakeholders such as the local communities and the emerging stakeholders such as government, private tourist sector and wildlife conservation groups. At the international level, there is conflict between Botswana and Namibia over the use of the Okavango River waters.

6. There is also lack of integrated wildlife management in East Ngamiland District that takes into account the welfare of the local communities and that of other economic sectors.

Based on the findings, the study makes the following recommendations:

1. That there is need to involve the local communities in decision making regarding wildlife resource utilisation and management. The local communities need to be mobilised and empowered so that they may have access and derive direct benefits from wildlife in the area.

2. That, in the light of land use conflicts in the area, there is need for a conflict resolution mechanism to be put in place in the form of an institution or policy. This, therefore, makes it necessary for government to consider establishing a Ministry of Environmental Affairs and Tourism to co-ordinate and harmonise all land use activities in the country (e.g. agricultural and wildlife conservation activities). At the international level, it is vital to have an effective institutional structure and policies in the Southern African region to deal with the sustainable use of shared water resources.

3. Development programmes and projects in wildlife areas need to be preceded by Environmental Impact Assessments including social considerations in order to minimise detrimental effects on wildlife resources e.g. veterinary fences and livestock expansion in wildlife areas.

4. Hunting in wildlife areas is not controlled, as a result there is need to review hunting procedures and where possible, a booking system in hunting areas needs to be put in place. Hunting of the declining wildlife species should be suspended for a specified period of time in order to give the specified species time to regenerate.

5. Education is the key to sustainable wildlife resource utilisation and management, as such it is important to include wildlife conservation programmes in the formal and non-formal school curriculum.

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ACCRONYMS

ARAP - Arable Rainfed Agricultural Programme
ALDEP - Arable Land Development Programme
ARB - Agricultural Resource Board
CAMPFIRE - Communal Area Management Programme for Indigenous Resources
CASS - Center for Applied Social Sciences (University of Zimbabwe)
CBNRMP - Community Based Natural Resource Management Programme
CHAs - Controlled Hunting Areas
CTO - Central Transport Organisation
CI - Conservation International
DNPWLM - Department of National Parks and Wildlife Management (Zimbabwe)
DTRP - Department of Town and Regional Planning
DWA - Department of Water Affairs
DWNP - Department of Wildlife and National Parks (Botswana)
EIA - Environmental Impact Assessment
FAP - Financial Assistance Policy
HATAB - Hotel and Tourism Association of Botswana
ITK - Indigenous Technical Knowledge
KCS - Khalahari Conservation Society
LIFE - Living in a Finite Environment
MCI - Ministry of Commerce and Industry
MFA - Ministry of Foreign Affairs
MFDP - Ministry of Finance and Development Planning
MLGL&H - Ministry of Local Government, Lands and Housing
ML&HA - Ministry of Labour and Home Affairs
MMR&WA - Ministry of Mineral Resources and Water Affairs
MOA - Ministry of Agriculture
MOE - Ministry of Education
MOH - Ministry of Health
MPA&PA - Ministry of Presidential Affairs and Public Administration
MWT&C - Ministry of Works Transport and Communication
NCS - National Conservation Strategy
NGOs - Non-Governmental Organizations
OP - Office of the President
OPWT - Okavango People's Wildlife Trust
RADP - Remote Area Development Programme
SIA - Social Impact Assessment
SMEC - Snowy Mountains Engineering Corporation Consultants
TGLP - Tribal Grazing Land Policy
USAID - United States Agency of International Development
WCED - World Commission on Environment and Development
WMAs - Wildlife Management Areas
WUC - Water Utilities Corporation (a parastatal)
WWF - World Wildlife Fund
ZIMTRUST - Zimbabwe Trust

CHAPTER 1: INTRODUCTION

1.0 Introduction

This chapter outlines the general introduction to wildlife utilisation and management in Africa, with specific reference to Botswana. It also outlines the statement of the problem, the objectives, the research questions, and the hypotheses of the study. The chapter also highlights the significance and limitations of the study and finally describes the choice and geographic characteristics of the study area, provides the justification of the study area and the organisation of dissertation.

1.1 Resource Utilisation and Management with Special Reference to Wildlife

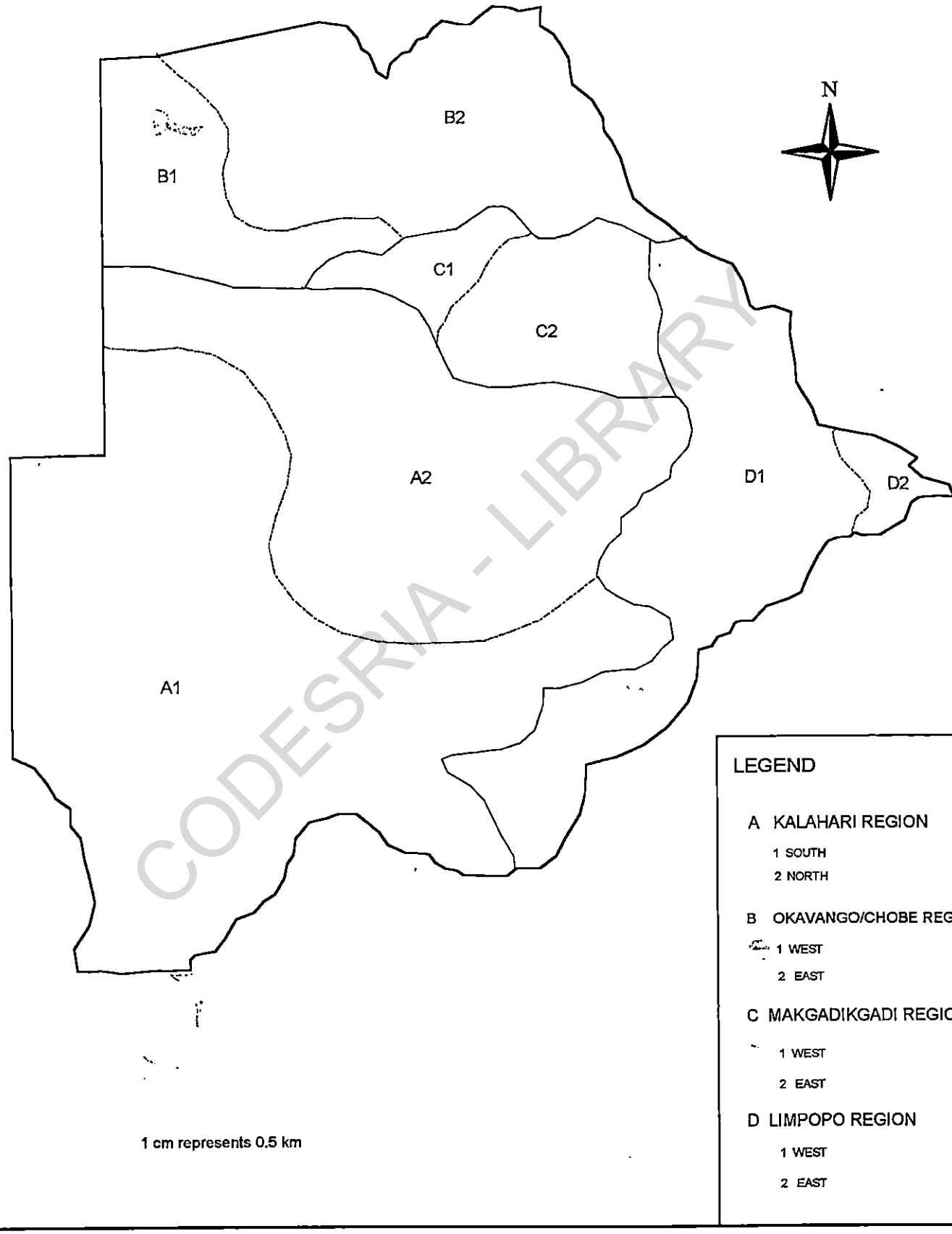
Africa as a whole has a long tradition of sustainable resource utilisation and management especially at the community level (Darkoh, 1996a). Darkoh argues that the indigenous people in the pre-colonial period in Africa possessed knowledge on resource utilisation and management, which was not static but dynamic, depending on the socio-economic and environmental circumstances of particular local communities. This knowledge was possessed by both males and females who collectively utilised and managed their natural resources sustainably.

With reference to wildlife resources, sustainable resource use has also a long tradition in various communities of the world. Human development would not have been possible without animals. For, apart from meat, animals provided people with skins and fur for clothing, sinews for rope and thread, fat for fuel, antlers for tools, horns for drinking vessels and musical instruments, and bone for all sorts of purposes---from tools and weapons to buttons and needles, and game for hunting and viewing. Animals also play a major role in people's religious activities (Eltringham, 1984).

In Botswana, wildlife is one of the most important resources. The country has been recently divided into four wildlife utilisation regions (Figure 1.1), the Kgalagadi Region, representative of the South-West arid biome, the Okavango Chobe Region containing the rich fauna with Central African elements (part of this zone being the study area), the

Figure 1.1

Map of Wildlife Utilisation Regions in Botswana



Makgadikgadi Region, transitional between the first two, and the Limpopo Region, containing South-East lowland fauna species. The wildlife resources tend to be concentrated in the National Parks and Game Reserves occupying some 17% of the country. Surrounding these are eleven designated Wildlife Management Areas (WMAs) in which it is intended that the main form of land use will be wildlife utilisation. WMAs occupy an additional 22% of the surface area of the country. There are also small areas with leasehold for wildlife uses. Some wildlife areas occur on communal grazing land outside the above mentioned areas although, so far, little information is known about their population and characteristics.

Like in the rest of Africa, and the world, since time immemorial in Botswana, knowledge of wildlife resource management was possessed by many tribes or groups of people who lived in harmony with their environment. Such communities and tribes viewed wildlife resources as the natural heritage of the tribe or clan, to be utilised for now and the future. During the pre-colonial period, Batswana had positive attitudes and perceptions towards wildlife resource utilisation and management, as the wildlife resources were regarded as community property. There were unwritten laws and cultural obligations which enabled people and wildlife to co-exist with each other. Batswana, over the centuries developed dynamic adaptive strategies in the management of the environmental resources around them as they were aware that their very survival was at stake unless the strategies were environmentally sustainable and consistent with their social values and institutions. The management of resources under customary law endured for centuries in part because of the strong religious links with ancestors and also because of the low population densities which helped to maintain a sound ecological balance (Chenje and Johnson, 1994). Mbanefo and de Boerr (1993) point out that indigenous peoples in remote areas developed wise procedures to protect their natural resources over centuries and could thus be called the original environmentalists.

The traditional resource management and institutions in Africa came under severe pressure with European intrusion and the onset of colonialism (Darkoh, 1996b). Darkoh argues that the advent of European, colonialism and modernisation alienated the local communities from the natural resources upon which they had previously based their livelihood under a

system of collective rights. According to Collett (1987), European intrusion and colonialism in Maasailand in Kenya began a process of packaging land, setting down boundaries which separated Europeans from Africans and cultivated land from wilderness areas and legislating for the maintenance of differing forms in each area. A similar trend of land use division which occurred in Kenya also occurred in Southern Africa especially in Zimbabwe, where the best fertile land was taken by Europeans while the indigenous populations were pushed into the reserves (Darkoh 1986, Mbanefo and de Boerr 1993). What is clear about Kenya and Zimbabwe is that, the colonial administration created wildlife areas in the form of national parks and game reserves, which completely prohibited the indigenous people from hunting in these areas.

In Botswana, the traditional resource management systems and institutions also came under severe pressure with the ascendancy of British colonial rule since 1885. The local communities lost control over wildlife resources when power became transferred from the local chiefs and their traditional management institutions to those of the British administration. This was the beginning of severe wildlife decline in most parts of Eastern and Southern Botswana (Campbell, 1995). This scenario led to the creation of national parks and game reserves to protect wildlife resources. These game parks and wildlife sanctuaries were created in the traditional hunting areas of the local people who then got denied of access to wildlife resources. The result was conflict and negative attitudes by local people towards wildlife resources and state powers charged with the responsibility for wildlife conservation.

The post-colonial period offered very little change throughout Africa. The policies of the colonial period were carried on into the post-colonial era, even though Africans, rather than Europeans, were now making decisions. The economic structures introduced during the colonial period remained almost untouched (Darkoh, 1996b). Botswana became independent from British colonial rule in 1966. The British administration's policies on wildlife management were simply carried on into post-colonial Botswana by the new Batswana leaders. More national parks and game reserves were created together with the formulation of more policies, institutions and projects which did not take the local situation

into account, leading to inappropriate and unsustainable management of the country's wildlife resources.

So far, the country has been divided into 38 Controlled Hunting Areas (CHAs) which are designated to assist in management of the licensing system. Different hunting and capture quotas are set annually for each CHA. Some CHAs have been leased to safari hunting concessions. The CHAs are being radically redesigned in the interest of more efficient resource allocation and in 1986, a government White Paper on Wildlife Conservation was published to provide a sound basis for wildlife utilisation in the country. Other legislation in the form of Acts have been passed to replace old ones. Many Batswana look at these Acts as alien and not in their inherent interests. Batswana have recently become more and more antagonistic to wildlife, leading to some sort of anti-conservation culture and attitude, countrywide. Government's inappropriate pro-conservation policies and the new anti-conservation culture are proving to be detrimental to wildlife utilisation and management in Botswana (Mordi, 1991). The new government policies and strategies are also suffering from insufficient implementation capacity, inadequate scientific research, and lack of political will. The result is the inability by government at present to sustainably manage the country's wildlife resources. The Okavango Community Consultants (OCC 1995: 19) state that "Huge areas have been almost depleted of wildlife...we strongly believe that the conditions of our country's wildlife is in such dire straits that it is reaching catastrophic proportions." According to Barnes (1998), numbers of wildlife species have declined significantly during the last fifteen years. In parts of the Khalahari, game biomass appears also to have reduced by as much as 60% (Barnes, ibid).

Traditionally, Batswana are arable and livestock farmers. After Botswana's independence in 1966, the government introduced agricultural policies which tend to downplay wildlife conservation. The country's National Development Plans from independence to the present indicate a huge government expenditure on agricultural production, especially, on the livestock sector. Agricultural schemes have led to land use conflicts between the wildlife industry and the agricultural sector. This situation suggests that Botswana lacks an integrated approach to wildlife conservation, that is, an approach that promotes wildlife

conservation while taking into account other sectors of the economy and the welfare of the local communities.

As Botswana's wildlife resources are in dire straits, it is important for the country to find ways and strategies which will develop a wildlife industry that will take the country into the next millennium and beyond. Such policies and strategies must ensure the socio-economic development of the local communities. Policies and projects that are formulated and implemented must take into consideration the needs and values of the local people. Community participation is an aspect of human development where people are closely involved in the economic, social, cultural and political processes that affect their lives (Human Development Report, 1993). Community participation in wildlife management should, therefore, be regarded as a process that demands empowerment of the local people to have increased access to and control over resource utilisation and the socio-economic and political matters that affect their lives. It must also be seen as an approach to rural development which shifts from top-down to bottom-up, from centralised government control to local divestiture and from blueprint to learning process (Chambers, 1992).

Because of the role tourism and wildlife are expected to play as alternative engines of growth to mining and the beef industry, wildlife utilisation as a commercial and economically viable land use is bound to gain increased importance in Botswana. Already, as we have noted, numbers of some wildlife species have declined significantly partly as a result of drought and partly as a result of hunting pressure. The wildlife sector is facing increasing competition for the rangeland resource from burgeoning national livestock herds, and other land users. The issue arising from this is whether, given present rates of utilisation, there are prospects for wildlife utilisation that will not compromise the future needs of the people and environmental sustainability.

1.2 **Statement of the Problem**

The problem this study set out to investigate was the sustainability of wildlife utilisation and management in Botswana with specific reference to East Ngamiland District. Botswana is one of the few African countries endowed with a variety of natural

resources, of which wildlife resources are a major component (Barnhoorn *et al.* 1994). However, little is known about how the country's abundant wildlife resources (Table 1.1) have been utilised and managed from the pre-colonial period to the present time. There is, therefore, need to investigate the history and development of wildlife resource utilisation and management and find out the extent to which both traditional and modern wildlife management practices have been sustainable and how they have changed over time. Equally important for planning is the issue of how traditional wildlife management could be fused with modern scientific knowledge to achieve a higher degree of sustainability in future.

Table 1.1 **Mean Annual Estimates of Selected Wildlife Species in Botswana**

Species	**1987**	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**
Elephant		60,050	49,278	66,818	54,943	72,967	67,446	79,480
Buffalo	77,364	36,399	42,967	53,933	25,461	12,748	26,893	18,381
Eland					10,258		15,792	22,563
Gemsbok					117,704		126,514	163,881
Hartebeest	56,048		36,431		39,027	39,559	47,992	40,775
Kudu			48,742	18,197	15,095		26,070	27,891
Giraffe					3,420		12,028	12,036
Impala			45,280				61,510	95,560
Lechwe			77,700	84,165		66,023	70,274	57,231
Reedbuck			1,667	4,043		2,780	2,166	2,071
Sitatunga						1,179	816	2,065
Roan	1,228		970	1,233		530	1,357	1,570
Sable	3,636	3,902	3,592	2,935		1,156	3,138	2,923
Springbok					137,202		120,546	110,441
Wildebeest			13,009	20,338	27,127	21,632	42,865	60,292
Tsessebe		3,930	9,468	15,500	3,178	15,052	10,015	10,487
Waterbuck			784			601	1,071	1,291
Ostrich					42,829		55,778	71,940
Crocodile					187		597	697
Steenbok							72,400	71,940
Duiker							33,183	43,400
Zebra			47,310			52,285	33,738	54,372

Source: Research Division, DWNP 1995

Although Spinage (1991) argues that Botswana has one of the most comprehensive game laws in Africa, fears have been expressed in the country about the sustainability of wildlife utilisation and management as wildlife populations are declining. Table 1.2 provides a summary of the changing status of key wildlife species in Botswana over the past sixteen years. With the exception of the elephant and the gemsbok, almost all other wildlife species have been declining. Botswana's wildlife management policies largely advocate for a centralised wildlife resource management, a phenomenon that has antagonised most local communities against wildlife conservation, thus contributing to the problem of sustainability. In an era in which Botswana's wildlife resources are facing the threat of depletion (Perkins and Ringrose, 1996), the question of whether current wildlife policies and institutions will carry the country's wildlife resources into the twenty-first century and beyond can no longer be gainsaid or ignored. There is, therefore, the need to examine the current patterns of wildlife resource utilisation and management and their associated problems in Botswana.

Table 1.2 **Changing Status of Key Wildlife Species in Botswana Over Sixteen Years.**

Species	1978	1994
Wildebeest	315 058	17 934
Hartebeest	293 462	44 732
Gemsbok	71 423	85 368
Eland	18 832	11 757
Springbok	101 408	67 777
Ostrich	92 286	27 744
Kudu	6 429	7 849
Zebra	100 295	20 863
Elephant	45 449 (1987)	78 304
Buffalo	72 290 (1987)	29 037

Source Perkins and Ringrose (1996)

The centralisation of wildlife management in Botswana is allegedly denying the local communities in wildlife areas access to and benefits from wildlife resources, resulting in many people living in poverty in the midst of a rich wildlife and tourist environment. While the Wildlife Conservation Policy of 1986 calls for the establishment of

community-based wildlife management projects which will benefit and positively change local community attitudes and perceptions towards wildlife conservation, it is not known whether such projects are yielding the intended wildlife benefits to the communities living in the wildlife areas. There is also little information that explains the current attitudes and perceptions of the local communities towards wildlife conservation. It is, therefore, important to assess the benefits, attitudes and perceptions of the local communities towards wildlife conservation in wildlife areas.

Natural resources like wildlife and their habitats are defined in the context of human use and their values to human communities. As a result, conflicts over resources and resource habitats can arise when several groups see differently these resources in the same natural system or location. These conflicts are often exacerbated by the fact that different definition of resources are usually accompanied by a variety of resource management regimes (Rogers *et al*, 1999). In these cases, two or more groups are not only competing for resources from the natural system, they are also attempting to impose often radically different notions of resource management upon such a system. Conflicts of this sort over resource definition and management in the contemporary world are likely to take place at many sites and on many scales, as the contending parties bring to bear their respective political and economic capabilities in venues where they will have the greatest success.

In Ngamiland District, land use conflicts between wildlife and agriculture are rampant. The Botswana government through the European Union has over the years provided subsidies to livestock farmers to promote the beef industry (Perkins and Ringrose, 1996), and also to arable farmers to ensure food security in the country. Agricultural schemes and policies have led to land use conflicts between wildlife, human settlements and agricultural production. Other conflicts occur among hunting-safaris, photographic-safaris and subsistence hunting as SMEC (1989) has found in Ngamiland District. It is important, therefore, to identify the stakeholders and the land use conflicts experienced in wildlife management areas. It is also important to identify the mechanisms, if any, that have been introduced to prioritise competing demands and how such conflicts can be contained or mitigated.

Lack of a wildlife management policy that takes into account other sectors of the economy, that is, an integrated wildlife management in Botswana, has resulted in government policies conflicting with each other during implementation in East Ngamiland District. This has compounded the land use conflicts occurring in wildlife areas in the country. It has also hamstrung efficiency in wildlife management in the country. The prospects of an integrated approach to wildlife management in Botswana need to be explored and experience from other countries examined to draw valuable lessons that might be helpful to Botswana in its efforts to achieve sustainable wildlife management.

1.3 **Research Questions**

This study aims at investigating the prospects for sustainable wildlife utilisation and management in Botswana with special reference to East Ngamiland District. The research questions addressed in the study are:

(a) How have wildlife resources been utilised and managed from the pre-colonial period to the present time in Botswana in general and East Ngamiland District in particular?

(b) What are the current patterns and methods of wildlife utilisation and management and their associated problems?

(c) What is the role of the local communities in wildlife management in and around the wildlife management areas (WMAs), and what benefits do they get from wildlife resources?

(d) What are the attitudes and perceptions of the local communities on wildlife resources conservation in wildlife management areas?

(e) Who are the stakeholders and what is the nature and extent of the land use conflicts experienced in wildlife management areas?

(f) How are local community-based and controlled wildlife projects performing?

(g) Are there prospects for an integrated wildlife management that can lead to wildlife conservation that takes into account the welfare of the local communities as well as other sectors of the country's economy?

(h) What is the experience of other neighbouring countries in integrated wildlife management and what lessons can Botswana learn from this experience?

1.4 **Objectives of the Study**

From the issues raised above, therefore, the research objectives for this study are to:

(a) investigate the history and development of wildlife utilisation and management from the pre-colonial period to the present time.

(b) examine the current patterns of wildlife utilisation and management and their associated problems.

(c) assess the benefits, attitudes and perceptions of the local communities towards tourism and wildlife conservation.

(d) identify and examine the stakeholders and the land use conflicts experienced in wildlife management areas.

(e) explore the prospects for an integrated wildlife management and conservation and the lessons Botswana and the district in particular can learn from the experience of neighbouring countries.

1.5 **Hypotheses**

The general hypothesis of this study is that there is currently an unsustainable wildlife resource utilisation and management in Botswana in general and in East Ngamiland District in particular. It is further hypothesised that this unsustainability is related to:

(1) failure to involve local communities in policy making regarding wildlife conservation and management.

(2) failure to ensure that local communities in wildlife areas obtain benefits and have a role in wildlife utilisation and management.

(3) negative attitudes and perception of the local people towards wildlife resource conservation and management.

(4) failure to involve all the stakeholders in WMAs in wildlife management and land use conflict resolution.

(5) ineffectiveness and poor performance of community-based and controlled tourist projects in wildlife areas.

(6) lack of an integrated wildlife resource utilisation and management policy.

1.6 **Significance of the Study**

There is at present little coherent information on the history and development of the wildlife industry and it is hoped that this study will contribute to fill this void. It is also important to know the present pattern of wildlife utilisation and the perceptions and attitudes of the local people towards the commercial activities of wildlife viewing tourism, safari hunting tourism and wildlife conservation. Commercial wildlife activities are attractive both financially (from the point of view of the private investor) and economically (from the point of view of society or nation), but private and national interests are sometimes achieved at the expense of local community interest and welfare.

There is little research that has been done in Botswana to critically investigate the possibility of providing an integrated wildlife management that takes into account the welfare of the local communities as well as that of other sectors of the economy. This investigation,

therefore, is significant, in that, it also taps on the experience of other countries to provide lessons on how integrated wildlife management can be pursued in Botswana.

The findings of this study should go some way in providing information to policy makers on the prospects for sustainable wildlife resource utilisation and management.

1.7 **Limitations of the Study**

Time and financial constraints were serious limitations to this study. The preliminary reconnaissance survey, which is normally important for a study of this nature, was not done due to time and financial constraints.

Another constraint has been the limited focus of the study. The investigation is limited to terrestrial wildlife (wild animals and birds) even though it is recognised that other forms of wildlife resources like riverine, lacustrine and plant life also exist in the study area and are being unsustainably exploited.

A third limitation is related to absenteeism of respondents, which required a modification of the original scheduled sample. This is discussed in passing in Chapter Three on Methodology.

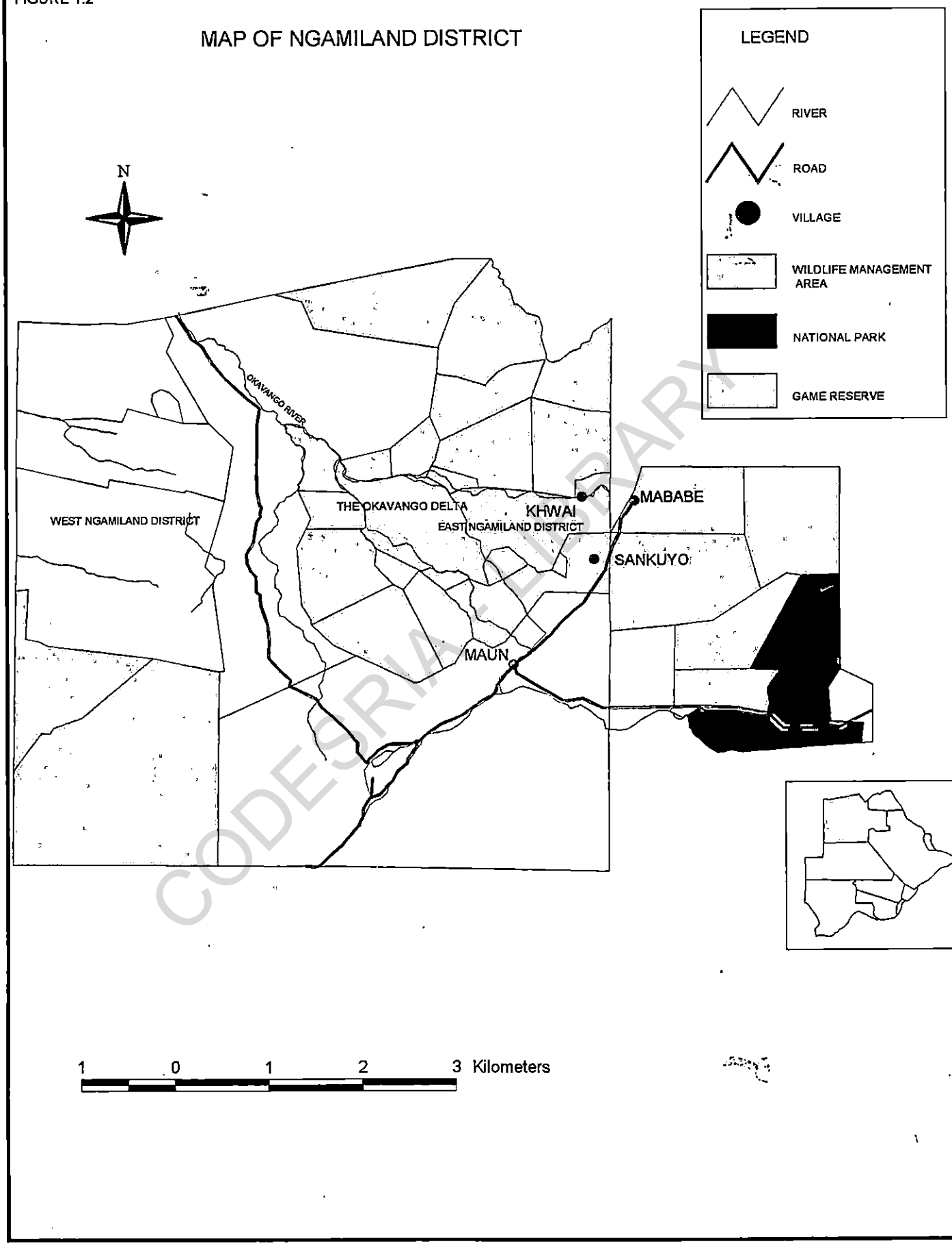
1.8 **Description of the Study Area**

This study area is East Ngamiland District which is a sub-district within Ngamiland District. It has most of the general geographical characteristics of the whole of Ngamiland District. However, it should be noted that the name of the study area does not necessarily imply an officially designated sub-district as understood in Botswana's administrative language. It is so-called mainly because the study was conducted in the eastern part of Ngamiland District (see 1.8.1 for details).

1.8.1 **Location**

Ngamiland District is located in the north-west corner of Botswana (inset in Figure 1.2). Its northern and western boundaries are part of the international boundary between

FIGURE 1.2



Botswana and Namibia. Ngamiland covers an area of about 109, 130 square kilometres, and it is one of the largest districts in the country, ranking third out of ten. East Ngamiland District is found between latitudes 18° 30`S – 20° 00`S and longitudes 23° 15`E – 24° 30`E and is roughly 54 565 square kilometers. It shares its northern boundary with the Chobe District and the eastern boundary with the Central District.

Like other parts of Ngamiland, the geographical location as well as the physical characteristics of East Ngamiland District give it a remote area status. Remote in the sense that the provision of social services such as the communication system in the district is very poor. Roads are generally in poor condition and are not easily accessible. East Ngamiland District lies over a bed of deep, heavy Kalahari sands, a situation that makes travelling within the district, to some extent, a difficult and risky endeavour. The sandy roads make only the four wheel vehicles and trucks to be able to pass through, with the latter managing through great effort. The area is more than 500 kilometers from the nearest railway line with only a few tarred roads found around Maun area. Public transport, postal services, telephone network and shopping facilities are almost non-existent. The other feature that adds to the remoteness of the area is the Okavango Delta. The Okavango Delta is the most striking geographical feature in East Ngamiland District and indeed, in the whole of Botswana. The Okavango River Delta is a vast swamp and floodplain area measuring about 16, 000 square kilometres, of which half is permanently flooded (Tlou, 1985). The Delta is formed by the inflow of the Okavango River, which originates from the Angolan Highlands, passing through Namibia and entering Botswana in the north-western corner at Mohembo Village.

The Okavango Delta is part of the larger geographical network, meaning that, its influence extends to include areas such as Moremi Game Reserve, the Chobe National Park, Nxai Pan, Mababe Depression, and the Makgadikgadi Pans. Physical features such as the Okavango Delta, Mababe Depression and Makgadikgadi Pans are a result and extension of East African rift valley system. As a result, East Ngamiland District as well as the whole of Northern System at times experiences minor earthquake activities.

1.8.2. **Natural Resources in East Ngamiland District**

East Ngamiland District is endowed with a variety of natural resources. The Okavango Delta is itself important as a tourism resource, because of the wildlife it sustains and its scenic beauty. Like other wetlands in the world, it provides good breeding areas for wildlife, birds, amphibians, aquatic mammals and fish.

Wild animals, birds and plant life are also considered the most important natural resources in the region. Large herbivores such as elephants, buffaloes, zebra and a variety of small game such as impala, kudu, red lechwe, and ostrich are found in the region. As a result, wildlife resources and other natural resources like veld products have a direct and indirect influence on the socio-economic lives of the people living in the region. There are about thirty-two large mammals which together with the crocodile and the ostrich make up thirty-four game animals of the Okavango Delta which are classified under the Wildlife Conservation and National Parks Act of 1992 (OCC, 1995). Table 1.3 illustrates the wildlife population estimates in Ngamiland District in 1989-1991.

Table 1.3: **Wildlife Population Estimates for Ngamiland District 1989-1991**

Species	Estimated Number	95% CL %EST	% Biomass	% in Protected Areas
Elephant	34, 605	18	21.58	12.37
Zebra	24, 149	29	2.99	35.33
Hippo	2, 763	39	1.14	26.38
Warthog	7, 125	20	0.29	35.75
Giraffe	7, 237	16	2.42	23.85
Eland	1,213	54	0.22	0.16
Kudu	9, 090	15	0.84	10.30
Sitatunga	1, 792	20	0.09	17.97
Bushbuck	13	202	0.00	0.0
Gemsbok	10, 376	29	1.04	7.20
Roan	696	57	0.09	0.00
Sable	1, 313	49	0.15	5.86
Waterbuck	338	90	0.03	60.06
Lechwe	69, 719	16	4.01	42.64
Reedbuck	2, 957	20	0.11	30.67

Tsessebe	9, 593	16	0.76	13.92
Hartebeest	547	83	0.05	0.00
Wildebeest	18, 260	17	1.96	23.37
Impala	34, 124	17	1.38	49.80
Springbok	5, 041	94	0.14	40.79
Duiker	3, 044	21	0.05	3.15
Steenbok	5, 674	14	0.07	5.18
Buffalo	39, 036	30	8.88	18.42
Baboon	808	73	0.00	41.34
Jackal	93	73	0.00	13.98
Wild Dog	161	170	0.00	0.00
SPT Hyaena	29	88	0.00	41.38
BRN Hyaena	90	130	0.00	0.00
Lion	101	77	0.00	38.61
Ostrich	111, 129	17	0.61	5.00
Crocodile	209	51	0.00	0.00
WL Biomass	214, 932			
Area	111, 036			

Source (Bonifica, 1992:46)

Surface water from the delta is also an important natural resource in the area. It is used for domestic purposes and a limited small-scale agriculture along both sides of the panhandle. Seasonal outflow from the delta has been used traditionally for *melapo* (flood recession) farming, as the water recedes just prior to the rainy season. The Okavango Delta is, therefore, of high biological, hydrological and economic value to the district and the country as a whole.

1.8.3 **Climate**

East Ngamiland District falls within the northern wet band of Botswana, although it is also very prone and vulnerable to drought, especially the southern/south-eastern part of the district. The climate of East Ngamiland District is, therefore, semi-arid with average annual rainfall varying from 350mm in the south to over 550mm in the north-east.

However, the amount and distribution of rainfall in the district can vary greatly from one year to the next. During drought years, rainfall in Ngamiland varies from 15 to 30% below the annual average. Most of the rain (90%) falls between November and April, and winter months (June-August) are virtually dry.

Mean minimum temperature range from 15 to 20 degrees Celsius (winter/summer) in the south and north, with the lowest temperature occurring in June/July. Mean maximum temperature range from 25 to33 degrees Celsius (winter/summer) with peaks in October/November, sometimes reaching extremes of 42 degrees Celsius. The high temperature naturally results in high rates of evaporation, and it is estimated that 90% of the Okavango Delta waters are lost through evaporation.

1.8.4 **Soils**

East Ngamiland District is situated entirely in the Kalahari physiographic basin, one of many large sedimentary basins, separated by broad upwarps or swells, which cover the continent of Africa (Okavango Community Consultants, 1995). These basins developed by subsidence (downwarping) or rifting within a shield area of very ancient Pre-Cambrian rocks. Most of them have been sites of sedimentation throughout the phanorazoic period.

Since the soils are developed primarily from the underlying geological materials, the Kalahari group sediments are of major importance in Ngamiland District soils, which are, therefore, mostly sandy. Beneath the Kalahari group sediments, are the Pre-Cambrian basement and the carboniferous to Triassic Karoo Supergroup. Pre-Cambrian rocks outcrop as dispersed inlets. Karoo sequences lie between the Pre-Cambrian basement and Kalahari surface, as well as minor elements in the post karoo sills and dykes. The importance of the Pre-Cambrian and karoo geologies lies in the fact that they are composed of rocks which are frequently mineral rich (OCC, 1995).

Generally there are three major divisions of soils in East Ngamiland District, that is, those developed from lucastrine deposits, in deflated pans or in interdune depressions, those

developed from alluvial deposits or alluvially reworked materials, and those developed from unconsolidated sand deposits or coarse-gained sedimentary rocks.

1.8.5 **Vegetation**

East Ngamiland District has a high plant species when compared with other districts in rest of the country. In general, the district has basically three different but closely interrelated zones: the aquatic grassland, the rich savannah woodland and grassland characterised by the predominant occurrence of *mopane (Colosphermum mophane), Terminalia Serecea/Lonchocarpus nelsii* associations, and the poorer scrub savannah which merges into the semi-arid desert to the remote west.

The vegetation spectrum of the Okavango Delta area is determined by the water/flood regime. This has resulted in the three vegetation types/plant communities. These are the aquatic open water communities or seasonal swamp, perennial swamp vegetation such as *Cyprus, Papyrus, Pharagonity australis, Miscanthus junceus* and the seasonal plants.

The sandveld is composed of dry land terrestrial ecosystems within the following types; forests: woodlands, savanna, and grasslands. Forests are found occasionally on the edge of the Okavango Delta along the panhandle. Riverine woodland border edges of wet lands/swamps and varies from trees to shrubs and grasses. Other woodlands include Acacia, but mostly *Mophane*. These are found in the drier areas of the district. As a whole, the vegetation type is determined by the distribution of soil and rainfall variation from north to south of the district.

1.8.6 **Human Population and Land Use Activities in East Ngamiland District**

Most human settlements in the district are small and the principal economic activities are hunting and gathering. Some of the major villages found in East Ngamiland are Khwai, Mababe, Sankuyo, Ditshipi, Thokatsebe, and Dionara. These villages are located in the North-Eastern fringes of the Okavango Delta, Moremi Game Reserve and Chobe National Park. Basubiya and Bayei are the two tribal groups found in Sankuyo while the Basarwa

inhabit Khwai, Mababe, Thokatsebe, and Dionara. Table 1.4 illustrates the population of villages found in East Ngamiland District (OCC, 1995).

However, the whole district is under Batawana tribal authority. The Batawana, who are an offshoot of the Bangwato of the present day central district, in the last quarter of the nineteenth century, seceded from the Bangwato and established an independent state in Ngamiland (Tlou, 1985). The Batawana conquered and defeated all the tribal groups they found in the area and then exercised their power and authority over them. Such defeated groups were forced to pay an annual tribute to Batawana chiefs, who established their capital in Maun, found at the base of the triangular Okavango Delta.

Table 1.4 **Human Population Statistics of Villages in East Ngamiland District (1991)**

Village	Population
Ditshipi	267
Gamodao	25
Diadora	205
Xarexau	107
Tshutshobega	179
Goroku	106
Xaraxau	151
Boro	804
Daonara	85
Katamora	73
Tshokoga	95
XauXau	252
Mokoba	51
Mababe	91
Sankuyo	382
Khwai	429
Total	3302

Source (OCC, 1995)

There are two major types of land ownership in the district. These are state lands and tribal or communal lands. Within both types, there are designated land use areas like Wildlife

Management Areas, Game Reserves and National Parks, and other general land use areas such as settlements, communal grazing, and arable areas. Since the district is endowed with natural resources such as wildlife and the Okavango Delta, wildlife conservation and tourism are some of the significant land use activities.

The cultural variety of the district has also created a degree of specialisation among the economic activities of the local communities. For example, the Bayei of Sankuyo excell in fishing and are well versed in *molapo* cultivation and hunting. As a result, the current economic base of Sankuyo Village is fishing, arable agriculture, hunting and gathering of veld products. They also keep donkeys, goats and chickens.

The Basarwa of Khwai who are referred to as BaNoka, meaning, people of the river or the so-called "river bushmen" in the past lived through hunting, fishing and gathering along the distributaries and streams of the Okavango Delta. At the moment, they earn a living through gathering of veld products and grass cutting for sale to the delta lodges. There is also a limited amount of arable agriculture, and a few people have donkeys and chickens.

The Basarwa of Mababe or Basarwa *ba Setsiga* or *Matsegakwe,* that is the people of the dryland or the so-called "sandveld bushmen", used to live a nomadic life of hunting and gathering. Their current economic base is arable agriculture, hunting and gathering of veld products. They also keep donkeys, goats and chicken.

The Bantu-speaking groups in the area such as Basubiya, Bambukushu, Batawana and Baherero specialise in both arable and livestock farming. Hunting and gathering were carried out in the past to supplement livestock and crop production.

1.9 **Justification of Study Area**

Although this study generally addresses wildlife utilisation and management problems in Botswana, its geographical matrix has been narrowed down to Eastern Ngamiland District in Northern Botswana (inset Figure 1.2). The choice of this study area was motivated by the

fact that the area is mostly dominated by the presence of different wildlife species due to the influence of the Okavango Delta and Moremi Game Reserve which cover most parts of the district. This makes wildlife resources to have an input, directly or indirectly, in the socio-economic and political lives of the people found in the area.

Apart from the fact that the socio-economic livelihoods of the people of East Ngamiland District mostly depend on natural resources such as wildlife, the district has in the 1990s become one of the most important international tourist destinations as a result of its rich wildlife diversity and natural environment. Tourism has potential for local people to make money. At the same time, it has potential to degrade the environment in wildlife areas. All these factors, aroused the interest of the researcher, prompted the investigation whether the already deteriorating wildlife resources in the area cannot be utilised and managed in a sustainable way for the benefit of all stakeholders.

1.10 **Organisation of the Dissertation**

Chapter One is the introduction, giving the general background on wildlife resource utilisation, the research problem, questions, hypotheses, study area, significance and limitations of the study. Chapter Two outlines the basic concepts and definition of terms, theoretical framework and review of the literature. Chapter Three discusses the methodology used in the study. Chapter Four outlines the research findings on the history and development of the wildlife industry from the pre-colonial period to the present time. Chapter Five deals with the research findings on benefits, attitudes and perceptions of the local communities towards wildlife conservation. The chapter also outlines the stakeholders and the land use conflicts experienced and also discusses the problems leading to poor performance of wildlife community-based projects. The chapter finally deals with prospects for integrated wildlife management in East Ngamiland District. Chapter Six analyses the findings and their implications in relation to the issues raised in the statement of the problem for this investigation. The last chapter, that is, Chapter Seven gives the summary, conclusion and recommendations of the study. The reference and appendixes are given at the end the dissertation.

CHAPTER 2

BASIC CONCEPTS, THEORETICAL FRAMEWORK AND THE REVIEW OF THE LITERATURE

2.1 **Introduction**

This chapter clarifies the basic terms and concepts used in this study. It also outlines the theoretical framework, which forms the backbone of this research. The theoretical framework is based on the concept of sustainable wildlife management which is largely derived from the concept of sustainable development. Finally, the chapter provides the reviewed literature which also focuses on sustainable wildlife resource utilisation and management.

2.2 **Basic Terms and Concepts Used in the Study and their Definitions**

Sustainable wildlife management is important for any country, which aims at utilising its wildlife resources for the benefit of both the present and future generations. **Wildlife resources** can refer to flora and fauna, that is large mammals, plants, of which birds and even reptiles are often included (Eltringham, 1984). To Giles (1974), wildlife refers to game animals and the songbirds of the veld. The term wildlife resource is, therefore, used in this study to refer to terrestrial and large aquatic vertebrates and the free-ranging birds.

Wildlife management can either be manipulative or custodial (Caughley and Sinclair, 1994). **Manipulative management** does something to a population by either changing its numbers by direct means or influencing numbers by the indirect means of altering food supply, habitat, density of predators or prevalence of disease. **Custodial management** on the other hand is preventative or protective of wildlife utilisation. According to Roth and Merz (1997), **wildlife management** refers to any type of organised, purposeful human engagement with wildlife species or the use of some species for material or recreational benefit.

The global concern over the degradation of the world's natural resource base prompted the United Nations to set up the World Commission on Environment and Development (WCED), that proposed the concept of sustainable development. The main thrust of WCED's concept of **sustainable development** is the utilisation and management of renewable resources for the benefit of today's generations at the same time making the same resources available for future generations (WCED, 1987). Sustainable development is defined by the WCED as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987:8). In relation to wildlife resources, WECD's definition simply implies a situation where the wildlife resources are harvested or utilised to meet the needs of the present generations without jeopardising the wildlife resource needs of future generations. Although the concept of sustainable development became a global notion after 1987 due to the work and report of the World Commission on Environment and Development (WCED) and was further popularised by the Earth Summit in Rio de Janerio in 1992, it was first promulgated in the World Conservation Strategy in 1980 (Darkoh 1993, Holmberg and Sandbrook 1997). Barrow (1991), however, says that the concept of ecologically sustainable development seemed to have been "voiced for the first time in 1972, possibly in 1968".

Sustainable wildlife management is related to the concept of **integrated wildlife management** which implies a system of utilisation and management of wildlife resources which at the same time takes into consideration other land use options. This, therefore, suggests that, apart from the socio-economic needs of the human populations living with wildlife, one of the major reasons for wildlife utilisation is conservation. **Conservation** is the wise use of renewable natural resources like wildlife; as such, it accommodates the concept of sustainable development.

Wildlife resources can be utilised for both "consumptive" and "non-consumptive" purposes. **Consumptive utilisation** is mostly hunting, that is commercial/spot hunting or trophy hunting. It also includes game farming, live capture and export of live animal or translocation, and taxidermy and trophy processing (Mothoagae, 1995).

Non-consumptive use of wildlife is mainly photographic tourism, this include activities such as photographic safaris, photographic camps and lodges, air charter operators, the wildlife film industry, educational/recreational parks and conservation organisations. Photographic tourism allows nature to take its own course. In fact, it is environmentally friendly and suits the interests of the international animal rights groups (Mothoagae, 1995). However, this depends on numbers of people involved, if the number is high, this can disturb the animals and birds in an area.

Non-consumptive and consumptive wildlife utilisation can benefit the local communities and all wildlife stakeholders in Botswana through the implementation of Community-Based Natural Resources Management (CBNRM) projects. The **CBNRM concept** can be said to be an awakening approach within Southern African states where the conservation paradigm has been made to shift from a centralised preservationist and protectionist approach to a more integrated approach. This approach recognises the need for the promotion and empowerment of the local communities by linking economic and social development to natural resources management.

The CBNRM concept recognises the incorporation and importance of indigenous knowledge system in natural resources management. **Indigenous Knowledge or Local Knowledge or Indigenous Technical Knowledge (ITK)** denotes a cumulative body of knowledge generated and evolved over time, representing generations of creative thought and actions within individual societies in an ecosystem of continuous residence with an effort of coping with the ever changing agro-ecological and socio-economic environment (Fernandez 1994, LaDuke 1994, Laws and Luning 1996, Serrano 1996, Warren 1996, Darkoh 1996b). The CBNRM proposers regard the ITK as the basis for establishing a realistic blend, if not an alternative, to the current inadequate conventional natural resource conservation attempts. The local communities possess a pool of knowledge of the ecosystem in which they live and are involved in adaptive and coping livelihood strategies that ensure that natural resources are used sustainably in their local environment (Darkoh, 1996b).

2.3 **Theoretical Framework**

Botswana is faced with the challenge of formulating and adopting a sustainable wildlife management strategy in order to ensure the availability of wildlife resource utilisation for both the present and future generations. The notion of sustainable wildlife resource utilisation and management is broadly based on the concept of sustainable development as noted already.

A basic principle of the concept is that of intergenerational equity, which says that our development is sustainable only to the extent that we can meet our needs today without prejudice to those of the future generations. Therefore, the present generation should leave for the next generation, a stock of a quality of life assets no less than those we have inherited (Pearce, Markandya and Barbier, 1989).

It has become a cliche that environmental problems are substantial and that economic growth contributes to them. A common response is increased regulation that inhibits growth and human welfare. The result is a trade off or a balancing act: a healthy environment versus growth and development. As a consequence, markets and opportunities for business may be constrained, and often times community involvement and human welfare may be sacrificed, or constrained.

But there are forms of development that are environmentally and socially sustainable—development that leads not to a trade off, but to an improved environment and human welfare, development that does not draw down our environmental capital, but consciously seeks and tries to improve human well-being. Such an activity not only involves agricultural land, the absorptive capacity of the atmosphere, soil and water, but also the flora and fauna and other natural resources of the earth. This is what sustainable development is all about—a revolutionary change in approaching these issues. As businesses and societies, we can seek and find approaches that will move forward all three goals—environmental and social sustainability and economic development—at the same time. In setting new goals, we will both unleash many of the forces necessary to accomplish them, and open up many

opportunities for business and development of the human condition as well as the environment.

The power of the sustainable development concept lies in its dual benefits—it both opens up new opportunities and avoids the trap of trading off environmental goals against economic growth (Darkoh, 1996b). If sustainable development is to achieve its potential, it must be integrated into the planning and management systems of individual and corporate business enterprises (Darkoh 1994, 1999). However, it must be emphasised that sustainable development cannot be achieved by a single enterprise (or for that matter, by the entire business community) in isolation of the rest of society. Sustainable development is a pervasive and persuasive philosophy to which every participant in the global economy must subscribe if we hope to meet today's needs without compromising the ability of future generations to meet their own (WCED 1987, Darkoh 1999).

For the purposes of this study, therefore, our definition of sustainable wildlife management is modified to mean the development or management based on the exploitation or utilisation of wildlife resources in order to meet the needs of the wildlife industry and its stakeholders, while enhancing the wildlife resources for both present and future needs.

This definition captures the spirit of the concept produced in the report of the WCED as outlined already. It focuses attention on areas of specific interest and concern to the wildlife industry. It recognises that economic development must meet the needs of wildlife industry and its stakeholders, tourist operators, investors, hunters, bird-watchers, government, conservationists, e.t.c. as well as the communities who are affected (either positively or negatively) by the industry's business activities. The definition also highlights the dependence of the industry's economic activities on human and natural resources in addition to physical and financial capital. It emphasises that economic activity must not irreparably degrade or destroy these natural or human resources. This is to say that wildlife resources can be harvested at a rate which allows regeneration, not degeneration. Human resources refer to all people affected directly or indirectly by the industry's economic activities, including employees and the public at large.

At the beginning of this century, business strategies and objectives were directed primarily towards earning the maximum return for shareholders and investors. Business entities were not expected to pursue any other social or environmental objectives. Exploiting natural and human resources was the operating norm in many industries as was the lack of regard for the well-being of the communities in which the enterprise operated. In short businesses were accountable only to their owners.

Today, business enterprises in developed countries operate in a much more complicated and regulated environment. Many different laws and regulations have been enacted to govern their activities and make them, their officers and directors, more accountable to a broader range of stakeholders. Sustainable development extends the stakeholder group even further with consideration of intergenerational and natural resource interests. Identifying the parties that have a vested interest in an industry or business enterprise is an integral component of the sustainable development concept and is directly related to expanding business accountability. Developing a meaningful approach to stakeholder analysis is a vital aspect of this management system and is one of the enhancements of sustainable development over conventional management practices (for further discussion, see Chapter Five section 5.5 where the stakeholder idea has been applied to the findings on land use conflicts).

According to Chambers (1986), sustainable development appears to be the terminology of managers, and is not as yet, the terminology of the managed. Sustainable development must, therefore, give priority to the livelihoods of the poor for it to succeed, a view shared by WCED (1987) and Redclift (1987). In many parts of the world, the growing numbers of poor people have inevitably led to the degradation of the environment each day just to make ends meet. Hence the need and reality to adopt the concept of sustainable wildlife management to make people living in wildlife areas have their socio-economic livelihoods improved.

There are those who feel that sustainable development involves contradictory goals (e.g. Redclift 1987, Arnold 1989, Lele 1991, Warren 1996), but in spite of this, it has come to be

generally accepted that "real" development cannot be achieved unless the strategies are sustainable and consistent with social values and institutions. It has been advocated that sustainable development should ensure the poor have access to secure livelihoods.

The community-based natural resource management projects in Southern Africa of which Botswana is a part, are based on this broader application of sustainable development, which assumes that economic benefits in the form of community projects and/or household's dividends will tend to foster individuals and communities living in natural resource areas like wildlife to maintain a sustainable ecological base. The local communities should, therefore, be involved in conserving, protecting and exploiting natural resources in a rationale manner, a goal which sustainable development aims at achieving (Hasler, 1996). Roth and Merz (1997) state that wildlife is considered to be a natural resource, the management of which must necessarily produce an economic return in one form or another if it is to be maintained. Such a utility-value notion is as old as mankind, but has to be better understood and adapted to socio-economic changes and ecological conditions in order for wildlife utilisation to yield sustained returns.

The concept of Wildlife Management Areas (WMAs) in Botswana arose from a need for conservation and controlled utilisation of wildlife outside national parks and game reserves, along with the desirability of creating buffer zones between parks and reserves and areas of more intensive land use. A Wildlife Management Area (WMA) can thus be defined as an area where wildlife utilisation and management is to be the primary form of land use. Other types of land use will be permitted provided they do not prejudice the wildlife populations and their utilisation. Winer (1995) states that community natural resource management projects in WMAs, as a principal aim, seek to return custodianship of natural resources to the local communities in order for conservation to be linked to rural production systems that generate wealth and not continue to be viewed as being in conflict with them.

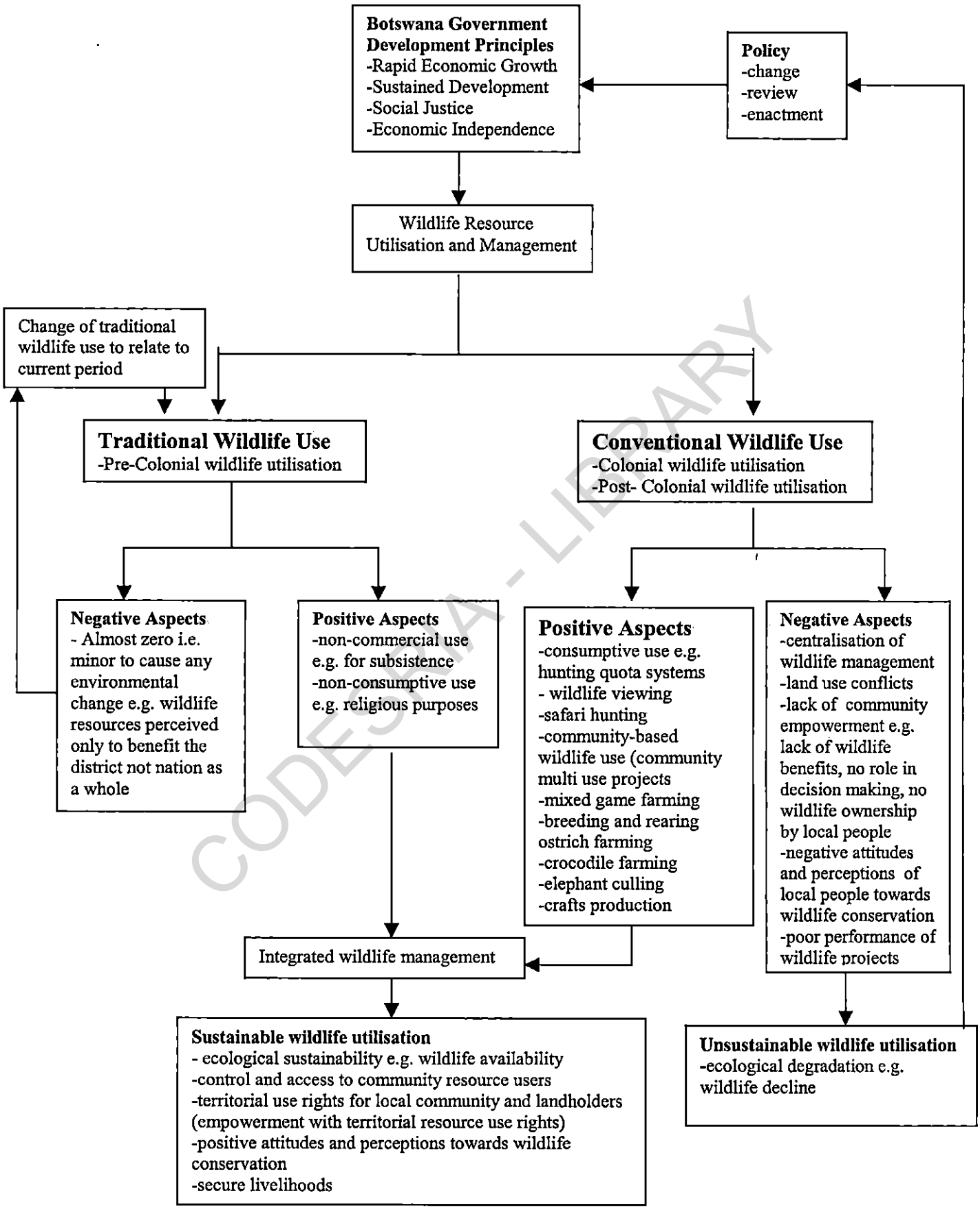
The CBNRM concept as understood and implemented in Botswana might in the long run become problematic in sustainability since it is based on a narrow western economic notion of realising benefits in order to conserve natural resources. The commercialisation of

wildlife resources and their products are primarily the perceived economic benefits that must accrue to the communities in order to encourage the sustainable use of wildlife resources. The dilemma of this concept is: what will happen if the perceived economic benefits are not realised or forthcoming? The other problem is that as long as the management of wildlife resources in national protected areas remains centralised, negative attitudes and perceptions on the part of the local people towards wildlife conservation in wildlife management areas, and towards the Department of Wildlife and National Parks or government will continue to perpetuate.

According to the Botswana National Development Plan VII of 1991-97, Botswana's economic development objectives are based on four principles: rapid economic growth, sustained development, social justice and economic independence. Although, "sustained" development is considered as one of the main national principles guiding development, it only implies efficiency in investment and does not necessarily imply ecological sustainability or resource utilisation without degradation or damage. As a result, economic development is promoted in the country without much consideration of the consequences of natural resources utilisation. Figure 2.1 illustrates the theoretical framework of this study, it implies that traditional wildlife utilisation and management systems tend to be more sustainable, than conventional systems which mostly result in unsustainable wildlife utilisation and management. The study, therefore, builds on the foundation that socio-economic benefits from wildlife resources need to be realised at a rate that does not degrade the ecological systems, and also consistent with social (community) values and institutions. It should ensure also that local communities have benefits and access to secure livelihoods.

In summary, it is important to note that this study is based on the concept of sustainable wildlife management, which is largely derived from the concept of sustainable development as already defined and elaborated upon. Sustainable wildlife management emphasises that wildlife resources can be harvested at a rate, which allows regeneration and avoids degradation. As Botswana approaches the next century, sustainable wildlife management is no longer an option to be ignored, but a realistic policy to be formulated and adopted.

Figure 2.1**Theoretical Framework: Sustainable Wildlife Utilisation and Management**



2.4 The Review of the Literature

This sub-section deals with the literature review which seeks to address the question of sustainable wildlife resource utilisation and management. The sub-section starts with a review of the literature on wildlife management at a global scale, followed by a regional focus on Africa, and finally Botswana and Ngamiland District. Environmental and geographical problems straddle various spatial scales. While it is impossible to give a comprehensive review of the available literature at each of the different spatial scales, an attempt has been made to survey the broad views and trends of work previously done on the subject. An indication of the strong and weak areas of the existing literature is given as well as pointing out the gaps and trends pertinent to the research problem as revealed in the survey of the literature.

2.4.1 A Global Review of Wildlife Management

Several international organisations and individual researchers such as the World Conservation Union (IUCN, 1980), the World Commission on Environment and Development (1987), Pearce, Markandya and Barbier (1989) and Holmberg and Sandbrook (1997) generally agree that economic development around the world is being given priority over environmental resource management. In the Global 2000 Report to the President of the United States, Barney (1980) also raised concern over the deterioration of the global resource base due to economic development, a phenomena he states is more severe in developing countries. The common theme stressed by all these organisations and researchers is the linking of economic development and environmental resource management, which can be achieved through the adoption of the concept of sustainable development by all states. As stated earlier, the main thrust of the sustainable development concept is the utilisation and management of renewable resources for the benefit of today's generations at the same time making the same resources available for future generations. This ideal calls for further research regarding its applicability to poor Third World economies. The poor Third World states generally put more emphasises on their immediate economic needs than environmental issues.

Ceballos-Lascurain (1996) points out that the deterioration of the global wildlife resources has led to the creation of national parks and game reserves of which over 130 nations around the world have established some 6900 major legally protected areas covering 5% of the planet's land surface, a view shared by McNeely (1992). Marekia (1991) says, the idea of protected areas was transferred to the African continent, with no regard to geographic, cultural or economic aspects of the people of Africa, leading to land use conflicts. Marekia further states that the areas where parks were established were not necessarily those that supported the largest variety or largest possible concentrations of wildlife. Rather, these areas were chosen on the colonialists' basis that they were unlikely to be required for other purposes. According to Marekia, this was a wrong assumption, considering that there were people subsisting in the areas prior to the establishment of wildlife sanctuaries. This scenario shows that most developing states do not have any appropriate data available to ensure the applicability of the establishment of protected areas in their respective countries. A good example is that of Botswana, where no literature is available to show that Environmental Impact Assessment was ever conducted at the establishment or monitoring of the progress of the country's protected areas.

Caughley and Gunn (1996) state that international conventions, legislation and organisations established to ensure sustainable wildlife management, like the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) of 1975, the International Union for the Conservation of Nature (IUCN)-The World Conservation Union of 1948, are characterised by failures because they rely on national policies and institutions for their success. As an example, Caughley and Gunn state that CITES can only be effective in regulating international trade if all countries become members and if member nations have supportive national legislation, the means, ability and commitment to do scientific population assessments, and effective enforcement. According to Caughley and Gunn, simply listing a species on CITES appendix is itself not an effective conservation. This point is made strong in the sense that most Third World governments focus on short-term economic and political needs of their people, which in most cases are contrary to international wildlife conservation demands as already stated. Therefore, a way that will

harmonise international wildlife conservation legislation with national socio-economic policies and programmes needs to be found especially in the developing world.

2.4.2 **Wildlife Management in Africa**

Rodney (1972) and Darkoh (1996b) point out that colonialism and modernisation in Africa alienated African societies from the natural resources upon which they had previously based their livelihood under a system of collective rights. Rodney states that African political states lost their power, independence and meaning overnight, irrespective of whether they were big empires or small ones. Political power simply passed into the hands of foreign overlords. The loss of political power by African leaders meant loss of control over the natural resources in their local environment. Arntzen (1989) shares the same view with Rodney and Darkoh by stating that in Botswana, the traditional resource management systems of which the chief had power and control became affected before the country's independence in 1966. Arntzen states that one of the factors contributing to this development was the mounting pressure on natural resources which took the traditional buffers away and rendered the traditional tools less effective. He also attributes this to government policies which did not usually take the local resource base into account, hence forming a source of interference which led to natural resource degradation.

According to Collett (1987), the advent of colonialism in Kenya divided Maasailand into wilderness areas for wildlife and separate agricultural areas for both Europeans and Africans. Mbanefo and de Boerr (1994) say the same situation occurred in Zimbabwe, while Chenje and Johnson (1994) state that the whole of Southern Africa became affected, and the local African populations were denied access to wildlife areas. To Chenje and Johnson, the onset of colonialism in the region disrupted the delicate balance that existed between traditional communities and their environment, and started a process of change in all spheres of development. This scenario led to the development of negative perceptions and attitudes towards wildlife conservation by the local people. This was the beginning of human-wildlife conflict, a common theme expressed by Collett (1987), Grove (1987), Lindsay (1987) and Marekia (1991) about Kenya, Moganane and Walker (1995) about Botswana, and Chenje and Johnson (1994) about Southern Africa. These researchers state that the indigenous

people and the government clashed when wildlife resources were declared state property under the colonial legislation, making it illegal for rural people to make any use of the resources in their areas. While previous studies, not only those conducted in Botswana, but Africa as a whole, indicate that colonialism did affect natural resource management, they do not show the role played by indigenous technical knowledge (ITK) especially in wildlife management prior to colonialisation of the region. As a result, ITK is mostly denigrated, ignored and not documented to show its relevance to wildlife resource management. The greatest challenge, therefore, for ITK is that it needs to be documented since it only exists in the minds of the local people and is passed on from one generation to the other by word of mouth. Its documentation, understanding and interpretation as well as fusing it into modern scientific knowledge might have potential for sustainable wildlife management in Botswana and Africa as a whole.

Kiss (1990) and Marekia (1991) point out that the new African leaders adopted unsustainable colonial policies on wildlife management after independence. Darkoh (1996b) shares the same view by stating that the post-colonial period offered very little change throughout Africa. The policies of the colonial period were carried on into the post-colonial era, even though Africans rather than Europeans were now making decisions. The economic structures introduced during the colonial period remained almost untouched. The result was the continued natural resource deterioration like wildlife resources. In order to adhere to the concept of sustainable development as stated by WECD (1987), Kiss (1990) suggests that Community Natural Resource Management Programmes (CNRMP) are an option that can lead to sustainable wildlife utilisation in Africa. According to Kiss, the community-based wildlife conservation projects seeks to enhance the conservation of wildlife resources and the biological diversity outside the protected areas and private lands, while at the same time affording rural people benefits from wildlife resources in their areas. This is intended to create a positive attitude and thinking of the local communities towards wildlife thus making them less inclined to poach. Mbanefo and de Boerr (1989) say the idea of CNRMP which was designed to encourage villagers to view wildlife as their own property and utilise and manage them sustainably has been successfully implemented in Zimbabwe since 1986 through the Communal Area Management Programme for Indigenous Resources

(CAMPFIRE). Lungu (1990) also claims that CNRMP is being successful in Zambia through the Luangwa Integrated Rural Development Project (LIRDP) and the Administrative Design for Game Management Areas (ADMADE). Ashley (1995) claims CBNRM is being implemented through the Living in a Finite Environment (LIFE) programme in Namibia. In Mozambique, CBNRMP is accomplished successfully through Tchuma Tchato "Our Wealth" (Cruz, 1995), in Kenya through the Conservation of Biodiversity Resource Areas Programme (COBRA) (Masika, 1995), and in Tanzania through the Ujirani Mwena "Good Neighbourliness". What all these studies do not indicate is the problem that population pressure might bring to CNRMP in wildlife areas, since most African countries are beginning to have shortages of land due to the rapid population growth.

Mbanefo and de Boerr (1993) state that CAMPFIRE in Zimbabwe allows subsistence farmers to manage, and benefit directly from wildlife resources in an entrepreneurial fashion. Market forces are used to achieve economic, ecological and social sustainability. Villagers have access to the wildlife resources in their areas through either tourism or safari enterprises that are proving to be profitable and good for both the environment and the participatory communities. Based on the CAMPFIRE programme, Murphree (1991) came up with five principles on sustainable natural resource management of which he used wildlife as a unit of analysis. These principles pre-suppose that sustainable wildlife resource utilisation is possible in communal areas when local communities realise benefits and have a sense of ownership over the wildlife resources around them. Maveneke (1995) supports Murphree's ideas by stating that CAMPFIRE has what is known as CAMPIRE Association, a local community organisation formed with basic aims of devolving responsibility of management of wildlife and other natural resources to producer communities. The Association, as a national representative body of rural district councils with appropriate authority, performs a number of roles designed to promote sustainable utilisation of natural resources like wildlife. This includes lobbying and advocacy at both the local, national and international levels. It also disseminates information about CAMPIRE in Zimbabwe and abroad and is involved in capacity building amongst its members (e.g. through seminars, annual general meetings, regional meetings and the upgrading of extension staff). Hasler

(1996) states that in terms of research CAMPFIRE has adopted a multidisciplinary collaborative approach by incorporating research from wildlife managers, ecologists, social scientists, technicians, economists and legal experts. This approach by CAMPFIRE has, therefore, made it possible for groups such as the Center of Applied Social Sciences, World Wildlife Fund and Department of National Parks and Wildlife Management to be involved as stakeholders in the affairs of the programme.

Significant lessons that CAMPFIRE provides on the sustainable use of wildlife resources are the involvement of local communities and other major stakeholders in wildlife management. CAMPFIRE further demonstrates that sustainable wildlife resource use is still a possibility in the region provided decentralisation of wildlife management to producer communities is adhered to. Equally important is the fact that the CAMPFIRE programme provide a model under which regional states can either develop or improve their natural resource community-based projects. Bond (1995) states that a common understanding with Community-Based Natural Resource Management Projects (CBNRMP) especially CAMPFIRE is that benefits from the wildlife resources must exceed the costs to ensure that local communities utilises the resources sustainably. To Bond, this hypothesis is insufficient in that it does not indicate the fact that producer communities have a number of land use options, of which wildlife resources are only one of the components. The sufficient condition, therefore, for wildlife as a land use option for producer communities is that net benefits of wildlife must exceed net benefits of the alternative land use options. The hypothesis by Bond recognises the availability of other resources and land uses in wildlife areas, hence all must be treated with an equal degree of importance. While this introduces a new approach to sustainable use of natural resources, there is little literature available in the region to support this philosophy. Another important fact that arises from CAMPFIRE is that Murphree's five principles might be providing a framework under which the CBNRMP can be implemented. However, there is no universal template that can be universal applied. As such, operating under some parameters, the various regional communities need to decide on how they choose to implement their unique resource management opportunities. Researched data in this aspect in Southern Africa is not readily available, the result of which resources management such as those of wildlife remain centralised.

As already mentioned, Namibia is one of the Southern African countries that has embarked on the implementation of CBNRM projects. Rihoy (1995) states that although Namibia is one of the youngest countries in Africa. Since independence in 1990, the country has through the Ministry of Environment and Tourism (MET) initiated a CBNRM programme, which has resulted in the drafting of a new policy for wildlife management, utilisation and tourism in communal areas. This policy enables the MET to devolve authority over wildlife to legally constituted conservancies in communal areas, established by and composed of members resident within defined geographic areas.

Baker (1995) states that a conservancy consists of a group of commercial farms or areas of communal land on which neighbouring landowners or members have pooled resources for the purposes of conserving and using wildlife sustainably. Members practice normal farming activities and operations in combination with wildlife use on a sustainable basis. The main objective is to promote greater sustainable use through co-operation and improved management. Conservancies are operated and managed by members through a committee. Rihoy (1995) on his part states that the conservancy policy seeks to streamline wildlife use on private and communal lands, by applying the conservancy principle to both. Conservancies have a bottom-up constitution and a set of rules or management plan in line with the regulations laid down by the Ministry of Environment and Tourism. Like CAMPFIRE in Zimbabwe, the Namibian CBNRM project has a number of actors in its implementation, however, the MET has taken the lead in policy projects formulation and co-ordination. There are also local NGOs involved in implementation. In 1993, MET established the LIFE programme, which is co-managed by WWF-US and funded by MET, WWF-US and USAID. LIFE supports local organisations in their efforts to develop capacities for CBNRM through technical assistance, training and funding grants. The Social Sciences Division at the University of Namibia was established to provide research support.

As Rihoy (1995) points out, Namibia is one of the world's arid countries (92% of the country receives less than 500 mm of rain per year with 95% having little or no irrigation

potential). Under such an environment, utilisation of wildlife resources takes on a special significance. While consumptive use of wildlife has good potential for conservancies, non-consumptive tourism development has proved to provide higher returns on investment as well as returns per unit of land. Although it can be argued that it is still too early to make judgement or an evaluation of Namibia's CBNRMP, semi-arid environments in the region or Africa can derive significant lessons from the country's non-consumptive approach to wildlife utilisation. Despite these attempts by Namibia, there is inadequate literature on the non-consumptive approach to wildlife resource utilisation in the region, especially in Botswana which experience a semi-arid climate like Namibia and its wildlife resources are currently faced with a constant decline.

Hanks (1996) states that South Africa has realised that her national parks and game reserves are raw materials of the country's tourism industry, thus all stakeholders of the wildlife industry have been integrated together in wildlife management under the National Parks Board. Prosser (1994) points out that the Sabi Sabi Game Reserve in South Africa is privately owned but has come up with a management plan that recognises the importance of integrating tourism, wildlife conservation and community development. Since one aspect of the Sabi Sabi management plan is community development, Sabi Sabi employs 150 people of which 80% of them are from the local Gazankulu community. These local people are employed in all types of jobs, including that of game rangers. Some get employed in jobs such as the bush clearance to reduce bush encroachment. The game reserve also supplies thatching material and fuelwood for local families.

Staff training is done in all fields such as an understanding of the ecosystem which tourists pay to come and see and of the conservation principles involved. Sabi Sabi also runs educational classes for children and adults to supplement the local school education system. Money is raised for bursaries to send individuals on specific courses. Artifacts or craftwork by the local community are sold in the lodge gift shop of Sabi Sabi (Prosser, 1996). A similar trend of land use integration amongst various land users occurs in Kenya where Marekia (1991) points out that the Maasai pastoralists and their herds co-exist in wildlife sanctuaries like Amboseli, Maasai Mara and Samburu. The experiences of Sabi

Sabi Game Reserve and Kenya's Maasai provide significant important lessons to other African countries on how integrated land use can be achieved. However, the idea has not been fully explored in other African countries especially those characterised by land use conflicts between protected area management and local communities such as Botswana.

2.4.3 **Wildlife Management in Botswana**

Most national and local studies on Botswana in recent years generally tend to concentrate on environmental change, with comparably little on wildlife utilisation and management, though some of the studies also touch on various aspects of the wildlife industry including government policies. Specific studies on wildlife utilisation and environmental sustainability are few and far between.

The work of Campbell (1980) centres on archaeological information that explains wildlife distribution, totemism, and hunting patterns in Botswana. Like Crowe (1995), he states that until the early nineteenth century, species such as elephant, rhino, lion, buffalo, wildebeests, hartebeest, springbok and zebra were found in most parts of the country. However, He does not give an explanation of what could have led to the disappearance of some of these species in other parts of Botswana. Campbell also states that archaeology tells us that Basarwa were found in Botswana two million years ago and lived by hunting and gathering. His findings become limited in that they do not explain the impact of these activities could have had on wildlife species. Campbell (1995) further develops his 1980 work by briefly discussing traditional attitudes and wildlife decline from the Stone Age period to more recent times in the country. According to Campbell, until about 1820, wildlife in Botswana was recognised as one constituent of an environment in which humans formed another constituent, people and animals co-existed and interrelated. Through animals, humans could maintain environmental stability. In fact, humans were part of the animal world, animals were taken as humans. To Campbell, wildlife was utilised sustainably amongst Batawana since it was believed that misuse could bring down God's wrath on the people. Batswana's traditions and customs regulated the use of not only wildlife resources, but also all natural resources around their environment. An example that Campbell gives is that of totemism, the belief that under certain circumstances, some humans can transpose their spirits into those of

animals or take an animal form both before and after death. Animals and birds considered to be totems were never killed but respected which, therefore, led to their preservation and conservation.

Crowe (1995), Perkins (1995), and Perkins and Ringrose (1996), discuss wildlife decline, but their research covers only the past two decades and it is based on the wet and dry seasons of Botswana's semi-arid environment. They state that the welfare of many wildlife species in a xeric area such as Botswana is inextricably related to the seasonal ranges they occupy. Crowe's work centers around the explanation of the wet and dry seasons of Botswana and the distribution of wildlife species based on archaeological evidence. It does not give an explanation of how these climatic variations contributed to the decline of the country's wildlife species. Murray (1980) briefly looked at subsistence hunting in Western Botswana in the 1970s. He discusses the hunting activities such as illegal hunting/poaching, subsistence hunting, licensed hunting and the different hunting methods used as well as the animals that were hunted. While Murray gives well-researched statistics of the different hunters and type of animals killed, he does not reveal whether such statistics reflect a sustainable harvest or not. Spinage (1992) deals with wildlife ownership in Botswana before the advent of colonialism. Like Campbell, he states that wildlife ownership was in the hands of the tribal chiefs who held them in trust of their people. However, Spinage only looks at the legal aspect of wildlife resources.

There has been little attempt in the literature by Campbell, Crowe, Murray and Spinage to trace the historical development of the wildlife industry from the pre-colonial period to the present time, and to find out the extent to which traditional wildlife management practices were sustainable and how they have changed over time. Most of the available studies in Botswana describe the present situation and current government policies. There is also no literature available in the country, that compares the current wildlife management to pre-colonial wildlife management, and how indigenous local knowledge can be utilised together with the modern scientific knowledge to bring about a sustainable wildlife management in Botswana as the country moves towards the twenty-first century.

Campbell (1973), Mordi (1991) and Spinage (1991) state that Botswana's wildlife resources are centralised under the state government. Moganane and Walker (1995) argue that wildlife centralisation is responsible for the negative attitudes and perceptions of Batswana towards wildlife conservation thus decentralisation must be considered as an option that will lead to sustainable wildlife conservation. According to Moganane and Walker, the centralised wildlife management in Botswana by the central government has created much misunderstanding and resentment with local communities. Most local communities feel that the culture of respecting ownership or guardianship of resources has been lost in the systematic centralisation of wildlife management and the removal of rights over wildlife resources from the local people. To Mordi (1991), whose work so far is the most comprehensive on attitude towards wildlife in Botswana, wildlife centralisation is not a major problem, nor does he see local participation in wildlife management a solution; he attributes the negative attitudes and perceptions of Botswana towards wildlife conservation to Tswana culture and government conservation policies. In his attitude survey, Mordi found that the sentiments for wildlife conservation are concentrated among the educated people. He has little to say about the views of uneducated local people in Wildlife Management Areas. Since there is also little documentation of local knowledge, it is important to closely assess Mordi's (1992:143) assertions that "all that local people know is that animals are abundant in the forest. Lacking a scale to measure what is left and what is lost, lacking the wherewithal to take census of the animal's reproduction and population dynamics, people believe wildlife is inexhaustible". Mordi (1991:165) further states that "local people do not posses any peculiar information on fauna habits and ethos about which scientifically trained ecologists and wildlife managers are ignorant". These assertions by Mordi can be clarified when a critical investigation into traditional wildlife management systems is made, which at the moment, is not adequately done and documented. Like Mordi, Dikobe (1995) points out that people and parks do not mix, they must be left as separate entities in their development. He states that this should be done if the integrity of protected areas is to remain or better still, to improve. Dikobe argues that local communities do not have enough incentives or knowledge in protected area management to ensure conservation of resources in these areas. However, Dikobe's work is mostly based on opinion than research, thus its reliability is problematic.

Cooke (1985), Williamson (1994), Perkins (1995), and Perkins and Ringrose (1996) explain the human-wildlife conflict in Botswana as a desire by Batswana to expand livestock farming especially cattle into wildlife areas, and because of that they suggest cuts on European Union aid to the Botswana livestock industry. Studies conducted in the region by such as those by Murphree (1991) explain the human-wildlife conflict to be a result of draconian central government wildlife policies and institutions on local people. To Murphree, government policies and institutions usually deny local people benefits and access to wildlife resources. However, Spinage (1992) views the phenomenon differently. He states that the resentment against game laws where game is perceived as plentiful is of universal nature. He says game laws have invariably been imposed to ensure the survival of game rather than as an irrational jealous denial to the individuals, as is generally the rural dweller's interpretation. Spinage (1992:7) further states that "if there were no laws to exercise control, then larger game animals would quickly disappear, for no value is placed upon something which has no ownership". The challenge that faces researchers in Botswana, therefore, is an examination of the current wildlife management patterns and their associated problems and the formulation of policies that will bring about sustainable wildlife management in the country.

Moganane and Walker (1995) state that national parks and game reserves in Botswana have been established in the hunting grounds of the local people, who now find themselves living in the fringes of such areas and are ironically denied access into such wildlife areas. As a result, they suggest the decentralisation of resources to local communities. Moganane and Walker's study is too general in approach since it covered woodlands, veld products and wildlife resources. This resulted in other issues being over generalised and some crucial aspects of wildlife utilisation overlooked. Thus there is need for a specific study that will make up for some of the deficiencies of their findings. Since Moganane and Walker do not provide information on how these local communities can be involved in wildlife management in protected areas, a major challenge that faces wildlife researchers in the country is that of examining the current wildlife management practices to determine whether

a case can be made for accommodating local communities in wildlife conservation in protected areas.

According to Lawson and Mafela (1990), the new Botswana Government concept of Wildlife Management Areas (WMAs) and Controlled Hunting Areas (CHAs) introduced in all the country's districts is seen by government as a way of making wildlife resources accessible for use by the local communities. Perkins and Ringrose (1996) view the idea of WMAs as a new government strategy of livestock expansion into wildlife areas. This is shown by the drilling of boreholes into WMAs and CHAs, as a result, most game in these areas have fled to protected areas leaving WMAs and CHAs without game to benefit the local communities. While Lawson (1992) cherishes the WMA idea, he perceives it as an additional burden to the already existing land administration problems in Botswana. He states that CHA boundaries often bear no relation to existing land tenure, as a result CHAs cross district or communal land boundaries, thus cause land administration problems. However, no study or comprehensive investigation has been carried out on the problems of the WMAs and CHAs to determine the perceptions and attitudes of local communities towards WMAs, hence the perceived benefits from WMAs to these local people could be illusory.

While the adoption of WMAs by government led to the establishment of CNRMP in Botswana, Lawson and Mafela (1990), Winer (1995), White (1995) and Tamuhla (1997) view the establishment of community-based wildlife resource projects where local people are expected to obtain benefits as having the potential of leading Batswana to utilise and manage their wildlife resources sustainably. However, Perkins and Ringrose (1996) seem to agree with White (1995) that the local communities will simply convert the intended benefits from wildlife community projects into cattle, a situation which will further exacerbate the conflict between wildlife management and livestock farming. While Batswana value livestock production, the speculation by White, Perkins and Ringrose may appear to be unduly far fetched, especially since no research has been done in the country to determine the prospects of integrating wildlife management and conservation with livestock production, as has been the case during the pre-colonial period and elsewhere in Africa at

present, for example Kenya (Marekia, 1991), Zambia (Lungu, 1990), Zimbabwe (Mbanefo and de Boerr, 1994) and Namibia (Baker, 1995).

The National Conservation Strategy (NCS) approved by the Botswana Parliament in 1990 (Government Paper No 1 of 1990) is a broad integrative document that sets as its objective, long-term sustainable resource utilisation, linking it to economic development. Despite its good intentions, the NCS is likely to be ineffective as it views wildlife conservation to the exclusion of community participation and depends on sectoral out-dated departmental acts and policies. The document is mostly top-down, in contrast to the spirit of proposals made by the World Commission on Environment and Development of 1987. Along with other government policy documents on environmental management, there is need for research to be conducted that will examine the usefulness and effectiveness of government policies on wildlife management. There is also need for research to find out how the NCS can effectively integrate land use activities especially in conflict areas like those with wildlife resources.

The principles of community-based projects outlined in the Wildlife Conservation Policy of 1986 and the Tourism Policy of 1990 create the basis for rural Batswana to assume greater responsibility for and receive greater financial benefit from conservation of natural resources. The policies are in line with government's aim of diversifying the country's economy and encouraging rural development through community-based wildlife projects. While these policies appear colourful and generally appealing, they do not make provision for community empowerment. Nor is there any literature available which discusses rural community empowerment and how rural communities in Botswana can have wildlife community-based and controlled projects which are self-supporting and self-funded and which will enable the people to sustain themselves especially when foreign aid is withdrawn or becomes unavailable. At this point, it is important to note that the two major community-based projects at Chobe Enclave and Sankuyo Village are American sponsored through the United States Agency of International Development (USAID) while the Department of Wildlife and National Parks merely acts as a facilitator.

2.4.4 **Wildlife Management in Ngamiland District**

Although, Ngamiland District has a variety of wildlife species, little literature on wildlife management in the area is available. Wildlife management in Ngamiland is generally based on the use of institutions, national policies and legislation as applied to other parts of the country. It is also important to note that previous studies and consultancies in Ngamiland District are not comprehensive enough and mainly tend to ignore the role indigenous knowledge can play in wildlife management. Thakadu (1997) states that such studies discredit indigenous hunting methods and the importance of subsistence hunting to indigenous economies. He says that such studies actually blame the local communities for being responsible for resource degradation and faunal declines in the area.

The Snowy Mountains Engineering Corporation Consultants (SMEC) Report (1989) on the ecological zoning of the Okavango Delta points out that there is land allocation conflict between Controlled Hunting Areas and the use of these areas by non-hunting tourists. The report states commercial hunting-safaris, photographic-safaris and subsistence hunters often find themselves in conflict and have contributed to the disturbance of the game populations in the area. Lawson (1992) and van der Haiden (1991) also acknowledge the existence of conflict. To Lawson, in addition to the different interests of land users and land use conflicts, there is a problem of CHA rentals which are very low and a confusion over where the rentals should be paid, that is, should safari operators pay the land rentals to local communities or to LandBoards. Although SMEC (1989), Lawson (1992) and van der Haiden (1991) propose that conflicts can be solved through the zonation of the area, however, nothing is mentioned on the role that the local people or indigenous knowledge and other stakeholders must play in the zonation process. van der Haiden is actually worried about human settlements in and around the Okavango delta. She argues that they conflict with the wilderness aspect of the area, which is the greatest asset of the delta on which the tourism industry relies. There is also no literature available on the area that tries to identify all the stakeholders of the wildlife industry and how land use conflicts can be managed amicably. What is available is the top-down approach in land use conflict resolution proposed by van der Haiden, which reduces the rights of the local communities over the natural resource use. She suggests the evaluation and revision of special game licences given

to Remote Area Dwellers, and that there must be no subsistence hunting allowed in Okavango area. Hansen and Erbaugh (1987) state that the failure of policies and projects in Third World countries is due to the top-down approach, which van der Haiden proposes; as a result the latter proposal can be suicidal if adopted. An approach that identifies and involves all stakeholders in land use conflict resolution is needed.

Lomba (1991), Williamson (1994), Perkins (1995) and Perkins and Ringrose (1996) state that in the Ngamiland District, the need to separate cattle and buffalo populations for foot-and-mouth disease control led to the construction of the Buffalo Fence at the periphery of the Okavango Delta; the fence has led to negative impacts on migratory wildlife species. Williamson (1994) further claims that the fence will have detrimental effects on the potential of wildlife based economic activities of the area and the livelihood of the hunter-gatherers. Thompson (1976), Mordi (1991), Dikobe (1995) and Perkins and Ringrose (1996) who share Williamson's idea, state that the Okavango area can better be utilised for the conservation of wildlife stocks only, since they alone can maintain the integrity of the area. To Thompson, wildlife and livestock need to be mutually exclusive in management if the fragile Okavango or Ngamiland wilderness is to be conserved. As a result, he supports the erection of the Buffalo Fence which was done without any Environmental Impact Assessment being conducted as stated by Lomba (1991). There has been no study yet conducted to prove that Botswana's low human population, let alone that of Ngamiland District, can have large cattle populations capable of destroying the fragility of the Okavango Delta area. As a result, researchers are faced with the task of establishing whether it is possible to integrate the conservation of wildlife resources and the Okavango ecosystem with other sectors of the economy like livestock production.

The Okavango Community Consultants Report (1995) aimed at producing management plans that will allow people access to natural resources in the area. The report actually resulted in the zonation of Ngamiland and Okavango Delta WMAs and CHAs. While this can be perceived to be a positive development, no comprehensive ecological study was done in order delineate the area taking tourism into consideration since it will be the underlying factor. For protected areas and their surroundings, Ceballos-Lascurain (1996) suggests a

zonation of land into categories in a tourism area if tourist impacts are to be controlled and managed. These categories range from those that are strictly for scientific research, monuments management sites, ecosystem protection and recreation.

Maotonyane (1996) studied the Sankuyo Tshwaragano Management Trust project in Ngamiland District, to document socio-economic conditions of the Sankuyo Village prior to the implementation of CBNRMP, and to gather socio-economic information in support of continuing efforts of people in Sankuyo to manage wildlife and other natural resources. Maotonyane's study is actually a socio-economic baseline survey intended to provide a background information for future research. Tamuhla (1997) also studied the Chobe Enclave Project in the Chobe District to find out factors that influence community participation in community projects. Some of the factors were found to be wildlife and tourist benefits. Prosser (1994) states that community projects can provide potential benefits and become sustainable when they are small-scale and self-supporting. According to Prosser, community projects, which are big such as tourist lodges often become unsustainable since local communities may have no capacity to manage them. However, Maotonyane, Tamuhla and the 1995 Management Plans Report do not provide information on how community projects in the area can be made to be small-scale and self-supporting. Nor is there any available literature that explains the viability of fully owned and controlled community-based industries that takes into consideration the socio-economic level of development of the local people in Eastern Ngamiland.

Thakadu's (1997) study on indigenous wildlife management knowledge systems and their role in facilitating community based wildlife management projects in Botswana provides valuable information on traditional hunting systems in Ngamiland District. However, it is narrow and limited to the two communities studied (Sankuyo and Xai Xai). The study used hunting as the only parameter of assessment. Hunting, therefore, can be used as basis on which other sustainable wildlife practices can be researched for purposes of policy and decision making. However, the concept of CBNRM which the study is mostly centered upon might not be the only alternative that can lead to sustainable wildlife management in

Botswana, hence the need to explore further the prospects of sustainable wildlife management in the area.

The Tawana Land Board and the Department of Wildlife and National Parks Natural Resource Utilisation Report (1994) provides an outline of previously documented traditional use of natural resources in the seven multiple-use Controlled Hunting Areas in the Okavango and Kwando Wildlife Management of Ngamiland District. The CHAs are to be zoned for commercial safari/tourism use through leasehold from the Tawana Land Board. SMEC (1989) and van der Haiden (1991) endorse this idea, since they believe it will lead to the conservation of the Okavango delta. However, no research has been done to explain the effects at which the existing scale of traditional resource use like wildlife might be replaced by a larger scale off-take of resources of wildlife commercial hunting. Leasing out such areas actually means involving the private sector and private companies in the wildlife industry. Botswana currently does not have such local companies, thus the idea of leasing out the area will be left for grabs by foreign companies who in most cases are interested in making profit and not particularly interested in sustainable wildlife resource management. There is also no data available to explain how the sustainablity of resources like wildlife will be ensured in such a scenario. The report does not explain how local people can be involved in such a development.

In summary, as Botswana is faced with the challenge of formulating and adopting a sustainable wildlife management policy, and the focus of this research is the prospects for sustainable wildlife resource utilisation and management in Ngamiland District, it is important to underline the significant issues emerging from the reviewed literature:

(1) Except for the National Conservation Strategy, there is no literature available in Botswana that broadly looks at the international wildlife conservation strategies and tries to bring in the country's level of socio-economic development and perquisites in the formulation of sustainable wildlife management procedures.

(2) The available literature on the history of the wildlife industry and the current patterns of wildlife management is sketchy, limited, and overlooks the importance of indigenous knowledge. As a result, there is need for literature that deals with traditional wildlife management and how indigenous knowledge can be linked or fused with modern techniques to help Botswana achieve sustainable wildlife management.

(3) The idea of community-based wildlife management is perceived as an option that can lead to sustainable wildlife management. With the exception of the Chobe Enclave Project in the Chobe District, there is little literature that explains the benefits, attitudes and perceptions of the local communities towards wildlife community tourist industries in Botswana and, especially, in Ngamiland District.

(4) Studies from other African countries show that wildlife management and conservation, when all stakeholders in the wildlife industry are identified can be integrated into other sectors of the economy in order to effectively manage human-wildlife conflicts. This kind of literature in Botswana is not coherent or readily available. The country, thus, needs a study that will draw significant lessons from the experience of other African countries in order to have data in human-wildlife conflict resolution.

(5) Literature from other African countries indicates that wildlife management in protected areas can be accomplished together with the participation of local communities. This has been a way of bringing local people into protected area management. Such information is not adequately addressed in Botswana, except for speculative assumptions and fears expressed by some researchers such as Mordi (1991), Dikobe (1995), White (1995) and Perkins and Ringrose (1996).

CHAPTER 3: METHODOLOGY

3.1 Introduction

The research methods and tools used for data collection and analysis in a study mostly depends on factors such as type and quality of data required, the socio-economic and political setting, and the available time and resources for the research.

3.2 Data Types and Methods of Acquisition

In this study, both primary and secondary data were used. The following data types and methods of data collection were used:

(a) **Data on the history and development of wildlife resource utilisation and management from pre-colonial Botswana to the present time.** This information was principally obtained from secondary data sources. These included both published and unpublished reports and maps on the districts. Specific materials that were used included archival materials, government policy documents on wildlife conservation, reports, maps, books and audio-visual information. The Botswana National Archives, the University of Botswana Library, the Department of Wildlife and National Parks Library and other libraries or documentation offices in Gaborone, Maun and Francistown were visited to obtain the needed information.

Unstructured questionnaires were also used for data collection from key informants who were considered knowledgeable on the history and traditions of the people of Ngamiland District. Key informants were chosen using the snowball method where the preceding respondent recommended others for interviewing. These people included traditional leaders, village elders and various individuals considered to be having specialised knowledge on wildlife use. This method allowed a few people to be selected in each village for interviewing.

Interviews were conducted with key informants mainly to confirm information from secondary sources on the history and development of the wildlife industry from pre-colonial

Botswana to the present time. Although an unstructured questionnaire was designed and used to guide discussions during the interview, the method involved a more or less ordinary conservation, where at times free response questions were asked to dig deeper about a particular issue.

(b) **Data on current patterns of wildlife resource utilisation and management and their associated problems.** This information was obtained from secondary sources similar to those in (a) above. Data was further collected through the administration of unstructured questionnaires to local people considered knowledgeable in wildlife management policies. These include people in government, local council, private sector, tribal administration, and local community leaders. Interviews were also conducted with government wildlife officers in Gaborone and Maun and with wildlife conservation Non-governmental Organisations (NGOs) such as the Khalahari Conservation Society and Okavango People's Wildlife Trust.

Questionnaires were chosen for use since they have an advantage of being administered to the respondents at any place found suitable e.g. at work or at home. While most respondents had the potential of completing the questionnaires on their own, the researcher administered the questionnaires since time available for the study was very limited. Moreover, as Burton and Cherry (1990) have pointed out, considerable controversy surrounds the use of self-administered survey instruments in social research, that is survey in which questionnaires are completed by respondents themselves.

(c) **Data on the benefits, attitudes and perceptions of the local people towards wildlife conservation.** Here, data was collected through interviews or the administration of structured and semi-structured questionnaires. Three villages in the study area were selected for close study with respect to benefits, attitudes and perceptions of the local people. These villages are Khwai, Mababe and Sankuyo. They are located in the fringes of the Okavango Delta and Moremi Game Reserve. Their surrounding areas have been declared wildlife management areas due to the abundance of wildlife resources. These three villages were also selected based on their unique characteristic features such as ethnic background and reliance on natural resources such as wildlife (see section 3.3).

The head of the household or spouse was expected to be the respondent. In cases where the husband or spouse was absent, their child who is over 18 years became the respondent. The households were interviewed because with interviews, the question of literacy does not matter. Most rural populations of Botswana are unable to read and write but understand Setswana, a language that was used for interviewing by the researcher. In this research, a household should be understood to mean a demarcated compound as defined by the LandBoard or a dwelling unit where meals are prepared and served for a family from the same kitchen or pot.

A group discussion method was also used in order to probe deeper on issues that were not fully addressed in the household interviews. The *kgotla* is the familiar and respected forum for group discussions in rural Botswana. These group discussions were conducted at any convenient place, such as around the fireplace in the evening and at lunch break when workers were having their meals.

(d) **Data to identify stakeholders in wildlife management, nature and extent of land use conflicts experienced in wildlife management areas.** A stakeholder analysis was performed to identify the various groups and activities that are affected by the wildlife industry and areas of actual and potential conflicts among them. Apart from the fact that the stakeholders analysis is primarily used to identify the stakeholders (or interest groups) and the areas of actual or potential conflict. It has also been found to be a useful method of clarifying conflicting sets of expectations and understanding conflicts among stakeholders that will allow business activities to manage themselves appropriately. The method was first developed and applied to business (IISD 1992) in promoting corporate accountability for sustainable development performance, but has been found to be applicable and useful to natural resource utilisation studies (Darkoh, personal communication). It has recently been applied to the problem of desertification in Zimbabwe and the identification of the various interest groups in the national action programme to combat it (Marongwe,1997).

In business studies, the methodology starts with the identification of the different stakeholders or interest groups. These are conveniently categorised into two groups: traditional and emerging. Each group shares common characteristics, although individual stakeholders have specific objectives as well. These stakeholders not only include the various groups that are affected by the enterprises' business activities such as shareholders, creditors, regulators, employees, customers, supplies and communities in which the enterprise operates, but also people or groups of people and their activities that are affected or which are considered affected by the enterprise's impact on the biosphere or on the social capital. In identifying stakeholder groups, management is expected to consider each business activity and operating location, including the social environment and community. Finally, the stakeholder analysis contemplates the effects of business activities on the environment, the public at large and the needs of future generations. Understanding conflicts among stakeholders and the impact of stakeholder activities on the environment enables business to develop management plans to mitigate conflicts and ensure among other things environmental sustainability. Using a modified and simplified form of this methodology, the author was able to identify the major land users and interest groups, the land use activities and land use conflicts in his area of study. Specific unstructured questions were posited to the different land users in the area. A free discussion was allowed to find extra information that affects the land users and how they believe such problems could be solved.

(e) **Data on the prospects for an integrated wildlife management and conservation.** This information was obtained from secondary sources as in (a) and (c) above, and from the review of the available literature from neighboring countries such as Zimbabwe, South Africa and Namibia. However, the local people and stakeholders in the wildlife industry were interviewed as well to determine their attitudes towards the formulation of integrated wildlife management policy in Botswana.

3.3 **Sampling Procedure**

East Ngamiland District covers a vast geographical area and is composed of several villages. For the purposes of determining the benefits, perceptions and attitudes towards wildlife

conservation, the three villages of Khwai, Mababe and Sankuyo were chosen for close study as already mentioned. In choosing the three villages, it was assumed that the variables to be measured were normally distributed across all the villages in the district. As a result, the three villages were assumed to be representative of the diversity that occurs in the district.

There is no general rule for devising a standard sample, as it would vary from one specific research problem to another. In developing a sampling system, the researcher must take into consideration type of data he wants to acquire the degree of accuracy he wishes to attain, the importance of cross section and the economic, social and cultural aspects of the population. All these requirements were taken into consideration.

For example, the selection of villages took into consideration the issue of ethnic background, and the diversity of human activities prevailing in the area. Most settlements are composed of Basarwa whose livelihoods are mostly based on the utilisation of wildlife resources. A few villages comprise Bantu-speaking groups such as Basubiya, Bayei, Baherero and Bambukushu who practice crop and livestock farming as well as hunting and gathering but to a limited scale. The selection of Khwai and Mababe represents the Basarwa ethnic groups while Sankuyo represent Bantu-speaking groups such as Basubiya and Bayei. In addition, some of the villages have already established wildlife community projects while others have not. Sankuyo has a project while Khwai and Mababe do not. It was, therefore, important to choose a village with a community project and those without projects. In addition to Khwai having no community project, the village was chosen mainly because of its unique land use conflict with government and the tourist industry. Other villages in the area are considered by government to be permanent, while Khwai is not given permanent status and has the provision of social facilities currently suspended. This then gave justification of why Sankuyo, Mababe and Khwai were selected. Thus, the sample represents a cross section of the population, ethnic groups and their involvement in or non-involvement in wildlife related activities. The three villages were also chosen to make the research work easier and quicker within the limited time and available funds, as well as avoiding collection of too much data that would be unnecessarily difficult to handle and manage within the time frame of this dissertation.

Originally, the selected sample of households was more than 95 as detailed in Table 3.1 below. About 130 households were originally envisaged, that is, 33% of the village households population. Unfortunately however, absenteeism of respondents forced the investigator to limit the total sample number to 95 households whose co-operation was impeccable.

At the household level, the sampling procedure used involved the systematic sampling of households in each of the three villages of Khwai, Mababe and Sankuyo. Although, the sample size for each village was determined by the population size of each respective village, a sample size of thirty (30) or more respondents in view of the problem of absenteeism mentioned above was considered adequate for a study of this nature (Table 3.1). It also reflects the population characteristics and diversity of activities which condition perception. Bailey (1987) states that a sample of over thirty respondents in this regard is considered scientifically appropriate.

Table 3.1**Sample Size and Total Population of Khwai, Mababe and Sankuyo Villages**

Village	No of Sampled Household	Total Village Population
Khwai	32	429
Mababe	31	91
Sankuyo	32	382
TOTAL	95	902

Source: Author's Fieldwork 1998

The direction of conducting interviews was determined by using the household whose major entry/exit point was nearest to the first household interviewed. Further interviews proceeded in that sequence with every third household until the required sample was achieved. This procedure of systematic sampling is referred to as sampling within a random start (Bailey, 1987), because it involves choosing a starting point in the sampling frame at random, and then choosing every *nth* household. The households were systematically sampled since systematic sampling provides an organised pattern of household selection.

No sampling was done on institutional places since decision-markers existed as single individuals in their respective areas, thus questionnaires were simply administered directly to them. These involved personnel in government, local council, tribal administration, private sector, wildlife conservation and non-governmental organisations.

3.4 **Data Management and Analysis**

Data collected was processed and analysed quantitatively and qualitatively, and records were stored in a computer database programme. The data was checked for out-of range values and improperly entered values were re-entered before any analysis was done. Open-ended questions were coded and entered in excel computer programmes and later transferred to SPSS for further analysis.

The frequencies generated as well as the statistical tests used in the study are presented where relevant in Chapter Five. The excel programme was also useful in the drawing of graphs.

Finally, in dealing with the issue of stakeholders and land use conflicts, as indicated already, a **stakeholder analysis** was performed. This technique of analysis is derived from business studies and in recent years has used to analyse land use conflicts.

CHAPTER 4

THE HISTORICAL DEVELOPMENT OF WILDLIFE MANAGEMENT IN EAST NGAMILAND DISTRICT

4.1 Introduction

This chapter specifically deals with the research findings on the history and development of the wildlife industry from the pre-colonial period to the present time in East Ngamiland District. The chapter also examines current patterns of wildlife resource management and their associated problems. The chapter, therefore, seeks to identify the issue of sustainable wildlife resources utilisation and management practices employed during the stated period. As a result, both the traditional and conventional wildlife management systems are explored for the purposes of obtaining information on how the two systems can finally be fused together and bring about sustainable wildlife management in the country.

4.2 Pre-Colonial Wildlife Utilisation and Management in Botswana

Information from secondary data sources, backed by data collected from key informants indicate that Basarwa occupied Ngamiland District before the arrival of the Bantu-speaking groups, which are now found in most parts of the district (Tlou,1985). These Basarwa groups which include those of Khwai or Banoka (River Bushmen) and those of Mababe or *Batshega* (Sandveld Bushmen) had traditional ethics, norms, institutions and practices which governed the use and management of wildlife resources.

4.2.1 Basarwa's Traditional Wildlife Management Patterns and Institutions

The Basarwa in Khwai and Mababe had strong traditional leadership institutions, which governed the utilisation and management of all natural resources in their respective territories. The Basarwa lived around the delta in small bands of 30-50 people who were mostly of the same clan. Their population was small and they, therefore, had little pressure on the available wildlife resources. Hence, during the pre-colonial period, natural resources were not over-harvested.

Each Basarwa band or group had its own leader who was not necessarily referred to as chief or headman, like it was with other Tswana societies in the country (Thakadu, 1997). The Basarwa leader was the most senior male person in terms of age in a band or group. Each individual within the group normally respected his leadership position. Such a leader was thought by his subjects to be endowed with ancestral powers and charms and could therefore, communicate with ancestors through dreams and visions. He was a traditional healer, hunter and a spokesperson for his band. Respect and authority came down the ladder from the Basarwa leader, elder, and down to the household members where the father and mother followed by their eldest child (mostly male) to the last child in the family. This information is mostly from Tlou (1985), Thakadu (1997) and key informants confirm it.

The leader in each Basarwa band was responsible for the utilisation and management of all the natural resources like wildlife in his territory. He dispatched hunting and gathering expeditions and made sure that other Basarwa bands did not utilise resources within his area. The leader would defend resources in his territory in a war with other infringing bands. Thakadu (1997) notes that the bandleader would remind the people of their hunting territories and conservation ethics to be observed during hunting. Key informants in Khwai and Mababe confirmed that they had leaders who always directed the hunting and gathering activities around the delta.

4.2.2 **Land use management amongst Basarwa Groups**

Interviews with key informants indicate that, to avoid land degradation and wildlife resource deterioration, Basarwa of Khwai and Mababe were migratory in nature, but always kept the same camps or sites in their movements. The abundance and availability of natural resources like water, wildlife and various products influenced location of such camps or settlements. Mababe residents stated that they would move towards the delta where there was water in drier seasons and outside to dry places in times of good rains. Basarwa's movements from one place to another become important in that they ensured the recuperation of the resources in a particular place for a long time.

Information from key informants indicates that land amongst Basarwa was divided accordingly amongst each band. Each band had its own hunting and gathering ground, and was allowed to use natural resources in that particular area only. Natural features such as rivers, hills and big trees marked the territories or boundaries for each band. Each band knew very well that hunting or gathering natural resources in another band's territory might lead to a war, thus respect of each group's rights over certain areas of land was observed. The respect for each other's territory by Basarwa groups gave the respective band the individual group rights and custodian over all the natural resources in the particular area, which then made the group to become obliged to utilise the resources in a sustainable way.

Natural resources like wildlife in an area were communally owned, thus sharing in terms of their exploitation and utilisation was an important cultural aspect that required observation by everyone in the band. Campbell (1995) states that meat of large animals amongst Basarwa was shared equally amongst the households after every kill. Sharing helped to bind the community and households together. Key informants stated that meat from a hunted and killed animal would be shared by all members of the group till it was finished before hunting would resume once more. Hunting at the time was for consumptive purposes only. The sharing aspect of what was provided by nature was a cultural way of controlling the utilisation of all natural resources, a system that resulted in avoiding waste thus encouraging the continued availability of such resources into the future.

4.2.3 **Ecological Understanding amongst Basarwa Groups**

In terms of ecological understanding, the way of life of the Basarwa show a deep understanding of how the ecosystem functions. The Basarwa had names for each animal or bird in their territory and they knew how each of these species feeds and related to the environment (Thakadu, 1997). The Basarwa knew where, when and how to find food in the forest. The seasonal migrations were done depending on the availability of wildlife resources or veld products in a particular place.

Although Basarwa hunted throughout the year, hunting intensified only in winter, and became limited in summer. Big game such as gemsbok, eland and giraffe were not hunted in summer because it was assumed that the bulk of the meat might be spoiled before being made into biltong. Although, this was done to preserve the meat, it gave these species time to regenerate. During summer, small game were preferred to big game species. Summer also had a lot of veld products to supplement their main diet of meat thus little hunting was done. The seasonal migrations, hunting seasons and selective hunting indicate a deep understanding of the ecological environment around them. While males did the hunting, women picked up tortoises, reptiles, ostrich eggs, and collected certain insects including beetles and caterpillars. The fact that hunting was mostly allowed in winter and became less pronounced in summer shows that Basarwa had a defined set of hunting seasons which they strictly adhered to, a cultural norm that ensured the sustainable utilisation of wildlife resources.

During breeding seasons, only old male animals were killed, this ensured that young ones would not remain orphans when females were killed. The young ones were also not killed. Breeding animals were also not hunted. It was actually considered a sin against the gods if someone killed a breeding animal. The killing of only old male animals was a form of culling which then left female animals with the young reproductive bulls to continue with the reproductive cycle. Basarwa knew the spoors and sounds of all the animals in the bush. They could tell the direction and time when the animal had since passed an area. Animal tracking was thus made easier and quicker (Thakadu, 1997).

The Basarwa respondents in Khwai and Mababe stated that water does not reach some of the lower streams in the lower parts of the delta partly because of a grass species which blocks the river channels. They pointed out that they used to burn the grass at certain periods and this allowed water to flow down the streams freely, a phenomenon, which they are no longer allowed to do since the control over the delta has shifted to the central government. The way Basarwa used fire shows an understanding that fire in ecological terms could be used as a management and not always as a destructive tool.

4.2.4 **Basarwa's traditional hunting tools and methods**

The Banoka of Khwai were the principal riverine fishermen of the Okavango Delta. Hunting of wildlife also played an important role in their economic lives. Unlike their sandbelt kin (i.e. Basarwa of Mababe), Banoka relied more on game pits and snares than on poisoned arrows. Campbell (1995) says Banoka dug deep holes on trails leading down to the river, sometimes lining their bottoms with poisoned stakes pointing upwards. These holes were covered with a mat of sticks and grass supporting a thin layer of sand and made indistinguishable from the trail. Often fences were built along the riverbank leaving only the trails open, and guiding animals into traps. Such traps could catch animals as large as the elephant or the hippo. Fish and water plants were always abundant, and game was more accessible to the Banoka since they lived on the waterfront where animals came to drink (this might explain the present location of Khwai Village on the banks of the Khwai River). The hunting tools and methods were appropriate and ensured that the required amount of wildlife to harvest.

Banoka simply moved from one part of the river to the other according to game and fish movements. Tlou (1985) states that their lives tended to be more sedentary than that of their nomadic kin in the hinterland. The life of Banoka was more economically secure than that of the arid savanna dwellers who relied mainly on hunting constantly moving game and gathering short-lived summer plants (Tlou, 1985).

As for Basarwa of Mababe, to hunt for game, the most effective weapon was the Basarwa's poisoned arrow, which was capable of killing game as large as the elephant. Tlou (1985) and Campbell (1995) point out that lethal poison was made from the larvae of *diamphidia* and *polyclada flexuosa* beetles, mixed with poisonous sap from the *leshoma* Lilly (*boophane disticha*), *moshakashela (swartzia madascariensis*), *mogau (dischapetalum cymosum*. Poison was also extracted from the sacs of such dangerous snakes as the puff-adder and cobra. Basarwa's variety of snares and traps used to trap game were made from strings of *mokgotse (sansevieria rhodesiana)* and other plants.

The information from key informants confirms that the Basarwa of Mababe used bows and arrows and snares for hunting. They also tracked animals on foot. The size and length of snares were designed to suit the animal to be hunted. In Mababe, pits used for hunting are still visible on the north-eastern side of the village. Thakadu (1997) states that pits also had their sizes designed accurately to suit the animal wanted. Like Banoka, the Basarwa of Mababe used hunting tools and methods that were limited enough to avoid over harvesting of wildlife resources.

4.2.5 **Basarwa's Educational Curriculum**

On the issue of "education-for-living", the Basarwa did not have a formal school in the Western sense. However, they taught their children about their socio-economic and political way of life. This information was mostly passed to the children in the evenings when seated around the fireplaces and made practical in hunting and gathering expeditions. Apart from natural resource management, the education provided in these traditional schools also involved the religious aspect of the gods who were supposed to govern the utilisation of all natural resources in the area including wildlife.

The key informants state that after supper, they would sit around the fireplace and the elders of the group would then teach the children about natural resources utilisation and management. Animal sounds and movements would be imitated for learners. The colours, names and how these wild animals reproduced, feeding patterns, habitats and movements were taught. The behavioural patterns and hunting methods and tools for a particular animal species were also important aspects of the educational curriculum. Stories of Basarwa legends, taboos, the dos and don'ts or Basarwa's religious beliefs and their relationship with the environment provided the guiding principle in Basarwa's educational curriculum. Thakadu (1997) states that specific lessons on hunting were given to Basarwa boys by male elders while women provided skills and information on gathering to girls. Boys would accompany their male elders in hunting expeditions while girls joined their mothers or women in gathering expeditions.

Since the Basarwa's education curriculum was not only theoretical but practical, Basarwa children grew up knowing and utilising what nature provides and how that could be done while leaving some of it in the environment for future use. The important point that needs to be realised here is that the education curriculum was appropriate, designed to meet the socio-economic and political needs of the inhabitants, hence it promoted sustainable use of wildlife resources. The curriculum mostly relied on the indigenous knowledge, skills, tools and techniques to ensure that all the desired needs of the society were met.

4.2.6 **Bayei and Basubiya's Wildlife Management Patterns**

Apart from Basarwa, East Ngamiland District is home to groups such as Bayei and Basubiya, that arrived in the Okavango Delta, probably from Zambia and Namibia in the early 1800s. The Bayei had a diversified economy. They farmed, raised domestic animals, fished, hunted and supplemented their diet with wild plants (Tlou, 1985). They also practised *molapo* farming, which involves ploughing within the floodplains of the rivers to utilise the moisture within the deposited alluvial soils. In Sankuyo, respondents mentioned that they have since abandoned their old fields along the river due to frequent destruction by elephants. Bayei had few cattle, rearing mainly fowl, dogs and goats. Therefore, cattle rearing on a large scale, amongst them was introduced by Baherero from Namibia and the immigration of Setswana-speakers in the early nineteenth century (Tlou, 1985).

Bayei were also responsible for the introduction of fishing gears and boat (*mekoro)* making, which were used for fast hunting to most parts of the delta. Campbell (1995) states that Bayei hunted hippo and elephant, mostly with drop spears, snared antelope and fur-bearing animals, and fished with reed, traps, baskets, nets and spears. The use of these traditional weapons of hunting was appropriate in that it ensured that over harvesting was not possible. While fishing and hunting played an important role in the Bayei's economy, special laws regulated these activities (Tlou, 1985). Each village had the right to designate fishing and hunting grounds. Heavy fines and confiscation of fishing and hunting equipment was the punishment imposed on poaching. Failure to pay fines could result in the poachers being forcibly incorporated into the village of people whose

territorial rights over fishing or hunting they violated (Tlou, 1985). Such measures were put in place in order to protect communal wildlife resources from other tribal groups, thus allowing the availability of the resources into the next generation in the area.

Hunting amongst Bayei was administered through the chief or headman. The chief had power over the land and the available natural resources. Such powers were allowed even after Batawana took over the area (Thakadu, 1997). Hunting was done through out the year but at different intensities. During the breeding seasons, only male animals were killed to avoid making the young ones orphans. Thakadu (1997) states that one gained prestige for killing a bull or male, thus most hunters would target and preferred male big animals instead of female ones. As a result, with few males remaining, there would be less fighting and competition for females. The cultural aspect of not killing young ones and females during the breeding season was designed to ensure that wildlife availability remains possible for the coming generations as well.

Hunting amongst Bayei was intense in winter. Because of low temperatures, meat could be stored for a long time while being made into biltong. Hunting in summer was less intense due to ploughing activities where both males and females participated; this then gave wildlife time to recuperate. Birds were hunted through out the year, but during the growing season, only bird species which were troublesome to crops e.g. guinea fowls, quellea birds were hunted. The diversified economy was important in that during the ploughing season when hunting was minimal and veld products abundant, wildlife would be given a chance to multiply for use in future.

Basubiya hunted the lechwe; a number of hunters would surround a herd of lechwe and drive them slowly towards an area of open water. When the lechwe took to the deep water and started swimming, the hidden hunters pooled their *mekoro* to surround them and then spear them as they swam (Campbell, 1995). Hunting would then be suspended until all the meat from the lechwe was finished or made into biltong. This hunting practice was by itself a limiting factor in the killing of large amounts of wildlife that might not get completely utilised at the end.

4.2.7 **The Batawana and Wildlife Management in Ngamiland District**

The history of wildlife utilisation and management in Ngamiland District, would be incomplete if the role played by Batawana is ignored or over-looked in a study of this nature. The Batawana are an off-shoot of the Bangwato of the Central District of Botswana. They seceded in the nineteenth century and immigrated to Ngamiland District. There, the Tawana state was superimposed on the hitherto stateless societies of the area.

Tlou (1985) states that the most important characteristics of the period before the arrival of the Batawana in Ngamiland District was the absence of a unitary state and the prevalence of small-scale communities with diversified social and political structures. None of these entities was powerful enough to impose its rule on others. They co-existed in a fairly peaceful and balanced manner and were relatively autonomous until their incorporation into the Batawana State in the early nineteenth century.

The wildlife utilisation and management under the Batawana rule in Ngamiland District was mostly governed by the use of customary, totemic and tribute laws. The laws were built upon indigenous knowledge and got modified with time to meet the changing needs and nature of the wildlife industry.

4.2.7.1 **Customary Law**

Under the customary law, all game belonged to the community, which then would surrender their user rights to the chief. The chief would then be entitled to hold all wildlife resources in trust for his tribe, or as a titular owner of the land, he was entitled to share in the proceeds of every hunting expedition (Schapera, 1943). Communal ownership of the resources meant communal policing or protection of wildlife against poaching or overharvesting.

This law traditionally allowed local Batawana to hunt wherever they pleased within their tribal territory. Fur-bearing animals were not usually hunted during the summer months when they were breeding. Hunting was done mostly in winter (Thakadu, 1997).

According to the customary law, the chief received all animals killed in a collective hunt or *letsholo*. Meat was then shared and given to the people to dry up for themselves at home, this meat would be used as replenishment in non-hunting seasons. The skins and trophies for important animals would be given to the chief. Spinage (1991) points out that those individual hunters or collective hunters would give to the chief the brisket (*sehuba*) of large game, the skins of lions, ostrich feathers and elephant tusks. This was done as some form of tribute and sign of loyalty and respect to the chief. It was also accomplished to make sure that the chief was always informed of the level of wildlife offtake, so as to take measures in case of misuse.

At the cattlepost or elsewhere in the tribal area, no one could hunt and eat game birds, small antelopes, hares or tortoises, without first sharing the booty with the elders. Elders decided on hunting or wildlife matters where the chief was not readily available. Spinage (1991) point out that these regimental and seniority obligations were still customary law in 1940.

The vassal people comprising of all the different groups Batawana conquered in Ngamiland District like the Basarwa, Bayei and Basubiya, had Batawana appointing a major tribal overseer who made sure that the particular tribes fulfilled their obligations of handing over all hunting spoils such as ivory, ostrich feathers and skins to the chief or his surrogate heads. This was again designed to keep the chief informed about the offtake level of wildlife at a particular time and place. Spinage (1991) states that by the 1930s, the freedom of the tribal Tswana groups hunting freely under the customary law began to be restricted by the protection that the chiefs extended to large game at the request of the protectorate administration. This change of events by the colonial rulers seriously affected the Basarwa who were forced by circumstances to turn to a great deal of poaching on large scale. They even began to ignore the chief's restrictions, refusing to hand over the skins which the Batawana chiefs claimed to be theirs. These actions were a protest or a way of resisting Basarwa foreign laws that undermined their rights and access to wildlife resources. This was the genesis of unsustainability in wildlife utilisation in Botswana.

4.2.7.2 **The Totemic Law**

According to Campbell (1995), all the different tribal groups in Botswana recognised totemism, the belief that under certain circumstances, some humans can transpose their spirits into those of wildlife animals or take an animal form before and after death. The animals and birds considered to be totems were never killed but respected, which, therefore, led to the preservation and conservation of such animals. Basarwa in Khwai and Mababe mentioned lion, sun, and warthog as some of their totems. Thakadu (1997) states that Bayei had several animals as totems, they mentioned elephants, hippo, crocodile and fish as some of their totems. The totem for Batawana is the duiker (*phuti*). Killing or eating of totems was forbidden, because it might pose hazards to the individual, for example, it was generally believed that anyone who will touch or eat his totem will face the removal of all his teeth or develop sores all over the body. Killing and eating of totems did not only affect the individual, but the community as well; natural calamities like droughts, hailstorm, locust destruction, disease and other forms of pestilence. were interpreted as a result of anger by the gods due to misbehaviour of the society of which eating or killing of totems was a part. The respect and observing of totems by the people was an important cultural norm since it meant preservation and conservation of the totem species.

4.2.7.3 **The Tribute Law**

Since land and all the natural resources found on it belonged to the Batawana chiefs in East Ngamiland District, it automatically meant that all tribal groups in the area, together with Batawana themselves had to prove their loyalty to the Batawana king through the payment of tribute. As the chief's tribute rights, the people gave him tusks of any elephant hunted, skins and claws of all lions and leopard, and features from any ostrich killed. He kept the ivory and features for himself, but sometimes gave lion or leopard skins to his relatives and tribal doctors. Interviews with Basubiya, Bayei, and Basarwa in East Ngamiland District confirmed that they paid tribute to Batawana chiefs. The chiefs to ensure their control over wildlife utilisation used the payment of tribute which also helped to determine the offtake rate of wildlife resources in a tribal area.

Any person who was found with a pangolin or killed a kori-bustard was required to hand it to his chief. The chief would reward the hunter of a lion or leopard with a cow and even gave a calf for a pangolin or a kori-bustard (Campbell, 1995). The Kori-bustard or pangolin as well as the leopard were later designated royal game, a measure that would ensure their hunting only with permission from the chief. This measure was taken mainly because of the scarcity and fears that the species might get depleted and there was need for their preservation and conservation.

Through the tribute system, chiefs as trustees of wildlife resources were always kept informed of wildlife populations and utilisation in their respective territories. As a result, the chief, who was the head of the kgotla, the highest traditional institution in the territory at that time, closely controlled harvesting of wildlife resources.

4.2.8 The *Kgotla* and Wildlife Management in Pre-colonial Botswana

On the role played by the traditional institutions in wildlife management, except for the Basarwa, the people of East Ngamiland District had the *kgotla,* which served as the most important traditional institution in relation to wildlife utilisation and management. It is the traditional Tswana village assembly, where all members of the village were allowed to attend and discuss issues affecting their nation. Since the *kgotla* was where village affairs were discussed, it was the most democratic institution among Tswana society where everyone was allowed to express his or her view without inhibition. The purpose of bringing such matters to the *kgotla* was to both inform the villagers and provide them with an opportunity to express their own views. The *Kgotla* could be used as a court and a public place for society to discuss ideas, policies and projects to be implemented for the benefit of the whole community. The chief was the head and chairman of the *kgotla* and he commanded respect among all members of his society.

In the pre-colonial period, local traditions and customs of natural resource management were discussed at the *kgotla*. There were unwritten laws governing hunting, gathering or the collection and harvesting of any veld product. These laws were laid down by the

chiefs or the community through the *kgotla* system. The Kgotla was, therefore, used as a regulating institution or body in wildlife utilisation. Amongst Bayei and Basubiya, such an institution existed, while Basarwa of Khwai and Mababe held casual meetings, probably due to their low level of population and political development when compared with their Bantu-speaking neighbours. Batawana had such a traditional institution when they arrived in Ngamiland District, however it was more developed and sophisticated when compared to any of the groups which lived in the area by then. The *kgotla* and all the cultural respect attached to it by individual tribes or clans facilitated the sustainable natural resource management in the local environment.

Amongst Batawana, seniority determined rights to use property including spoils of hunt. Seniority had privileges, but it also had obligations. Chiefs, ward and family heads all cared for their people (Campbell, 1995). Basarwa did not observe the ward system. As mentioned earlier, the Tswana chief was recognised as the owner of all wild animals, which he held in trust for his people. As a trustee, he had rights to specific species and to a share in every major hunt. As a result, when regiments were sent out to hunt, all the meat and skins were laid down before the chief who will share the meat amongst his people, while keeping the skins for himself. In turn, family heads shared amongst their own families the meat allocated to them. The fact that seniority privileges flowed from the chief down to a particular family, indicates that society was hierarchical, a phenomena that indicates that traditional society in Botswana was organised and in line with organisation of utilisation of natural resources like wildlife.

In areas where the chief or his appointed representatives of elder people were not readily available, hunted animals were given by the hunter to his father who could dispose of them as he saw it fit. For example, in the case of an animal as large as a gemsbok or hartebeest, the father first reserved the brisket (*sehuba*) for his chief, gave out the head to his maternal uncle, and then divided the rest of the meat amongst his family and neighbours. However, he always reserved the kidneys, liver, uterus and marrow for elder relatives. Tortoises, hares, small antelope, lesser predators and birds were automatically handed over to older relatives who could choose to eat them, give them away, or hand

them back to the hunter (Campbell, 1995). Since seniority amongst all people living in an area was important, all trophies hunted like ivory, rhino horn, ostrich features, and skins of fur-bearing animals, including lion, leopard, cheetah, foxes, jackals, genets, civets, and lynx were taken to the chief (Campbell, 1995). The fact that any wildlife killed or hunted was reported to the chief or elders gave society leaders the opportunity to monitor and control wildlife harvesting in their respective tribal areas, hence, the required amount of wildlife was always allowed in an area and those that were so important to the local people, in particular stocks of animals arid birds that were totems were maintained. This helped to ensure the biological integrity of the environment in the hunting areas.

In summary, the findings from section 4.2.1 to 4.2.8 indicate that in the period up to the 1850s, the different tribal groups in East Ngamiland District had traditional wildlife utilisation and management strategies which were sustainable. These groups had traditions and customs such as totems which stipulated which animal or bird should be hunted and which one should be preserved. The Bayei, Basubiya and Batawana had tribal institutions such as the *kgotla* headed by the chief who through the powers vested upon him by societal norms and customs directed wildlife resource use. The chief actually held wildlife resources in trust for the whole community to be used for the benefit of both the present and future generations. Although the Basarwa did not have a chief in the sense of Bantu-speaking groups, they had a band or group leader who performed almost similar responsibilities to those of the Bantu-speaking chief. The other important factor is that both groups had traditional schools which provided young people with information on natural resource management. It can, therefore, be concluded that the traditional communities in East Ngamiland District had unwritten laws and traditions that made sustainable wildlife utilisation and management possible in their respective territories before the 1850s when European trade expanded in to the region.

4.2.9 **The Impact of European Trade on Traditional Wildlife Utilisation and Population**

The traditional wildlife utilisation and management systems in East Ngamiland District were severely affected by the arrival of Europeans and their trade expansion in the

region. In the 1850s, Dr David Livingstone arrived in Ngamiland District and introduced European trade of which ivory was the main commodity of the trade. Ivory was being exported via the Cape of Good Hope in South Africa to India and Europe. Campbell (1995) states that the next fifty years after the first arrival and introduction of trade by Dr Livingstone in the area saw the destruction of vast numbers of animals and the elimination from the whole of Southern and Eastern Botswana of species like elephants, rhino, giraffe, zebra, and buffalo. Tlou (1985) points out that the cheapness of ivory, and its scarcity in the southern areas attracted traders to Ngamiland District.

The commercialisation of wildlife especially in the form of trade in ivory and the introduction of the monetary economy changed local communities' attitude towards wildlife resources in general on which they previously depended for their livelihood under a regulated system of usufruct and shared rights access. Local chiefs began to see profit in the commercial activities of hunting by foreigners, turning a blind eye to the subsistence needs and even those values that were so important to their local communities.

White (1995) states that during the 1870s, Francis and Clark's store in Shoshong was exporting annually up to P50, 000.00 worth of wildlife trophies, of which most of it came from Ngamiland District. He further states that the actual volume of the trade each year may have involved as much as 5, 000 elephants, 3, 000 leopards, 3, 000 ostrich and 250, 000 small fur bearing animals. This information illustrates the fact that European trade expansion, not only in Ngamiland District but the whole of Botswana had tremendous effects on wildlife populations.

The European trade expansion in Ngamiland District marked Batawana's involvement in external trade which involved the export of ivory, ostrich features, karosses and, to a lesser extent, hippo teeth. The Batawana and people in East Ngamiland District did not regard all these commodities as valuable before the coming of Europeans.

Information from White (1995) indicates that European trade in Ngamiland introduced and spread the use of guns at an alarming rate in the area. An example is that, by 1874, *Kgosi* Moremi of Ngamiland District personally owned more than 2, 000 modern rifles, which he dished out to his people to hunt on his behalf. It is estimated that, there was a total of about 8, 000 rifles in Ngamiland District at that time, all these subjected wildlife to terrific pressure. *Kgosi* Moremi relied on his regiments (*mephato*), to hunt for him and provide ivory and ostrich feathers needed for European trade. The Bayei canoeists were expert hippo hunters and were relied upon to produce hippo teeth. White confirms that the Bayei's traditional hunting system before the introduction of European trade and guns had little effect on wildlife populations in Ngamiland District. However, after the 1870s, when guns had been introduced into the delta areas, not only hippos suffered from severe hunting but elephants as well.

The tribute system (*sehuba*) became the source of most trade goods used by Batawana chiefs in Ngamiland District. Officials or Batawana chief representatives travelled throughout the state to collect tribute, and communities paid in whatever commodity they produced. Tlou (1985) states that Bayei paid with hippo teeth, Basarwa with ostrich beadwork, ivory and ostrich feathers. Due to the new European trade in the area, tribute collection became more frequent, systematic and rigorous for the people of Ngamiland District. Taxation became burdensome. The standing of the Batawana provincial governors within the administrative system was enhanced because of their role in tribute collection from hunting. They made regular visits to their provinces both to collect tribute, and to check on the movement of traders. Tlou points out that due to trade, the presence of the local chiefs on the people of Ngamiland was more felt even in outlying areas than ever before.

The involvement of the people of East Ngamiland District in European trade changed the traditional wildlife utilisation aspects in the area. Wildlife species were no longer used only for consumptive and religious purposes, but for commercial purposes as well. The commercialisation of wildlife resources led to the over harvesting of particular species since the trade was driven by profit making without any consideration for the ecological

aspects. The involvement with Europeans also led to Batawana chiefs failing to control the use of wildlife as before, Europeans traders became involved in illegal trade and hunting in Ngamiland District, this contributed to depletion and overharvesting of wildlife resources in the area.

Realising the detrimental effects of overharvesting, some Batawana including their chiefs began to instruct people living near hunting grounds, like the Basarwa to drive game away from European poachers or traders who hunted without permission from Batawana chiefs. They were also to refuse to guide such hunters to waterholes where game abounded. Canoe men were forbidden to transport goods belonging to hunters and traders who violated the Batawana king's orders. One memorable story about European poachers still fresh on the minds of the people of East Ngamiland District was that of Europeans who came with vehicles and guns and started hunting and killing game in the areas around the Okavango delta. *Kgosi* Letsholathebe the chief of the Batawana was notified about this hunting spree; and he consequently issued a ban on these intolerable activities committed by those foreigners.

Tlou (1985) states that, while the European traders brought new goods and services which diversified the Batawana economy, they also caused institutional changes, and increased the degree of political centralisation since Batawana rulers commanded great wealth. It is worth noting that before the British colonial rule was extended to Ngamiland District, the Batawana king directed the socio-economic and political development of Ngamiland. With the British assuming political control over the area, there was a shift in the control of natural resource utilisation and exploitation in the area. At the turn of the eighteenth century, Batawana hunted mainly using regiments, the chief controlling the trade in valuable trophies. Basarwa continued to hunt with bows and arrows, snares and dogs. During the nineteenth century many changes took place in Botswana, all of which had a great effect on wildlife resources.

Campbell (1995) states that the arrival of Europeans and the spread of the *Mfecane* Wars saw the accelerated use of guns into Tswana societies. At first, guns were to be used

mainly for defence, but soon after the wars, concentrated attention turned to hunting. Regimental hunters of elephants increased aided by the upsurge of firearms. When the Europeans arrived in the country, at first, chiefs tried to control trade, requiring foreign traders to deal with them through the *kgotla* often held in their capital Maun, but this soon failed. The arrival of Europeans was responsible for the changing of people's attitudes towards the rights of seniors and collective ownership. The attitudes changed as chiefs lost power and people started to recognise their exclusive property and trading rights. People began to look to wildlife as a commodity for profit and attitudes towards wildlife conservation changed, as commoners could now buy guns and trade with Europeans sometimes directly without going through their chiefs. Its worth noting that prior to European arrival, all cattle belonged to the chief who then gave portions to his people to use as drought power and milk for their respective families. Since cattle belonged to the chief, he could control grazing and watering without much difficulties. However, the European concept of privatisation, and profit and ownership started to make individuals to demand cattle ownership as well. The chief's strict control over hunting and disposal of the proceeds slackened. Commodification of hunting made people to exploit game mainly for personal gain. They did this to exchange the benefits from wildlife sale for cattle, guns and wagons (Campbell, 1995). The traditional regime all but ceased at this period and time. All who could hunt to make profit did so. The people who suffered were the Basarwa and others belonging to minority groups living in remote areas, who were used and manipulated to produce a constant supply of furs, feathers and skins for their masters (Campbell, 1995).

In summary, in this section (4.2.9), the findings show that the European trade expansion in the 1850s had an impact in the utilisation and management of wildlife resources in the area. During this period, chiefs began to cede and sell their rights to foreigners who traded and hunted on their behalf. As chiefs' central control weakened, individuals in most tribal groups started having interest in the acquisition of guns mainly for hunting purposes. Since guns provided the means for acquiring new property to both commoners and the tribal chiefs began to grow rich on their own right. Attitudes towards wildlife utilisation changed, people looked on the animals they killed as their personal property,

to dispose of as they wished. Hunting for personal gain superseded the inbuilt social controls which previously ensured utilisation for communal benefit (Campbell, 1995). This marked an end of an era where traditional wildlife management was sustainable in the country. As McNeely (1993) puts it, new and foreign technological innovations tend to favour over exploitation of biological resources and weakening of traditional approaches to conservation, especially when a technological superior group moves into the a region occupied by groups with a simpler technology. The collapse of traditional wildlife management systems in East Ngamiland District can, therefore, be explained to be a result of European trade intrusion into traditional wildlife utilisation and management systems which hence rendered them inferior. This new European technological approach to wildlife resource use, failed to adopt to the previously held concept of sustainable use of the resource, resulting in the deterioration of wildlife resources in the area.

4.3 **Wildlife Utilisation and Management in Colonial Botswana**

Botswana came under British Protectorate rule in 1885. The immediate impact of colonialism is that wildlife resources in Botswana became public property with control vested in the Central Government. Control and access to utilisation values left the hands of the chiefs and their elders and passed onto the Government of Botswana. Realisation of the potential for commercial wildlife use grew much stronger under centralised administration than the territorial use rights for local communities and landholders that have been prevalent in the past in Botswana. Wildlife Management Areas (WMAs) and game parks were created. Under centralised control, **de facto** open access to the WMAs was limited and new wildlife resource management policies were introduced and promulgated. However, one of the immediate concerns of the new colonial government became the excessive game harvesting due to commercial hunting done by European traders and tribal chiefs. The British colonial administration hence aimed at controlling hunting activities done by both the European traders and the tribal chiefs and their people. Therefore, in response to the over utilisation of wildlife resources, the colonial government introduced laws which applied principally to foreigners, while the tribal chiefs were required to introduce laws or decrees (*melao*) for their tribesmen. The effects

on traditional wildlife management system, is that they overlooked the traditional customary laws of totems, taboos and the *kgotla* and wittingly or unwittingly rendered them ineffective in wildlife management.

4.3.1 **Game Statutory Laws in Colonial Botswana**

As already noted, the British Government came up with statutory game laws as a result of the appalling game destruction, which threatened game populations in Bechaunaland Protectorate. White's (1995), confirms Schapera (1943) claims that in the latter half of the nineteenth century, one firm in Shoshong exported £50, 000.00 worth of wildlife products annually, at its peak worth some £1.5 million in today's terms (P4.5 million). In the late 1880s, there was already a decline in the European trade due to drought and the over exploitation of the wildlife resources in the country. This is shown by the decline of the combined exports of six stores at Shoshong amounting to an estimated £15, 000.00 per year. Spinage (1991) states that the adoption of sophisticated methods of game destruction, and the changing patterns of land use led to the reduction in game habitat, which, therefore, necessitated game protection.

The introduction of the 1886 legislation, which was the first statutory game law introduced in colonial Botswana, was primarily designed to curb this trade. The law put restrictions on the hunting of certain species of wild animals named and defined as "game". It also introduced the idea of suspending hunting in certain months of the year, during which in that period of the year, animals could not be hunted. Licences were required to hunt, capture or sell game (Spinage, 1991).

The introduction of statutory game laws did not solve the problem of unsustainable wildlife utilisation in East Ngamiland District. Hunting continued unabated. One notable aspect is that the statutory game laws in colonial Botswana mostly dealt with only one aspect of wildlife conservation, which was the control of hunting. Spinage states that in the colonial period, five major revisions of the principal law (1886 Law) took place. The revisions introduced little that was new into the basic law of hunting, serving only to make it more detailed.

In 1925, Bechuanaland Protectorate Game Proclamation No. 17 of 1925 was passed, probably due to outside influence where protected areas were established in South Africa (Kruger National Park) and in Belgian Congo (now the Democratic Republic of Congo) (Albert National Park). The law called for the creation of national parks, game reserves, and wildlife sanctuaries, whereby wildlife species and areas, or species within a defined area were to be protected. This proclamation led to the establishment of Gemsbok National Park (1948), Chobe Game Reserve (1961), Central Khalahari Game Reserve (1961) and Moremi Game Reserve (1965). The British administration further established the Game Control Unit in 1959, to specifically control the harvesting of elephants and the management of protected areas. The law also redefined game into three categories, namely, "royal game", and "small game", and "large game".

Information from local key informants in East Ngamiland reveals that the establishment of Moremi Game Reserve and Chobe Game Reserve in their former hunting and gathering areas was done without their consent. The site for these protected areas was decided and chosen by the colonial administration, before the Batawana chiefs being called upon to attend a *kgotla* meeting where the British colonial representative told them that the areas have been declared protected areas. The local communities state that they were removed by force from these new protected areas, and in some instances, their huts and crops were burnt down, while they were loaded into trucks to give way to wildlife conservation. The people state that new protected area owners denied them access and benefits from these areas (i.e. wildlife, veld products and visits to their cultural sites). The establishment of the protected areas in East Ngamiland District resulted in the emergence of negative attitudes and perceptions of the people towards wildlife conservation.

In 1961, the Fauna Conservation Proclamation was passed. The law introduced controlled hunting areas, whereby, hunting was restricted by area. The law also declared as unlawful hunting methods such as the use and possession of poisoned bait, poisoned weapons, pitfalls, stakes, nets, gins, traps, set guns, missiles containing explosives, snares, fences or

enclosures (Spinage, 1991). It also declared unclaimed parts of the dead animal as government trophies.

White (1995) states that the proclamation provided the issue of hunting licences to residents and non-residents who wished to hunt. This proclamation had little impact on subsistence utilisation and hunting of wildlife resources by Batswana residents, but it caused a large increase in sport hunting by non-residents and laid the foundations of the present day wildlife viewing tourism and safari hunting tourism. The law resulted in an influx of wildlife viewers and safari hunters into Botswana from South Africa and Rhodesia (now Zimbabwe) who accelerated the over utilisation of wildlife resources in the country. According to White, the safari hunters hunted game indiscriminately in the hunting areas, resulting in a decline in the use of wildlife resources for subsistence purposes. The local communities in wildlife areas such as those in East Ngamiland District criticised the colonial administration at *kgotla* meetings about too much foreign hunting which depleted wildlife resources in their communal areas (White, 1991).

4.3.2 **The Tribal Chief's Decrees in Wildlife Management**

In relation to the role played by the chiefs in wildlife management in the colonial era, each tribal chief was statutorily required by the colonial administration to formulate and pass decrees (*melao*) for their people. The excessive exploitation of game by European commercial hunters made Batswana chiefs to co-operate with the colonial administration in matters of game protection. The chiefs became worried about the disappearance of game in their own lands due to European trading and hunting activities.

Spinage (1991) states that the chief's decrees probably date well before colonialism was introduced in Botswana, but they intensified after British rule was formally established in Botswana. This was mainly because of the commercial value of wildlife utilisation and possibly missionary influence. However, as already noted, Batswana had traditional wildlife institutions and laws long before the arrival of any European in the country. Although there is little documentation on this fact, unwritten wildlife laws existed in the

oral traditions of the people and this knowledge was passed on from one generation to the other by the word of mouth.

There is evidence to show that in Ngamiland District, the Batawana chief complied with colonial directives and in 1910 declared as illegal the hunting of elephants without permission of the chief (Spinage, 1991). Hunting of giraffe, buffalo, eland, rhino and hippopotamus was also prohibited (Spinage, ibid). In 1920, the Batawana chief modified the 1910 decree by allowing elephant hunting with permission from the chief with one tusk to be given as tribute to him. In 1937, another decree was passed by the Batawana chief where hunting of giraffe and other royal game were prohibited without permission of the chief (Spinage, 1991). Since decrees passed by the tribal chiefs were mostly influenced by the colonial administration, the people of East Ngamiland District interpreted them as a step further in denying them rights and access to wildlife resource utilisation in the area. The result was the growing negative attitudes and perceptions towards wildlife conservation in the area.

Stigard (1913) points out that the Batawana chief gave very limited permission to prepare people to hunt, except in respect of the smaller or more numerous species such as steenbok, duiker, impala and lechwe. Schapera (1970) states that most of the tribal laws were still in force during colonial rule until 1940. Spinage (1991) indicates that the complex game laws of Botswana evolved partly because the ancient customary law of totems and taboos was inadequate to meet the prevailing situation. All these findings show that colonial involvement in wildlife management alienated chiefs and prompted them to fail to enforce their tribal laws on the people to effectively ensure sustainable utilisation of wildlife resources in their areas.

In summary, the findings in section 4.3 indicate that, in the colonial period wildlife resources in East Ngamiland District, like in other districts in the country, was utilised and managed on the basis of two approaches. The first approach was that which created statutory game laws principally designed for Europeans, and the second that which forced the chiefs to impose decrees on their local people. The alien wildlife management

approaches supplanted or displaced the traditional wildlife management systems as **de jure** management passed into the hands of the Central Government. Local people lost control of wildlife management as British colonial government took over. The protected areas of Moremi Game Reserve and Chobe Game Reserve were established in Ngamiland District without the consent of the local communities. The result was the emergence of land use conflicts since local communities were forced to abandon their villages in these places, and were not allowed to hunt or collect veld products in their ancestral lands. This is probably the basic cause of the negative attitudes and perceptions towards not only wildlife conservation but also wildlife officers, wildlife laws and the protected areas.

4.4 **Wildlife Resource Utilisation and Management in Post-Colonial Botswana**

Although the various wildlife patterns and their associated problems are discussed below, generally, the first major problem with post-colonial wildlife management patterns in Botswana is that, after independence in 1966, the old British colonial policies and institutions were continued or partially modified by the new post-colonial leaders of Botswana. There has been little effort made by government to formulate and adopt development policies that are relevant within the context of local community interest and environmental sustainability.

Secondly, wildlife policies and institutions in Botswana have continued to be formulated and adopted without the involvement and participation of all major stakeholders, especially the local communities. This author's interviews show that there is lack of knowledge amongst the people about government wildlife policies. Table 4.1 shows 62.1% of the people of East Ngamiland District disclaim any knowledge about government wildlife management policies except those sections that restrict them from hunting, while 37.9% of them are completely ignorant of government wildlife policies. This, therefore, suggest that the local people of East Ngamiland District are not likely to co-operate with government in the implementation of wildlife utilisation and management programmes.

Table 4.1 **Awareness of Government Wildlife Conservation Policies by Local Communities**

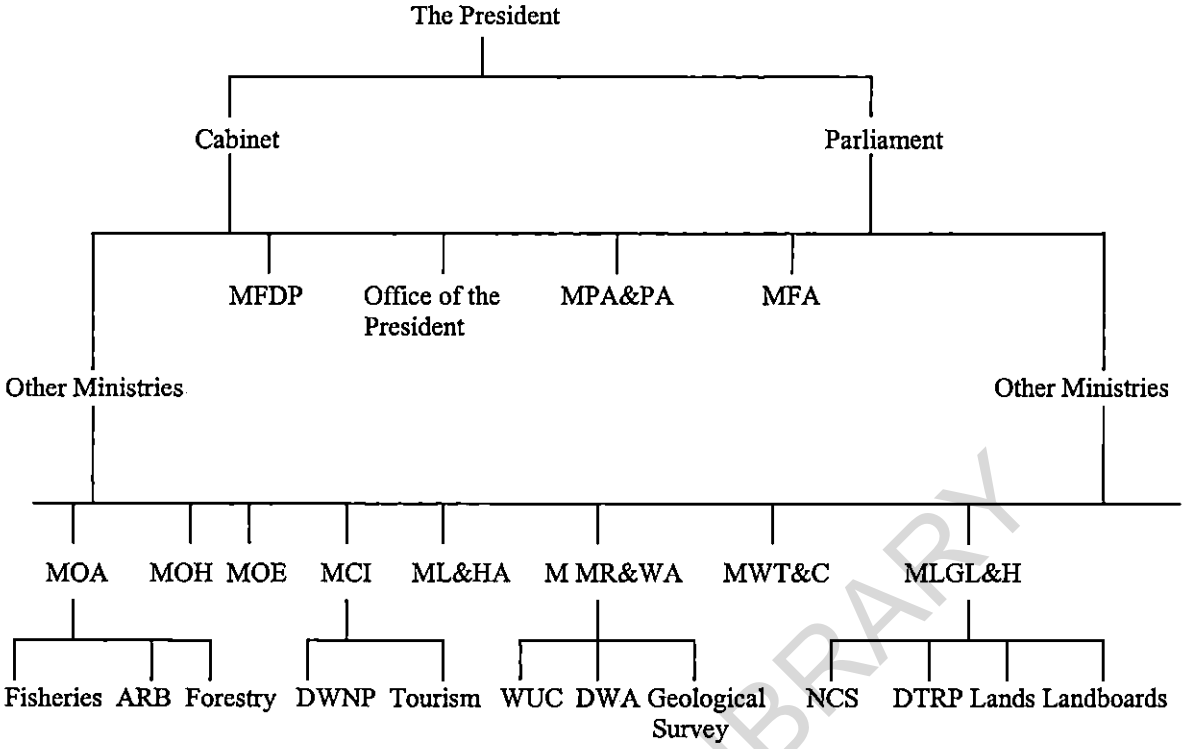
Response	Frequency	Percentage
Aware of Section on hunting only	59	62.1
Not Aware	36	37.9
Aware of Full Wildlife Policy	0	0.0
Total	95	100.0

Source : Author's Fieldwork 1998

Thirdly, in the post-independence era, a major problem affecting not only wildlife management but also all natural resource management in Botswana is that, natural resource management agencies, institutions and policies are fragmented into the different government ministries and departments. This arrangement results in policies conflicting with each other during implementation. Figure 4.1 shows the structure of natural resource management in Botswana. From this figure, it can be noted that there are four key ministries dealing with natural resources. These are the Ministry of Agriculture (forestry and fishery resources), Ministry of Commerce and Industry (wildlife and tourism), Ministry of Local Government, Lands and Housing (land resources and the National Conservation Strategy) and the Ministry of Mineral Resources and Water Affairs (water resources).

A fourth major problem with current natural resource management in Botswana is that the agencies and institutions dealing with natural resource management are located within line or junior ministries (see Figure 4.1) hence they often lack teeth or political support from government. As already noted above, some of these agencies and institutions include the Department of Wildlife and National Parks and the Department of Tourism in the Ministry of Commerce and Industry, the National Conservation Strategy and the Department of Lands in the Ministry of Local Governments, Lands and Housing, and finally the Department of Water Affairs and Department of Geological Surveys in the Ministry of Mineral Resources, Energy and Water Affairs.

Figure 4.1 **Structure of Natural Resource Management in Botswana**



Senior Ministries
MFDP – Ministry of Finance and Development Planing
MPA&PA – Ministry of Presidential Affairs and Public Administration
MFA – Ministry of Foreign Affairs
Office of the President

Line or Junior Ministries
MOA – Ministry of Agriculture
MOH – Ministry of Health
MOE – Ministry of Education
MCI – Ministry of Commerce and Industry
ML&HA – Ministry of Labour and Home Affairs
MMR&WA – Ministry of Mineral Resources and Water Affairs
MWT&C –Ministry of Works, Transport and Communication
MLGL&H – Ministry of Local Government, Lands and Housing

Departments
DWNP – Department of Wildlife and National Parks
DWA – Department of Water Affairs
ARB – Agricultural Resource Board
WUC – Water Utilities Corporation (a parastatal)
DTRP - Department of Town and Regional Planning
NCS - National Conservation Strategy

Source : Author's Fieldwork 1998

The findings on specific current wildlife legislation and management patterns and their associated problems are presented below as follows:

4.4.1 **The Fauna Conservation Act of 1967**

In 1967, the Fauna Conservation Act was passed. This was the first post-colonial wildlife law in Botswana. While retaining most sections of the 1961 Act, it replaced the customary laws or decrees and introduced the Tribal Hunting Regulations. These were separate hunting regulations for each tribal group and territory in the country, including Ngamiland District. Under this law, the tribesmen were required to pay in order to hunt.

The law had effects on the livelihoods of the local communities since some could not raise the needed fee to allow them to hunt. The local communities interpreted the fee as a way of denying them the opportunity to utilise wildlife resources provided by God freely in their local environments.

However, the law also made exceptions. It made provisions for remote area dwellers that they need to hunt freely without any restrictions (except for conserved animals) as long as hunting is done only for consumptive purposes by individuals or households. The remote area dwellers were also allowed to use poisoned weapons, pitfalls, traps, snare, fence or enclosure and also to posses poisoned weapons, traps or snares; but not traps or snares of a type manufactured for commercial purposes or a wire snare, fence or enclosure (Spinage, 1991).

While the law allowed some freedom to some of the communities in East Ngamiland District to hunt, it generally did not allow some of the hunting methods to be used as well as hunting of conserved species. This was perceived by the local communities as a step further in denying them the use of wildlife resources. This further led to the growing negative attitudes and perceptions towards wildlife conservation in the district.

4.4.2 **The Fauna Conservation Act No.47 of 1979**

The new law abolished separate regulations for each tribal area, consolidating them into a single set of regulations applicable throughout Botswana (Spinage, 1991). This law unified all tribal territory hunting regulations, making a move to nationalisation of hunting regulations in the country (Thakadu, 1997). The law served mainly to control licensing procedures in the country.

White (1995) states that the impact of these changes on the rural livelihoods has been damaging to rural citizens (who are mostly subsistence hunters), since they had to compete for licenses with urban citizens, most of whom are recreational and professional hunters. As a result, there has been a sharp increase in demand for hunting licenses, out of proportion of wildlife resources. Spinage (1991) states that the centralisation of hunting was a mistake, in that, more hunting licenses had to be sold out to the detriment of wildlife populations. He states that, over 119, 000 licenses were being sold each year, with some 33% or 40, 000 animals being killed annually. The realisation of the potential for commercial wildlife is essential, but current efforts should decentralise control of wildlife resources to local community level.

The 1979 Conservation Act also dropped the practice of reserving a substantial proportion of the quota for local residents. According to White (1995), the decline in benefits derived from the use of wildlife resources occurring to rural communities contributed to the marked change in public attitudes and perceptions towards wildlife conservation over the last two decades. The Basarwa of East Ngamiland District were hard hit by this Act, thus their attitudes towards the Wildlife Department, wildlife officers, protected areas and government in general have continued to be negative.

4.4.3 **Department of Wildlife and National Parks (DWNP)**

The Department of Wildlife and National Parks (DWNP) came into existence in 1985. It set as its aims conserving, managing, promoting and using productively the national wildlife resources and the country's protected areas such as game reserves, national parks and wildlife sanctuaries. Some 23% of Botswana's land is state-owned, of which 17% is

devoted to wildlife parks and game reserves, which are under the jurisdiction of the Department of Wildlife and National Parks (Figure 4.2).

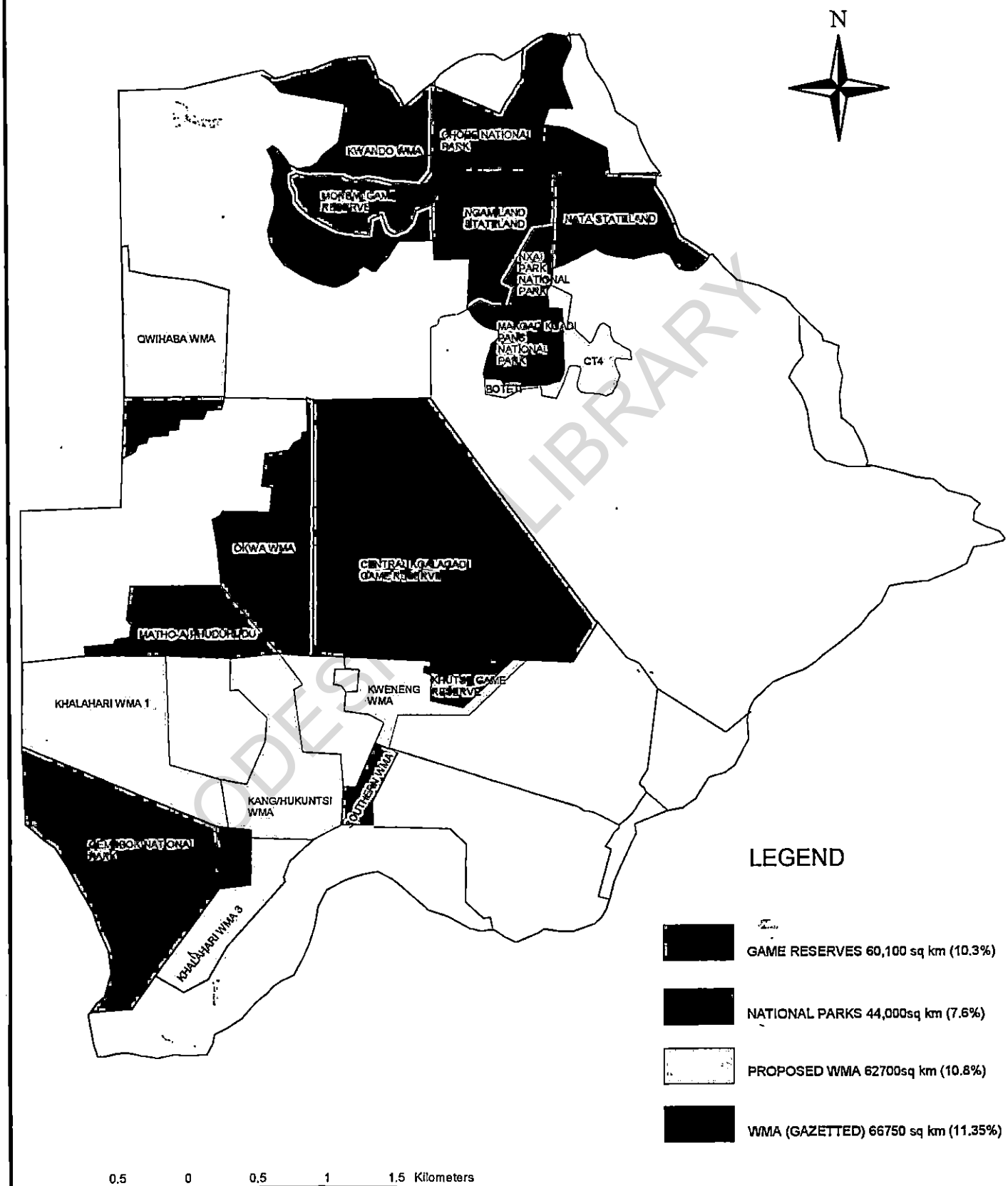
The problem with DWNP, like other natural resource institutions in the country, is that it is currently having very little political support from government. This is demonstrated by its location in a line Ministry of Commerce and Industry as a department. This has made DWNP to have limited power and strength to effectively implement wildlife policies in the country.

Another factor is that DWNP is plagued by problems of lack of equipment, such as vehicles. The Central Transport Organisation (CTO), a department in the Ministry of Works, Transport and Communications, is responsible for the purchase, repairs, maintenance and disposal of vehicles and other transport-related equipment for government agencies. CTO is perceived by DWNP officers in Maun and East Ngamiland District as inefficient in handling transport problems on time. For example, CTO takes a long time to repair or replace broken vehicles. The DWNP officers view lack of transport as a contributory factor in the ineffectiveness of DWNP. To validate the transport problems within DWNP, a Village Development Committee member in Sankuyo complained that "DWNP normally responds late and when you report that wildlife have either destroyed your crops or killed your livestock and you want them to assess the damage, you are always told that there are no vehicles for vehicles".

Apart from transport problems, DWNP is faced with a serious shortage of trained personnel. In the period 1997/1998, DWNP had a total of 1, 173 establishment posts, with 1, 056 people employed, and a total of 117 vacant positions (Ministry of Commerce and Industry Annual Report 1997-98). In the same period, about 15 trained personnel who held certificates up to the level of master's degree resigned from DWNP, including three out of six master's degree holders trained by USAID. The reasons that these people gave for resignation include low salaries that government pays when compared to the private sector, frustration by the government system, which takes too long to promote individuals and failure to effectively and efficiently do the job due to lack of equipment

FIGURE 4.2

MAP OF WILDLIFE AREAS IN BOTSWANA



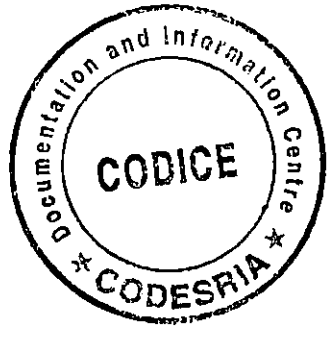
and scientific data. Ferrar (1995) has noted that DWNP has an acute shortage of senior staff with suitable experience and those available have a very low level of decision-making knowledge and authority. DWNP also has a general shortage of middle and junior staff, and those that it has have suffered for years under a completely inadequate training programme. Table 4.2 below shows the total DWNP trained staff as of March 1999.

Table 4.2: **Total DWNP Trained Staff as of March 1999**

Qualification	Trained Staff
Certificate	148
Diploma	23
Degree (first degree)	41
Masters	20
Total	232

Source: Author's Fieldwork 1999

In East Ngamiland District, the local people are recently beginning to appreciate the role of DWNP in wildlife management, but they still regard DWNP as a policing body whose main duties are to arrest people and prevent them from utilising wildlife resources in their area which is their God-given bounty. During this author's fieldwork, an old woman in Mababe after personal introduction warned the author as follows, "*ngwanangwanaka, o seka wa bua ka diphologolo ka kwano fa o sa batle go swa, MaGame ba tse di tala, ba tloga ba goroga gompieno go go tshwara mme ko morago ba go bolai*". Literally translated, this means, "my grand child, don't speak of wildlife in this area if you do not want to die, wildlife game scouts will soon arrive to arrest you and finally will kill you". In Sankuyo, the author experienced difficulties in data collection since some local community members suspected him to be a DWNP secret agent rather than a university student on research. Because of its high handedness, the public view DWNP with suspicion and mistrust. The prohibitive procedures that DWNP imposes on the local people have made the department to be an anathema to the people in East Ngamiland District. The people of East Ngamiland District state that the culture of guardianship of wildlife resources by local communities has been lost to DWNP. The harassment, which



they face from DWNP when found in a protected area without written government permission, increases the hostility between DWNP and the local people. The latter want control and access to be given back to them.

4.4.4 The Wildlife Conservation Policy of 1986

The most recent wildlife utilisation and management policy is the Wildlife Conservation Policy of 1986. It is frequently seen as the blue-print for the re-introduction of community involvement in wildlife conservation. However, it seemed to have ignored the participation of stakeholders in the wildlife industry, especially the local communities in its early stage of design and formulation. The general view amongst key informants at present is that the Wildlife Conservation Policy of 1986 was simply rushed through without proper consultation with the various stakeholders; hence the majority of the stakeholders do not understand it, especially the local people in wildlife areas in Ngamiland District.

The local communities who are meant to be the main beneficiaries of this policy were found during the fieldwork to have only a rough understanding of those sections of the policy that directly affect them, such as the establishment of wildlife community projects. The main reason attributed to this situation is that most wildlife policies in the Botswana are foreign influenced and are drawn by foreign consultants who tend to ignore local involvement of people and who lack adequate local knowledge, understanding and awareness of the ecological and social dynamics that affect the area and community.

Tamuhla (1997) states that the Wildlife Conservation Policy provides the legal framework for community-based wildlife projects in the country, but he does not outline how community participation in sustainable wildlife utilisation will be carried out. He does not address the issue of community empowerment, mobilisation and project implementation of community-based projects. His idea of project implementation actually is based on experience from elsewhere, ignoring the socio-economic and political context of the area. Community empowerment appears to be mostly left in the hands of foreign investors and donors who lack the commitment and understanding of the

local situation with respect to the need for training and provision of skills to the local people. Some operate simply for profit in their industries or businesses.

The legislation and the policy do not address the role that can be played by the local communities living in and around protected areas in the utilisation and management of wildlife resources. The failure to involve the local communities in the running of protected areas has partially been instrumental in conflicts occurring between the local people of East Ngamiland District and wildlife management.

Interviewees from the wildlife Non-Governmental Organisation in Maun state that the problem with the Wildlife Conservation Policy is that it is mainly consumptive in nature and thus helps to accelerate the already declining wildlife populations in the country. The suggestion, therefore, is that the policy must shift from being consumptive at both subsistence and commercial levels to a non-consumptive approach in face of the declining wildlife resources. *Kgosi* Tawana II of Ngamiland District has stated that a consumptive approach to the declining wildlife species can lead to the devaluation of the product and he sees the need to shift policy from being consumptive to that which promotes the photographic tourist industry.

Since management policies appear to have a top-down approach rather than a bottom-up approach and local appropriateness, they only appeal to rich foreign investors who are able to establish wildlife industries in the area. These industries are meant to realise quick profits from the use of wildlife resources, which might in the long run prove detrimental to the local environment especially the wildlife species in demand by safari and game hunters.

4.4.5 **The Tourism Policy of 1990**

The Tourism Policy of 1990 recognises that revenues generated by tourism should be returned to the rural economy as soon as possible and that wildlife is essential to the tourist attractions of Botswana (Lawson, 1992). The Tourism Policy aims at diversifying the economy of Botswana. It outlines initiatives to decentralise control of wildlife to

district and local community to promote rural development in which rural communities utilise wildlife resources for their own benefit.

However, like the Wildlife Conservation Policy of 1986, the Tourism Policy is viewed by decision-makers as having been rushed through without proper consultation of the various stakeholders. Thus, it is not properly understood especially by local communities. The policy appears to be still top-down instead of bottom-up. It appears designed to take place in the framework of rational land use zones designed to ensure wildlife resource utilisation to promote tourism without necessarily taking the **de facto** open access and local community interest into serious consideration. This top-down approach has resulted in the policy lacking integration to improve links between nature conservation, local community development and the tourist industry itself. The OPWT stated that innovative approaches to tourism of big game lodges and vehicles are not mandatory for successful tourism operations. Tourism in Ngamiland District would benefit the local inhabitants if it were approached on the basis of traditional values and full participation of the local people.

The OPWT states that the high-cost low-volume tourism policy is out of reach to the local communities and will continue to promote the current exclusionist-elitist divisional tourism as perceived by the local communities. The OPWT says that what is needed is a more employment-led venture which can be executed through low-impact high-volume activities such as walking and (boat) *mekoro* safaris, as opposed to vehicle-lodge operators which do not maximise employment but encourage degradation of the habitat. What this means, of course, is that tourism would benefit the local communities if made to promote their small-scale tourist projects instead of the large-scale facilities, which in most cases, local communities cannot manage due to lack of skills and resources.

The Department of Tourism in Maun states that the high-cost low-volume tourist approach is not based on a sound and fully environmental assessment but on cost-effective measures, and so far, no Environmental Impact Assessment has been conducted prior to the approach's enactment. The high-cost low-volume tourism promotion has

resulted in the erection of huge structures like lodges which do not only leave the local communities out but the underprivileged people in the country as a whole. Booking, payment and banking for lodges around the delta is done in Johannesburg and other capital cities and source areas of the tourists. One European tourist in Maun remarked, "I book and make payments in Jo'burg, then come to enjoy the sight of the Okavango Delta, buy a T-shirt or basket and then go back home". This indicates the kind of attitude tourists have towards local community development and their apparent insensitivity to local and environmental situation in host countries, a scenario perpetuated by the policy.

The Tourism Policy is faced with problems of lack of implementation due to shortage of manpower, limited equipment and lack of scientific data. The result has been that, the Tourism Policy has become ineffective and where it has been implemented, there is lack of monitoring and co-ordination. During data collection in the area, the Department of Tourism in Maun expressed concern about the high influx of tourists and mobile tour operators in Ngamiland District. The major attraction is the financial and economic returns. They acknowledged that the problems of monitoring and lack of co-ordination emerge from the undue emphasis on profit and shortage of manpower in their department.

Although the Financial Assistance Policy (FAP) in 1995 was extended to tourism, the dilemma that arises is that it only appeals to rich investors who can afford the high contributions required before one can obtain the loan. As a result, the FAP is unable to benefit the poor local communities such as those of East Ngamiland Sub-District. The Director of HATAB states that tourism is a financial oriented industry thus the poor local communities might find it difficult to benefit from this business venture.

4.4.6 **Wildlife Management Areas (WMAs) and Controlled Hunting Areas (CHAs)**

Moganane and Walker (1995) state that WMAs, which are proposed to be around protected areas, bring the total wildlife areas to 39% of Botswana's land (Figure 4.2). The WMA idea encourages community-based wildlife conservation projects and seeks to enhance the conservation of wildlife resources and the biological diversity outside the protected areas and private lands, while at the same time affording rural people benefits

from wildlife resources in their local areas. This is intended to create a positive attitude and thinking of the local communities towards wildlife conservation, thus making them less inclined to poach.

Some respondents in East Ngamiland District do not know or appreciate the government policy on Wildlife Management Areas (WMAs) and Controlled Hunting Areas (CHAs) which is currently being implemented in communal lands in the district. Table 4.3 illustrates awareness and views emerging from interviews of the local people towards WMAs and CHAs. About 32.4% of the respondents are aware of them but view them badly, 37.9% are not aware of them, while 33.7% are aware and think they are good.

Some local people state that the demarcation of land into WMAs was done without consultation, hence their prevailing feeling of unhappiness that WMAs and CHAs have been imposed on them. *Kgosi* Tawana II of the Ngamiland District states, "whose land is this anyway... before implementation of this Dutch man's plan by over-eager authorities, the people on the ground need to understand what's going on" (Caitlin Davies, Botswana Gazette 11/11/98). The current WMAs, therefore, remain unpopular with the local communities even though they were designed to improve their socio-economic livelihood through the use of natural resources.

Table 4.3 **Awareness and View of local Communities of WMAs and CHAs**

Response	Frequency	Percentage
Aware and Bad	27	32.4
Aware and Good	32	33.7
Not Aware	36	37.9
Total	95	100.0

Source : Author's Fieldwork 1998

The Basarwa of Khwai and Mababe appear not to know their WMA boundary since it was drawn without their consent or participation. They indicate that they were only shown some maps which they never understood, since they do not know how to read and write. The people say they could have been taken around to be shown rivers, hills, big

trees or any physical object that makes the boundaries of their WMA. Since the people do not know their WMA boundary, Khwai residents state that photographic tourism by leaseholders or safari operators who leased the land from the council is carried out in their area without their permission while Mababe residents claim hunting taking place on their land by safari hunters without their permission.

The key informants raise concern about the demarcation of Ngamiland District into WMAs and CHAs which was done without any EIA. They say that, the existing WMAs and CHAs ignore the ecological dynamics and traditional resource use of the area. The WMAs and CHAs, therefore, seem to be mostly cognisant of private commercial business interests such as hunting safaris, mixed game ranching, ostrich farming, crocodile farming even into sensitive parts of the area.

Information from key informants confirm that no community consultation was undertaken when WMAs and CHAs were established and that planning was done by expatriates who had little understanding of the ecological and social dynamics of the Ngamiland District. As already noted community consultation was not a priority on the part of the expatriate consultants who proposed the demarcation of the area into WMAs and CHAs. The result has been a feeling by local communities that their best land has been taken away and given to foreign investors while they are marginalised and given small drier areas.

The WMAs also include the Controlled Hunting Areas (CHAs) which allow safari hunting and subsistence hunting, and game capture. When all these activities are carried out in one place at the same time, it leads not only to disturbance of game populations but also to conflict among those engaged in the hunting activity. Hunting-safaris and photographic-safaris have had conflicts around the Okavango Delta area (Lawson, 1992). This situation is common at the Khwai and Sankuyo WMAs. Unlike the private landowners, the rural communities do not have title deeds to the land they occupy and cannot fully control the wildlife resources in their WMA.

The problem of livestock expansion into WMAs and CHAs in East Ngamiland Sub-District has led to game in these areas to concentrate mostly in protected areas of Moremi Game Reserve and Chobe National Park, leaving the communal WMAs and CHAs without game to the disadvantage of the local communities. The Ministry of Agriculture through the local council is encouraging livestock in the form of donkeys and goats in Mababe and Sankuyo. Livestock and wildlife management in this area has shown that the two cannot share the same piece of land. The Tawana Land Board is also demarcating fields at both Sankuyo and Mababe to promote crop production, a situation that further reduces WMAs potential for wildlife conservation and tourism.

The other problem of WMAs and CHAs is that, unlike the private landowners, the rural communities of East Ngamiland Sub-District do not have tittle deeds to the land they occupy. This, therefore, makes them have no control over wildlife resources in these areas. Both land and wildlife resources in WMAs and CHAs remain a government or public property, leading to a situation where the local communities cannot take sound decisions on land they have no control over or derive sufficient resources for their benefit.

4.4.7 **The National Conservation Strategy (NCS) of 1990**

The National Conservation Strategy (NCS) was approved by Parliament in 1990, to deal with environmental problems in the country as a whole. It identified several major issues, which need to be addressed, of which wildlife depletion was considered a minor issue. A review of NCS by some consultants (e.g. Barnhoorn *et al,* 1994) have disclosed the constraints of NCS and some of the problems associated with wildlife management patterns in the country. Barnhoorn *et al* (1994) point out that the translation of policies into concrete activities has been constrained by the limited implementation capacity, absence of a legal framework, lack of involvement of communities as well as the non-governmental organisations and corporate sectors in government programmes. Lack of the legal framework makes the NCS to depend on out-dated and inappropriate sectarian acts and policies, which further cripple its aims and objectives.

The NCS suffers from insufficient understanding amongst politicians, decision-makers and the general public. This was demonstrated by a lack of understanding of the serious environmental implications and enormous future costs that Botswana would pay if proper environmental procedures are not taken when implementing socio-economic and political decisions. An NCS Officer complained about the government bureaucracy and the fact that government does not give immediate attention to proposed NCS activities. This has hampered the effectiveness and efficiency of the agency. Like DWNP, the NCS was found to lack political teeth, support and backing. The co-ordinating agency is located within the Ministry of Local Government, Lands and Housing (MLGLH), a line ministry. As a line ministry, MLGLH is not able to coordinate the work of other line ministries, notably the Ministry of Agriculture and Ministry of Mineral Resources, Energy and Water Affairs. Major livestock and arable policies pursued by the Ministry of Agriculture, such as the Tribal Grazing Land Policy and Arable Rainfed Agricultural Programme have been blamed for increasing environmental damage in Botswana. The NCS, therefore, has no power or strength to implement its objectives; thus the body is just a sub-structure without any significant power base.

4.4.8 **The Tribal Land Act of 1968 and the Traditional *Kgotla* Institution**

In the issue of land management after independence, the Tribal Land Act of 1968 established Land Boards in each district of Botswana in 1970. The Land Boards assumed the responsibility for land matters previously held by chiefs and their representatives. The Land Boards became responsible for the allocation of tribal land under customary and common law procedures, adjudication of disputes relating to tribal land and they are also responsible for land tenure system in tribal land (Tribal Land Act of 1968). The Land Boards striped the chief who once held land and its natural resources in trust for his people of his powers. The *Kgotla,* which governed the use of land resources, and all other natural resources including wildlife is currently left without any control over land matters. The Tawana Land Board was created to take over tribal land issues in Ngamiland District from the chiefs in the area.

In the 1980s, a number of reforms within the Land Boards were made of which the chief who was an ex-officio member of the land board was removed. This was the last effort by government to remove the community voice in the utilisation and management of land and the natural resources found on it. The result has been the unsustainable utilisation and management of not only wildlife resources but also all natural resources in rural areas. Loss of control over land by the chief is mostly seen through the present land tenure systems, namely tribal land (71%), stateland (23%) and freehold land (6%). The Land Board, Department of Lands and private individuals manage all these land tenure systems respectively, with the chief or the local communities having no effective role to play.

In modern Botswana, the tradition that villagers are permitted to express their views at the *kgotla* has continued, providing an opportunity for ordinary Batswana to discuss matters with civil servants, field officers, councillors and members of parliament. The *kgotla* still serves as the customary court, which tries only minor civil and criminal cases with the chief or headman as head of the *kgotla*.

Despite the undoubted importance of the *kgotla*, the central government has used it primarily for informing the public of policies that it has already decided upon, and for requesting assistance in implementing programmes. It is used to legitimise government policy initiatives from the centre, rather than to incorporate villagers into initial decision making process. Respondents in East Ngamiland District state that, while the *kgotla* is supposed to be used for consultation, politicians and civil servants have often failed to respond to the views or complaints that villagers have expressed at the *kgotla.*

The government has further reduced the power and control of the chief and his *kgotla* by placing them under the Ministry of Local Government, Lands and Housing. The chief is expected to work as a civil servant supervised by the District Commissioner. This new post-colonial arrangement has affected the traditional *kgotla* institutions in their effectiveness in the management of wildlife resources.

4.5 Post-Colonial Government Support to Agricultural Production

The last major problem associated with wildlife management not only in East Ngamiland District, but in the whole country is that the post-colonial government land use economic policies in Botswana mainly support agricultural production at the expense of wildlife conservation. The establishment of the Ministry of Agriculture and the Botswana Agricultural College immediately after independence in 1966 to support agricultural production in the country appear to validate this hypothesis. These new developments on agricultural production are coupled with huge government expenditure especially on the livestock sector as reflected in Table 4.4.

Table 4.4 **Planned Development Spending on Agriculture in National Development Plans (NDP) in (000 Pula)**

	NDP 1 1968-73	**NDP 2 1970-75**	**NDP 3 1973-78**	**NDP 4 1976-81**	**NDP 5 1979-85**	**NDP 6 1985-91**
Livestock & Animal Health	1501 (59.3%)	4479 (30.7%)	9224 (74,3%)	20 635 (68.6%)	61 447 (56.6%)	11 606 (22.8%)
Arable Farming	262 (10.3%)	351 (6.3%)	754 (6.1%)	3562 (11.9%)	24 067 (22.2%)	23 830 (46.9%)
Research	92 (3.6%)	86 (1.5%)	755 (6.1%)	2214 (7.4%)	4621 (4.3%)	1300 (2.5%)
Others	678 (26.9%)	633 (11.5%)	1675 (13.5%)	3628 (12.1%)	18 418 (16.9%)	14 120 (27.8%)
Total	2533	5549	12 408	30 039	108 553	52 856

Source Harvey and Lewis (1990:90)

Table 4.5 shows a comparison of planned development expenditure between the agricultural and wildlife sectors from the National Development Plan (NDP) One in 1968 to NDP 8 in 1998. The findings show a wide disparity between the two where the agricultural sector is receiving more government funding than the wildlife sector.

The government first demonstrated support on livestock farming through the introduction of the Tribal Grazing Land Policy (TGLP) of 1975. The main objective of TGLP was to commercialise livestock production and conserve the rangeland. This was to be achieved

through the allocation of blocks of land within communal areas for leasehold ranches, which were to be used for commercial ranching. When the TGLP proved a failure, in 1991, government modified the TGLP and introduced the Agricultural Development Policy (ADP) under NDP 7. The ADP mainly focuses on fencing livestock farming land in communal areas to improve productivity of the livestock subsection and ensure the sustainable use of range resources.

Table 4.5 **Comparison of Planned Development Spending between Agriculture and Wildlife in National Development Plans (000Pula)**

	NDP 1 1968-73	NDP 2 1970-75	NDP 3 1973-78	NDP 4 1976-81	NDP 5 1979-85	NDP 6 1985-91	NDP 7 1991-97	NDP 8 1997-2003
Agriculture	2,533	5,549	12,408	30,039	108,553	52,856	126,300	344,308
Wildlife	202	328	402	803	1,979	3,985	6,490	64,010

Source: Author's Fieldwork 1999

In the arable sector, the major government programme is the Arable Land Development Programme (ALDEP) introduced in the late 1970s. ALDEP's main objective is to improve farming methods and techniques hence government provides substantial financial assistance to farmers. In 1983 government decided that it would pay 85% of the cost of any assistance, leaving the farmers with only 15% to pay. In 1985, government further implemented the Arable Rainfed Agricultural Programme (ARAP). ARAP effectively became a drought relief programme. It provides a set of subsidies to all farmers, such as distribution of free seeds, payment for de-stumping and weeding of one's own field. The government also provided 85% of the fencing costs of a farmer's field. Studies by White (1993) indicate that government support for agricultural production especially livestock has resulted in an increase in the country's cattle herd as shown in Table 4.6.

According to White (1993:15), half the rural population owns no livestock while the country's richest 5% own over half the country's cattle herd. The increase in the cattle herd is coupled with a decline on wildlife species in the past twenty years. The

explanation given is that cattle farming continue to expand into wildlife areas due to the high government subsidies in drilling boreholes for watering livestock. The penetration of livestock into wildlife areas tends to push wild animals into hidden sanctuaries where their populations remain in constant threat of deterioration.

Table 4.6 **Botswana National Cattle Herd from 1934 –1990**

Year	National Cattle Herd
1934	1189 000
1939	671 000
1947	966 872
1954	1 140 000
1957	1 310 000
1965	1 481 000
1970	2 017 000
1975	2 390 000
1980	2 390 000
1985	2 459 000
1990	2 696 000

Source White (1993)

The encroachment of livestock into wildlife areas is also coupled with the erection of veterinary fences (Figure 4.3), which block wildlife migratory routes. The veterinary fences trap and kill or prevent wildlife from migrating to water sources especially in dry seasons, leading to high wildlife motarlities. Perkins and Ringrose (1996:63), state that "veterinary cordon fences which continue to be erected in order to maintain access to European beef export markets have contributed significantly to these declines". The wildlife resource decline in Botswana is somehow correlated to agricultural production (see Table 1.2 in Chapter One).

In summary, the findings in Chapter Four indicate that in the pre-colonial period wildlife resource utilisation and management in East Ngamiland District was sustainable. This was possible mainly because of the traditional wildlife management institutions and customs that directed wildlife use amongst the societies. The European trade expansion in the area around the 1850s commercialised wildlife resources. The result was the over-harvesting of wildlife

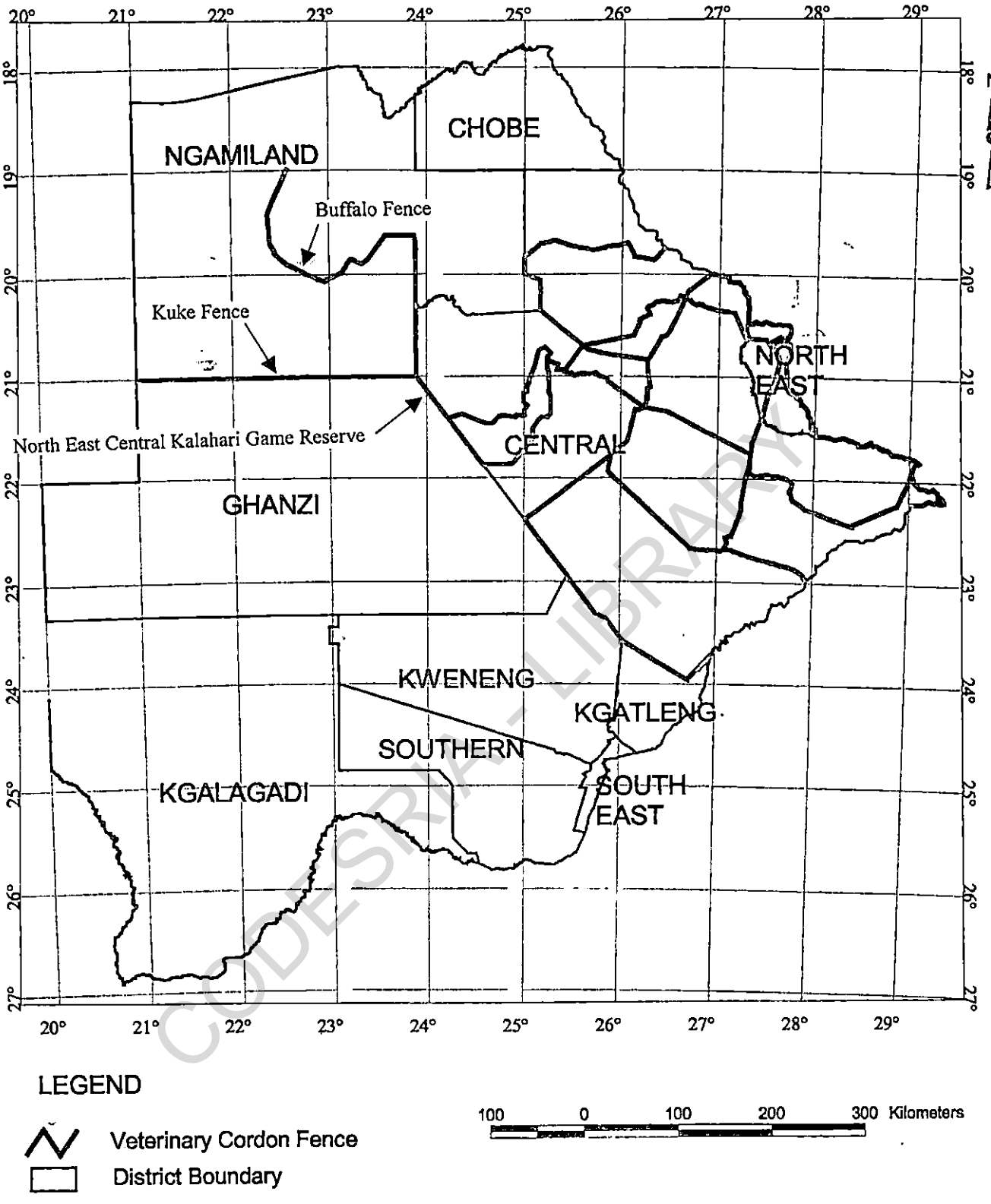


FIGURE 4.3: MAP OF VETERINARY CORDON FENCES IN BOTSWANA

Please note that the recent cattle lung disease veterinary fences in Ngamiland District are not shown in the map.

resources by both by the European traders and tribal rulers and their people in pursuit of individual gains. During the colonial period, the British Government passed statutory game laws to apply to European hunters and traders while tribal rulers were forced to pass decrees for their people. Hunting became restricted and protected areas were established to protect wildlife species. Actually, in the colonial era, wildlife resource management became centralised hence human-wildlife conflicts in the area. The local people felt that they were denied access and benefits from wildlife resources around them. The findings indicate that even after independence in 1966, wildlife resources are still centralised. The wildlife policies and institutions of the colonial period have been carried on into the post-colonial era, even though Batswana leaders, rather than the British are now involved in decision making. The post-colonial government of Botswana introduces wildlife policies and institutions mostly without consultation and involvement of the local people in wildlife areas. This is made evident by the establishment of more protected areas and laws restricting hunting. Such policies and institutions have become difficult to implement mainly because they do not have the backing of people living in wildlife areas. The other disadvantage that results in unsustainable wildlife management in the country is that, the natural resource use policies and agencies are fragmented into the various government ministries and departments which tend to conflict with each other during implementation. This is reflected by the conflict between the Department of Wildlife and National Parks in the Ministry of Commerce and Industry and the Department of Animal Health and Production in the Ministry of Agriculture. It can also be observed that after independence in 1966, the Government of Botswana introduced wildlife policies and institutions that promote agricultural production at the expense of wildlife conservation. Because of this, as agricultural expenditure goes up, wildlife populations appear to be going down. The findings in this Chapter, therefore, suggest that the interference of traditional wildlife management systems by conventional wildlife management systems have a contribution in the unsustainable wildlife resource untilisation and management currently ongoing in Botswana.

CHAPTER 5

BENEFITS, ROLE, ATTITUDES AND PERCEPTIONS OF LOCAL COMMUNITIES TOWARDS WILDLIFE CONSERVATION, THE ISSUE OF LAND USE CONFLICTS AND INTEGRATED WILDLIFE MANAGEMENT

5.1 Introduction

This chapter addresses the research findings on the benefits, attitudes and perceptions of the local communities towards wildlife conservation. It also outlines the findings on the role local communities play in wildlife management and the land use conflicts experienced in wildlife management areas. The chapter finally deals with the performance of community-based projects and prospects for integrated wildlife management in East Ngamiland District.

5.2 Benefits to Local Communities From Wildlife Resources

Research conducted in the Southern African region by Mbanefo and de Boerr (1993) in Zimbabwe and Prosser (1996) in South Africa, indicate that there are possible wildlife benefits that can be made to accrue to local people living in wildlife areas. These benefits include employment in the wildlife industry, infrastructure provision in the local villages (e.g. water supply and roads), craft work sales (e.g. baskets, wood carving and leather items), tourist activities (e.g. photographic tourism and revenue from gate fees), and hunting (e.g. subsistence and commercial hunting). Other potential benefits that can be derived by local communities from wildlife protected areas include access to natural resources such as forest and veld products, arable land for agriculture and grazing land for livestock.

Information from East Ngamiland Sub-District indicates that the majority of local people in the area either derive no benefits or have only limited benefits from wildlife resources. Table 5.1 shows a total of 62.1% of the respondents who state that there are no household benefits they derive from either wildlife resources or tourism in their area. Only 37.9% of them state that wildlife benefits do accrue to households. Responses show that the principal benefits local communities get are meat (from subsistence hunting), income

(from sale of community wildlife quota to safari operators), employment (in local lodges and safari companies) and revenue derived from individual sales of baskets and wood carvings to tourists. The explanation given by those who state that they do not get any benefits from wildlife resources is that wildlife control and land belong to government, as a result, they cannot determine how wildlife can be used to benefit them. Actually, a 25-year old gentleman in Khwai made this remark, *"re ka bona jang dipoelo mo diphologolong re sena taolo mo go tsone le tiriso ya lefatshe. Tsotlhe ke tsa MaGame ba ba re bolelelang gore re foduge fa ka gore ke lefatshe la diphologolo"*. Literally translated, this means, "how can we get benefits from wildlife resources when we do not have control over them and the use of the land. All belong to the Department of Wildlife and National Parks, who are making a request to us to re-locate from this place and give way to wildlife conservation".

Table 5.1 **Household benefits from wildlife resources**

Village	Benefits	No Benefits	Total
Khwai	9(28.1%)	23(71.9%)	32(100.0%)
Mababe	6(19.4%)	25(80.0%)	31(100.0%)
Sankuyo	21(65.6%)	11(34.4%)	32(100.0%)
Total	36(37.9%)	59(62.1%)	95(100.0%)

Source: Author's Fieldwork 1998

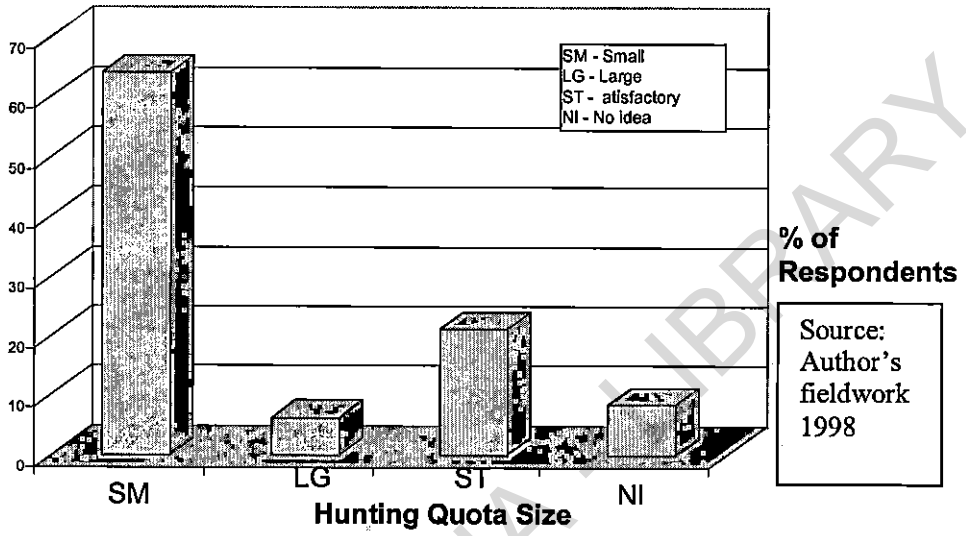
The figures in Table 5.1 show that there is a disparity in responses between the three villages of Khwai, Mababe and Sankuyo regarding the wildlife benefits. The explanation for the differences in responses might be due to the fact that, at the time of the study, there were limited wildlife benefits that were beginning to accrue to some few individuals at Sankuyo and Khwai. These benefits are in terms of employment and hunting. In Sankuyo, there are sixty-six people employed in the Safari Company (Crocodile Camp Safaris) that has leased the Sankuyo community area for hunting. These people provide services such as skinning and tent keeping (house keeping). In Khwai, about nine people are employed in the local lodges of Tsaro game Lodge and Khwai River Lodge as cooks, house keepers, including one man who works as driver and tourist guide. In Mababe, no one is employed in any wildlife related activity.

Respondents from the villages of Mababe and Khwai say for the past two years, they derive nothing from hunting activities due to the suspension of their hunting quota by government. The two villages have been instructed by the local authorities to produce a constitution describing how they want to use the quota before being allowed to hunt. The Khwai community involvement in wildlife community projects is further made complicated by the fact that the community needs a constitution that will gave them full control and ownership of wildlife, land and all natural resources in the area. This idea by the Khwai community is contrary to the government model of community based projects hence, the delay in the final arrangements to them benefit from wildlife resources around them. However, Sankuyo, which already has a constitution, get benefits from both subsistence and commercial hunting. From the quota of twelve elephants issued to the community of Sankuyo by the Department of Wildlife and National Parks in 1998, eleven were sold to Crocodile Camp safaris for P22, 000.00 each. In addition to revenue from elephants sold to Crocodile Camp safaris, interviews with the Sankuyo Trust Board members indicate that the trust received a lease fee of P285, 000.00 in 1996 and P345,000.00 in 1997 (from safari companies) of which the total amounted to P660,468.00. This revenue has been distributed to each household in the village and was used to buy a community landcruiser. The households state that they get an annual income of P200.00 each.

Still on the hunting quota issued by the Department of Wildlife and National Parks (DWNP) to rural communities, 64.2% of the respondents state that it is very small (Fig. 5.1). The DWNP office in Maun state that in 1996, the Sankuyo community was given a hunting quota of 313 animals, 320 animals in 1997 and 328 animals in 1998. The explanation given by the communities why these quotas are small is that they are decided by DWNP alone, and are often issued late, at times at the period when the hunting season is just about to close. This in the past has resulted in the communities being unable to hunt the total number (quota) of wildlife species allocated to them.

The local communities are of the opinion that hunting must be allowed throughout the year for particular species. This would afford them the opportunity to hunt all the animals issued in the quota at the time they want. In group discussions with the local communities, concern was expressed about the inclusion of baboons in the quota instead of buffaloes. The people state the baboons are not edible nor is there any foreign hunter interested in buying them.

Fig 5.1 **Community view on Hunting Quota**



The results show that the local communities get meagre benefits from wildlife resources around them in the form of meat, employment, income from the sale of craft work and wood carving to tourists, and selling of community hunting quota to safari hunting companies. They also have access to veld products such as thatching grass and wildlife fruits only in communities areas and not in protected areas around them.

About 70.5% of the respondents state that wildlife benefits (in the form of revenue) in the area mostly accrue to government while 32.5% think it accrues to safari hunters and tour operators. It has been difficult to obtain figures in terms of revenue that accrue to safari hunters, tour operators and lodge owners in East Ngamiland District from wildlife resources. However, it has been alleged in Sankuyo Village that a single elephant that a safari hunter buys at P 22, 000.00 from the community quota is sold at US$ 50,000.00 (P

225,000.00) to sport hunters from Europe. Table 5.2 illustrates revenue that government collected from the two protected areas in East Ngamiland District in 1996/97.

Table 5.2 **Revenue Collected by Government From Park Fees in 1996/97**

Protected Area	No of Tourists	Park Fees Collected
Chobe National Park	48, 481	P 3, 011, 705.00
Moremi Game Reserve	23, 504	P 2, 448, 316.00
Total	71, 985	P 5, 460, 021.00

Source: Department of Wildlife and National Parks Report 1996/97

The Ministry of Commerce and Industry Annual Report 1997/98 states that protected areas in the country in 1997/98 generated P8 million, Department of Lands and Land Boards generated P 1,705 million from land lease fees. Licenses, fees and charges brought in P 1,774 million, while subsistence hunting licenses for small game, single game and bird licenses contributed to P 5 million.

An observation that can be made about the revenue figures that accrue to government is that, it is mostly from northern Botswana which includes East Ngamiland District, mainly because this is the area in Botswana which at present has the largest number of wildlife species, lease land and tour operators.

From these results, the conclusion that can be made is that while the local communities are aware of possible benefits from wildlife resources, either through safari tour operation or tourism, these wildlife returns are mostly not realised at the household level. Most of the benefits directly go to either government, tour operators and safari hunters. These findings, therefore, support the hypothesis that current unsustainable wildlife resource utilisation and management in Ngamiland District is related to failure to ensure that local communities in wildlife areas obtain benefits from wildlife resources.

5.3 **Role of Local Communities in Wildlife Management**

The issue on the role local communities have in wildlife management is used to explain wildlife ownership and benefits which largely determine people's attitudes and

perceptions towards wildlife conservation. As a result, on the role local communities living in wildlife areas play in wildlife management, the people of East Ngamiland District do not have any major policy-making function regarding wildlife utilisation and management in the district. Table 5.3 shows 93.7% of the respondents who state that government never consults or involves them in making wildlife management laws, while only 6.3% claim they get involved. However, they state that government officials at the *kgotla* inform them of such wildlife laws or policies when they are just about to be implemented. An example given is that of the establishment of protected areas of Chobe National Park and Moremi Game Reserve and the extension of the park boundaries into their communal land two years ago. The results in Table 5.3 are backed by a statement by Barnes (1998) that much of the wildlife resource in Botswana is public property and control is vested with central government. This suggests that people in wildlife areas have no control or ownership over wildlife resources as already noted in Section 5.3.

Table 5.3 **Community Involvement in Formulating Wildlife Utilisation and Management Laws and Policies**

Response	Frequency	Percentage
Involved in Making laws/Policies	6	6.3
Not involved in making laws/Policies	89	93.7
Total	95	100.0

Source : Author's Fieldwork 1998

The fact that local communities have no role in policy formulation regarding wildlife management is further confirmed by failure of government wildlife policy to provide community empowerment in wildlife utilisation and management. Community empowerment in this case denotes training of local people in decision-making, provision of employment, provision of skills and education in wildlife conservation, ownership and control of wildlife resources. Table 5.4 shows 49.5% of the respondents who state that government wildlife policies have failed to provide community empowerment to them, while 33.7% state that community empowerment has been provided but it is insufficient or inadequate.

Table 5.4 **Community Empowerment by Government Wildlife Policies**

Village	High	Low	Average	None	No Idea	Total
Khwai	6(18.8%)	14(43.8%)	1(3.1%)	11(34.4%)	0(0.0%)	32(100.0%)
Mababe	0(0.0%)	3(9.7%)	0(0.0%)	27(87.1%)	1(3.2%)	31(100.0%)
Sankuyo	3(9.4%)	15(46.9%)	5(15.6%)	9(28.1%)	0(0.0%)	32(100.0%)
Total	9(9.5%)	32(33.7%)	6(6.3)	47(49.5%)	1(1.1%)	95(100.0%)

Source: Author's Fieldwork 1998

These results show a difference in responses between the villages of Khwai, Mababe and Sankuyo, in terms of community empowerment. This difference is due to the fact that in Sankuyo, as noted earlier, about sixty-six community members are employed in Crocodile Camp Safaris operating in the Sankuyo Wildlife Management Area. In Khwai and Mababe WMAs, there is no wildlife community project in operation to employ people, as result, there is no empowerment or role the two villages play in wildlife utilisation and management in their territories

Although a safari company employs some people in Sankuyo, indications are that members of the community are not empowered in relevant skills such as management, community wildlife monitoring, tour operating and safari hunting. As already discussed in Chapter Four, wildlife polices in Botswana are formulated without the participation and involvement of the local people. The people of East Ngamiland District, therefore, state that wildlife policies are imposed on them, resulting in the community viewing wildlife policies as government's intention to deny them access to wildlife resources. These findings, therefore, support the hypothesis that current wildlife resource utilisation and management in East Ngamiland District was related to failure to ensure that local communities have a role to play in wildlife management.

However, the local communities of East Ngamiland District show a great desire (drive) to actively participate in the wildlife resource management, both at household (72.6%) and at community level (74.7%), (Tables 5.5 and 5.6). The explanation given is that, in case of wildlife policy changes to involve the local communities in decision making, they

stand a better chance to obtain wildlife benefits. The other respective 27.4% and 25.3% state that wildlife protection must be the responsibility of DWNP only. The reason being that those local communities get little or nothing from wildlife resources. They also complain that they are not involved in the formulation of wildlife laws that affect them directly. As a result, they see no reason why they should participate in the conservation of a resource that is yielding no benefits to them.

Table 5.5 **Household Participation in Wildlife Management**

Responses	Frequency	Percentage
Participation is necessary	69	72.6
Not Necessary	26	27.4
Total	95	100.0

Source : Author's Fieldwork 1998

Table 5. 6 **Community Participation in Wildlife Management**

Responses	Frequency	Percentage
Participation is Necessary	71	74.7
Not Necessary	24	25.3
Total	95	100.0

Source : Author's Fieldwork 1998

They suggest that wildlife management needs to be a shared responsibility between resident communities in wildlife areas and the Department of Wildlife and National Parks (DWNP). A Village Development Committee member in Mababe states, "*thokomelo ya diphologolo e tshwanetse go tshwana le twanthso borokothi, re tshwanetse go ithakanela le MaGame*". Literally translated, this means "wildlife management must be like a combined effort between DWNP game scouts and the local people against crime or poaching". The explanation they give for a shared wildlife management is that they posses local knowledge of wildlife resource utilisation while DWNP is equipped with the latest technology of vehicles, guns and scientific knowledge in wildlife conservation.

5.4 Attitudes and Perceptions of the Local Communities

In this study, the attitudes and perceptions of the people of East Ngamiland District are assessed on the basis of variables, such as benefits derived from wildlife resources, role local communities have in wildlife management and ownership of wildlife resources. Other variables such as how people relate to Wildlife Management Areas (WMAs) and protected areas (game parks) the Department of Wildlife and National Parks, tourism, wildlife crop and livestock damage are also used to determine the people's attitudes and perceptions towards wildlife conservation.

Mordi (1991) and Perkins and Ringrose (1996) state that the attitudes and perceptions of the people in wildlife areas of Botswana are negative towards wildlife conservation. In East Ngamiland District, the attitudes and perceptions of the local people are predominately negative towards wildlife conservation. As already pointed out (see also Table 5.1) the majority of the people state that they derive little benefit from wildlife resources in the area. As a result, wildlife resources are perceived to be of little value to them. It has also been pointed out in Table 5.3, that 93.7% of the respondents indicate that they do not play any role in policy making regarding wildlife utilisation and management. The government is perceived to have usurped wildlife resource control and ownership from the local people. As a result, wildlife resources are mostly viewed as government property and not a communal resource, which they assume at the moment mostly benefits the government and tourists. Findings by Mwenya *et al* (1991) in Zimbabwe portray the idea that people's attitudes are largely based on the personal or community ownership they attach to wildlife resources. Mwenya *et al* assessed people's attitudes and perceptions on wildlife conservation on the issue of "who owns wildlife" and "who should manage it". Their findings indicate that people view wildlife resources as "theirs" because they realise the benefits of "owning" wildlife resources, and they understand wildlife management as a partnership between them and the government.

In Table 5.11, 81.1% of the people who ploughed in the last 1-3 years experienced crop damage mostly from hippos, elephants and zebra, while in Table 5.13, 37.9% of those who own livestock reported livestock either killed or injured by lions, hyenas, leopards

and jackals. Because of the livestock and crop damage by certain wildlife species, respondents regard such species as hippo and elephants a nuisance rather than an asset to them. More over, the elephant is reported to be destructive to the thatching grass and wild fruits (veld products) on which the people's livelihoods in the area are partially dependent. As indicated in Table 5.10, the protected areas of Moremi Game Reserve and Chobe National Park are regarded by 60.0% of the respondents to be in conflict with the socio-economic activities of the people (e.g. collection of veld products, firewood and hunting). The respondents state that they are denied access and benefits from resources in protected areas by the Department of Wildlife and National Parks (DWNP). These protected areas are, therefore, viewed negatively by people living around them. Furthermore, they regard the extension of these areas into communal areas as a government step to deny them the use of wildlife resources and veld products in the area. As already indicated in Chapter Four, the attitudes of the people towards the Department of Wildlife and National Parks (DWNP) are mostly negative, as they regard it as a body charged with the responsibility to deprive them of nature's bounty. At the time of this study, DWNP was constructing a wildlife officers' camp to accommodate over forty people at Mababe Gate (Chobe National Park). The construction of the camp was a cause of concern to the people in Mababe, Khwai and Sankuyo. They resented its construction, mainly because they feel they were not adequately informed about the project or because of the fear that the presence of more wildlife officers in the area will further deprive them benefits from wildlife resources in the area. This further reveals the people's negative attitudes towards DWNP and its activities in the area.

Table 5.7 shows that 71.6% of the respondents state they get no tourist benefits in the area (income, employment, improved infrastructure e.g. water supply and roads). Actually, these respondents state that tourism in the area is destructive in that tourist take pictures of their children and huts without permission, their vehicles make noise and some pass across their villages at high speeds. They also allege that tourists are more likely to be engaged in wildlife poaching. Only 28.4% of them state that they get benefits from tourism since tourists buy their craft work (e.g. baskets and wood carvings). Tourism, therefore, is viewed by the people as an economic activity that yields revenue to

the government who collects gate fees from game parks and private lodge owners and hoteliers in the area. This results suggest that the people's perceptions towards tourism largely remain negative since they allegedly derive little benefits from it.

Table 5.7: **Household Benefits From Tourism**

Responses	Frequency	Percentage
No Tourist Benefits	68	71.6
Benefits	27	28.4
Total	95	100.0

Source : Author's Fieldwork 1998

From the findings above, the conclusion can be drawn that the attitudes and perceptions of the people in East Ngamiland District are predominately negative towards wildlife conservation as already mentioned. However, despite such negative attitudes, the available evidence also suggests that some people in the area attach some value to wildlife as a valuable resource. This is demonstrated by a majority (88.4%) of the respondents as shown in Table 5.8, who state that it is important to have wildlife species in the grasslands and woodlands around their villages. The reasons they give are that wildlife species make the environment beautiful, yield income and encourage community projects in tourism (see Section 5.6). However, 11.6% of them state that it is not important since they get no benefits from wildlife resources in the area as the benefits accrue mostly to government and tour operators.

Table 5.8 **Importance of Wildlife Species in the Grasslands and Woodlands**

Response	Frequency	Percentage
It is important	84	88.4
Not important	11	11.6
Total	95	100.0

Source : Author's Fieldwork 1998

The findings indicate a positive development in people's attitudes and perceptions towards wildlife conservation that incorporates community tourist projects. This positive

trend is mainly due to the anticipated wildlife benefits they hope to derive if implementation of community tourist projects becomes successful in the area.

5.5 **Stakeholders and Land Use Conflicts**

As pointed out in the introduction to this study, conflicts over resources arise when several interest groups see or use differently resources in the same natural system or geographic location. The stakeholder analysis was used to identify stakeholders (or interest groups) and the areas of actual or potential conflict. The findings indicate that the major land use stakeholders can be conveniently be categorised into two groups: traditional and emerging stakeholders as shown in Figure 5.2 below. The traditional stakeholders include groups such as Basarwa, Bayei, Basubiya and Batawana. The emerging stakeholders include the different government ministries and departments, tourist private sector and wildlife conservation groups such as Khalahri Conservation Society, Okavango Peoples Wildlife Trust and Conservation International.

Figure 5.2 **Accountability Stakeholders in Sustainable Wildlife Management**

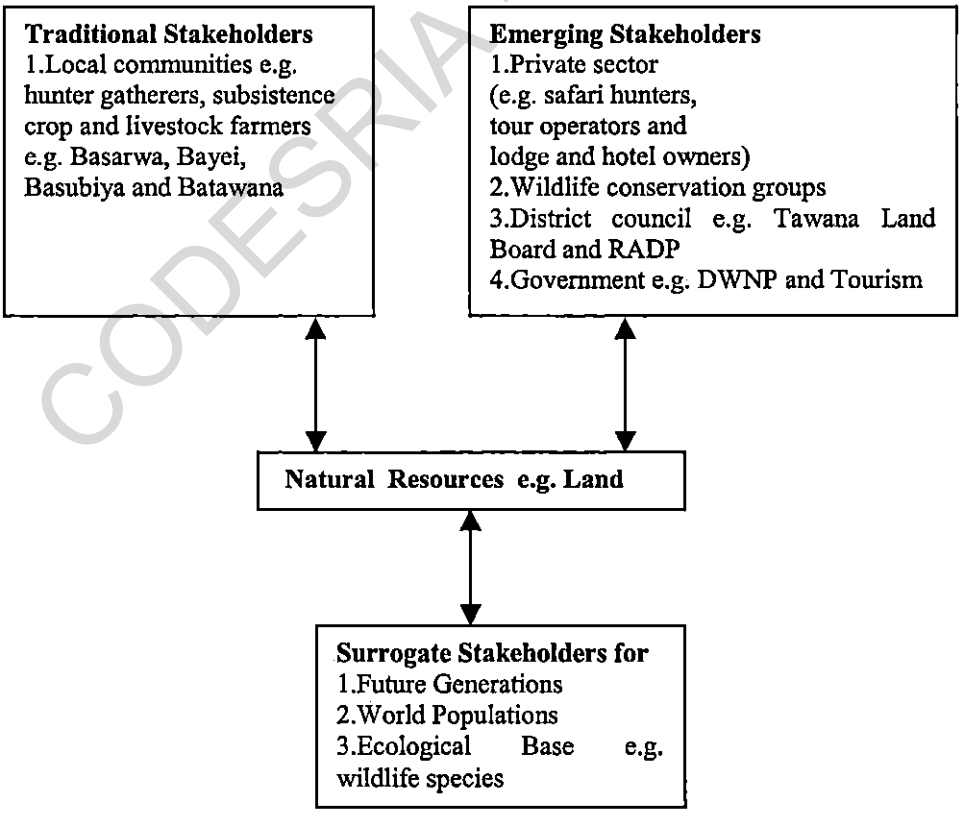


Table 5.9 below summarises the major stakeholders and their land use activities and conflicts in East Ngamiland District. The nature, extent and land use conflicts are discussed in detail from Section 5.5.2 to 5.5.7.

Table 5.9 **Main Stakeholders, Land Use Activities and Conflicts in East Ngamiland District**

Main Stakeholders	Land Use Activities	Land Use Conflicts
1. Local Communities		
-Basarwa e.g. Khwai and Mababe -Bantu-Speaking groups e.g. Bayei and Basubiya.	- collection of natural resources e.g. veld products, firewood, fishing e.t.c.	-conflict with Department of Wildlife and National Park (DWNP)'s wildlife conservation policies especially in protected areas.
	- subsistence hunting activities by local communities.	-conflict with DWNP due to hunting without a license, tracking shot and wounded animals in protected areas or hunting outside the hunting season is not allowed by DWNP.
	- expansion of crop and livestock farming in wildlife areas e.g. goats and donkeys at Khwai, Mababe and Sankuyo villages.	- competition for land between crop and livestock farming and wildlife tourist sector (eg. With DWNP, tour operators, lodge owners, tourists e.t.c).
-Batawana in Maun	- desire to control wildlife resources and Moremi Game Reserve (i.e. area is considered Batawana territory).	- conflict with government on the control and management of wildlife and tourism in the area.

2. Government of Botswana - Ministry of Commerce and Industry (MCI)		
# Department of Wildlife and National (DWNP)	- implementation of government wildlife conservation policies.	-conflict with socio-economic activities of the local people e.g. arable and livestock farming, hunting and gathering e.t.c.
# Department of Tourism	-promotion of government laws on tourism e.g. consumptive and non-consumptive tourism.	-conflict with local people and conservation groups e.g. influx of tourists into the Okavango Delta.
# Ministry of Agriculture	- implementation of agricultural policies e.g. crop and arable farming.	- conflicts with wildlife industry e.g. provision of seeds to farmers, agricultural demonstrators and veterinary officers taken as a way of agricultural expansion into wildlife areas.
	- erection of the veterinary fences e.g. the Buffalo Fence.	-competition of land between wildlife and livestock sector -fences detrimental to the ecological aspects of the area e.g. blocks wildlife migration routes and cause death of wildlife species.
The Remote Area Dweller Programme (RADP).	- provision of free livestock to Basarwa in the area e.g. goats and donkeys.	- conservation groups and DWNP again take it as livestock expansion in wildlife areas.
# Department of Lands	- implementation of government land policies in the area.	-land zonation into WMAs and CHAs conflicts with local people's traditional use of land
# The Tawana Land Board	- allocation and distribution of tribal land.	- allocation of crop fields and human settlements in wildlife

		areas seen as expansion of human socio-economic activities into wildlife areas by the wildlife and tourist sectors e.g. DWNP.
	- leasing of land to tour operators.	-local communities take it that their land was leased out without consultation and are now disadvantaged in lease benefits that accrue to Land Boards.
3. **Private Tourist Sector** -consumptive tourism e.g. by safari or commercial hunters.	- promotion of safari hunting activities in the area.	- safari hunting competes with subsistence hunting for wildlife resource benefits. - perceived detrimental to wildlife species by local people and conservation groups e.g. Okavango People Wildlife Trust.
-non-consumptive tourism e.g. photographic tourism.	-photographic tour operators promoting the industry especially around the delta.	-photographic areas compete with safari and subsistence hunting for wildlife species - conflict between safari and subsistence hunting with photographic activities e.g. gun shooting scares wildlife species. - tracking of shot and wounded animals into photographic areas not desirable to tour operators.
-Hotel and Tourism Industry e.g. lodges around the Okavango Delta.	- provision of hotel services and accommodation to tourists.	-construction of large scale tourist infrastructure down play community initiatives of small scale enterprises e.g. traditional

		village suggested by Sankuyo residents.
	-provision of game viewing services to tourists.	- settlement in wildlife areas conflict with tourist interest of keeping the area a wholly wilderness place.
- tourists	-involved in tourist activities e.g. game viewing e.t.c.	-local communities complain of tourists taking photographs of their huts and children without permission. - local communities complain of noise pollution from tourist vehicles, tracks of vehicles destroying countryside.
4. **Wildlife Conservation Non-Governmental Organisations** -Okavango People Wildlife Trust (OPWT), Conservation International (CI), Khalahari Conservation Society (KCS).	- promotion of conservation of the Okavango Detla and the immediate ecosystem e.g. wildlife resources.	- conflict with Ministry of Agriculture over erection veterinary fences e.g. fences blocks wildlife migration routes, killing wildlife e.t.c. -conflict with tourist sector e.g. influx of tourist into the delta.
5. **International Community** -Botswana and Namibia	- use of the Okavango River waters.	- conflict between governments over the use of the rivers waters.
- international conservation groups e.g. Greenpearce.	- Okavango Delta and its wildlife habitat are considered a world heritage for research, tourism e.t.c	- conflict with government on veterinary fence issues.

Source : Author's Fieldwork 1998

Major land use conflicts in East Ngamiland District are mostly between the following:

5.5.1 **Protected Areas Management and Socio-Economic Activities of Local People**

The two protected areas of Moremi Game Reserve and Chobe National Park in Ngamiland District conflict with the socio-economic activities (e.g. subsistence hunting, gathering, crop production and livestock farming) of the people of East Ngamiland District. Table 5.10 shows a majority of 60.0% of the people who acknowledge that the Chobe National Park and Moremi Game Reserve conflict with the socio-economic activities of the area while 40.0% of them state that there is no conflict.

Table 5.10 **Conflict of Protected Areas with Socio-Economic Activities of the Local People**

Village	Conflict	No Conflict	Total
Khwai	24 (75.0%)	8 (25.0%)	32 (100.0%)
Mababe	21 (67.7)	10 (32.3%)	31 (100.0%)
Sankuyo	12 (37.5%)	20 (62.5%)	32 (100.0%)
Total	57 (60.0%)	38 (40.0%)	95 (100.0%)

Source : Author's Fieldwork 1998

The results indicate a disparity in responses between the three villages of Khwai, Mababe and Sankuyo. The main reason for this disparity is that in Sankuyo, the local community is beginning to get some wildlife benefits from the community project recently introduced; as a result, the people are beginning to adopt positive perceptions and attitudes towards protected areas. In Khwai and Mababe where such community projects do not exist, protected areas are still viewed negatively by the people.

To explain the nature of the conflict, the two protected areas were established in the hunting and gathering lands of local communities without consultation. This approach resulted in the forceful removal of the people to give way to wildlife conservation. The respondents further mentioned that they are not allowed to collect firewood, wild fruits, roots and thatching grass in protected areas. This, therefore, causes mistrust and conflicts between DWNP and the resident communities in wildlife areas. The local people are also

not impressed by the fact that DWNP expects them to pay gate fees whenever they want to enter or pass through the park to neighbouring villages. Access is denied to them into their former ancestral lands since the gate fees are not affordable.

The recent extension of Moremi Game Reserve and Chobe National Park boundaries into communal areas also causes conflict with local communities living around these protected areas. The local people expressed the concern that these extensions were made without their consultation hence the new protected area boundaries deprive them of veld products, which are now located inside the protected areas. Regarding the possible wildlife community projects, respondents state that the extension of protected areas boundaries into communal areas will deprive them of possible future tourist campsites. This is so because water holes that used to be outside the parks and located in their communal land are now located within the protected areas.

5.5.2 **Arable Farming and Wildlife Management**

There is also conflict between crop production and wildlife management in East-Ngamiland District (i.e. between subsistence crop farmers and DWNP). Table 5.11 illustrates that the majority (81.1%) of the respondents who ploughed in the last 1-3 years experienced crop damage from wild animals. The other 14.7% and 4.2% of the respondents who did not experience crop damage are those who did not plough or have since stopped ploughing due to anticipated fear of wildlife crop damage. In Khwai and Sankuyo bigger crop fields, which used to be on the western side of the village, have been abandoned due to wildlife destruction thus restricting crop cultivation to small gardens behind huts in the compounds.

Table 5.11 **Farmers who experienced wildlife Crop damage in last 1-3years**

Responses	Frequency	Percentage
Ploughed	77	81.1
Did not Plough	4	4.2
Stopped Ploughing	14	14.7
Total	95	100.0

Source : Author's Fieldwork 1998

Fig.5.3 illustrates that the elephant and hippo are a problem at Khwai, elephant and zebra at Mababe and elephant at Sankuyo in terms of crop destruction in area. The local communities in East Ngamiland District regard the elephant as a nuisance since it does not only destroy their crops but also the veld products like wild fruits of which their livelihoods are also partially based. Tamuhla's (1997) findings in the Chobe District show almost similar results in that conflict between crop farmers and wildlife management is experienced due to crop damage by wildlife from protected areas.

Fig.5.3 **Wildlife species responsible for crop damage**

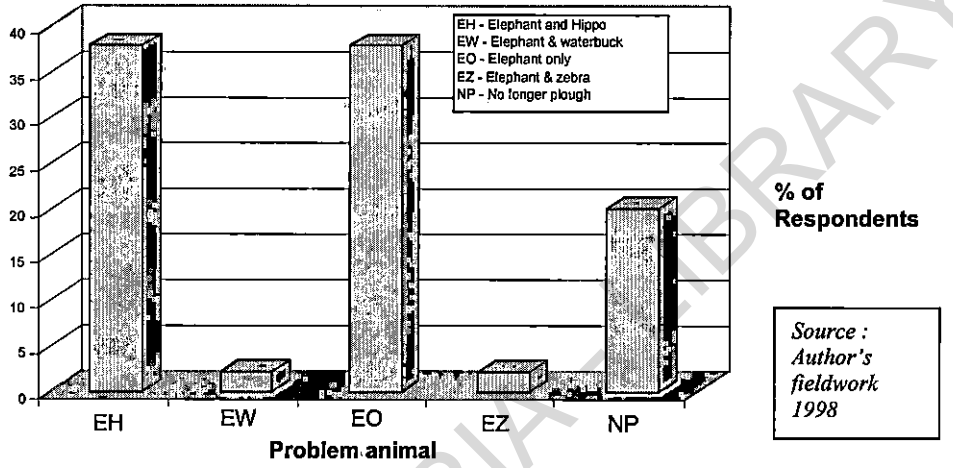


Table 5.12 shows that amongst the respondents who experienced crop damage from wildlife species, 70.5% of them reported the matter to the DWNP, while 9.5% failed to do so. The explanation given for failing to report crop damage is that, DWNP takes long to respond to the problem and the compensation that is usually provided is small. However, of the respondents who have reported crop damage to DWNP, a small percentage has been compensated and are happy (4.2%). About 24.2% have been compensated but are not happy while 44.2% state that they have never been compensated.

The main reason given for dissatisfaction with compensation due to crop damage is that compensation money comes late and it is normally very small. Those who never get compensated say that the area is for wildlife use not for crop production (e.g. in Khwai),

while some do not even know why compensation has not been paid. According to the Department of Wildlife Annual Report for 1996/97, government compensation rate for the period was only P 100.00 for crop damage for a maximum of one hectare. Most of the crop fields in the area are less than one hectare, this could be the reason why some farmers did not receive the compensation. Another reason could be the fact that there were limited funds budgeted by government for compensation (see Section 5.5.4).

Table 5.12 **Percentage of Respondents who Reported Crop Damage**

Responses	Frequency	Percentage
Reported	67	70.5
Never Reported	9	9.5
Never /Stopped Ploughing	19	20.0
Total	95	100.0

Source : Author's Fieldwork 1998

In the group discussions, the local communities suggest several ways that can help in reducing the problems related to crop damage by wildlife species in their area. These include having electric fences around their crop farms, (view common at Mababe and Sankuyo), increasing compensation money, stop crop farming since it cannot operate in one place with wildlife (view common at Khwai), and the reduction of elephant populations and the killing of problem animals.

5.5.3 **Livestock Farming and Wildlife Management**

Subsistence livestock farmers and the wildlife management (e.g. DWNP) also conflict with each other over the use of land and due to livestock being killed or injured by wildlife in East Ngamiland District. However, livestock ownership in the area is generally low, only 37.9% of the respondents (Table 5.13) own livestock, which comprises mostly goats and some donkeys (phenomena mostly found in Mababe and Sankuyo).

The responses show a difference in terms of livestock ownership between the three villages of Khwai, Mababe and Sankuyo. This difference might be because the Basarwa

community of Khwai and Mababe do not seriously appreciate livestock farming when compared with the Bayei and the Basubiya of Sankuyo. The Basarwa are traditionally not livestock farmers, the current government livestock policies are imposed on them in the hope of integrating them into the mainstream Tswana society. The other reason may be due to the fact that the Basarwa of Khwai are not allowed officially to own livestock in their present settlement, which government considers to be a wildlife tourist area.

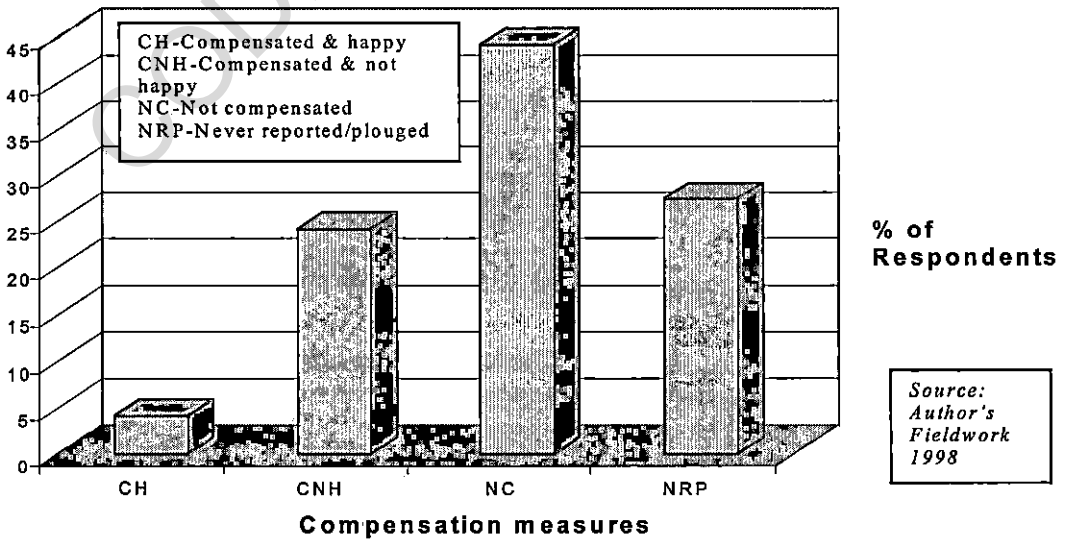
Table 5.13 **Livestock Ownership in East Ngamiland District**

Village	Own Livestock	No Livestock	Total
Khwai	3(9.4%)	29(90.6%)	32(100.0%)
Mababe	15(48.4%)	16(51.6%)	31(100.0%)
Sankuyo	18(56.2%)	14(43.8%)	32(100.0%)
Total	36(37.9%)	59(62.1%)	95(100.0%)

Source : Author's Fieldwork 1998

Fig.5.4 illustrates people's opinions regarding compensation paid to them by DWNP after livestock was killed or injured by wild animals in the last 1-3 years. About 24.2% of the respondents state that no compensation was paid and 6.3% state that it was paid but they were not happy. The other 69.5% are those who either do not have livestock or did not report stock damage to the Department of Wildlife and National Parks.

Fig.5.4 **Compensation for stock killed/injured by wild animals in last 1-3 years**



The explanation given for failure to report livestock killed or injured by wild animals to DWNP is that people are generally not happy with the government compensation. They also state that if the compensation happens to be issued to them, it is too little and mostly given very late. Respondents also mention the strenuous process of paper work, which they have to go through in order to get compensation and the general failure by DWNP to attend to the problem on time. All these factors make most of them not to report wildlife damage to DWNP. Several reasons explain why compensation is at times not paid out to affected farmers (including crop farmers). These are limited funds as a result of a small government budget on compensation, the fact that some wildlife animals are not included in the list of dangerous animals and the small size of one's crop field as already noted. According to the Department of Wildlife and National Parks Report of 1996/97, from 1995 –97, about P1.8 million compensation claims were left unpaid because of the limited government budget which stood at P 816,000.00 for 1995/96 and P 936,000.00 for 1996/97. Compensation is also paid only for damage caused by dangerous animals as defined in the Wildlife Conservation and National Act of 1992 – Schedule 9, namely lion, leopard, elephant, buffalo, rhino, hippopotamus and crocodile. Table 5.14 below illustrates government compensation rates for 1996/97. This explains why farmers whose livestock was killed by jackals and hyenas were not paid any compensation.

Table 5.14 **Government compensation Rates for 1996/97**

Domestic Animal Killed/Injured	Compensation Rate
Bull, Ox or Tolly	P 520.00
Cow, Heifer or Mule	P 400.00
Calf or Foal	P 200.00
Horse	P 800.00
Donkey	P 70.00
Goat or sheep	P 100.00

Source : Department of Wildlife and National Parks Report 1996/97

As a solution to conflict between livestock production and wildlife management, respondents at group discussions suggested several options. These include high compensation fees, killing of problem animals and trophies handed over to the affected

farmer, and stopping of livestock production in the area in preference to wildlife conservation and tourism.

5.5.4 **Veterinary Fences and Wildlife Industry**

Perkins and Ringrose (1996) report conflict between the wildlife industry and the livestock sector in Botswana mainly because of government agricultural policies which promotes the erection of livestock veterinary fences in wildlife areas. In East Ngamiland District, the Buffalo Fence (Figure 5.5) which has been erected on the south-eastern periphery of the Okavango Delta conflicts not only with the wildlife industry but with the socio-economic activities of the local people as well. Table 5.15 shows 68.4% of the people who state that the detrimental effects of veterinary fences in the area include be the blocking of wildlife migratory routes, and that some species such as giraffe and buffalo normally get trapped by the fence resulting in some dying. About 2.1% of the respondents state that the fence discourages tourism, while 29.5% state it has impacts on their socio-economic activities (e.g. they are not allowed to cross with meat to sell in Maun).

Table 5.15 **Specific Negative Effects of Veterinary fences**

Effects	Frequency	Percentage
Blocks wildlife Migratory routes	65	68.4
Discourage Tourism	2	2.1
Impacts on Socio-Economic Life	28	29.5
Total	95	100.0

Source : Author's Fieldwork 1998

The local communities suggest that the detrimental effects of veterinary fences to wildlife species can be reduced when certain measures are taken. These are, removal of the fence (65.0%), the need to re-examine the idea of fences and only 10.5% of the respondents state that the fence is appropriate and must never be removed (Fig.5.6). The reasons given in support of the existence of the fence is that livestock, especially cattle, can penetrate into the delta and compete with wildlife species for grazing.

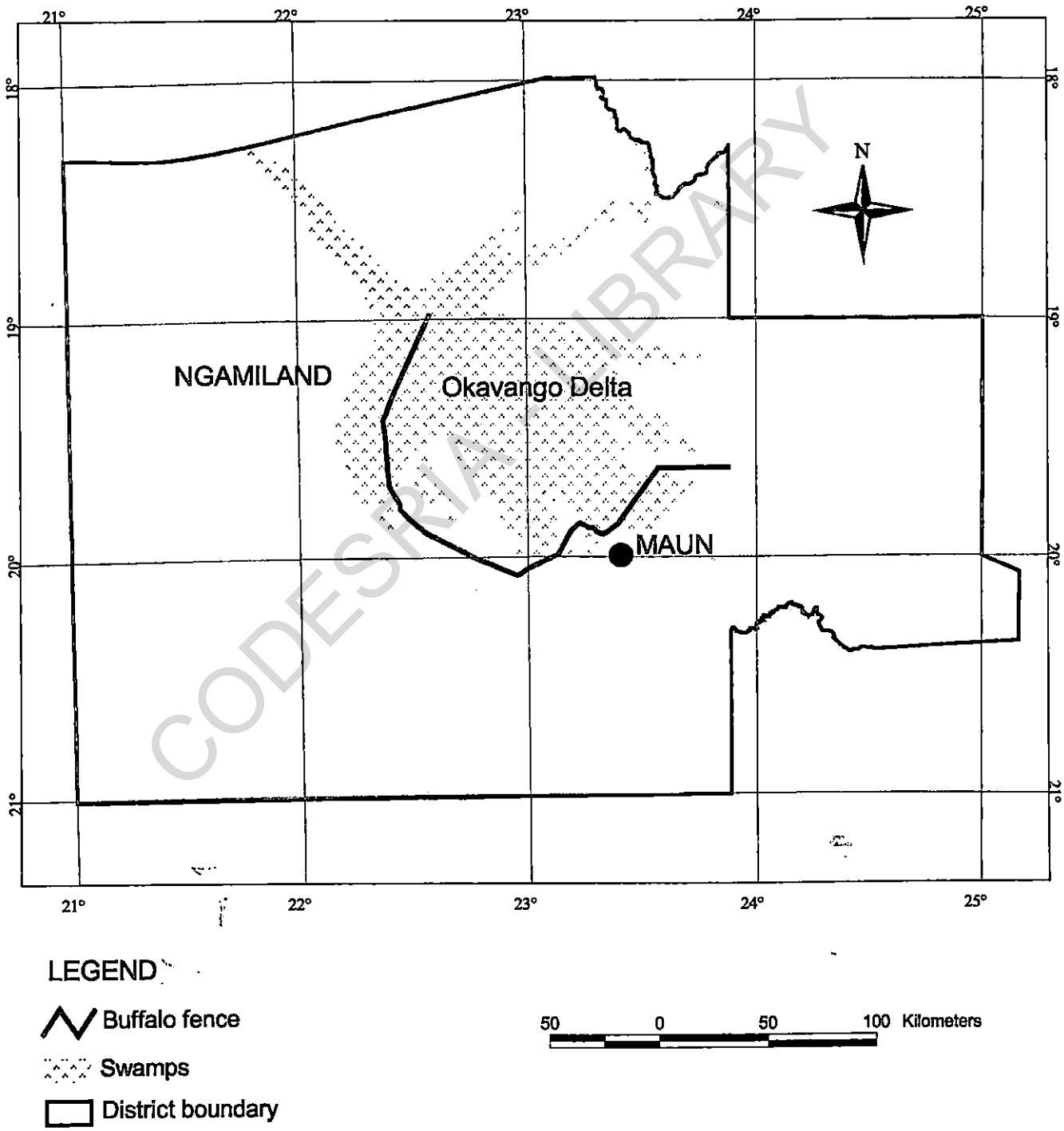
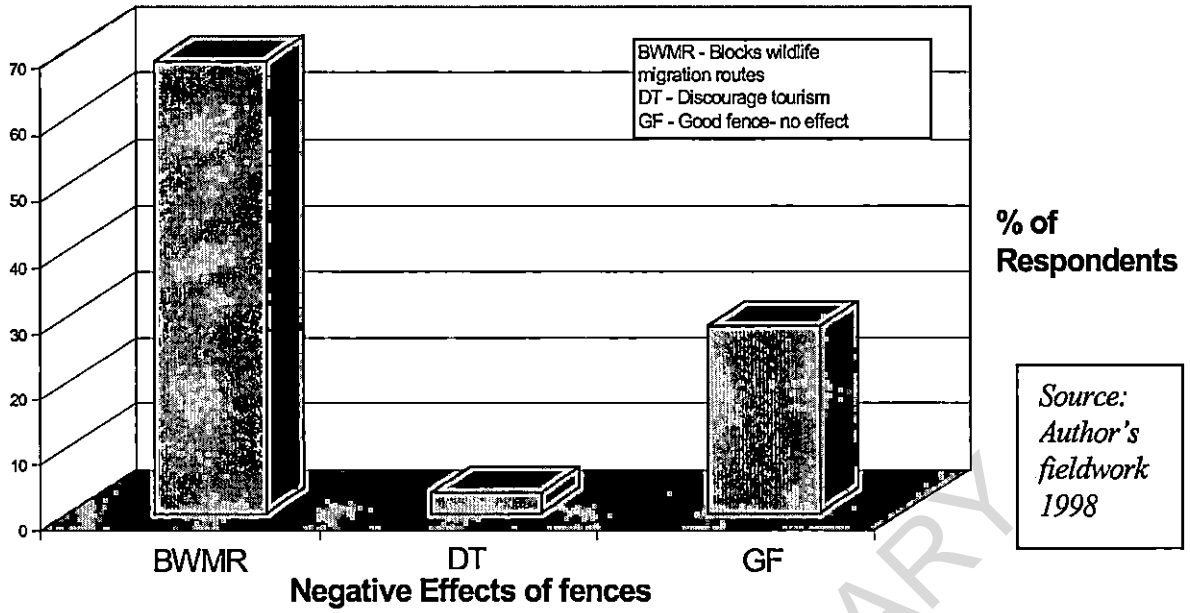


FIGURE 5.5: MAP OF THE BUFFALO FENCE IN NGAMILAND DISTRICT

Fig.5.6 **Solution to Negative effects of Veterinary fence**



Information from key informants in the wildlife industry confirms the detrimental effects of the veterinary fences on wildlife populations (through death) and the blocking of migration routes in the area. However, they state that veterinary fences must be seen in their individual context, even though all fences that transect wildlife areas are extremely negative to the wildlife habitats. They state that the Southern Buffalo Fence is serving a good purpose of keeping livestock out of the delta, even though some sections of it continue to take a toll of the constantly declining wildlife species. The DWNP office in Maun acknowledges that it serves a good purpose of restraining agricultural endeavors in wildlife areas, in full capacity since they act as a barrier to borehole drilling towards the Okavango Delta.

However, both the local communities and key informants in the wildlife industry question the necessity and continued existence of the Northern Buffalo Fence (SBF) and some parts of the Southern Buffalo Fence. The OPWT state that the NBF not only cuts off the larger migratory patterns of zebras, wildebeest or elephants, but also fragments and restricts the movements of localised populations whose territories it bisects, wildlife species mostly affected are eland, roan, sable, tsessebe and giraffe. Albertson (1998) reported deaths of wildlife species along the NBF in 1998 as shown in Table 5.16.

Further effects of the NBF include entangling and trapping species, and facilitating illegal poaching along the fences.

Table 5.16 **Wildlife Species which died along Northern Buffalo Fence in 1998**

Species	Number	Period
Giraffe	5	January-June 1998
Giraffe	2	July-September 1998
Buffalo	2	September 1998
Elephant (cow and calf)	2	September 1998
Roan	Unknown	

Source : Albertson 1998

The key informants in the wildlife industry think solutions to the detrimental effects of veterinary fences must be determined by conducting a comprehensive Environmental Impact Assessment (EIA) of existing veterinary fences. They also suggest an effective livestock fencing policy, which stipulates that EIAs must be conducted before erecting new fences. The other alternative they suggest is that of examining each fence on merit (that is, if the disadvantages in terms of greater perspective of long-term ecological and socio-economic sustainability outweighs any advantages, then remove the fences).

5.5.5. **Human Settlement and the Wildlife Industry**

The wildlife industry and the expansion of human settlements also conflict with each other in East Ngamiland District. This conflict is demonstrated by the current hostility between the Khwai community settlement on one hand, and the government wildlife management policies and the tourist industry on the other.

The Government of Botswana and the tourist industry view the present Khwai settlement site to be a wildlife and tourist area. The area is adjacent to Moremi Game Reserve of which the Khwai River with a permanent water supply forms the boundary of the two land use. The area thus attracts a lot of wildlife and tourists. As a result, the people of Khwai have been advised by government to re-locate their settlement elsewhere to give room for tourism development and wildlife conservation. Interviews with DWNP officers

at Moremi Game Reserve North Gate support the re-location of Khwai settlement since the village does not only present wildlife management problems, but also have residents' lives endangered by wild animals. DWNP officers state that the fact that local people do poach wildlife in the area and have domestic animals such as dogs makes work difficult for them.

This conflict has made government to implement draconian measures designed to indirectly force or intimidate the people of Khwai to consider re-location. The measures include the suspension of provision of social services and infrastructure to Khwai Settlement. As a result, Khwai does not have a clinic, school, water supply, shops, good roads and land allocation. This measure by the government increases the hostility and conflict between the local community and wildlife management in the area.

The conflict between the tourist industry and Khwai settlement is confirmed by the local lodge owners of Tsaro Game Lodge and Khwai River Game Lodge, who state that the present settlement site destroys the wilderness picture their tourist clients pay to see. Lodge owners also mention the presence of domestic animals such as donkeys, dogs and chickens, the distortion of wildlife sounds by domestic animals and too much litter in the settlement which they think is destructive to tourism. They also dislike the issue of killing wild animals that cause crop damage or kill livestock in the village. Lodge owners describe killing of wild animals as barbaric and against the norms of wildlife conservation. They also feel killing animals puts the tourist business at a disadvantage.

A total of fifteen European tourists who were interviewed at North Gate (Moremi Game Reserve) showed displeasure of not only the present location of Khwai settlement but the expansion of other settlements in the Okavango Delta area. The tourists stated that they were presented with wrong information abroad that the area was a complete wilderness without human settlement. They confirmed that the settlements to some extent destroy the wilderness picture they would love to enjoy. For example, one tourist mentioned that he did not like a situation where he saw a donkey walking side by side with a waterbuck at Khwai village. On the issue of re-locating settlements away from the delta, the tourist

A woman from Khwai Village drawing water from Khwai River. Government has since suspendend provision of social services such as water to the village in order to force residents to consider re-location elsewhere. Photograph: J.E. Mbaiwa

Thatching grass: Most of it is believed to be found in Moremi Game Reserve and Chobe National Park. Thatching grass is important to local communities for thatching huts and for sale to lodges around the Okavango Delta. The local communities are denied access and benefits from these areas. Photograph : J.E. Mbaiwa

stated that it would be a good idea to re-locate them if they have not been in the place for a long time (i.e. less than 25 years).

The people of Khwai for their part are most strongly opposed to the idea of re-location. Table 5.17 shows 85.7% of them oppose the idea of re-location. Only 2.9% of the respondents are happy with the idea, while 11.4% are indifferent.

Table 5.17 **Views of the Khwai Community about the Re-location of the Settlement**

Response	Frequency	Percentage
Not happy with Re-location	30	85.7
Happy with Re-location	1	2.9
Indifferent	4	11.4
Total	35	100.0

Source: University of Botswana Wildlife Conservation Society, 1995

The explanation given against re-location is that residents have been moved several times before from lands which they believe is theirs. In some instances, their huts and crops were burnt down while they were loaded by force into trucks to give way for the creation of the Moremi Game Reserve. The villagers also state that their socio-economic livelihoods depend greatly on the natural resources such as wildlife and veld products found in the area. Therefore, re-location to the government suggested areas might deny them the advantage they currently enjoy. A Village Development Committee member at Khwai cried, "*fa e le gore ba tla tla ka ditlhobolo, ba tla re hula fela ba re bolaya, gare batle go fuduga*". Literally translated, this means "if they will come with guns, they will just have to shoot and kill us because we won't move and re-settle elsewhere". The above findings indicate that conflict amongst land use activities in East Ngamiland District is very common.

5.5.6 **Wildlife Disease and Livestock - The Ox-pecker and Donkey Problem**

There are no serious wildlife-livestock diseases in the area, except for the ox-pecker-donkey problem observed at Mababe and Sankuyo. The ox-pecker is considered a threat to the survival of donkeys in the area, in that, it creates a wound on a donkey and then

starts sucking blood and literally eating the flesh from it. This makes the wound to increase and finally lead to the donkey's death. In Mababe, one donkey was traced to have died two weeks after the attack by a band of ox-peckers.

The ox-pecker problem is said to be common in the dry months, that is, starting from around May to November when most of the game is concentrated near water sources in the protected areas away from communal areas. The Veterinary Officer of Department of Animal Health and Production in Maun confirmed this ox-pecker-donkey problem, and stated that no measures have yet been taken to solve the problem.

5.6 **Performance of community-based and controlled Tourist Projects**

On how wildlife community-based and controlled wildlife projects are performing, information from group discussions with community members and project leaders at Sankuyo village as well as other interviews with key informants in the wildlife industry indicate that they are performing badly. Table 5.18 illustrates some of the major problems, which affect the community projects resulting in poor performance. The Table also illustrates some of the possible solutions to the problems.

Table 5.18 **Implementation Problems of Community Projects and Possible Solutions**

Problems	**Possible Solutions**
-CBNRM still a new policy and lacks local understanding irrespective of many workshops -projects very elaborate and complicated for the target groups to manage i.e. boards in place lacks managerial skills e.g. secretaries cannot take minutes, lack of knowledge on how to re-invest money in community accounts, failure by most local people (including some board members) to interpret different sections of their constitution e.t.c.	-need for workshops and seminars to enhance community understanding -need for community training in managerial skills.
-too much focus on high-income tourist lodges type operators requiring high loads of organisation and management thus have too much outside influence.	-help communities set up small, manageable realistic operations that require little capital outlay and are able to use existing skills

	-work with communities as advisors not dictators and help them market their products to potential clients national and internationally.
-not enough is being done to boost the resources on which such projects rely e.g. addressing habitat loss and fragmentation	-local schools and adult education must provide ecological lessons
-too much conflict of interest e.g. local influential people like politicians manipulate the running of projects	-seminars and workshops vital to sensitise people and make them participate
-local skills and participation of elders is neglected	-need for involving old people in decision making and implementation of projects.
- conflict in management of community wildlife projects due to differences in ethnic background. Management committees are voted in and out without valuable reasons e.g. Bayei and Basubiya at Sankuyo.	-inclusion of all the different ethnic groups in the management committees, i.e. constitution must stipulate the board management procedures.
- lack of suitable wildlife conservation NGOs in Ngamiland District to facilitate the implementation of community-based wildlife projects.	- capacity enhancement by government to wildlife conservation NGOs and support in getting direct links with donor agencies.
- lack of community empowerment in wildlife management and migration of young people to towns(e.g.Maun) for better employment and educational activities.	- government wildlife policy need to be directed to empower the local communities and provide necessary social services such as schooling and training for rural development.

Source : Author's Fieldwork 1998

Tamuhla (1997) states that the Chobe Enclave community project is based on the experience from elsewhere, and that the approach has been based on trial and error. The Sankuyo community project is also adopting a practice similar to that of the Chobe Enclave in that, participation in the project includes many foreign players, donor agencies, as well as people in government. Too much outside influence in community

project is making local communities to become divorced from projects that concern their lives. While the community project at Sankuyo is generating revenue from the community quota through the sale of elephants to Crocodile Camp safaris (see Section 5.2), the people generally lack ideas about how to reinvest the money they earn into other viable projects. At the time of this study, the project had in its two bank accounts in Maun, over half a million pula. An observation made during interviews with project leaders is that they generally lack entrepreneurial skills on how money can be profitably invested.

On the issue of viable and appropriate community projects in East Ngamiland District, information from local people through group discussion indicates that it is possible to have them. They suggest projects such as curio gift shops, campsites, community tour operation, and cultural villages, which would provide traditional dishes, accommodation, music and dance (cultural tourism). The people also suggest craftwork, walking and boat (*mekoro*) safaris as some of the activities that can be conducted in the area using local skills. Key informants in the wildlife industry confirm that viable community projects in the area can include walking safaris done by the local community, cultural tourism, and provision of community escort guides. They suggest non-consumptive tourist projects such as photographic tourism and related tourist spin-off projects like craft industry and bakery. Community projects in East Ngamiland District can also be viable because of there is a strong traditional institutions in the area. An example is that, in all the three villages of Khwai, Mababe and Sankuyo, there is a strong traditional institution organised through the *kgotla* and the ward system to enable the effective implementation of community-based projects. The villages also have strong village development committees, which have a great deal of influence and experience in community affairs.

5.7 **Integrated Wildlife Management in East Ngamiland District**

The integration of wildlife conservation and other economic development sectors in East Ngamiland District is almost non-existent. Socio-economic development policies and programmes in the area are being implemented independently of each other. This approach to economic development has impacts on wildlife populations in the area (See

Chapter Four). Although attempts have been made by government to address environmental issues in the country through the establishment of the National Conservation Strategy (NCS), wildlife resource integration into the overall policy management framework is largely marginalised or ignored. This is demonstrated by the fact that the NCS seeks to address mainly five fundamental environmental challenges considered to be of national concern. These are pressure on water resources, degradation of pasture (livestock) rangelands, depletion of wood resources, overuse of veld products and pollution (Government of Botswana Paper No. 1 of 1990). This approach by the NCS in addressing environmental issues has resulted in failure to make attempts by government to integrate wildlife utilisation and management into the country's economic plan. As Perkins (1996:513) has put it, "it remains pervasive, yet wholly incorrect" to state that the NCS has power to act in a meaningful way and influence government policy especially with regard to wildlife conservation.

Further more, the NCS, as discussed in Section 4.4.7, is made weak by failure to have a legal framework by which it can co-ordinate the five environmental challenges it was established to address. Natural resource management is, therefore, the responsibility of the various government ministries and departments. For the NCS to function, it must rely on the sectorial Acts and policies within the government ministries and departments. This sectorial nature of land use policies causes conflicts in East Ngamiland District during implementation, of which the results are largely threatening wildlife survival in the area. An example is that, the Tawana Land Board allocates crop fields while the Ministry of Agriculture provides free seeds and agricultural demonstrators to farmers in the area. Also, the Basarwa in the area are provided with free donkeys and goats as well as veterinary assistants and free vaccination for their livestock. All these agricultural measures are implemented without much consideration of wildlife conservation due to lack of a co-ordinating wildlife policy.

Despite the important role of Environmental Impact Assessment (EIA) in sustainable development, the NCS in all its nine years of existence, has just recently finished formulating EIA legislation which is not yet approved by parliament. While, EIAs have

been voluntarily carried out in Botswana, there is no legal policy or Act of parliament which makes it mandatory for EIAs to be carried out in any economic development project. This has resulted in veterinary fences being erected in rich wildlife areas like Ngamiland District by the Ministry of Agriculture without any environmental impact assessment. As noted earlier in section 5.5.4, veterinary fences tend to have tremendous impact on wildlife migratory routes and livestock populations. This is evidence of lack of integration between livestock production and wildlife management.

The Department of Wildlife and National Park's wildlife utilisation and management policies are silent on the issue of integration, the same applies to polices in other ministries and government departments. Although, the Wildlife Conservation and National Parks Act of 1992 has consolidated the laws relating to wildlife conservation and management in Botswana, it has not addressed the question of how wildlife utilisation and management must relate to other sectors of the economy. In all its sections, there is nowhere the Wildlife Conservation and National Parks Act require the conduct of EIA in economic activities that are implemented in National Parks, Game Reserves, Wildlife Management Areas and Controlled Hunting Areas. The Act gives the Minister, the discretion to decide and make assessment of activities to be carried out in wildlife areas. This, therefore, makes it difficult to integrate activities in wildlife utilisation with other human socio-economic activities. An example is that the management of protected areas of Moremi Game Reserve and Chobe National Park is not co-ordinated with the management of the surrounding community lands. This makes these protected areas to remain conservation islands instead of a large ecosystem that includes local communities. Wildlife management is, therefore, not done within the cultural and economic context of the people of East Ngamiland District, who continue view game parks and reserves as islands for tourist where local people are denied access to their former hunting and gathering lands.

Another example is that the booming wildlife tourist industry in East Ngamiland District ignores community development. Instead, local communities like those of Khwai Village, are viewed in tourist circles as a wildlife management problem. This is another aspect

that encourages land use conflicts in the area, because the various land use activities are not prioritised or co-ordinated.

The Botswana Government's efforts of zoning the Ngamiland District into Wildlife Management Areas and Controlled Hunting Areas, although aimed at promoting wildlife conservation, mostly create more problems for wildlife management. This is because the zoning did not take into consideration other socio-economic activities in the area nor was any Environmental Impact Assessment or Social Impact Assessment (SIA) conducted. The consequences as we have noted been the aggravation of the incidence of land use conflicts, especially between wildlife management and the hunting and gathering activities in East Ngamiland District. The local people complain bitterly that their former hunting and gathering lands have been taken away for wildlife protection while they are driven to drier empty places.

Key informants of the wildlife industry in East Ngamiland District appear to agree with each other on the possibility of integrated wildlife management in the area, if it is associated with proper land use planning in the district. For example, respondents from the OPWT state that an integrated wildlife management in the area can be possible when there is a return to the more traditional management methods and values of land use. An example given is that of traditional pastoralism, that is more compatible with free-ranging wildlife population as opposed to fenced commercial ranches.

The DWNP in Maun is of the view that the traditional approach of integrating wildlife management with agricultural production was possible in pre-colonial Botswana because populations of both livestock and human beings in the area were small. At present, however, the populations have gone up, making it impossible for wildlife management and agricultural production to be done in the same area. Nevertheless, DWNP acknowledges that integration is needed and is possible if sectors of the economy such as agriculture are given the least priority in East Ngamiland District.

5.8 Local Community Perceptions on Integrated Wildlife Management

Information from local communities in East Ngamiland District indicates that the possibility of integrating wildlife management with other sectors of the economy in the area exists. The local people say that it is possible to have agricultural production, tourism and wildlife conservation being practised in the same place provided proper planning is done. The results in Table 5.19 show 41.1% of the respondents think that it is possible to have tourism, wildlife conservation and agricultural production being practised in one place while, 58.0% think it is not possible to do so especially when livestock involves cattle. Respondents note that if these activities are combined without proper planning, this can promote wildlife-agricultural conflict since livestock especially cattle, cannot easily co-exist with wildlife due to predation the spread of diseases and competition for grazing.

Table 5.19 **Respondents Views on Agricultural Production, Tourism and Wildlife Conservation and Co-existence**

Responses	Frequency	Percentage
It is Possible	39	41.1
It is not Possible	56	58.0
Total	95	100.0

Source : Author's Fieldwork 1998

Like other Batswana groups in the country, a fairly small number of the people in East Ngamiland District have a desire to own livestock, especially cattle. Table 5.20 shows 52.2% of the respondents who have a desire to own livestock, but acknowledge that livestock production, particularly cattle, is not a viable activity in the area. Most importantly is that 47.4% of the respondents state that livestock production is not at all possible or viable in the area due to wildlife predation. The general feeling amongst local communities in East Ngamiland District is that wildlife community tourist projects should be established in the area as opposed to livestock farming.

Table 5.20 **Livestock Production in East Ngamiland District**

Responses	Frequency	Percentage
Must be Allowed	50	52.6
Must not be Allowed	45	47.4
Total	95	100.0

Source : Author's Fieldwork 1998

In group discussions, respondents noted that land in Ngamiland can be sub-divided to accommodate the various land uses such as crop production, livestock farming and wildlife tourism. They acknowledge that land in the area is suitable for wildlife conservation and tourism, hence the need to prioritise the land among various competing activities. Bond's (1995) findings in Zimbabwe indicate that an integration of wildlife management with other socio-economic activities is possible when wildlife net benefits are made to exceed net benefits from other sectors of the economy. The conditions as suggested by household respondents in East Ngamiland District indicate that it is possible for net wildlife benefits to exceed other economic benefits in the district.

In summary, findings in this chapter indicate that local communities in wildlife areas get little or no wildlife benefits partly because they have no control or ownership of the wildlife resources in these areas. The local people also have no role in wildlife policy making which mostly is centralised by the state government. This explains why the attitudes and perceptions of the local communities towards wildlife conservation and tourism remain predominately negative. Land use conflicts in East Ngamiland District are also experienced amongst various stakeholders mainly because various land users have in the recent past encroached on the area, a situation that has increased pressure on the land and wildlife resources. The findings also indicate that there is no integrated wildlife utilisation and management in East Ngamiland District. Specific ministries and departments without consideration of wildlife conservation, implement the different government economic policies, which have had an impact on wildlife populations. However, the findings show that integrated wildlife utilisation and management is possible if proper land use planning is taken into consideration. That is when all stakeholders and local communities are involved in decision making.

CHAPTER 6

ANALYSIS AND DISCUSSION OF FINDINGS

6.1 Introduction

This chapter deals with the analysis of the findings and their implications in relation to the issues raised in the statement of the problem for this investigation. The analysis and discussion are guided in particular by our statement of objectives, research questions and hypotheses.

6.2 Wildlife Utilisation and Management in Pre-Colonial Botswana

On pre-colonial utilisation of wildlife resources in East Ngamiland District, the findings indicate that there was sustainable utilisation and management of wildlife resources with minimal conflict. The local communities in East Ngamiland District had an ecological understanding of the environment in which they lived, resulting in their being able to co-exist with nature in harmony. They had a wide range of accumulated local knowledge and experience about wildlife resources and had evolved management techniques, institutional and organisational arrangements as well as beliefs and values that governed wildlife utilisation. For example, the communities of East Ngamiland District knew and associated different wildlife species in the area with different ecological habitats and locations. They also had traditional names for almost all the bird and animal species around them and knew the habitat preferences of the different wildlife species and their behaviour.

The seasonal movement of Basarwa of Khwai and Mababe, for example, was dictated by the availability of resources around them. These people would migrate due to seasonal changes to areas they knew there was available game or veld products to collect. The nomadic lifestyle of the local people did not only show the ecological understanding in their environment, but also helped to give the resources in different ecological settings, time and season to recuperate.

Hunting amongst the local people in East Ngamiland District was controlled. Wildlife belonged to the community, not the individual, as such it was to be controlled by the community through their chiefs and elders. Community ownership of wildlife resources ensured that no individual was able to maximise personal wildlife gains to the detriment of communal wildlife resources.

Hunting was mostly carried out in winter when large game animals such as the eland, giraffe, gemsbok and elephant were killed while small game such as hare, springbok etc. were hunted throughout the year. The availability of veld products in summer as well as ploughing activities (amongst the Bayei and the Basubiya) reduced the intensity of hunting since people at this time would substitute meat with plant foods. Wildlife would recover in this period. People were prohibited from hunting big game in summer. Even though small game was hunted throughout the year, hunting in general was selective and closely monitored.

Poaching was an unknown practice amongst the local communities. The norms of the community expected each member to act as a "game ranger" wherever he/she walked, reporting any poaching to the chief, as wildlife resources were a community resource to be protected and harnessed for the benefit of all members of the community. Heavy fines were imposed on anyone caught poaching amongst Bayei (Tlou 1985). Also, if anyone from another group was caught hunting in a tribal hunting territory of the neighbouring group, that individual would have his hunting equipment confiscated and at times, forced to become a vassal in that particular tribal group. What this means is that within a group, poaching was unheard of, and where it occurred, it was from someone who mistakenly crossed his hunting territory to that of the next group. The fact that everyone in the community had a role to play in policy formulation regarding wildlife utilisation and management instilled a sense of wildlife ownership and control amongst the people. The result was the wise use of the wildlife resources in East Ngamiland District.

The traditional hunting weapons used by the local people in East Ngamiland District, as we have noted, were less detrimental to wildlife populations when compared to the

modern hunting weapons. The use of snares, traps, bows and arrows, pitfalls, canoes and spears were appropriate and environmentally friendly tools and methods for the area. Such methods were limited enough to ensure that the right amount of game was harvested at a time. This, therefore, avoided the decline in wildlife populations. It should also be noted that wildlife utilisation amongst the local communities in East Ngamiland District was mainly for consumptive and religious purposes. As a result, there was no misuse of it and especially since it was believed that any misuse would anger the gods (Campbell, 1995). The local people hunted and killed only that which they needed. The whole traditional practice of when to hunt and which animal to hunt indicates that people were aware of how they should use the wildlife resources around them to avoid overharvesting. It is also important to note that people always shared the booty from hunting expeditions. This illustrates the fact that wildlife was a community resource base from which each member of the community benefited through sharing. Sharing was a practical mode of lessening conflicts between rival interests over community property.

The idea of "royal game" where rare and declining species were protected and their killing avoided, explains that local knowledge was rich with the idea of protection of endangered species which is a key to sustainable wildlife management. The diversification of the economy found amongst the local communities shows that the people did not exploit the resources to the extent of impairing their regenerative abilities. Since people supplemented hunting with agricultural products, fishing, and veld products on a particular season and assumed hunting in winter, we have here an indication of the diversity of activity in the economy that also to some degree helped in the wise use of wildlife resources.

A further point that should be stressed is that the local communities of East Ngamiland District had traditional institutions, which always ensured a sustainable use of natural resource. Society was hierarchical, and seniority in the society determined rights to use resources including spoils from hunting.

With the exception of the Basarwa, all the Bantu-speaking tribes had the *kgotla* where the local traditions and customs of natural resource management were discussed. The *kgotla* was the venue whereby all unwritten laws governing hunting, gathering or collection and harvesting of any veld product were discussed and publicised. It was the place where the community with the chief as the head laid down the laws for hunting and gathering. The *kgotla* can be said to be the most democratic institution that ever existed in Botswana's history since full consultation and discussion of ideas was done before they could be translated into policies and laws. Everyone in the society was allowed to have a say and a contribution in the formulation and implementation of laws and was obliged to observe them. What this demonstrates is that all stakeholders were involved in making laws and regulations regarding wildlife use. As a result, it can be stated that local people in East Ngamiland District, had developed not only appropriate technologies as we saw with regard to the instruments used for hunting, but also policies and institutions which ensured the sustainable wildlife resource utilisation and management in their area.

In summary, the analysis of the findings, indicate that the people of East Ngamiland District had traditional institutions and practices in place, which always ensured the sustainable use of wildlife resources. The level of technology used by these groups as well as the size of population in these areas, were limited enough to ensure that there was no over harvesting of wildlife resources. The salient feature about local and indigenous knowledge systems in the pre-colonial period is that they encompassed the continuum between the natural environment and the other resources that existed in the environment so that the two could be manipulated sustainably by people in the process of producing food to satisfy basic needs.

The arrival of Europeans and the introduction of European trade in East Ngamiland District altered the traditional norms, values, and practices. The spread of European trade in the 1830s led to the commercialisation of wildlife resources. Hunting for trade took precedence over hunting for subsistence. The traditional wildlife management systems in East Ngamiland District suffered severely from the effects of European intrusion and the upsurge of demand for wildlife products. One of the major effects was over exploitation

of wildlife resources with the introduction of more sophisticated implements such as guns.

As we saw, there were two major players responsible for the overexploitation of the wildlife resources. Firstly, there were the European traders and secondly, there were the local tribal chiefs and their people who in response to the felt needs of the Europeans became involved in the harvesting of wildlife resources for commercial purposes.

As for involvement of the tribal chiefs in commercial harvesting of wildlife resources, the findings in this study indicate that tribal chiefs acquired guns and used their *mephato* for hunting wildlife resources for sale. The tribute system (*sehuba*) became the source of most trade goods used by the Batawana chiefs in East Ngamiland District. Officials or the Batawana chief's representatives travelled through out the state to collect tribute, and communities paid in whatever commodity they produced. What this shows is that the tribute system was no longer used as a sign of respect and loyalty to the chief as well as ensuring sustained wildlife populations in the veld but to enrich the chiefs. This indicates the breakdown of the traditional culture of wildlife conservation due to European influence in trade.

The ownership of guns introduced the spirit of individualism amongst the local people. The European trade changed hunting from being a collective activity done for subsistence purposes to a commercial enterprise carried out mostly for personal gains. The collective responsibility in hunting and sharing of meat collapsed. Campbell (1995) states that the arrival of Europeans was responsible for changing people's attitudes towards the rights of seniors and collective ownership of resources in their immediate environment. The attitudes changed as chiefs lost power and people started to recognise their exclusive property rights and trading rights. Attitudes towards wildlife changed as people could now own cattle, buy guns and trade with Europeans in wildlife trophies. The power of the chiefs or bandleaders over hunting and resource management, therefore, declined.

Campbell (1995) states that by 1890 (five years after colonial rule was established in Botswana), vast numbers of wildlife populations in Botswana were gone, especially in the eastern part of the country. As from the 1820s to the 1850s, when European traders and hunters arrived in Botswana in larger numbers, wide scale hunting caused the destruction of vast numbers of animals and the diminution or disappearance in Southern Botswana of species like elephant, rhino, hippo, giraffe, zebra and buffalo. The traditional sustainable wildlife management systems were placed on the road to collapse with European patterns of wildlife utilisation and management slowly creeping into the system, a phenomenon, which worsened with the subsequent colonisation of Botswana. It should be noted that the collapse of the traditional authority over wildlife utilisation and management was partly caused by the involvement of the tribal chiefs and their people in the European trade of wildlife trophies. This resulted in the chiefs neglecting their noble obligations of being overseers of the sustainable use of all natural resources in the area including wildlife.

6.3 **Wildlife Utilisation and Management in Colonial Botswana**

The findings show that the colonisation of Botswana by the British Government from 1885 to 1966 resulted in wildlife management being approached in two ways. Firstly, there were statutory laws that governed the use of wildlife resources and only applied to Europeans, and secondly, the pressure put by the colonial government on the tribal chiefs to come up with customary laws (*melao*) for their people, along lines similar to the statutory game laws for Europeans. These laws in both cases were allegedly targeted at curbing the unsustainable commercial exploitation of wildlife resources in Botswana.

The major controlling interest was in both cases the colonial government as these decrees were only to operate with the approval of the British Resident Commissioner (Spinage, 1991). What this indicates is that the rights of the local people to control and manage wildlife utilisation according to their own customary laws and practices were disturbed or displaced by the European colonial system.

The final observation is that colonial game laws and decrees only addressed one aspect of wildlife utilisation, that is, hunting. The laws could, therefore, be said to have been narrow in outlook. This narrowness of outlook is further demonstrated by the establishment of the Game Control Units in 1959, charged with the responsibility of protecting the hunting of elephants in Ngamiland District. Other wildlife species which faced similar overharvesting situations were not covered by the Game Control Unit. The laws also became restrictive, denying the local people access to and use of wildlife resources in the area. This accelerated the growing trend in the negative attitudes and perceptions of the local communities towards wildlife conservation in East Ngamiland District.

Despite the fact that the colonial game laws undermined the traditional wildlife management systems in East Ngamiland District, with the commercialisation of wildlife products in the area, the situation demanded that new measures be taken to control the trade. This of course, means that game laws were partly vital to Botswana since customary laws appeared to be inadequate to meet the changing pressure on wildlife and were unforceable against foreigners. However, colonial game laws did not halt the overharvesting of wildlife resources as they were alien to the local people in East Ngamiland and the rest of the country. Further more, unsustainable wildlife utilisation and management at the time can be attributed largely to the marginalisation of the role of the local population and their local knowledge systems in matters appertaining to wildlife policy formulation and implementation.

In support of the fact that colonial game laws did not solve the problem of unsustainable wildlife utilisation, Arntzen (1989) states that it is a common misconception that the decline of traditional resource management in which the chief held most power started at independence in 1966 in Botswana. He says that, the unsustainable wildlife resource utilisation and management in Botswana started earlier than 1966, in the colonial era. He attributes the situation to the following:

1. the mounting pressure on natural resources which took the traditional buffers away and rendered the traditional tools less effective.

2. the different socio-economic groups which emerged with different interests in dependence on natural resources, and

3. the external factors such as government polices and outside job opportunities that emerged at the time.

Arntzen argues that all these factors did not usually take the local resource base into account, hence forming a source of interference which led to natural resource degradation. The local institutions and leaders in Botswana lost their powers and control over wildlife resources in their areas. The cultural aspect of natural resource management was no longer capable of sustainably managing the wildlife resources due to European interference.

The conclusion that can be drawn about wildlife resource utilisation and management in colonial Botswana is that wildlife resource control was transferred from the local communities to the British Protectorate Administration. The wildlife protected areas like the national parks and game reserves were created in the hunting areas of the local communities without their consent and approval. These local communities were denied access into these wildlife protected areas. The result was the emergence of negative attitudes towards wildlife resources by the local people and land use conflicts.

6.4 **Wildlife Utilisation and Management in Post-Colonial Botswana**

Like in the rest of Africa, the post-colonial period offered very little change in terms of wildlife utilisation and management in Botswana. The old British colonial wildlife policies and institutions were continued or partially modified by the new post-colonial leaders. A good example is that in 1967, the Chobe Game Reserve became Chobe National Park. What this suggests is that more game parks, policies and institutions were created by the post-independent government against the wishes of the people. Local people in the area were not involved in these decisions and policies. It is under these

circumstances that Mordi's (1991: 89) assertion that "...the laws were parachuted, fully formed into society and literally imposed by the government on the people..." appears to carry some validity. As in other situations, again, the result was the growing negative attitudes and perceptions of the local people towards wildlife policies, institutions and officers, as well as wildlife conservation measures.

Since the post-colonial government did not make any radical changes in wildlife management structures, hunting became even more restrictive especially for the local communities. The 1967 and 1979 Fauna Conservation Acts demonstrate this. The two Acts especially that of 1979, instead of improving the socio-economic livelihoods of the people in rural areas in East Ngamiland District introduced poverty, in that there was a decline in benefits the local people derived from the use of wildlife resources due to the unified hunting procedures introduced. This then contributed to the marked change in public attitudes and perceptions towards wildlife conservation. It can also be stated that the two acts demonstrate failure on the part of the post-colonial government in Botswana to come up with appropriate and suitable wildlife polices and institutions needed for the socio-economic development of the local people.

The findings have revealed that wildlife policies and institutions in Botswana are formulated and adopted without the involvement and participation of the main stakeholders, especially the local communities. As a result, these policies are impossible to successfully implement. If local communities have policies and institutions imposed on them, they are unlikely to cooperate in the implementation of such policies. This explains why the local communities in East Ngamiland District have continued to have negative attitudes and perceptions, towards the Department of Wildlife and National Parks (DWNP), and wildlife conservation policies in the country.

The DWNP is one of the institutions charged by government with wildlife control in the country. This centralisation of power into DWNP makes the latter to be viewed negatively by the local communities in wildlife areas. However, wildlife control is likely to remain with DWNP and this may not change or improve the department's image from

being viewed by the local communities as a state police department established to deny them access to wildlife use. Ironically, there is little doubt that state control of wildlife resources is inadequate, especially since most of the control is done from urban centres, which are dialectically and geographically detached from the rural areas. This, therefore, suggests that effective management and monitoring of wildlife resources requires the involvement of those living within the resource areas because they are best placed and could be economically motivated to monitor it effectively on a daily basis. The local communities recognise that wildlife utilisation must be a shared responsibility between them and DWNP as well as other stakeholders. Under these circumstances, the situation might be improved if the *kgotla* along with DWNP are vested with powers of decision making such that the local knowledge systems of wildlife utilisation and management are incorporated into the new management systems, hence the potential for sustainable wildlife management in the country.

The National Conservation Strategy (NCS) is a government major policy instrument that deals with the co-ordination of natural resource use in the country. However, the findings indicate that the government lacks seriousness and commitment to environmental issues or the National Conservation Strategy. This is demonstrated by the fact that government took seven years from 1983 before adopting the NCS in parliament in 1990, and also placed the NCS in a line or junior Ministry of Local Government, Housing and Lands. The implication of this approach to environmental issues by government is severe on wildlife populations that continue to go down since the NCS lacks any meaningful power to influence policy regarding wildlife utilisation and management in the country.

The findings have shown that the NCS is also handicapped by insufficient understanding amongst politicians, decision-makers and the general public on matters relating to environmental resource conservation. This appears to have serious implications and enormous costs on wildlife utilisation in the country in that economic development policies are being pursued based on short-term and short-sighted economic gains. They also lack the necessary integration hence one economic sector is promoted at the expense of others. A good example is that of the promotion of the agricultural industry in the

country at the expense of the wildlife industry, and the erection of veterinary fences which block wildlife migration routes leading to high wildlife mortalities.

The Wildlife Conservation Policy of 1986 was designed to promote economic development of rural areas through the implementation of tourist projects. However, the policy only provides the legal framework for community-based wildlife projects. It does not outline how community participation and mobilisation in sustainable wildlife utilisation is to be carried out. It also does not provide training incentives for people to benefit from wildlife tourism. As the local people are left out in terms of training in the necessary skills needed in the tourist industry, they automatically are eliminated from participation in the booming tourist business going on in their district. Tourism in East Ngamiland District is, therefore, left to benefit only foreign investors and government since they posses the necessary know how. The fact that the policy does not have an independent budget from the rest of DWNP to facilitate community projects, leaves community empowerment and mobilisation to foreign investors like safari owners or hunters in the WMAs. Foreign investors are generally not committed to provide training of the local people except for making quick profit within a short period of time. These conditions promote the overharvesting of wildlife resources in East Ngamiland District.

The findings also indicate that the Wildlife Conservation Policy of 1986 facilitated the creation of Wildlife Management Areas and Controlled Hunting Areas in 1989. However, the demarcation of WMAs and CHAs in Ngamiland District and the extension of the surrounding protected area boundaries were done without any Environmental Impact Assessment (EIA) and Social Impact Assessment (SIA) or consultation with the local communities of East Ngamiland District. This places the whole concept of WMAs and community tourist projects at a risk of failure since the local communities do not appreciate or are not obliged to co-operate during implementation of these policies. Since the local communities feel they have been cheated on issues relating to their land due to creation of WMAs and CHAs, there is little likelihood that they will co-operate with any government initiative in wildlife conservation.

As no proper EIA and SIA were ever conducted when the Okavango-Ngamiland WMAs were established, the whole of the fragile Okavango Delta ecosystem stands at risk of being degraded ecologically. The influx of the mobile tour operators into the area might lead to tourism having serious environmental impacts. Too many vehicles and people can scare away and even reduce wildlife populations in the delta area, and also lead to soil erosion. It is necessary for the development of wildlife areas such as those of East Ngamiland District to be approached on the basis of a comprehensive and prioritised land use zoning plan which takes into consideration the ecological sensitivity of the area before implementing any land or resource development projects.

Although government, through the Tourism Policy of 1990 aims at diversifying the rural economy through the promotion of tourism in wildlife areas, the policy appears to be of little benefit to the people of East Ngamiland District because of its eurocentric approach to tourism. The low-volume high-cost tourism approach cannot be sustained within the current context of declining wildlife populations and illegal livestock encroachment into game parks and WMAs. Perkins and Ringrose (1996) state that while the Northern system continues to contain some of the most diverse wildlife species and attractive ecosystems in Africa, population declines of some key species (e.g. buffalo and zebra) have already made many of the CHAs in the region economically unviable. The local communities of East Ngamiland District state that species such as buffaloes are no longer easily seen in their communal areas, this shows that some WMAs might in the long run have no potential for consumptive tourism.

The Tourism philosophy of high-cost low volume has not only succeeded in denying the people of East Ngamiland District benefits from wildlife resources in their territory, but has placed wildlife resources and the tourist industry in foreign hands as already alluded to. Although the government has extended the Financial Assistance Policy (FAP) to include tourism, the findings of this study show that the FAP is not within reach of local communities due to its requirement of high contributions. The implications of these phenomena are that much of the tourist industry in East Ngamiland District is under the control of foreign enterprises especially game lodges and tour operators. A lot of money

paid for tours by visitors never arrive in East Ngamiland District or the country in general. Bookings and payment by tourists are done in either Johannesburg in South Africa or in Europe. It can be argued that even if tourists pay local tour operators in the Okavango Delta area for safari into the wildlife area, a large proportion of this money is used to pay for imported food, equipment and imported expatriate staff. Further more, tourists from neighbouring states such as South Africa, Namibia and Zimbabwe usually drive themselves and carry their own food and fuel (petrol and diesel) from these respective countries. Tourism is thus an activity that fails to benefit local communities or Batswana in general except for the country's elite and foreign tour operators.

The findings testify that the local communities of East Ngamiland District get meagre wildlife benefits in the form of meat, employment and sale of individual craft work to tourists in the area. Most benefits accrue to government, tour operators and safari hunters in the form of gate fees revenue (government), safari hunting, and hotel accommodation for the safari hunting and tour operating businesses. Studies conducted in Zimbabwe by Murphree (1993) and Mwenya *et al* (1993), in South Africa by Prosser (1996) and in Namibia by Ashley (1995) indicate that people living in wildlife areas tend to put more value and perceive wildlife as a valuable resource when they derive benefits from it; this results in using wildlife sustainably. This means that if the current situation in Ngamiland District is continued where local people get little or no wildlife benefits, it is unlikely that sustainable wildlife utilisation will be possible in Botswana. Rihoy (1995:15) states that "for a community to manage its resource base sustainably it must receive direct benefits arising from its use. These benefits must exceed the perceived costs of managing the resource and must be secure over time".

The fact that the local communities in East Ngamiland District are getting little or no benefits from wildlife resources suggests that they are most unlikely to appreciate the need to conserve the resource base on which their livelihood depends. This is further complicated by the fact that local people are not included in the decision making process in determining the hunting quota and issuing hunting licences. The implication of this development is that the people of East Ngamiland District will continue to view regulated

hunting through the quota system as foreign to their traditional culture of wildlife utilisation. This may result in illegal hunting by some members of the local communities in the area.

Still on the issue of the hunting quota, the findings show that at the present, citizen hunters can apply for licences to hunt anywhere in the country. Hunters from urban areas who hunt for recreation also pay the same fees and compete for hunting licences with the rural subsistence hunters, most of whom hunt for consumption purposes. This situation appears to be problematic in that the increased competition for hunting licences between urban recreation hunters and rural hunters, can result in large numbers of rural hunters who need licences to support their daily nutritional livelihoods being unable to obtain them. It can be assumed that when the local communities fail to obtain hunting licences the legal way, poverty may automatically force them to hunt without permission. The other danger the situation poses is that, both urban recreation hunters and subsistence hunters may use the licences to kill more animals than permitted. As discussed in Chapter Four, the Department of Wildlife and National Parks (DWNP) is underfunded and has transport shortages to ensure effective wildlife surveillance and monitoring in wildlife areas. At present, DWNP is unable to enforce hunting regulations in wildlife areas such as East Ngamiland District. As a result, there is little control of hunters during the hunting season. Because of this, wildlife resources are at risk of overharvesting from illegal or destructive hunting activities such as poaching and the reckless chasing and shooting of animals from vehicles. Silisthena and McLeod (1998:179) state that "poaching, or the unlawful killing of wild animals, is a serious problem. Commercial poaching by wealthy urban dwellers is increasing in the Okavango and Chobe areas, where elephants in particular are threatened. Animal skins and ivory are smuggled out of the country to be sold overseas in the Middle East and Asian countries at high prices". Under these circumstances, it can be said that failure to make local communities get adequate benefits from wildlife resources in their areas and their exclusion from decision making on the hunting quota and licences appear to have had severe impacts of wildlife populations.

The findings also indicate that the people of East Ngamiland District do not have any major role in policy-making regarding wildlife utilisation and management in the district. Policies are formulated at the center and government officials disseminate information to the local people through the *kgotla* about how such wildlife policies and laws should be implemented. The fact that local communities in East Ngamiland District are mostly not involved in wildlife policy formulation means that they have no control over land and wildlife resources. This situation contributes to the unsustainable wildlife utilisation and management in East Ngamiland District. Barnes (1998:333) states that "much of the wildlife resource in Botswana is public property and control is vested with central government. Central governments are generally unsuited to any form of active management and are better at passive directing. For various reasons government in Botswana is small and even less suited than most governments to managing a dispersed, fugitive public resource". For sustainable utilisation of wildlife resources in an area to be possible, control and access to utilisation values should be given to the users, who in this case include the local communities in East Ngamiland District and other stakeholders in the wildlife industry. Barnes (1998) states that decentralisation of wildlife resources to district and local community levels is vital in that it will empower landholders to take control of the resources and manage them so as to maximise returns. A situation which will oblige them to use wildlife resources sustainably.

The findings also support the hypothesis that the people of East Ngamiland District have negative attitudes and perceptions towards wildlife conservation. Factors such as having no control over use of wildlife resources, livestock and crop damage by wildlife and being denied access to and benefits from wildlife resources in protected areas contribute to the negative attitudes of the people towards wildlife conservation. As local communities continue to have no sense of wildlife ownership and perceive wildlife species as a nuisance, it becomes difficult, if not impossible for them to see any need of involvement in any form of wildlife conservation. This, therefore, means that wildlife resources in East Ngamiland District will continue to be utilised unsustainably, denying coming generations any benefits.

However, the evidence from the findings suggest that in case tourist wildlife community projects are implemented successfully in East Ngamiland District, wildlife has potential to contribute to the positive development of attitudes and perceptions. Mbanefo and de Boerr (1993) state that the successful implementation of community wildlife tourist projects in Zimbabwe through the CAMPFIRE programme contributed to the positive development of the people's attitudes and perceptions towards both wildlife conservation and tourism. They state that the benefits local communities derive from projects reduced poaching and solved the long outstanding livestock land use conflicts in that people now realise that wildlife conservation and tourism are better economic activities than agricultural production.

The major land use stakeholders in East Ngamiland District have been identified as both traditional and emerging (Table 5.2). However, the issue of emerging stakeholders in the area suggests that there has been an increase in the human population in the region with different land use interests. It also suggests the increasing significance of the natural resources in the area to the diverse interest groups. Table 5.9 has portrayed the various stakeholders and their land use activities and conflicts in the area.

Underlying the various conflicts described in Chapter Five is the fact that an area like East Ngamiland District contains numerous biotic and abiotic elements, all of which have the potential to be valued as natural resources by one or more groups. For example, most traditional stakeholders like the Basarwa, Basubiya and Bayei see the area as their patrimony and their livelihoods are mostly dependent on the utilisation of wildlife resources and veld products. Pastoralists and agro-pastoralists (traditional) communities like the Batawana of the Maun area want control of the wildlife resources as well as the Moremi Game Reserve and the Chobe National Park as they also consider them to be an integral part of their territorial land. They see the potential value of the national parks and game reserves for settlement, grazing and arable agriculture. The Government of Botswana and the private sector interest groups (which include the Batswana economic and political elites) see the area's wildlife resources as a potential source of wealth through hunting and tourism. Conservationists, both expatriate and Batswana, regard the

game parks and reserves highly on account of the values of biodiversity and aesthetics. Each of these social groups thus constructs a different image of the East Ngamiland District, and a different set of natural resources, depending on how they perceive and value the different elements of the natural system.

The causes of the conflicts are different with different situations and different groups. For example, to the traditional stakeholders, there appears to have been an encroachment on their territorial rights and deprivation of traditional sources of livelihood and means of sustenance. State policies have affected natural resource use with insecurity of access to land, wildlife and veld products. Households or communities are being forced to compete for the same resources in territorial land that has decreased because of government imposed interventions and restrictions. Competition for the same resources in a shrinking territorial land means that the present generation is misusing land at the expense of future generations. Such situations have come about because people are no longer able to meet their daily requirements from sustainable use of the resource base to which they have access, given what they see as appropriate effort. Hence they want to gain more resources or overexploit the resources currently used in order to survive, rather than change their management practices. Their focus has to be upon immediate production rather than long-term sustainability, and poverty means that they have neither the time nor resources to invest in better land management. Their plight is made worse by other sources of conflict, for example, the conflict between wildlife conservation and crop-livestock damage and the fact that compensation from government is either not paid or satisfactory to the people affected.

Another intrusion into the modern scene is the erection of veterinary fences which are obstructing wildlife migration routes and preventing movement of local communities in pursuit of their traditional sources of livelihood. The effect of fencing on wildlife is illustrated by the example of the Northern Buffalo Fence that has had detrimental effects on wildlife resources in the region, causing many species to become trapped or die along the fence. Campbell (1973) notes that the visible manifestations of the fence impact is a build up of wildlife carcasses along the cordon fence. The fence also prevents wild

animals from migrating to watering places in and outside game parks. This limiting effect of the fence disputes the once held belief that game parks can provide the all year round requirements of wildlife species.

One significant source of conflict in the district is the fact that the Okavango Delta is the only permanent water body in Northern Botswana. As a result, it is attractive to various types of interest groups. Arable farmers prefer the Delta because the soils are better and water supplies are sufficient for *molapo* cropping. Pastoralists use it as fall-back areas for dry-season grazing. Likewise wildlife converges on it in the dry season. The area also is preferred for human settlement because of water availability. Conservation groups are interested in it because of the diversity of the flora and fauna. Government and private sector also are interested in it partly because of the opportunities it gives for the promotion of tourism. The Okavango is also a subject of international dispute between the two countries of Namibia and Botswana. At present both governments of Botswana and Namibia are planning major water development projects which can change the present environment and destroy the balance between man and nature when such schemes come into operation. Although the members of the Southern African Development Community (SADC) have responded to the issue of water resources in the region with a protocol on shared river basins (SADC 1995, Pallet 1997), the Okavango, is likely to continue to be a source of strategic local and regional conflict in Southern Africa. The SADC Protocol on Shared Watercourses of 1995 (SADC, 1995) addresses issues relating to the utilisation of water resources of international character. It is one thing to sign up an agreement, it is another to implement it. The Protocol is rendered ineffective in that national water acts in SADC member states are silent on the environmental considerations and interactions with other riparian states. The national water acts also do not define the criteria that ensure equitable use of water resources by all user groups. Moreover, the region lacks the institutional management structure as well as experts who have a better appreciation of the socio-economic aspects peculiar to the region. Foreign experts are usually contracted on water management issues in the region. Under this circumstances, it can, therefore, be said that if practical measures are not taken to address the issues raised, especially the capacity building within the region, the Protocol would

remain nothing more than a political statement. The conflict on the use of the Okavango waters is likely to continue between Botswana and Namibia. It can, therefore, be concluded that there is need for a long-term development plan of the Okavango Basin as a whole that meets the needs of all stakeholders in the region.

The worst conflict scenario in East Ngamiland District is that which occurs between community human settlements in wildlife areas and the tourist industry. Mention has been made of the Khwai community settlement which the Botswana Government and the tourist industry consider to be within a wildlife and tourist area. As a result, both the government and the tourist industry have agreed that the settlement must relocate elsewhere away from the Moremi Game reserve. Because of this, the government has suspended the provision of all social services such as water, clinics, shops, schools and communications in the hope of forcing the people to consider re-location. New government initiatives to re-locate the Basarwa are also disturbing the Basarwa economic lifestyles of hunting and gathering, with the result that many Basarwa continue to be over-dependent on handouts in the form of food rations and clothes. The RAD programme has settled the Basarwa in infertile land unsuitable for arable agriculture and creating problems for sustainable environmental management. It is worth noting that when the RAD programme started, fertile lands for arable agriculture and suitable grasslands for cattle were already taken by cattle rearing dominant groups in the country. Arable farming or livestock farming is, therefore, not a viable option for Basarwa. This means that the majority of Basarwa can only use land for residential purposes. Most recently, the Basarwa settlements have been cynically referred to as "economic refugee camps" for the relocated and unemployed (Gaborone, 1997).

The conflict between local communities in East Ngamiland District and Wildlife management agencies such as the Department of Wildlife and National Parks demonstrate the unwillingness of the government to involve local communities in Wildlife Management in protected areas. This conflict should be understood on the basis that government approaches the utilisation and management of natural resources in protected areas based on Western concepts and ideas of protected area management.

Emerging from the Western history and experience, a protected area is "an untouched and untouchable wilderness". This view of nature is based on ignorance of the historical relationships between people and their habitats and of the role local people play in maintaining the biodiversity hence the antagonism between people living in wildlife areas and conventional methods of wildlife conservation. As in the case of Khwai, government assumption is that wildlife and the people cannot co-exist and utilise the same area hence the village should be relocated elsewhere away from Moremi Game Reserve. The Community Based Natural Resource Management Programme (CBNRMP), supported by government Wildlife Conservation Policy of 1986 and the Tourism Policy of 1990, state that local communities in natural resource areas should be made to benefit from resources around them. A phenomenon that is ignored by the suggestions of re-locating Khwai Village elsewhere in order to give way for wildlife conservation and tourism development. Most radical in the scene is the fact that the Basarwa of Khwai propose a different model of community wildlife management projects when compared with that of government. Khwai residents proposes full community ownership and control of land, wildlife and all natural resources found in the area. This idea by the people of Khwai contributes to the antagonism that exists between them and government since government views all natural resources to be public property to be used for the benefit of all citizens. Most interestingly or rather ironically, is the fact that the National Settlement Policy (NSP) of 1992 provides a framework for balanced development of settlements throughout the country. This should be done through the re-direction of public and private investment to rural areas, an idea that can easily be achieved through the implementation of CBNRMP at Khwai.

The NSP also stipulates that Batswana are free to live where they choose. But this should be done within the general framework provided by land rights under customary and statute laws. The policy further divides settlements into three categories, that is, primary, secondary and tertiary. The tertiary category IV gives Basarwa special treatment in the sense that a settlement with over 250 people is given full status of a village. The understanding that can be derived from the NSP is that the people of Khwai with their population of 429 people are rightfully located in their present site and also have

customary and statutory rights over the area. This point is made stronger by the fact that the people of Khwai have been living around the Okavango Delta since time immemorial and that they have been moved several times before without much consultation.

This Khwai conflict further indicates that to the Botswana Government, the traditional knowledge in resource management is not a factor to consider in as far as resource use in protected areas is concerned. That is, the draconian measures such as the suspension of the provision of social amenities and the use of the wildlife Anti-Poaching Unit indicate government's insensitivity to cultural obligations in wildlife management in protected areas. This situation is as a result the main cause of antagonism between local communities in wildlife areas and wildlife management agencies. However, the prevailing land use conflicts around protected areas shows that protected areas can play a useful role in helping to revive, renew, and re-interpret traditional approaches to make them adaptive to modern conditions. Partnership between local communities and protected area management agencies can benefit both protected areas and the biodiversity. This is a long overdue relationship not only for Moremi Game Reserve and Chobe National Park but also to all protected areas in Botswana. What is needed is to encourage private and community investment in the area through the implementation of the CBNRMP. This strategy has the potential of creating employment opportunities and other wildlife tourist benefits to the local community of Khwai. The findings in this study have shown that the local communities in East Ngamiland District appreciate and support the implementation of CBNRMP in the district. It can, therefore, be concluded that the conflict involving the Khwai community and wildlife management demonstrates government's insensitivity to the rights and privileges of the minority groups over their land and resource use. Like any other "major" tribal group in the country, the Basarwa of Khwai are demanding the traditional right and control over resources and land they have inhabited since time immemorial.

The findings also show that the wildlife community-based and tourist projects in East Ngamiland District are currently performing poorly (see Table 5.18). This is mainly because the development of community-based tourism projects does not match the

capability of the local communities. These projects are too elaborate and complicated for these target groups to understand and manage. Since local communities lack the necessary entrepreneurship skills to benefit from wildlife community-based tourist projects in their area, they are forced to seek the assistance of private sector safari companies who have such experience. These safari companies are foreign owned and are able to attract wealthy game hunters from the industrialised states to visit wildlife areas in Botswana. Although the government is expecting that the companies would bring economic benefit and contribute to the rural economic development, little of their expenditure is of benefits to the livelihoods of the people of East Ngamiland District. Mention has been made that safari tours are often paid outside the country, and the companies generally use imported food and equipment. The community projects can, therefore, be said to enrich foreign companies at the expense of the local communities. This situation suggests that the Community-Based Natural Resource Management Programme is not yielding wildlife benefits to the target groups, instead, it is benefiting the few elites and foreign tour operators in the country. Under these circumstances, it is unlikely that the attitudes and perceptions of the local communities in wildlife areas can change positively when they get little benefit from wildlife resources.

Because community projects are too elaborate for the local people to understand, decisions are taken based on the demands of the commercial tour operators instead of the local communities who are supposed to be the owners of the resources. It is important to note that any project that wholly relies on outside influence and support is not likely to sustain itself once foreign aid is withdrawn. The fact that community empowerment especially training and provision of the necessary skills in wildlife management are left in the hands of the safari operators that happen to win the community hunting tender shows a wrong approach to sustainable community projects. This is an inappropriate strategy since most safari owners lack commitment to develop local skills and knowledge, let alone the sustainable use of the wildlife resources on which their business depend. It is important that efforts are made to give priority to community training as a way of improving rural skills.

The government policy of high-cost low-volume tourism also puts the local communities at a disadvantage. The policy presupposes the building of capital intensive infrastructures which the local communities cannot afford, as a result, they end up sub-leasing their WMAs to commercial safari operators. Under such circumstances, government policy must shift and encourage communities to set up reasonably small, manageable operations that require little capital and existing skills.

Despite all the problems that hinder the successful implementation of the community-based projects there is a high degree of awareness amongst the local communities about the benefits that their households and communities can obtain in case the implementation of wildlife community-based and tourist projects are successful.

The local communities need community projects which can be managed using the locally available skills such as leatherworks, curio shops for their craft work, campsites, community tour operation, cultural tourism which include traditional accommodation, traditional dishes, music, dances and walking safaris. This means that for local communities to benefit from wildlife and the booming tourist industry in the area, they need to engage in small-scale and simple projects that will require local skills and knowledge. Such projects not only require community skills and knowledge but also are also compatible with the prevailing environmental aspects and can hence promote sustainable development of wildlife resources.

Finally, the findings show that irrespective of the various wildlife policies and institutions in the post-colonial period in Botswana's history, the country's wildlife resources have continued to decline. The DWNP Report (1995a) admits that all wildlife species in Botswana are in a state of continual decline with the exception of only the elephant and red *lechwe*. A sequel DWNP Report (1995b) added two extra species, the blue wildebeest and impala to the non-declining list, but alluded to the uncertainty that surrounds the trends of most wildlife populations in Botswana.

In summary, during the post-colonial period, colonial policies have continued to be pursued by the State. These policies have affected natural resource use. The central government, since independence, has been making ever increasing demands upon the resources of East Ngamiland District, but imposing institutions and insensitive policies on the local communities, which are alienating and inducing the latter to have negative attitudes towards wildlife conservation and sustainable utilisation of natural resources. The findings indicate that wildlife institutions and policies are simply imposed on the district with minimal regard to the needs of, and consultation with, the principal stakeholders, namely the local communities in wildlife areas. Wildlife and tourism in East Ngamiland District have become increasingly important as an expanded revenue resource base for government. The quest for a diversified economic resource base by government is creating institutions and inducing state policies which appear to be placing wildlife resources and tourism into foreign hands, while denying local people access to resources in wildlife areas that have been their patrimony for ages. At the moment, in East Ngamiland District the local people feel they are marginalised with respect to access to and decision-making on wildlife resource utilisation and management. Many believe that they have lost their patrimonial rights, even though they believe that with independence from colonial rule, they would regain these rights. Some of the local people in the Okavango area, for example, as we have noted, currently perceive the place as a foreign enclave. It would appear here that, a stage is set for what is known in recent literature as internal colonialism (Dixon and Hefferman 1991, Drakakis-Smith and Willams 1983), a phenomenon, whereby the people in a sub-district or region are being economically and politically marginalised, in this case, with respect, not only to access to natural resources, wealth extraction and sharing of income between region and centre, but also, with respect to decision-making in resource management and conservation. No wonder that wildlife resources are declining as confirmed by researchers like Perkins and Ringrose (1996), Barnes (1998) and the DWNP (1995a,b).

CHAPTER 7

SUMMARY, CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

This chapter deals with the summary and conclusion of the study, which aims at providing an evaluation of whether the issues raised in the research questions, objectives and hypothesis have been addressed. The chapter finally outlines the recommendations of the study.

7.2 Summary and Conclusion

The study used several methods of data collection and analysis to answer specific research questions, objectives and hypotheses raised. Both primary and secondary data sources were used. Secondary data sources included the published and unpublished wildlife reports and government policy documents. Primary data collection involved the administration of structured and semi-structured questionnaires to the sampled households in the three villages of Khwai, Mababe and Sankuyo. Interviews were also conducted with key informants to confirm secondary information. A stakeholder analysis was also performed to identify the various groups and activities that are affected by the wildlife industry and areas of actual and potential conflicts among them. Finally data was analysed mostly by the use of Statistical Package for Social Sciences and where possible relevant statistical tests were employed. Below are the summary and conclusion of the study, presented within the framework of the research questions.

7.2.1 Pre-colonial Wildlife Management in Botswana

The first research question of the study is:

How have wildlife resources been utilised and managed from the pre-colonial period to the present time in East Ngamiland District?

The information from secondary sources confirmed by key informants indicate that the pre-colonial period in East Ngamiland District was characterised by the sustainable use of

wildlife resources amongst the local communities in their respective tribal territories. This was possible through traditional management systems, which regulated the utilisation of all natural resources such as wildlife resources. Wildlife resources during this period were mostly used for consumptive and religious purposes.

The people through their community leaders and elders controlled hunting. They also designed appropriate hunting tools and methods in a way that limited the over harvesting of wildlife resources. There were also taboos, totems, superstitions and the people's rich ecological understanding which ensured the wise use of the wildlife resources. Animals considered totems were never hunted but were respected and protected from any form of harvesting.

Hunting was intensive mostly in winter when there was little plant food available. However, in summer, the availability of plant resources released pressure on wildlife harvesting. As people became occupied in veld products collecting or *molapo* crop farming, wild animals recuperated. The traditional hunting regulations mostly designated old bulls to be the target species for hunting, females and young ones were often not killed in hunting expeditions. This system, therefore, ensured that wild animals were always available for regeneration in future. Wildlife resources were considered a community property, and all the benefits that accrued from it were communally shared. Wildlife conservation was considered a collective community responsibility. The fact that people had access and benefits from wildlife resources in their tribal territories, meant that their attitudes and perceptions were positive towards wildlife conservation.

What made traditional management systems successful in wildlife resource utilisation and management is that the local people possessed a rich and dynamic indigenous knowledge which enabled them to always initiate and apply appropriate wildlife management systems that ensured the wise use of wildlife resources. Local community participation in wildlife utilisation and management was a cultural obligation binding on all community members and this resulted in a sense of ownership and control over wildlife resources by all the local people.

7.2.2 **The Impact of European Trade on Traditional Wildlife Management Systems**

Information from secondary data sources indicate that the period between the 1830s and the 1850s was characterised by several changes in the traditional wildlife management systems in the region. First, the region experienced inter-tribal wars known as *Mfecane*, and second, there were the penetration and expansion of Europeans and European trade into the area. These two events are significant in that they introduced the use of guns in the region which became very important for hunting purposes. During this period wildlife utilisation changed from consumption and religious purposes to commercialisation. This, therefore, resulted in the overharvesting of wildlife resources by both European traders and tribal communities as discussed in Chapter Four. The attitudes and perceptions of the local communities towards wildlife utilisation shifted from wildlife being viewed as communal resource for the benefit of all members in the tribal group to individual property being used for individual gains. As the European methods of wildlife utilisation and management were superimposed on the local wildlife management systems, the latter became severely affected and could no longer direct the use of wildlife resources sustainably as it previously did.

7.2.3 **Colonial Wildlife Management in Botswana**

When Botswana became a British Protectorate in 1885, the immediate concern of the British Resident Commissioner was the overharvesting of wildlife resources in the country. He, therefore, made an appeal to the colonial administration to intervene and curb the unsustainable utilisation of wildlife resources caused by European traders and tribal rulers and their people in East Ngamiland. District.

The response from the colonial government in controlling the overharvesting of wildlife resources was the introduction of a system that made wildlife resource management to be approached along two lines. In the first approach, the colonial administration formulated and implemented wildlife policies and acts, which mainly applied to Europeans in the country. The second approach mandated the chiefs to impose decrees (*melao*) on their respective tribal groups. Although the chiefs were expected to make these decrees for

their people, such decrees had to be in line with colonial administration wildlife policies and were also to be approved by the colonial government. The outcome of this was that the chiefs were no longer independent to make laws for their people as they previously did. The *kgotla* as a traditional institution designed to involve all the people in wildlife policy design, formulation and implementation was completely undermined and it could no longer function effectively in the sustainable management of wildlife resources. The connivance or rejection of local knowledge in wildlife management during the colonial era, added to the problem of unsustainable wildlife utilisation and management in the country.

The findings also show that the commercialisation of wildlife resources led to the centralisation of wildlife resource management by the colonial government, which had as one of its aims, the conservation and protection of wildlife from depletion. Wildlife protected areas such as Chobe National Park and Moremi Game Reserve were established in the former hunting grounds and tribal areas of the local communities of East Ngamiland District. This was done without the latter's prior consultation and knowledge, local people were barred from access to resources in these new protected wildlife areas.

The European approach to wildlife utilisation and management was imposed on the local communities, who then began to develop negative attitudes and perceptions towards wildlife conservation because they could no longer have access to or direct benefits from wildlife resources as they did previously. The same wildlife, which destroyed their crops and livestock also occupied their former hunting grounds, which now had become state property. Despite the introduction of colonial game laws and tribal decrees to control the overharvesting of wildlife resources in the country, the situation did not change. Unsustainable wildlife utilisation continued unabated.

7.2.4 **Post-Colonial Wildlife Management in Botswana**

The second research question of this study deals with the post-colonial wildlife management systems and it is:

What are the current patterns and methods of wildlife resources utilisation and management and their associated problems?

The findings indicate that after independence in 1966, the old British colonial policies and institutions have been maintained or partially modified by the new post-colonial leaders of Botswana. These policies are enacted without the full participation or consultation of the local communities. There is little effort made by government to formulate and adopt development policies that are appropriate to the local socio-economic, ecological and political conditions. As a result, the policies have got little local community support and often fail during implementation.

Secondly, the post-colonial government immediately after independence introduced policies designed to promote agricultural production at the expense of wildlife conservation. Huge government expenditure as reflected in the national development plans from 1968-91 promoted the implementation of agricultural policies such as the Tribal Grazing Land Policy, Agricultural Development Programme, Arable Land Development Programme and Arable Rainfed Agricultural Programme in wildlife areas without regard to wildlife conservation. These agricultural policies, as a result, contribute to current wildlife resource deterioration in the country in that they are penetrating and taking land in wildlife areas.

Thirdly, the institutional set-up of the post-colonial natural resource management is fragmented into various government ministries and departments. The four key ministries identified are the Ministry of Agriculture, Ministry of Commerce and Industry, Ministry of Local Government, Lands and Housing and the Ministry of Mineral Resources and Water Affairs. These ministries formulate sectorial policies that often conflict with each other during implementation. More over, the natural resource use institutions like those of wildlife, are placed under junior line ministries which lack political support and teeth to influence the effective management of the country's wildlife resources.

Fourthly, the information from interviews with household respondents as well as the assessment of wildlife policies and institutions in the country suggest that the policies are largely formulated and adopted without the full involvement and participation of some of the major stakeholders, notably the local communities. These findings, therefore, support the hypothesis that current unsustainable wildlife resource utilisation and management in Botswana in general and in East Ngamiland District in particular is related to failure to involve local communities in policy making regarding wildlife conservation and management.

7.2.5 **Benefits and Role of Local Communities in Wildlife Resource Utilisation**

The fourth research question of this study is:

What is the role of the local communities living in and around the wildlife management areas in wildlife management, and what benefits do they get from wildlife resources?

On the issue of whether local communities in wildlife areas obtain benefits from wildlife resources, the available evidence from interviews with households indicate that very little wildlife benefits (e.g. jobs in the tourist industry, income from craft sales and infrastructure) accrue to the people of East Ngamiland District. For example, at Sankuyo village, where a wildlife based community project is currently in operation, the local community derive minimal wildlife benefits. Each household on the average obtains an annual income of P200.00 from the project. The project has also bought a vehicle, which serves as mode of transport between the village and Maun. The revenue that accrues to the households is a result of the community-hunting quota that is sold to the Crocodile Camp Safaris.

The hunting quota issued to the local communities by the Department of Wildlife and National Parks is determined without community involvement. The communities also consider their quota to be very small. The quota is also usually issued late, resulting in local people being unable to hunt all the animals issued to them. At the time of the study,

it had been two years since the communities of Khwai and Mababe had had their hunting quotas suspended, hence, they could not hunt as anticipated.

On the question of the role local communities play in wildlife management, the findings indicate that they do not have any major function in policy and decision making appertaining to wildlife utilisation and management in the district. They get informed at the *kgotla* when such laws are about to be implemented. Wildlife resource in Botswana is public property and the controlling power is vested in the central government, that is, the Department of Wildlife and National Parks. The local people as a result perceive government as having usurped wildlife resource control and ownership from them.

The findings on the lack of community benefits and the lack of a clear role by local communities in policy making in wildlife resource utilisation and management affirm the hypothesis that current wildlife resource utilisation and management in East Ngamiland District is related to failure to ensure local communities in wildlife areas obtain benefits and have a role in wildlife utilisation and management.

7.2.6 **Attitudes and Perceptions of Local Communities**

The third research question of this study is:

What are the attitudes and perceptions of the local communities on wildlife resource conservation in their local environment?

The attitudes and perceptions of the local people of East Ngamiland District were assessed based on variables such as benefits they derive from wildlife resources, the role they have in wildlife management and whether they have ownership over wildlife resources in the district. They were also assessed on the basis of how people relate to protected areas, Department of Wildlife and National Parks, livestock and crop damage by wild animals.

The findings indicate that the attitudes and perceptions of the people are predominately negative towards wildlife conservation. This is demonstrated by the fact that the people are not satisfied with the benefits obtained from wildlife. They perceive wildlife to be of no value to them. Since the local people play no role in decision-making in wildlife utilisation and management they tend to view wildlife resources as government property and are reluctant to give in to demands for their active participation in conservation.

With regard to subsistence crop and livestock farming, the findings indicate that compensation for wildlife damage is either not paid satisfactorily, or not paid act all, or paid late to the affected farmers. Wild animals such as elephants, zebra, lions, leopards and jackals mostly cause the farm damage. Failure to pay compensation on time and satisfactorily results in the local people viewing concerned wildlife species as a nuisance rather than an asset. As regards protected areas like Moremi Game Reserve and Chobe National Park, the local people have no access to collect veld products or benefit from them hence they are viewed negatively. This also applies to DWNP, which the people view as a body charged with the responsibility of denying them the use of wildlife resources freely provided by nature.

On the issue of the local peoples' attitudes and perceptions towards tourism, the findings reveal that they are also negative. This is mainly because tourism in the area mostly benefits the government and the tour operators while the local people derive little or no benefits from it. As such tourism is construed to be an activity that is meant to benefit government and a few elites in the country and foreigners.

The available evidence on the negative attitudes of the people towards wildlife conservation support the hypothesis which state that current unsustainable wildlife resource utilisation and management in Botswana in general and in East Ngamiland in particular is related to the negative attitudes and perception of the local people towards wildlife resource conservation and management.

7.2.7 Major Land Use Stakeholders and Land Use Conflicts

The fifth research question in this study is:

Who are the stakeholders and what is the nature and extent of land use conflicts experienced in wildlife management areas?

In order to identify stakeholders and land use activities and conflicts in East Ngamiland District, a stakeholder analysis was performed (see Table 5.2). The findings show that there are traditional stakeholders comprising local groups such as the Basarwa, Bayei and the Basubiya who mostly use the land for hunting and gathering purposes. The traditional stakeholders also include agro-pastoral groups such as the Batawana of the Maun area who value the land for crop cultivation and livestock grazing. The Batawana also demand the control of wildlife resources and game parks in the area because they believe they are located in their tribal territory. There are also emerging stakeholders such as government, the tourist industry and the conservation groups. Although government also supports the livestock sector which has resulted in the construction of the Buffalo Fence, the emerging stakeholders are mostly interested in the land for wildlife conservation and the development of the tourist industry. These different interest groups and activities over the same resource is, therefore, leading to land use conflicts in East Ngamiland District (see Table 5.9).

The conflicts are aggravated by the lack of a mechanism to prioritise and co-ordinate competing demands and the fact that the different government ministries and departments are also implementing conflicting sectoral land use policies. At present, the natural resource management institutions and policies including those of wildlife are fragmented into various government ministries and departments and this often results in the lack of co-ordination and harmonisation of policies and programmes during implementation. At present there are no effective institutional mechanisms for resolving land use conflicts despite the role played by Land Boards and the Department of Lands in land use. The nature and extent of the land use conflicts amongst stakeholders is described below.

7.2.7.1 **Nature and Extent of Land Use Conflicts**

The major conflicts identified in the district include those between the expansion of agriculture into wildlife areas and wildlife management. Crop damage and livestock predation by wildlife animals cause conflicts between DWNP and subsistence livestock and crop farmers.

The need to separate cattle and buffalo populations from each other to control foot-and-mouth disease by the Botswana Government has resulted in the erection of veterinary cordon fences through the periphery of the Okavango Delta. Veterinary fences are an European Economic Community-inspired precautionary measure against importing meat from Foot-and-Mouth Disease-stricken areas. At present, the Buffalo Fence in East Ngamiland District is having serious detrimental effects on the declining wildlife populations since they block their migration routes and trap some of wild animals to death. Interviews with key informants show that the fence also encourages poaching in that poachers walk and hunt along the fence in the hope of finding a trapped animal. Furthermore, veterinary fences deny access to pastures by livestock, and cause conflict between livestock and wildlife because of limited access to pasture. They also affect tourism in the district since they contribute to wildlife decline.

Settlement expansion into wildlife areas causes conflict between the tourist wildlife industry and community settlements. Both the government and the private sector, especially tour operators view the location of settlements in wildlife areas as a disturbance to wildlife conservation and the tourists activities in the area. The lodge owners and tourists do not appreciate the presence of domestic animals and litter around settlements since they destroy the wilderness picture of the Okavango Delta surroundings. Settlements in wildlife areas such as those of Khwai have been requested to relocate elsewhere, a move that the local people strongly oppose.

The establishment of protected areas such as Moremi Game Reserve and Chobe National Park also conflict with the socio-economic activities of the people of East Ngamiland District. New management systems and establishment of the protected areas are limiting

the hunting and gathering activities of the local people. The extension of the park boundaries into communal areas is seen as a government aim and initiative to deny resident community access to wildlife resources and veld products in their tribal area. The findings further indicate that the demarcation and creation of WMAs without community consultation is perceived by the local communities as a measure designed by government to reduce their communal areas and drive them to infertile and dry lands. To the local communities the belief is that the best and rich wildlife areas have been taken by government and leased out to foreign tour operators.

The foregoing findings support the hypothesis which state that current unsustainable wildlife resource utilisation and management in East Ngamiland District is related to failure to involve all the stakeholders in land use conflict resolution and wildlife management in wildlife areas.

7.2.8 **Performance of Community-based and Controlled Tourist Projects**

The sixth research question of this study is:

How are local community-based and controlled wildlife projects performing?

The information obtained from interviews with community board members, households and decision makers indicate that community-based wildlife and tourist projects in East Ngamiland District are experiencing problems which are impairing their performance (see Table 5.18). One of the problems is that the CBNRM concept is still new and not properly understood by the local people. A second problem is that projects that are implemented are very elaborate and complicated for target groups to manage. For example, the community project boards do not have the managerial skills, secretaries fail to take minutes properly and members lack ideas on how to reinvest the money from the projects. A third problem is the overfocus on high-income tourist lodge type operations requiring high levels of organisation and management. This has resulted in the communities failing to come up with projects that suit their local environment, instead they depend on foreign ideas and concepts of community wildlife projects.

In addition, some influential politicians are taking advantage of the projects to pursue their individual goals and local communities also get bribed by safari operators to win tenders. Finally, East Ngamiland District has no suitable wildlife conservation Non-Governmental Organisations to facilitate community projects or community mobilisation and empowerment.

All these handicaps and problems hinder local communities from getting significant benefits from community projects. These facts, therefore, support the hypothesis that current unsustainable wildlife resource utilisation and management in East Ngamiland District is related to the ineffectiveness and poor performance of community-based and controlled tourist projects in wildlife areas.

It should however be noted that despite the problems and poor performance, the people of East Ngamiland District are keen on having such projects and seem to have an idea of the types of projects to be promoted. Household respondents in the area suggest the following as appropriate projects in the area: curio shop, traditional village that would provide traditional accommodation, meals, music and dances. Also included are community escort guiding, walking and boat safaris. Key informants in the area believe that non-consumptive tourist related projects and their spin-off industries such as bakery, dry cleaning and low impact tourist activities are viable for the area.

7.3.0 **Prospects for Integrated Wildlife Management in East Ngamiland District**

The seventh research question of this study is:

Are there prospects for an integrated wildlife management that can lead to wildlife conservation that takes into account the welfare of the local communities as well as that of the country's economy as a whole?

The land use conflicts (see section 5.5) amongst the various stakeholders in East Ngamiland District indicate the lack of an integrated wildlife management approach that can effectively harmonise all the land use activities in the district.

As already noted, institutional conflicts and lack of co-ordination between ministries with natural resource interests have led to poor use of resources and conflicts. Although the National Conservation Strategy was formulated to ensure a sustainable use of environmental resources in the country, it depends on the different sectorial policies in government ministries and departments. The NCS also lacks political influence and support to make any meaningful impact on matters relating to wildlife utilisation and management in East Ngamiland District. As a result, the different sectoral land use polices and programmes are not co-ordinated during implementation. The lack of co-ordination in land use policies and the ensuing conflicts amongst the different stakeholders support the hypothesis that current unsustainable wildlife utilisation and management in Botswana and in East Ngamiland District in particular is related to lack of an integrated wildlife resource utilisation and management policy.

However, the socio-economic conditions in the area are favourable for integration of wildlife conservation with other economic sectors. The findings show that while the local communities have a desire to practice agriculture, they recognise that the best suitable land use activity in the area is wildlife conservation and tourism. The Basarwa of East Ngamiland District, however, are not keen on livestock or crop production which is one of the most important causes of land use conflicts in the area. Bond (1995) states that wildlife integration is possible if net benefits from wildlife resources are made to exceed those of other land use options in the area. This condition appears to be possible in East Ngamiland District because there is a general predilection amongst the local communities for wildlife community projects compared to arable-livestock farming projects.

Still on the issue of integration, the eighth and last research question of this study is:

What is the experience of other neighbouring countries in integrated wildlife management and what lessons can Botswana learn from this experience?

Case studies from Zimbabwe, South Africa and Namibia were examined and the next section summarises the major lessons.

7.3.1 **Lessons Botswana can learn from Experiences of other African States**

A review of case studies from Zimbabwe, South Africa and Namibia indicate that Botswana can learn from the experience of these countries in relation to integrated wildlife management. Some of these lessons include:

- protected areas need management plans that recognise the importance of integrating tourism, wildlife conservation and community development of the local people. This approach tends to lead to sustainable wildlife management.

- semi-arid environments tend to support non-consumptive wildlife utilisation and management in the form of photographic tourism in that it appears to be less destructive to wildlife populations than the consumptive approach (e.g. safari hunting).

-commitment to wildlife conservation or natural resource utilisation is important, thus the need to create of natural resource ministries to harmonise all land use policies and activities.

- "Murphree's Five Principles" and the creation of a strong local institutional organisation to effectively manage wildlife resources in communal areas are important. Community mobilisation and empowerment need to be given a priority in wildlife management.

- eradication of all state draconian laws and institutions of wildlife management and restoration of ownership and custodianship of wildlife resources back to the local communities are important in wildlife conservation. This situation allows the local

communities to benefit from wildlife resources and hence encourage them to use wildlife resources sustainably.

In summary, it can be concluded that the pre-colonial traditional wildlife management systems in East Ngamiland District were sustainable. This was mainly because the people had control of wildlife resources from which they derived their livelihood and possessed local knowledge that enabled them to develop meaningful utilisation and management strategies in their respective tribal territories. This situation changed with the introduction of European trade and the subsequent colonisation of Botswana in 1885. Wildlife became commercialised and centralised in the hands of the colonial government. Local communities during this period could no longer have access or benefits from wildlife resources as they previously did. The result was the emergence of land use conflicts and the development of negative attitudes and perceptions towards wildlife conservation.

Botswana became independent in 1966 from the British colonial rule. However, the old British colonial wildlife management practices were adopted or partially modified by the post-colonial leaders in the country. The laws and policies continued to ignore the involvement of the local communities in decision-making on wildlife management, and this has resulted in the perpetuation of the negative attitudes and perceptions towards wildlife conservation. Land use conflicts continue to predominate in wildlife areas. All these changes in the traditional wildlife management systems from the pre-colonial to the present time appear to be responsible for the unsustainable wildlife resource utilisation and management in the country. However, integration of wildlife utilisation and other socio-economic activities seem to provide a way forward in sustainable wildlife use in Botswana.

7.4 **Recommendations**

The general objective of this study is to investigate the prospects for sustainable wildlife resource utilisation and management in Botswana with special reference to East Ngamiland District. From the findings, the following recommendations are suggested if this objective of sustainability is to be achieved:

1. **Community participation in the decision-making process on wildlife resource utilisation and management**

The local community participation in decision-making regarding wildlife resource utilisation and management is an important aspect for the sustainable use of wildlife resources. The findings indicate that local communities in East Ngamiland District do not have any major role in decision-making regarding wildlife management, nor do they get any significant benefits from wildlife resources in their surroundings. For sustainable utilisation of wildlife resources to be possible in the area, control and access to utilisation should be given to local communities. Government control and management of wildlife resources via DWNP is not satisfactory since it precludes community participation and engenders friction and conflict. Effective and quality wildlife management and monitoring requires the involvement of those living with the resources since they are better placed and are economically motivated to monitor the use of the resources on a daily basis. Decentralisation of wildlife resource management to the district and local community should also incorporate rights over land use. This has potential to enhance commitment and ownership of wildlife and land resources by the local people. Once rural communities have access and benefits from the wildlife resources, they might feel obliged to use them sustainably. The findings in this study demonstrate that the local communities in East Ngamiland District possess local knowledge on wildlife resource utilisation that can be fused together with the modern scientific knowledge to bring about sustainable wildlife utilisation and management in the area. The involvement of local communities in wildlife utilisation and management is assumed to be an important aspect of sustainable wildlife management.

2. **The need for community empowerment and mobilisation in wildlife areas**

Related to local community participation in wildlife resource utilisation and management is need for the provision of empowerment and mobilisation of local communities in East Ngamiland District. The local community empowerment and mobilisation has the potential of enabling local people to obtain benefits from the booming tourist industry in the area. The government and private sector, therefore, need to establish a training facility where the local people in wildlife areas can be trained and acquire the necessary skills

specifically aimed at the tourist industry to manage and run tourism based enterprises. The government should further provide an enabling environment for the enhancement of wildlife conservation NGOs' capacity by providing for direct links with donor agencies. This should help NGOs to provide services and rapport to local people. The findings have shown that government (e.g. DWNP) is not as well placed in terms of its systems of operation to facilitate community participation, as are NGOs. As a result, DWNP should play an advisory role to community based organisations and complementing NGO efforts when need arises. The government should use NGOs to reach out to the local people and any resource to be spent by government on local communities should be channeled through the NGOs. These NGOs should further help local communities identify local and international markets for their products.

3. **Land use conflict resolution mechanism**

The findings show that land use policies and institutions in Botswana are largely reactive to conflict situations instead of being proactive. In the light of all the land use conflicts amongst the various land users and stakeholders in East Ngamiland District, there is need for a proactive land use conflict resolution mechanism to be put in place. This can be in the form of an effective institution or policy to specifically deal with land use conflicts in wildlife areas. This initiative needs to be a collective responsibility of all the land users in wildlife areas especially local communities. Sustainable wildlife utilisation is possible when restrictions agreed upon by all parties are enforced. The local communities should where possible, administer the enforcement of laws. Laws and institutions become sustainable when they come from the local people and other stakeholders and are enforced by them. This reality can, therefore, be used as the basis for the development of a land use conflict resolution mechanism in wildlife areas.

To avert the problem of internal colonialism alluded to in the previous chapter and the ensuing conflicts, negative perceptions and apprehensions, the solution of the central government and private sector demands upon the resources of East Ngamiland must involve some form of political and economic decentralisation, with limits upon wealth extraction and a sharing of income between region and centre. Similar principles must be

applied within the District of East Ngamiland so that the District Councils and local government and private investors do not create new resource conflicts as a result of their own exploitation of communities and their resource bases. Political decentralisation should provide a basis for agreements and the development of more local control over the natural resource.

The question of region-centre relations must be explored in terms of policies. The pressures on natural resources management in the East Ngamiland District have come from insentive policies which have encouraged unsustainable use of natural resources. It is clear that more thorough analysis of policies must be undertaken before they are implemented so that negative environmental consequences are avoided.

Furthermore, the relations between DWNP, district government and communities are important, particularly with respect to control over and access to natural resources as indicated in sub-section One above. It is increasingly clear that natural resources tend to be managed more sustainably when local communities and individual households have clear and secure control over their resources and can determine how they should be used. Secure access to natural resources is thus a pre-requisite for investment by households and communities in land improvements. This will not only help ensure the sustainability of production, but in turn reduce conflicts over resources (Wood, 1993).

At an international level, the conflicts regarding the use of the Okavango water are adequately adressesed by the 1995 SADC Protocol. Almost all national water acts of the SADC countries are silent on the environmental considerations and interactions with other riparian states. As a result, national water acts need to define the criteria that will ensure the equitable use of water resources by all user groups on sustainable basis. There is also need for SADC states to engage in capacity building. This means that local experts who have a better appreciation of the socio-economic aspects peculiar to the region are important if the Okavango waters are to be used by riparian states with minimised conflicts.

4. Review of the Ministries of Agriculture (MOA), Commerce and Industry (MCI), Local Government, Lands and Housing and Lands (MLGL&H) and Mineral Resources and Water Affairs (MMR&WA). The Review should lead to the establishment of the Ministry of Natural Resources and Tourism

Related to land use conflict resolution, is a need to review the above mentioned ministries with the aim to harmonise all natural resource management institutions and policies. The findings indicate that natural resource institutions and policies are fragmented into various government ministries and department and they often conflict with each other during implementation. The results of these land use conflicts appear to have detrimental effects on wildlife populations in the country. This, therefore, calls for the institutional review of the Ministry of Agriculture that will make a clear distinction between agricultural production in the form of the arable and livestock production sectors and natural resources management in areas such as fisheries, forestry and veld products. The institutional review should consider the possibility of confining the Ministry of Agriculture to economically sustainable livestock and crop production only. The institutional review at the MCI should separate the Departments of Wildlife and National Parks and Tourism, at the MLGL&H, it needs to separate the National Conservation Strategy, Department of Lands and the Department of Town and Regional Planning. Finally at MMR&WA, it needs to separate the Department of Water Affairs from the rest of the ministry. These departments deal with natural resources that have policies which conflict with each other during implementation. As a result, the separation must lead to the creation of an integrating land use institution that will harmonise policies and programmes during implementation.

The institutional review as noted above should place all renewable natural resources such as veld products, fisheries, forestry, water, wildlife and institutions such as the NCS, Agricultural Resource Board, and the Departments of Wildlife and National Parks and Tourism under one ministry. The creation of this new ministry (e.g. Ministry of Natural Resources and Environment or Environmental Affairs, Land Utilisation and Tourism) should, therefore, be designed in such a way that it will harmonise and provide an effective co-ordination of all natural resource use institutions and policies in the country.

This study recognises the fact that there might be constraints (e.g. financially) in the establishment of a single ministry dealing with renewable resource utilisation and management as well as the review of the mentioned ministries. As a result, an alternative would be to place natural resource use institutions such as the Department of Wildlife and National Parks and the National Conservation Strategy in a senior ministry such as that of Finance and Development Planning. This ministry already controls the budget and provides the secretariat for other inter-ministerial committees, as this can make the two institutions have much power and influence in natural resource management. It can, therefore, ensure effective co-ordination between ministries with natural resource interests.

One way in which some of the conflicts between ministries may be addressed is through land use zoning. This could establish biodiversity reserves to maintain genetic resources, anthropological reserves to protect communities with particular local knowledge skills, as well as providing guidelines for natural resource ministries concerning the most appropriate land use in different parts of the district (Suitcliffe, 1992). While some zoning of land uses can be helpful, there are always problems of enforcement. This should only be undertaken around genetic, anthropological, and forest reserves, and in these cases, efforts should be made to ensure that there are benefits for the local communities. Elsewhere, land use zoning should not be enforced by government fiat but encouraged and negotiated through discussions supported by extension advice, land management demonstrations and policy and pricing measures (Wood, 1993). Hence the government should create a favourable policy environment to encourage land uses which are appropriate and sustainable, leaving final responsibility for natural resources and their use in the hands of the community.

5. **A Review of the current livestock production policies**

Livestock production policies in Botswana conflict with wildlife management policies especially the Buffalo Fence in Ngamiland District. It is recommended that there should be a review of all current livestock production policies (e.g. the Tribal Grazing Land

Policy and the Fencing Policy) since they do not consider wildlife as a viable land use option. The review should take into account social and environmental implications of agricultural policies in the country. As result, an appropriate Social Impact Assessment (SIA) and Environmental Impact Assessment (EIA) need to be carried out in all existing veterinary cordon fences such as the Buffalo Fence. It is further recommended that SIAs and EIAs should precede all future veterinary fences as mitigation measures. Due consideration can be given to remove or realign the Northern Buffalo Fence after a thorough study of the impact has been carried out.

6. **Establishment of National Parks Board**

It is suggested that there be an establishment of a National Parks Board to facilitate effective wildlife utilisation and management in the country. The National Parks Board should have sub-boards (that is, for each game park) to determine the utilisation and management of natural resources (e.g. wildlife and veld products) in a particular protected area. Membership of the boards should comprise the necessary stakeholders in the wildlife industry such as the Department of Wildlife and National Parks, the Department of Tourism, the local communities and the private sector.

The idea of a National Parks Board presupposes that all protected areas need management plans that recognise the importance of integrating tourism, wildlife conservation and community development of the local people. Management plans of protected areas in Botswana should, therefore, be designed such that all stakeholders are involved in wildlife utilisation and management in protected areas.

7. **Proposed major development programmes and policies should have Social Impact Assessment (SIA) and Environmental Impact Assessment (EIA) components**

The findings show that development programmes and policies in wildlife areas are mostly carried out without any SIAs and EIAs. This is to say comprehensive SIAs and EIAs must be conducted for all existing Wildlife Management Areas and Controlled Hunting Areas in Ngamiland District. This has the likelihood to mitigate some land use conflicts in the area.

8. **Control of settlement expansion in wildlife areas**

The rights of local communities living in wildlife management areas must be recognised because WMAs are a part of their patrimonial land. It is also recommended that settlement expansion in these areas need to be part of the zoning exercise already recommended. This suggests that government should recognise the already existing settlements in wildlife areas and find ways of making them more viable to new developments such as tourism in the area. This also means that settlements in wildlife areas need to be provided with the necessary social facilities such as clean water supply, communication (e.g. good roads and telephones), health facilities (e.g. clinics) and shopping facilities (e.g. grocery and clothing shops), rather than being forced to relocate in less favourable environments.

9. **Review of hunting licences and the need to promote non-consumptive wildlife use**

There is a wide abuse of hunting licences in East Ngamiland District, existing laws make provision for people to assist others in hunting and or shooting animals. This provision make it possible for hunting licences to be abused and also cause conflicts amongst hunters in wildlife areas (e.g. commercial and subsistence hunters). As a result, the laws pertaining to actual hunting licences need to be reviewed. This can help solve the problem of hunters shooting more than what they are legally permitted to hunt. The existing law is also difficult to regulate or enforce. This situation suggests that more control may be placed on hunters by introducing a booking system for recreational hunters and by setting up trained mobile wildlife patrols during the hunting season in wildlife areas. The transfer of licences may also be stopped, and the use of vehicles for transporting hunters and game may be banned in selected areas. The hunter must be in possession of a valid licence at the time of hunting or shooting any animal. The hunter must also register in writing upon shooting the animal and clearly endorse the said licence.

Since the findings of this study indicate that some wildlife species in East Ngamiland District are on a state of decline, a selective ban on hunting need to be placed on some

endangered species or those that have experienced large declines in their populations e.g. the buffalo, wildebeest, hartebeest, lions e.t.c. Semi-arid environments tend to support non-consumptive wildlife utilisation and management in the form of photographic tourism in that it appears to be less destructive to wildlife populations than the consumptive approach (e.g. safari hunting). This is the trend that Namibia is adopting at present. Botswana, which has an almost similar environment and experiencing declining wildlife populations should consider adopting a non-consumptive approach to wildlife utilisation to enable the diminishing wildlife species a chance to regenerate.

10. **The formal and non-formal school curriculum should have wildlife conservation programmes**

Wildlife conservation appears to be neglected in the formal and non-formal school curriculum not only in East Ngamiland District but the whole country. This, therefore, suggests that wildlife conservation programmes need to be part of the formal and non-formal school curriculum. For wildlife conservation programmes to be effective in the curriculum, they need to be made part of the environmental education process. Molebatsi and Toteng (1998:6) state that "...environmental education is, among other things, education which seeks to inculcate positive attitudes and instill discipline and encourage responsibility in people's interaction with the environment. Environmental education should transmit knowledge, skills, and values particularly to the younger generation of the society. It should enable people to understand the environment as a resource, to utilise it to meet their needs and conserve it in order to ensure their continued survival". In the formal school curriculum, there is need for environmental education to adopt an interdisciplinary approach in implementation across all subjects. However, efforts should be made to introduce environmental education as a core and compulsory subject in Botswana's senior secondary schools, colleges of education and at the University of Botswana's Faculty of Education. This will enable all learners to get exposed to environmental issues in their areas especially on wildlife conservation matters. In the non-formal school curriculum, especially in rural areas, the *Kgotla* should be empowered for it to be one of the forums for the dissemination of wildlife conservation information especially to adults and out of school youths.

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APPENDIX 1

QUESTIONNAIRE FOR THE SAMPLED HOUSEHOLD HEADS/SPOUSE OR THEIR REPRESENTATIVES

Background Information **Code**

1. What is your ethnic background?

Mosarwa	1
Mosubiya	2
Moyei	3
Other (Specify)_____	4

BENEFITS, ROLE, ATTITUDES AND PERCEPTIONS OF LOCAL COMMUNITIES TOWARDS WILDLIFE CONSERVATION AND TOURISM

Benefits local people get from wildlife resources

2.Does your household benefit from wildlife resources in this area?

Yes	1
No	2

If yes, list the benefits:

(a) Improves income this household	1
(b) Creates jobs/employment to members of this household	2
(c) Makes provision for social services e.g. water e.t.c.	3
(d) Other (Specify)_____	4

3. Who gets most benefits from wildlife resources in your village surroundings?

(a) Government	1
(b) Safari hunters and tourists	2
(c) Subsistence hunters	3
(d) People in this village	4
(e) Other (Specify)_____	5

Explain you answer_____

4.What is your view about the hunting quota given to you by the Department of Wildlife and National Parks?

(a) It is too small	1
(b) It is too large	2
(c) It is satisfactory	3
(d) It is not necessary	4
(e) Other (Specify)_____	5

Explain your answer_____

Role of local communities in wildlife management

5. Are you aware of government policies and laws on wildlife conservation and management?

Yes	1

No 2

6. Does government involve you in participation in the formulation of wildlife laws and policy writing?
Yes 1
No 2
Explain_____

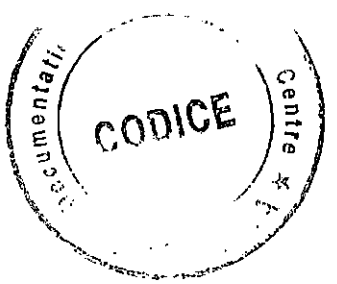
7. Are you aware of government policy of creating Wildlife Management Areas (WMAs) and Controlled Hunting Areas (CHAs)?
Yes 1
No 2
If yes, what have these WMAs and CHAs done for you?
(a) Made us have access to wildlife resources 1
(b) Made us aware of wildlife conservation 2
(c) They have not done anything for us 3
(d) Other (Specify)_____ 4

8. To what extent have government policies and laws helped in community empowerment in wildlife management in your area?
(a) Community empowerment is very high 1
(b) Community empowerment is very low 2
(c) Community empowerment is average 3
(d) They have not provided community empowerment 4
(e) Other (Specify)_____ 5

Explain your answer (explain specifically the type of empowerment you are referring to)_____

9. Do you think as individuals, you and your household members have the responsibility to participate in wildlife conservation and management?
Yes 1
No 2
If yes, why?
(a) It promotes tourism that brings income to this household 1
(b) To promote wildlife conservation for future use 2
(c) Wildlife provides meat, jobs, income e.t.c. to the household 3
(d) Other (Specify)_____ 4
Explain your answer

10. Do you think the other people of this village must participate in wildlife conservation and management in their surrounding environment?
Yes 1
No 2
If yes, Why?
(a) It promotes tourism that brings income to the community 1
(b) To promote wildlife conservation for future use 2



(c) Wildlife provides jobs, income, meat to the community 3
(d) Other (Specify)_____ 4
Explain your opinion_____

Attitude towards Wildlife Conservation

11. Is it important to have wildlife in the grasslands and woodlands around your village?
Yes 1
No 2
Explain your opinion_____

12. Do you think wildlife conservation is necessary and needs participation by people of your village?
Yes 1
No 2
Explain your opinion_____

Attitudes towards tourism

13. Does tourism has any meaning to you?
Yes 1
No 2
Explain your opinion_____

14. Does tourism have any benefits to your households?
Yes 1
No 2
If yes, list the benefits:
(a) Improved income 1
(b) Improved infrastructure 2
(c) Better water supply and other social services 3
(d) Jobs or employment for the youth 4
(e) Other(specify)_____ 5

15. Does tourism have any negative impacts in your area?
Yes 1
No 2
Explain your answer_____

NATURE AND EXTENT OF LAND USE CONFLICTS IN WILDLIFE MANAGEMENT AREAS

Conflict with Protected Areas

16. Do these national parks and game reserves bring any benefits to you and your community?
Yes 1
No 2
If yes, list the benefits:

(a) Improved income 1
(b) Improved infrastructure 2
(c) Better water supply and other social services 3
(d) Jobs or employment for the youth 4
(e) Other (Specify)_____ 5

17. Do these national parks and game reserves conflict in any way with other human activities of people in this village?
Yes 1
No 2
If yes, which human activities and how?
(a) Prohibits hunting and gathering in our lands 1
(b) Took away our crop and livestock lands 2
(c) Other (Specify)_____ 3

Conflict with livestock farming

18. Does your family or household own livestock?
Yes 1
No (Skip to Q19) 2

19. Did you have any of your livestock killed or injured by wild animals in the last 1-3 years?
Yes (go to Table 1) 1
No (skip to 20) 2

Table 1

Type of Livestock Killed/Injured (**please tick**)	Number of Livestock Killed /Injured	Wild animal that Killed /Injured Livestock
Cattle		
Goats		
Sheep		
Donkeys		
Other		

20. Did you report the matter to the Department of Wildlife and National Parks (DWNP)?
Yes 1
No (skip to Q22) 2
If yes, were you:
(a) Compensated and happy 1
(b) Compensated and not happy 2
(c) Not compensated 3
Explain_____

Veterinary cordon Fences

21. Are you aware of the veterinary cordon fences like the Buffalo Fence?

Yes 1
No 2

If yes, of what use are these cordon fences?

22. Do these fences have any detrimental effects on wildlife and the socio-economic activities of the people in the area?

Yes 1
No 2

If Yes, what are these negative effects?

(a) Blocks wildlife migration routes thus leads death 1
(b) Discourages tourists economic activities 2
(c) Other (Specify)_____ 3

23. How do you think some of these negative effects can be overcome?

Removal of Fence 1
Re-examine the Fence 2
Fence appropriate 3
Other (Specify)_____ 4

Conflict with crop farming

24. Has your household ploughed in the:

last 1 year 1
last 2 years 2
last 3 years 3
Never ploughed (Skip to Q26) 4

(b) What types of crops do you grow?_____

25. Did you have any of your crops damaged by wild animals in the last 2 years!

Yes 1
No 2

If yes, which wild animal(s) cause the damage?_____

26. Did you report the damage to the Department of Wildlife and National Parks?

Yes 1
No 2

If yes which wild animal(s) caused the damage?_____

If yes, were you:

(a) compensated and happy 1
(b) compensated and not happy 2
(c) not compensated 3

Explain_____

27. What should be done to reduce conflict between crop production and wildlife conservation?_____

28. Name other land users who cause conflict with your socio-economic activities_____
_____

29. What conflicts are they?_____

Conflict with other land users

30. In your opinion, which one of the following can be most profitable to do in your area?

(a) Wildlife conservation and tourism 1
(b) Crop production 2
(c) Livestock farming 3
(d) Other (Specify)_____ 4

Explain your opinion

PERFORMANCE OF LOCAL COMMUNITY-BASED AND CONTROLLED WILDLIFE TOURIST INDUSTRY

31. How useful are wildlife community projects or organisations to you or your village (i.e. what benefits have these brought to your people)?

(a) Provides income to the society 1
(b) Creates jobs/employment for the community 2
(c) Educate us on the relevance of wildlife conservation 3
(d) They only benefit outsiders and a few in our community 4
(e) Other (Specify)_____ 5

32. Do you think wildlife community projects should be expanded or abolished?

Expanded Yes 1 No 2
Abolished Yes 1 No 2

Explain your view

33. Is it possible for villages like yours to have self-supporting and controlled tourism projects to obtain benefits from wildlife in your surroundings?

Yes 1
No 2

Explain your view_____

34. What wildlife community-based projects do you think your village can or should have to generate employment and income from tourism?

(a) Curio gift shops 1
(b) Community owned camping sites 2
(c) Community owned tour operating companies 3
(d) Other (Specify)_____ 4

PROSPECTS FOR AN INTEGRATED WILDLIFE CONSERVATION AND MANAGEMENT

35. Should the people of East Ngamiland District be allowed to keep livestock, e.g. cattle like other Tswana groups in the country?

Yes 1
No 2

Explain, why _____

36. Do you think it is possible for Ngamiland District to have tourism, livestock and wildlife management being done successfully (i.e. without conflict) in the same area?

Yes 1
No 2

Explain your answer_____

Comments_____
_____