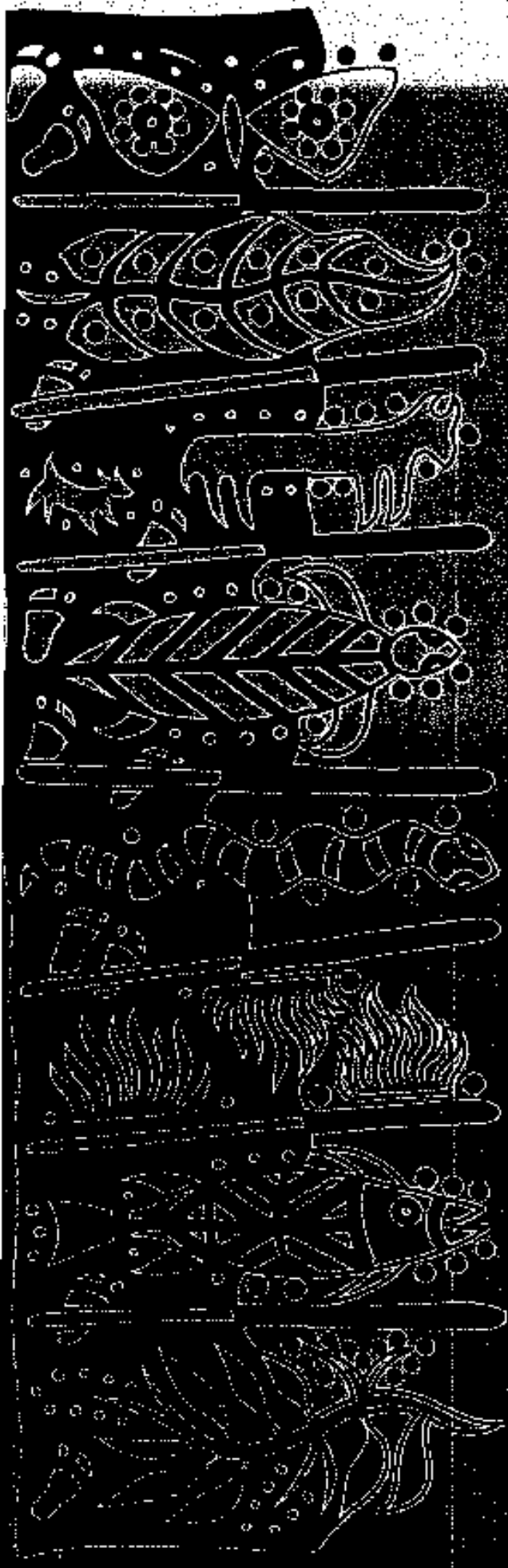
Evaluating Eden Series No.6



PROMOTING PARTNERSHIPS:

Managing wildlife resources in Central and West Africa

Jo Abbot, Faith G. Ananze, Nico Barning, Phil Burnham, Emmanuel de Merode, Andrew Dunn, Emmanuel Fuchi, Elie Hakizumwami, Ced Hesse, Robert Mwinyihali, Massalatchi Mahaman Sani, David Thomas, Pippa Trench and Richard Tshombe

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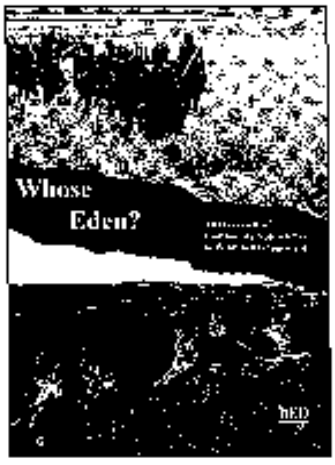

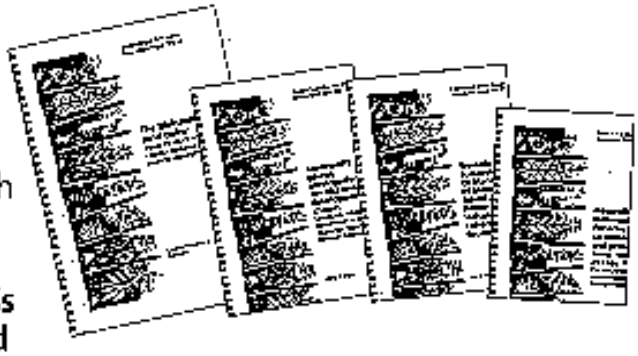

Evaluating Eden is a three year collaborative research project which explores the myths and realities surrounding community-based wildlife management. The project is coordinated by the Biodiversity and Livelihoods Group at IIED, working with project partners world-wide. Evaluating Eden Discussion Papers document experiences of community wildlife management at both the country and local levels. The Evaluating Eden report series draws on these case studies to provide analyses of community-based wildlife management from different regions around the world.

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Disclaimer. Each chapter reflects the reviews of the authors and does not necessarily reflect the individual or collective views of IIED or any supporting organisations.

IIED (2000). Promoting partnerships: managing wildlife resources in Central and West Africa. Evaluating Eden Series No. 4. International Institute for Environment and Development, London.

Executive summary

As part of a global review of community wildlife management, this volume offers insights into the collaborative management of wildlife resources in Central and West Africa. As a region, Central and West Africa is best defined in terms of its diversity: in language, livelihood, geography, colonial history and ecology. By examining community wildlife initiatives from a range of different contexts in the region, this study explores what can be learnt about the conditions for community wildlife management, particularly the factors that are driving or constraining its spread.

Following regional reviews on the scope and extent of community wildlife management in Central and West Africa, a case-study approach was used to focus on specific countries and community wildlife initiatives in the region. One or more initiatives were chosen that promote the collaborative management of wildlife resources in each of four countries in the region:

- Kilum-Ijim Forest, Cameroon (Chapter 3);
- Okapi Wildlife Reserve and Garamba National Park, the Democratic Republic of Congo (DRC, the former Zaire) (Chapter 4);
- Transition zone to the 'W' Region Biosphere Reserve, Niger (Chapter 5); and
- Gashaka Gumti National Park, Nigeria (Chapter 6).

As four of the largest countries in the region, the countries cover a range of environmental zones, from the Sahel through savanna woodland to tropical moist forest, and represent some of the great ecological diversity of the region. The case studies were also selected by developing a typology of community wildlife initiatives along four axes of different forms of: initiation, participation, decentralisation and integrated conservation and development approach. To promote comparative analysis of the case studies a framework was developed for analysing the forces that constrain or enable the spread of more collaborative forms of wildlife management. The forces were articulated in terms of the political, legal, institutional, ecological, social and economic incentives and disincentives for community wildlife management.

Each of the case studies is authored by field practitioners with long-term contact with the country and initiative under study. The case studies are complemented by a review of published and grey literature of community wildlife initiatives in Central and West Africa more generally (Chapter 2).

This volume builds on discussions that took place at a workshop in January 1999 which brought together most of the authors of the case studies and literature review. It sought to understand the conditions for enabling the spread of more collaborative forms of managing wildlife resources.

Key findings

The case studies highlight the many innovative forms and diverse contexts in which collaborative management of wildlife resources in Central and West Africa is taking place. The diversity in approaches perhaps reflects the diversity of the region and highlights the need to draw on local opportunities as much as global models for managing wildlife resources.

The case studies demonstrate the numerous incentives for developing partnerships for managing wildlife resources that exist, but also the many constraints towards implementing more collaborative approaches. The title of this publication, *Promoting Partnerships*, reflects the importance of bringing together competing interest groups, and negotiating between them, to move towards collaborative management of wildlife resources. This shift in focus, to broaden from the community to a range of local and non-local actors, has implications for the implementation and skills-base of those implementing these approaches.

- *Community wildlife management is better understood as collaborative management of wildlife resources*

A range of both plant and animal resources contributes to local livelihoods in the region and thus the term wildlife resources has been chosen to encompass wildlife and the habitats on which it depends.

Our studies suggest that the divide between the community and external actors is blurring and there are few examples of communities managing wildlife resources in isolation from a range of other actors. This means that negotiation between different institutions with different roles and agendas in resource management becomes key. Dealing with different institutional agendas is not easy: it requires time, high levels of trust and a flexible approach. Emphasis must be placed on ensuring that those in the weakest positions, in terms of access to information and resources, have an equal footing in the negotiation process and are not marginalised by more powerful groups.

- *The community is better understood as a number of local interest groups amongst which management must be negotiated*

Community is a problematic term. Many 'communities' in Central and West Africa defy definitions based on spatial criteria or homogeneous social units. People in Central and West Africa are often on the move, either in search of economic opportunities, as part of seasonal migration patterns or as the result of conflict. 'Community' is better understood as a number of common interest groups amongst which management of wildlife resources must be negotiated. This definition promotes a more inclusive approach to identifying local resource users, emphasises the often competing nature of different interest groups and initiates a process of negotiation to resource access and management. Such an approach ensures that resource users who are not well linked into decision-making structures, such as women or seasonal harvesters, are able to contribute to resource management decisions.

- *In some contexts in Central and West Africa, traditional administrations can play an important role, as a legitimate community group with the capacity to manage wildlife resources*

Three of the country case studies show the important role that traditional administrations can play in managing wildlife. Often, these institutions have both an historical mandate and the capacity to establish and maintain harvesting rules. It is important, however, that the traditional administration is seen as an important local interest group that can contribute substantially to resource management, and does not replace or usurp other interest groups. This is because these institutions are rarely democratic or gender balanced and where they have exclusive control can reinforce local power

structures. However, where there is strong local and national respect (and/or a mandate) for these administrations, then it can be important to harness their powers, and sustainable resource management can be undermined when they are excluded.

- *Meeting the costs of the collaborative management of wildlife resources.*

The costs of collaborative management can be met either locally (from the economic value of the resource) or globally (from the international community's willingness-to-pay for Central and West African wildlife resources). Conservation through the generation of local revenues from wildlife resources is more sustainable as it does not depend on external support. However, it requires careful management to ensure that it contributes to conservation management as well as economic growth. Where wildlife resources are of insufficient local value, external support can help create the conditions under which conservation management can occur. In both cases, the focus of collaborative management is ensuring that the financial revenues are invested in local stakeholders for the conservation of wildlife resources.

- *An enabling policy environment facilitates collaborative management of wildlife resources, but must be tracked and driven by institutional reform.*

Enabling policy provides a framework within which collaborative management of wildlife resources can develop. New policy, and that developed with heavy influence from external agencies, rarely meets all of its objectives but provides a starting point. Policy development should be seen as a dynamic, on-going process.

For policy to work, two conditions must be met. First, people at all levels from implementing ministries to resource harvesters must be aware of new policy and its implications for them. Second, people at all levels need to have the appropriate skills to implement policy. Often, new policy requires new skills or ways of working and institutional reform must both track and feed into policy reform. The de jure and de facto decentralisation processes that are occurring throughout Central and West Africa provide new opportunities to develop new policy and institutional arrangements for the collaborative management of wildlife resources. However, sufficient resources also need to be invested in developing the capacity of implementers to work in new ways, which are often different to the environment in which they were trained.

- *Many of the opportunities for realising the value of natural resources are local, and approaches that support local livelihoods can bring important benefits to users of wildlife resources. International enterprises, such as tourism, may have more limited potential in the region.*

Opportunities for realising the value of wildlife resources, for example through tourism and sport hunting, may have only limited potential in Central and West Africa. There are specific contexts, high in unique biodiversity or cultural attractions, where tourism can generate local revenues. But instability and poor infrastructure suggest that these enterprises are unlikely to add value to local economies to the same extent as can occur in other regions, such as southern or eastern Africa or south Asia.

Interventions that support local livelihoods through enhancing subsistence technologies and developing income generating opportunities appear to offer important ways of enabling local people to realise the benefits of wildlife resources. Furthermore,

livelihood activities can be targeted to ensure that those whose livelihoods depend heavily on natural resources, such as women, poor people and migrants, can benefit from improved management.

Recommendations

Our study makes the following recommendations for better developing the collaborative management of wildlife resources in Central and West Africa.

1. *Maintaining and monitoring objectives.* The overall objective of collaborative management is the conservation of wildlife resources through the development of incentives for stakeholders to sustainably manage them. Implementing agencies should maintain this clear remit and be evaluated according to the conservation and livelihood outcomes of collaborative management. Improved monitoring of community wildlife initiatives is a prerequisite for the outcomes of collaborative approaches to be assessed.

2. *Legislative and policy framework:* National and local policy must be reviewed to promote an enabling environment for the collaborative management of wildlife resources. The aim of policy reform should be to provide a framework which recognises local wildlife managers and their ability to adapt legislation to complex and dynamic local circumstances. Such a framework should be seen as a first step in building innovative alliances which form the backbone of collaborative management. A failing of past processes has been the lack of political commitment at the national level to any reforms. To address this, policy reform must adopt a principle of subsidiarity whereby as much legislative power is devolved to wildlife managers as can be addressed at the local level.

3. *Communicating policy:* The collaborative nature of managing wildlife resources has implications for who needs to know about policy. New policy must be properly communicated vertically and horizontally to a broad range of stakeholders, from farmers and traditional leaders to extension officers and ministers – both within and outside natural resource departments. Resources need to be allocated to ensure that the necessary workshops, roundtables and translation take place so that all interest groups can help develop policy and understand the implications of it for them.

4. *From practice to policy:* Policy development must be seen as a dynamic process and an effective policy environment is best developed through reviewing practice. There is extensive and long-term field experience in diverse contexts in the region from which to draw but new ways of learning about, and sharing, the impacts of policies that support the collaborative management of wildlife resources must be found. In particular, methods of promoting feedback between policy makers and practitioners should be encouraged. Given the instability of some countries in the region, the generally poor communication and the diversity of international languages (French, English, Spanish and Portuguese) innovative forms of information sharing should be developed. These should help policy makers to learn about the potential and pitfalls of policy development, and practitioners to learn how to interpret and implement policy at the local level. Multi-stakeholder fora are needed but mechanisms for initiating and maintaining dialogue between different groups are in their infancy and new inclusive processes need to be found at both national and local level.

5. *Developing capacity:* To achieve the collaborative management of wildlife resources, capacity must be developed within implementing institutions (e.g. civil, wildlife, traditional and community administrations) to facilitate negotiations between different, and often competing, interest groups. We suggest that capacity development must occur in two ways. First, developing capacity for negotiation, ensuring that a level playing field exists amongst competing interest groups. This means supporting the weakest interest groups, often local or community-based, and ensuring they have access to resources and up-to-date information to negotiate from a position of strength. Second, collaborative management of wildlife resources is a long term endeavour, and skills and systems for building and maintaining relationships, including trust, transparency, accountability and conflict resolution must be developed within and between interest groups.

6. *Reinforcing not usurping institutional roles:* A large number of institutions are already involved in the management of wildlife resources. Any initiative to support or enhance this management should start with an assessment of these institutions and build on existing structures, such as traditional administrations, local user groups, and commercial interests. A clear mandate and objectives for establishing novel groups must first be negotiated with existing institutions and complementary modus operandi developed. Where possible, alliances of local users and managers of wildlife resources should be supported to help shift the balance of power towards those with most to gain from secure and sustainable management of wildlife resources.

Contents

Introduction

Jo Abbot[1]

1.1 Regional aims

The move towards more inclusive forms of biodiversity management has had its regional pioneers, such as community-based wildlife management in southern Africa and joint forest management in South Asia. But what do these more collaborative forms of biodiversity management look like elsewhere in the world? As part of a global review of community wildlife management under the Evaluating Eden project at IIED[2], this volume offers insights into the collaborative management of wildlife resources in Central and West Africa.

As a region, Central and West Africa is best defined in terms of its diversity: in language, livelihood, geography, colonial history and ecology (see Chapter 2[3]). How does this diversity affect the processes by which community wildlife management has been implemented in this part of the world? By examining community wildlife initiatives from a range of different contexts in the region, this study explores what can be learnt about the conditions for community wildlife management, particularly the factors that are driving or constraining its spread.

1.2 Methods

1.2.1 Phase one

A first phase of the study involved regional reviews of the scope and extent of community wildlife management initiatives in Central and West Africa (Hakizumwami 1998, Zeba 1998). The reviews were conducted in conjunction with the regional offices of the World Conservation Union (IUCN) in Central Africa and West Africa. Primary and secondary data were generated through site visits, surveys and analysis of project reports and policy documents. This enabled the scope of community wildlife initiatives in the region to be compiled and recommendations for case studies for the second phase to be made.

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1 International Institute for Environment and Development, London, UK.

2 The Evaluating Eden Project emerged from an earlier review of key issues in community wildlife management which resulted in the Whose Eden? report (IIED 1994). Whose Eden? focused mainly, although not exclusively, on experience in southern Africa, and was based on a review of the literature. Evaluating Eden was initiated to take forward the debate on community wildlife management, by widening the geographical focus and looking beyond the literature.

3 Henceforth, all chapter numbers refer to chapters in this publication.

A key finding from the regional reviews was the lack of information sharing and analysis on community wildlife initiatives in the region, particularly as management at the local level is often undocumented. The West African regional review highlights the lack of a regional champion for community wildlife issues (Zeba, 1998). The Central African review notes that, unlike other regions in Africa which are better networked, there have been few attempts to exchange information within the region (Hakizumwami, 1998).

1.2.2 Phase two

The second phase attempted to address these issues by analysing and documenting the progress of a number of community wildlife management initiatives in the region and by bringing together practitioners to discuss their findings in a regional forum. To this end, a workshop took place in January 1999 on community wildlife management in Central and West Africa, which was attended by ten practitioners from Africa, together with a reference group who reviewed the research progress[4]. An extended version of the discussions held during this event is found in the concluding chapter (Chapter 7).

The second phase of the Evaluating Eden project in Central and West Africa used a case-study approach to focus on specific countries and community wildlife initiatives in the region. One or more initiatives were chosen that promote the collaborative management of wildlife resources in each of four countries in the region: Cameroon, the Democratic Republic of Congo (DRC, the former Zaire), Niger and Nigeria. As four of the largest countries in the region, the countries cover a range of environmental zones, from the Sahel through savanna woodland to tropical moist forest, and represent some of the great ecological diversity of the region (Table 1.1).

Additionally, the case studies were selected by developing a typology of community wildlife initiatives along the following four axes:[5]

- *initiation*: community wildlife initiatives can be classified according to the role of outsiders in their initiation as *designed*, the result of planning and implementation orchestrated from the outside or *discovered*, based on community resource management systems that are already in place (Seymour, 1994). Elements of both design and discovery can co-exist within community wildlife initiatives.
- *participation*: initiatives can be assessed according to a framework developed by Paul (1987) which breaks participation into four types, which can co-exist simultaneously: *information sharing, consultation, decision-making* and *initiating action*. As with many typologies of participation, this framework assumes an externally driven project with differing levels of responsibility by insiders (community members) and outsiders (project/government staff) (Guijt, 1998). Community wildlife initiatives that have developed without such external support have been classified as *self-mobilised*.
- *decentralisation*, where initiatives capitalise on decentralisation opportunities, including *delegation* whereby functions are transferred to lower administrative levels, *devolution* whereby authority, responsibility and financial control is

4 A list of the workshop participants can be found in Annex 1.

5 This typology has been developed from Zeba (1998)'s four categories of methods used in designing community wildlife management projects: technocratic, ICDP, participatory and decentralised.

Table 1.1 Classification of the case studies selected for Phase 2 of Evaluating Eden in Central and West Africa and the major activity focus

Country	Initiative	Initiation (Seymour, 1994)	Participation (Paul, 1987)	Decentral-isation (de Merode, 1999)	Integrated conservation and development approach (Abbot et al, 1999)
Cameroon	Kilum-Ijim Forest	Design/ discovery	Consultation/ initiating action	Devolution	Alternatives and enhance-ment
Democratic Republic of Congo	Okapi Wildlife Reserve	Design	Consultation	Delegation	N/a
Democratic Republic of Congo	Garamba National Park	Discovery	Self mobilisa-tion	*de facto*	N/a
Niger	Transition zone to the 'W' Region Biosphere Reserve	Design	Consultation/ initiating action	Devolution	Alternatives and enhance-ment
Nigeria	Gashaka Gumti National Park	Design/ discovery	Consultation/ decision-mak-ing	Delegation	Compensation

transferred from central government to lower levels of social organisation and *de facto* whereby local management systems replace dysfunctional state systems (de Merode 1999, Chapter 4).

- *integrated conservation and development:* where a development package is linked to the conservation of natural resources. This can be in the form of *compensation* where development is offered to offset resource restrictions; *alternatives* whereby a development package aims to reduce pressure on natural resources by increasing the value of livelihoods derived from land outside the site valued for biodiversity; and *enhancement* which seeks to increase the value of the natural resources and thus provide an economic incentive for conservation (Abbot et al, 1999).

The case-studies have been classified along the four axes of different forms of initiation, participation, decentralisation and integrated conservation and development approach (Table 1.1). In interpreting Table 1.1, it is helpful to review Guijt's (1998) cautions re typologies of participation, many of which are equally relevant for the four axes used in this classification of community wildlife initiatives.

First, by their nature, classifications present a snapshot of initiatives yet projects are dynamic and have different phases of activity, depending on the period of the project, the resources available, the policy environment etc. Second, classifications can be intrepreted as hierarchies as if there is an 'ideal' form of activity for which to strive. The classifications presented above do not represent a hierarchy, recognising that a range of political, historic, institutional, legal, ecological and socio-economic factors will influence what is a 'feasible intensity' of activity along any of the axes

(Guijt & Kaul Shah, 1998, see below). Third, typologies ignore the diversity of activities being undertaken in an initiative: most of the case studies include activities that could fit into almost all the categories of classification. Thus, Table 1.1 has been compiled on the basis of the major activities. Finally, the utility of classifications stems not from its prescriptive use, but rather to build an understanding of why a particular range of activities has been chosen (sensu Guijt, 1998).

Understanding these provisos, Table 1.1 enables the foci and approaches of the case studies to be compared easily, while the chapters that follow (Chapters 3 – 6) explain in detail the rationale for the activities that are being undertaken at each site.

Each of the case studies is authored by field practitioners with long-term contact with the country and initiative under study. This enables the rationale for management decisions to be articulated and insights developed into how the national context influences practice at the local level. Furthermore, it promotes analysis of how incentives and disincentives differ for different stakeholder groups and trade-offs that occur in implementing collaborative forms of wildlife management.

The country case studies are complemented by a review of published and grey literature of community wildlife initiatives in Central and West Africa more generally. The review, which includes both French and English sources[6], analyses information gathered during the regional reviews completed in the first phase, describes the different forms of community wildlife management, and identifies the trends and gaps in what has been written about the collaborative management of wildlife resources in the region.

1.3 Framework of incentives and disincentives

To promote comparative analysis of the case studies and literature review, a framework was developed for analysing the forces that constrain or enable the spread of more collaborative forms of wildlife management. The forces were articulated in terms of the political, legal, institutional, ecological, social and economic incentives and disincentives for community wildlife management. This diversity of contexts reflects an evolving understanding of wildlife management as a multi-sectoral discipline. Clearly there is overlap between these incentives: the ecological context correlates closely with the economic value of wildlife resources and this value determines the interest and competition for benefits from wildlife resources among the various different stakeholders. However, the aim of the framework was not to be rigid about how the boundaries of the categories of incentives and disincentives were interpreted. Instead, it was designed to promote a standardised and in-depth analysis of community wildlife initiatives in the region, and the national and local contexts that support or constrain their spread.

The framework, or an adapted version of it, was applied at each of the five initiatives in the four countries in the region. A summary of the incentives and disincentives for

[6] Literature on wildlife management in Central and West Africa is written in, amongst others, the English, French, Spanish and Portuguese languages. However, due to linguistic constraints and recognising the dominance of these two languages in the region, only the French and English sources were reviewed in this volume.

community wildlife management at each site (Table 1.2) shows the marked differences in, inter alia, political stability, legal instruments and institutions supporting community wildlife management, ecology, population density and area of intervention. The chapters that follow examine in more detail the different forces that are enabling or stifling community wildlife management at each site and the findings are summarised in the concluding chapter.

1.4 Structure of the publication

Chapter 2 presents the findings from the literature review, describing the different forms that community wildlife management takes in Central and West Africa. The chapter argues that the success or failure of community wildlife management, in terms of both community development and wildlife management, is driven by the balance of power between different stakeholders and their interests in the resource in question.

Chapter 3 focuses on Cameroon and explores the implementation of the new Forestry Law at the Kilum-Ijim Forest. It explores the balance between novel and traditional institutions in developing partnerships for managing wildlife resources.

Chapter 4 contrasts two sites in the Democratic Republic of Congo (DRC), the Okapi Wildlife Reserve and Garamba National Park, and their experiences with designed and discovered community conservation initiatives. In the politically unstable conditions of DRC, the case study explores the different interests of traditional, civil, wildlife and military administrations in managing wildlife resources.

Chapter 5 comes from Niger and explores the PURNKO project that is being implemented in the transition zone to the 'W' region Biosphere Reserve. Originally conceived as a conservation project, the initiative has shifted its focus to address issues of sustainable rural development in the high population density, low wildlife abundance and diversity areas of the Sahel. It describes how the project has capitalised on the political changes towards decentralisation in Niger.

Chapter 6 explores the conflicting demands for wildlife resources amongst hunters, farmers and herders around Gashaka Gumti National Park, Nigeria. It explores the impacts of the strict protective legislation on efforts to mediate resource access amongst these different groups.

Chapter 7 highlights the key findings from the four country case studies and the literature review. It builds on discussions that took place at a workshop in January 1999 in which the case studies were compared. It concludes with recommendations, at the policy and institutional levels, for enabling the spread of more collaborative forms of managing wildlife resources.

Table 1.2. A summary of the incentives and disincentives for community wildlife management at the Central and West Africa case study sites.

Cameroon	Democratic Republic of Congo		Niger	Nigeria
Kilum-Ijim Forest Project (200 km²)	Garamba National Park and hunting reserves (12 000 km²)	Okapi Wildlife Reserve (14 000 km²)	Transition zone to the W region Biosphere Reserve (840 km²)	Gashaka Gumti National Park (6600 km²)
Political context				
External agencies have encouraged the development of policies that involve local communities in natural resource management. Progress towards greater local democracy has been made.	A conflict region (zone de combat) since 1991 and refugee affected area. Remote from political centres. Borders Sudan.	Afflicted by conflict since 1996. Crossed by the Trans African Highway, attracting some development, but also intensive conflict.	Process of decentralisation in progress; local elections will facilitate the establishment of local decision-making bodies.	Traditional authority retains a high degree of respect and influence and is keen to support the national park. Community wildlife management is not a wholly accepted component of national park management
Legal context				
Enabling legislation, notably the 1994 Forestry Law with provision for demarcating community forests, together with Procedures Manual that outlines necessary process for creating community forests.	Gazetted in 1938 as a national park, surrounded by hunting reserves that support local populations. Traditional law recognised in the villages.	Recently gazetted as a Wildlife Reserve. Natural resource use permitted. Emphasis is placed on the protection of the resource base of the Bambuti and Bantu residents.	The giraffe zone is classified as a transition zone of the 'W' region Biosphere Reserve, although the legal status is in the process of being defined.	National Park legislation, Decree 36, contains no provision for community wildlife management, the presence of enclaves or any human use of national parks. This is under review.
Institutional context				
Strong traditional authority: fons (chiefs) assisted by advisory bodies, the KwiFon, with special responsibility for natural resource management. The KwiFon, newly formed forest management institutions, project staff and the Ministry for the Environment and Forestry work to develop community forests. Facilitated by an international NGO.	No 'formal' community conservation project. Important funding for wildlife conservation activities from a consortium of international donors. National park managed by national wildlife agency, ICCN. Area administered under military, civil, wildlife and traditional authority.	Formal community conservation project funded through external support. Relatively little investment in wildlife protection by external agencies. Reserve managed by national wildlife agency, ICCN. Area administered under civil, wildlife and traditional authority.	The establishment of the Decentralised Decision-making Body (ODD) involves the local population in all decisions regarding the development of the zone. This body is being linked to the wider decentralisation process taking place in Niger. Process facilitated through external agencies.	Traditional institutions are strong and active. Hunting associations exist in the northern sector of the park. Community wildlife management is supported by a national and international NGO.

Cameroon	Democratic Republic of Congo		Niger	Nigeria
Kilum-Ijim Forest Project (200 km²)	Garamba National Park and hunting reserves (12 000 km²)	Okapi Wildlife Reserve (14 000 km²)	Transition zone to the W region Biosphere Reserve (840 km²)	Gashaka Gumti National Park (6600 km²)
Ecological context				
Mountain forest at an altitude of 1800-3010m. Key species include Bannerman's turaco and the banded wattle-eye	National park and hunting reserves of wood and grassland savanna. Exceptionally high abundance of large mammals (elephants, giraffes). Last wild habitat for the northern white rhino.	Tropical Moist Forest. Highest recorded primate diversity in Africa, and mammal diversity in DRC. Key endemic species is okapi. Main game species of the Bambuti include 6 species of small forest antelope.	The project intervention zone is sub-divided into 3 agro-ecological areas which determine the movements of a small population of the last giraffes known in West Africa: humid (valley) area, intermediate area, and plateau. Low wildlife abundance and diversity.	Mosaic of gallery forests, savanna woodland, montane forests and grasslands at an altitude of 300-2400 m. Key species include: buffalo, wild dog, and mountain reedbuck.
Social context				
The forest dependent community is estimated at 200,000 people and there are 37 forest-adjacent villages. High human population densities (3-400 per km²). Three dominant ethnic groups (Kom, Oku and Nso).	Low human population densities (< 1 per km²). Low immigration. Three dominant ethnic groups (Azande, Mondo, Logos). One dominant language: Bangala.	Bambuti hunter-gatherers and Bantu horticulturalists. Low human population densities (< 1 per km²). High immigration. Diversity of ethnic groups. Two dominant languages: swahili in the south, the east and the west; Bangala in the north.	With a density of 54 people per km², the population consists of arable farmers and livestock farmers involved in seasonal migration. Decision-making is therefore difficult at certain times of year.	Support zone contains 55 villages with approximately 44,000 people (6 people per km²). More than 40 different ethnic groups with livelihoods based on farming, fishing, herding and/or hunting. Few social amenities but relatively good local support for the national park.
Economic context				
National economic decline has increased dependency on forest resources. Project has facilitated a programme of livelihood activities. The medicinal bark from *Prunus africana* offers one of the few opportunities for forest income generation.	Livelihoods predominantly dependent on subsistence agriculture. Active informal economy and a profitable bushmeat trade. Conservation primarily dependent on international aid.	Livelihoods predominantly dependent on foraging and subsistence agriculture. Active informal economy and a profitable bushmeat trade. Tourism potential high until recent conflicts.	An area suited to agriculture and animal husbandry. The project has increased tourism, generates employment and has a programme of livelihood activities.	High value of grasslands in enclave areas for pastoralists but less local incentives to conserve wildlife or forests.

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The many faces of community wildlife management in Central and West Africa[1]

Pippa Trench[2]

Chapter summary

Chapter 2 reviews the literature on community wildlife management in Central and West Africa.

- Central and West Africa covers a vast area with a correspondingly wide array of agro-climatic conditions: from coastal plain and inland delta to desert and highland tropical forest. This variety is reflected in the range of habitats and wildlife found throughout the region.

The following definitions are used:

- Community wildlife management (CWM) implies management of wildlife by, with and for the local community. Management implies intent or deliberation, a set of rules and regulations governing wildlife resource utilisation with the mechanisms for enforcing them.
- Wildlife has been taken to refer principally to vertebrates - mainly large and small mammals and fish. The main exception to this is a number of invertebrates, mainly snails, which have nutritional and economic value. However, wildlife management is inextricably bound up with habitat management. Wildlife and the habitats on which they depend are referred to collectively as "wildlife resources".
- 'Community' is a problematic term often taken to refer to homogeneity among a group of individuals living in a village or group of villages. But Central and West

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[2] SOS Sahel, London: UK

Africa is heterogeneous, with high rates of migration, and highly differentiated village groups.

Community wildlife management is currently equated with sustainable management; i.e. regulations exist which ensure that use does not lead to the decline of the resource.

- Wildlife management mechanisms can act directly on resource extraction (e.g. controlling access or techniques of exploitation) or indirectly, acting on the behaviour of resource users through altering demands for products.
- In reality, wildlife management objectives depend on the values and interests of the management institution(s) and do not necessarily relate to sustainability.

Wildlife resources in the region are of value to a wide range of stakeholders other than the local communities living adjacent to the resource.

- Key stakeholders in wildlife resources in the region include: communities (representing a range of interests in themselves); national governments; the private sector (traders and retailers of wildlife resources, as well as large scale commercial interests, including timber companies, agricultural and plantation estates and oil companies); the national and international conservation lobby; and the international donor community.

- Community interests in wildlife resources lie in their economic (an important source of revenue and nutrition), political (a means of asserting power or staking a claim to an area of land) and socio-cultural (an expression of local belief systems and rituals) values.
- National governments hold moral responsibility for maintaining the national biodiversity heritage and can earn considerable income from wildlife management projects. Governments are also under considerable political pressure to produce rapid economic growth in the short term. Where wildlife resources represent high economic value or where the value of the resource is so low to local communities that it represents a significant opportunity cost, pressures on government is high to convert wildlife resources into seemingly more profitable ventures, such as plantation forestry or agriculture. Widespread, high level corruption adds an additional dimension to these conflicting demands.
- Timber and other large-scale commercial companies have been present in the region, particularly in the forests of Central Africa, for decades. Their interest in wildlife resources are purely economic, although they represent a significant source of income for governments and communities alike; the former from licensing revenues, the latter from income opportunities, infrastructure development and markets for wildlife products.
- Local traders provide the link between small-scale resource extractors, such as hunters, and the users, particularly urban residents. These traders are often women or government officials, and complex parallel management systems for controlling this commodity chain have been well documented.
- The conservation lobby is primarily interested in the conservation of biodiversity. This group can be divided into two groups. At one extreme are those who believe that community participation in management and limited, sustainable use of wildlife resources is essential for the preservation of biodiversity. At the other extreme are those who believe changing economies and the lack of capacity among local communities to manage resource use are such that community

involvement in wildlife management is not realistic and will lead to decline in wildlife populations.

- The balance of power between these different stakeholders will ultimately determine whether wildlife is managed, by whom and for what.
- De facto CWM is occurring all over the region, but local institutions are becoming less able to control resource use due to pressures associated with market and population change and erosion of traditional institutions. While this may be bad for wildlife populations, it is often a sign of greater freedom of choice and equality among traditionally weaker groups, such as women and youth.

Ecological diversity across the region is reflected in massive variation in the economic value of wildlife resources.

- Wildlife poor areas in the drier regions are of lower economic potential in terms of markets, but support a larger rural population than wildlife rich areas to the south.
- Wildlife resources in the more humid area tend to have a greater national or international market value, which can be more easily captured by individuals or groups.
- A higher market value increases the potential for individuals to capture profits from wildlife resources in the high agro-climatic potential areas. Competition for control over these resources between the different stakeholders is high. Communities are rarely in a strong position to compete and economic processes tend, to varying extents, to place the interests of these other stakeholders over and above those of the local communities.
- Wildlife imposes costs as well as benefits to communities and governments alike, whether direct in terms of crop damage or injury, or indirect in terms of opportunity costs.

Throughout the region, the state remains the legal owner of all wildlife resources, although the degree to which customary tenure is recognised varies between different countries and the resource in question.

- The degree to which local communities genuinely participate in the design, implementation and ownership of wildlife management systems among CWM initiatives within the region varies from practically nil to high. The majority of cases lie somewhere in the middle.
- The extent to which CWM is really by, with and for the local community depends ultimately on the balance of power between the different stakeholders and their interest in the resource for economic, social or political reasons. The majority of CWM initiatives in the region are run by conservation agencies, whose priorities are to conserve biodiversity and compensate communities for their resulting loss of income and choice over land use.

Ultimately, support for CWM systems among local communities can only exist where the perceived benefits from managing the resources are greater than the opportunity costs. If this is not the case then the decision to manage wildlife resource use becomes a purely political one.

2.1 Introduction

Chapter 2 reviews the literature on Community Wildlife Management (CWM) across Central and West Africa. The review draws on both anglophone and francophone, published and grey literature, and builds on two earlier regional reviews in Central and West Africa (Hakizumwami 1998, Zeba 1998, see Chapter 1).

With such a vast geographical area to cover, no review can be entirely comprehensive. Rather, case studies have been selected to demonstrate the key issues that arise in the pursuit of effective CWM in the region. Case studies have been selected from a total of 14 countries to represent both the range of CWM systems and the variety of ecosystems in the region.

Chapter 2 aims to set out the factors that determine the potential for CWM in the region, and which affect the balance between incentives and disincentives for CWM. It argues that the form CWM takes in Central and West Africa, and its success or failure in terms of both community development and wildlife management, is driven by the balance of power between different stakeholders and their interests in the resource in question.

The support for community wildlife management in Central and West Africa and the potential role of local communities in wildlife management has been driven by a two factors: a decline in the resource base; and changes in national and international socio-policies, recognising the role of wildlife in the rural economy and local livelihoods (Western & Wright, 1994; Ndiaye, 1998). Government bodies have failed to adequately protect wildlife resources through coercive measures (Alieu, 1998), and there are growing demands to address the continued poverty throughout much of Africa.

In West Africa in particular, the shift towards greater community involvement in wildlife management has been assisted by national decentralisation programmes. These have been supported (in cases driven) by other programmes and agendas, such as structural adjustment.

The competing interests of different stakeholders are nowhere clearer than within the literature itself, which tends to be highly partisan. Authors most concerned with social and rural development evaluate CWM according to its social impacts and implications, while those more concerned with wildlife conservation express concern at the long-term impact of anthropocentric approaches on wildlife populations. Both parties tend to criticise projects attempting CWM for opposing reasons and largely on theoretical and ideological grounds rather than empirical evidence. Few, if any, attempt to identify what constitutes successful CWM which ultimately makes evaluating CWM difficult, if not impossible. Contradictions in the literature are rife. This should be a serious concern for anyone interested in the future of CWM.

2.2 The region

Central and West Africa is a vast region, incorporating 24 countries covering more than 11.5 million square kilometres, with an estimated population of over 280 million people in 1997 (US Government estimates, CIA World Fact sheets 1999). The majority of this population is rural, although rural population density varies radically: from over 1,000 people per square kilometre in parts of Nigeria to less than one person per square kilometre in the driest parts of Chad and the forest zones of Central Africa.

The region is immensely variable in its social and political make-up and land-use practices, reflecting its historic, climatic and ecological diversity.

Climate varies radically between extreme aridity in the north, to humid tropical ecosystems in the south, with a corresponding ecological diversity encompassing both desert and dense humid tropical forest. This variation has major implications for wildlife management.

The entire region is characterised by inwards and outwards migration, both in response to the environment, as in the case of mobile pastoral and fishing communities, and to social factors such as slavery in the past and the search for employment and income generating opportunities today.

Since the 1980s, much of the region has been involved in a process of decentralisation, fuelled at least in part by the fiscal demands of international agencies and calls for greater democratisation. This has been an important driving force behind the support for community management of natural resources (Chapters 3 & 5). However, the degree to which genuine decentralisation is taking place is not consistent across the region.

The region's vast rural population, together with their governments in many areas, depends on a declining natural resource base. Wildlife use and conversion of forests to agricultural land, together with large-scale commercial activities (e.g. logging, mining, oil exploitation, and plantations), have all taken their toll on wildlife populations and biodiversity in general. For example, the elephant has been in decline over the last 100 - 200 years in West Africa (Benoit, 1997) while forest cover across Central and West Africa has declined radically over the last 50 years. This inherent conflict between economic development and biodiversity conservation, and the relative value awarded to each by different stakeholders in the region, lies behind many of the issues discussed in this chapter.

2.3 Community wildlife management

2.3.1 What is community wildlife management?

In this chapter, CWM is defined as wildlife management *"by, for and with the local community"* (Western & Wright, 1994). In its ideal form, this should ensure the sustainable use of wildlife and the habitats on which it depends. The terms 'community', 'wildlife' and 'management' are not self-explanatory. This section explores the definitions and assumptions surrounding these terms.

Community

Only with full 'community' participation can wildlife management be truly *"by, with and for the community"* (Murphree, 1996). Western and Wright (1994) go further and attempt to define a community agenda in CWM as *"to regain control over natural resources and, through conservation practices, improve their economic well-being"*. Participation here does not simply imply community involvement in discussions over the future of wildlife management, but a genuine stake in negotiations and decisions over wildlife management which depends on having legitimate access and rights over the resource in question (IIED, 1994).

However, this raises the question, who is a community? In general a community is taken to refer to a homogenous group of common interests generally resulting from a shared history, sense of tradition, or residence within a common area. However,

research has repeatedly found conflict and heterogeneity to be the norm within communities, and membership within a community is fluid and highly dependent on the problem or opportunity faced by the group (Gueye, 1994). *"Anthropological research during the last twenty years has confirmed that most rural communities are not free of conflict"* and are frequently highly heterogeneous (Little, 1994: 357; Sharpe, 1998).

The difficulty in defining a 'community' is a serious obstacle for CWM, and is discussed further in the course of this review.

Wildlife

Wildlife has been taken to refer principally to vertebrates - mainly mammals and fish. The main exception to this is a number of invertebrates, mainly snails, which have nutritional and economic value.

However, wildlife management is inextricably bound up with habitat management. Discussions of forest management in areas of dense humid forest encompass wildlife management. In contrast, most references to wildlife resources in the drier Sahelian regions are limited essentially to forest products – direct references to wildlife in these areas are rare (Chapter 5), probably in direct correlation to the rarity of wildlife itself! Wildlife and the habitats on which they depend are referred to collectively in this review as "wildlife resources" and mention is made of a number of plant species and of timber within this broader definition of wildlife resources.

Wildlife is found outside as well as within protected areas, but much of the literature relating to CWM focuses on initiatives based in or around protected areas. Yet hunting, fishing and other forms of wildlife use mainly occur outside protected areas (Falconer, 1992; Sharpe, 1998), and wildlife and forest use and policies also stretch beyond their boundaries. For example, forest departments throughout the region frequently have policies that extend to trees outside forest reserves, even those planted in farmers' fields.

Management

Dictionary definitions of management refer to intent and deliberation i.e. management involves decision-making and does not include *laissez-faire* unless this is a deliberate and measured strategy. Community wildlife management is taken here to refer to the application of rules and regulations to ensure the long-term sustainability of wildlife resource use and hence, biodiversity.

Many ethnographic surveys that describe consumptive use of wildlife by local populations, equate wildlife *use* with wildlife *management*. However, according to the above definition, wildlife management requires an element of application of rules and regulations and does not include behavioural norms that occur by default and which have the effect of reducing pressure on wildlife populations. An example of this latter would be the use of traditional technologies for hunting in the absence of modern firearms - unless "modern" technologies for hunting are proscribed.

Wildlife management can be either direct or indirect (Table 2.1). Protected areas are perhaps the most well known form of modern direct wildlife management, but direct management includes a range of other approaches (Colding and Foulke, 1996;

Table 2.1 Direct and indirect wildlife management tools

Direct	Indirect
Prohibition (taboos/totems).	Taxes on sale of wildlife products reduce demand for wildlife and timber products (Wilkie et al, 1998).
Control of access i.e. limiting access to certain groups or individuals. Membership may be awarded to family, clan, guild, village, tourists, etc., and may change according to season or the state of the resource.	Integrated conservation and development approaches such as *enhancement* e.g. taxing sport hunting and sharing the profits; *compensation* e.g. providing employment opportunities; *alternatives* e.g. increasing agricultural productivity, domestication of wildlife species.
Open and closed seasons	Prohibition of sale of products internationally e.g. Convention on the International Trade in Endangered Species (CITES)
Using cultural beliefs to limit offtake	
Introducing less destructive technologies, such as selective logging and improved bee-keeping.	
Protected areas	

Takforyan, 1996). Indirect management tools affect the behaviour of the resource user towards the resource without imposing rules or regulations on the users themselves. The definition of CWM used here assumes that rules and regulations lead to the *sustainable* use of wildlife resources. However, regulations regarding wildlife use may serve other purposes and the rationale for management may not be the same for all stakeholders. For example, wildlife management can include containing its damaging effects (Box 2.1). And whilst controlled access to wildlife is perhaps the most common form of direct wildlife management, this does not in itself guarantee sustainable offtakes, particularly when populations and market demands continue to grow. Box 2.1 demonstrates a range of objectives other than sustainability that may drive wildlife 'management' in the region.

Finally, management demands not just rules and regulations but also rule enforcers and regulators. In many remote areas, *"the rights to use resources such as wildlife are underpinned by spiritual affiliations to land resources"* or societal norms (Makizumwani, 1998). However, where rules and regulations are not adopted as behavioural norms then management is meaningless unless it can be enforced by coercive measures. Such measures can be implemented by formal institutions, such as in conventional protected area management, or by informal and local institutions (Chapter 4). Some form of devolution of enforcement to more local institutions is attractive both to the local communities who see a greater stake in resource management and to governments who see the opportunity for cost-cutting (Chapters 3 - 6). But local institutions do not always have influence on individuals outside the local community (Kerkhof et al. 1998).

Box 2.1. Wildlife management to what end?

Wildlife exerts a considerable cost on local communities in terms of danger to human life and crop damage (Wachter, 1997). In northern Cameroon, the elephant population in the Waza National Park threatens local lives and livelihoods and the community is keen to see their movements and growing numbers contained (Thouless, 1995). Management in this context may involve shooting rogue elephants, although this would rarely damage the elephant population as a whole.

Taboos and totems are commonly cited as a form of traditional direct management. They generally apply to specific species but there is some doubt as to whether they are effective. In East Cameroon, 29 species were found to be entirely or partially prohibited "to avoid loss of the child by pregnant women or disease or deformation of the newborn" (Takforyan, 1996). However, the taboo only applies to the consumer, not to the hunter who is free to sell or give tabooed species to someone not affected by taboo. In an area where 60-80% of game shot is for sale, the significance of such taboos in terms of wildlife management pales (Takforyan, 1996).

In the Democratic Republic of Congo, hunters traditionally belong to a guild, which limits who is able to hunt. Such guilds were frequently appointed by the chief and were intended to control the profits from hunting rather than ensure sustainability. Unless the guilds themselves impose rules on what technologies are allowable and restrict yields, wildlife populations may be overharvested (de Merode *pers. comm.*).

2.4 Incentives and disincentives for CWM

Four key, and overlapping, factors influence how CWM in the region will operate:

- ecological;
- social and institutional (relating to the different stakeholders and balance of power between them);
- economic (resource value and distribution of returns);
- legal (access rights over resources).

Each of these is discussed below.

2.4.1 Ecological context

Incentives:

- High biodiversity in humid parts of the region
  - Predictable high value resource base.
  - Makes for profitable commercial exploitation and discrete economic value creating potential for investment.
  - Tends to correlate with low density rural population
  - Attracts external funding
- Lower biodiversity in drier parts of the region
  - Local economic value high but diffuse
  - Little commercial interest away from urban centres
  - Supports large rural population.

Disincentives:

- High biodiversity in humid parts of the region
  - most influential and richest members of society are best able to capture discrete values of wildlife to the exclusion of the poorest
  - high levels of exploitation due to commercial interests, even in areas far from urban centres
- Low-value, scarce biodiversity in drier parts of the region
  - high opportunity costs to local people
  - little external interest
- Wildlife inflict direct and indirect costs on communities
- Difficult to measure sustainability

Introduction

This section examines the ecological factors which determine the distribution, productivity and diversity of wildlife resources, all of which act as incentives or disincentives for CWM, largely due to their considerable economic effects. Climatic variation on the one hand and variation in resource dependency due to a range of social, economic and political factors on the other, make short-term and even long-term measures of sustainability, and therefore management, difficult.

Regional diversity

Wildlife and wildlife habitats in the region under review are extremely diverse. Mean annual rainfall from north to south ranges from less than 150mm to 4,500mm in parts of the dense humid forest zone. West Africa stretches from the desert north to the high forests of the coastal countries of Ghana and Cote d'Ivoire. In between lies the vast Sahelian region which supports dryland forest and the Soudano-Sahelian zone with its savanna woodland mosaics. The inland delta of the Niger and Congo river basins create their own unique habitats.

The high potential zones in the southern and coastal region of West Africa and Central Africa, in particular, are considered of global importance for their biodiversity and ecological functions. Central Africa supports more than 60% of Africa's biodiversity, due largely to the immense forest estate which contains more than 50% of Africa's forest species. Central Africa's ecosystems include *"tropical moist forest (representing about 80% of the dense forests remaining in Africa, and the second largest in the world after the Amazon), dry and evergreen forests, afro-montane forests, seasonally inundated forests and savannas, woodland savannas, dry woodlands, papyrus and peat bogs, the Congo river system, lakes and lagoons."*. (Hakizumwami, 1998).

Fisheries in Central and West Africa include the coastal region as well as the vast freshwater river systems of the Congo, the Senegal and the Niger rivers. The fresh water system supported by the forests of Central Africa supports a high rate of endemism for freshwater species (Hakizumwami, 1998).

The semi-arid wooded and grassland savannah systems of northern Cameroon and Nigeria, Mali and Niger and Burkina Faso support significant populations of large and medium plains mammals (Benoit, 1997; Lungren, nd; IUCN, 1990; Le Berre & Messan, 1995). However, not much has been written on wildlife management in the

drier regions, perhaps because biodiversity and wildlife populations are so much lower in these areas relative to the high potential coastal and inland zones.

More has been written about forestry. Table 2.2 describes some of the characteristics of dryland and humid, high forest.

Table 2.2 Characteristics of dryland versus humid forests in Central and West Africa

Character	Dryland forest	Humid, high forest
Example countries	Northern Cameroon & Nigeria, Niger, Senegal, Mali, Burkina Faso,	Guinea, DRC, Cameroon, Ghana, Benin, Ivory Coast, Nigeria
Rainfall	300-800mm, spatially and temporally highly variable	900-4000mm, reliable
Human activities	Transhumant pastoralism in drier areas and agriculture predominating in valley bottoms and as rainfall increases.	Agriculture dominant. Slash and burn cultivation.
Biodiversity values	Low	High
Forest resource valued by local community...	as sylvo-pastoral resource in drier zones, with relative value of wood products increasing with mean annual rainfall	as a source of timber and non-timber forest products (NTFPs)
Economic value	Diffuse	Discrete
Relative subsistence value (in terms of number of individuals supported)	High	Low

Whilst this table is simplistic, ignoring, for example, the influence of access to markets on the economic value of forest resources, its main purpose is to demonstrate the interaction of ecological factors with economic and social factors, and the influence of this on CWM. It shows how wildlife poor areas in the drier regions have a more diffuse economic value in terms of markets, but support a larger rural population than wildlife rich areas to the south. In contrast, wildlife resources in the more humid areas tend to have a more discrete national or international market value, which can be more easily captured by individuals or groups. This creates very different social and economic conditions, particularly with respect to levels of competition over resource access and exploitation.

Costs of wildlife

Sustainable community wildlife management can only occur if the benefits accruing to the community from maintaining a wildlife population outweigh the costs (Adams & Thomas, 1996). The poor economic conditions in many parts of the region mean

that conservation of wildlife for its existence value will tend to be a low priority (GEF, 1995). What is more, wildlife inflicts a cost on communities, both directly through damage caused to crops and risk of injury or death from wildlife attacks (Chapter 6), and indirectly through the opportunity costs presented by restrictions on land use (Wachter, 1997, Inamdar, 1998).

Measuring sustainability

If CWM is to be sustainable, this demands continuous and accurate knowledge of the status of the resource (Ostrom, 1995; Struhsaker, 1997). Accurate systematic monitoring of wildlife populations alongside CWM initiatives is rarely happening (Hughes et al, 1998) and most claims of declining wildlife populations are based on general observations by project or government personnel or local hunters (R. Barnwell, *pers.comm.*).

In the more humid and productive areas of the region, dense vegetation makes estimating wildlife populations hard, while elsewhere in the drier areas, productivity varies radically, both spatially and temporally, depending on rainfall.

Monitoring populations and altering offtake in response to changes in productivity avoids the need to calculate fixed sustainable yields and allows for natural fluctuations in productivity, but still requires accurate population estimates. Those in the best position to constantly monitor wildlife resources tend to be those closest to them, the hunters/users themselves (Box 2.2), and attempts to involve these people in wildlife management and monitoring have been made in Niger (Chapter 5) and elsewhere in Africa (Marks, 1994). However, estimating the rates of extraction can be difficult where hunting is illegal, technically the case in much of the region (Mimbang, 1998).

In Cross River State, Nigeria, the Ekuri Co-operative, with assistance from the regional forest department, undertook an inventory of its community forest to establish levels of sustainable exploitation (Dunn & Otu, 1995). The inventory used a combination of modern forestry techniques and indigenous knowledge, which took into account, for example, other functions of trees when selecting individuals for cutting (see also Box 2.14)

Sustainability of resource extraction may also be measured indirectly, e.g. through comparison of catch rates near to a village versus further away (Ngnegueu, 1998), but this does not make allowances for changes in wildlife behaviour in response to hunting pressures (Robinson & Redford, 1994). Estimating sustainability through modelling population dynamics (Robinson & Redford, 1994; Ngandjui, 1998) is also possible, but the accuracy and therefore the relevance of these estimates is questionable.

In reality, a sustainable yield is notoriously hard to define without long term studies (Fa et al, 1995; Robinson & Redford, 1994) (Box 2.2) and the usefulness of the concept is being brought into question (Struhsaker, 1998; Bawa & Seidler, 1998).

A key question is whether natural resource use has become more sustainable since CWM systems have come into place but, in the absence of monitoring data, this is

difficult to assess. In the Taï National Park in Côte d'Ivoire poaching remains a serious problem three years after the start of the CWM project *"à cause des revenus très substantiels que les auteurs perçoivent de la de ces viandes de brousse très appréciées dans le pays"*[3] (Andriamianana & Roger, 1995) in spite of otherwise successful reductions of pressure on the park. Analysis of time-series satellite pictures shows that the forest boundary at Kilum-Ijim Forest, Cameroon has been respected and that in some places degraded land is being naturally reforested. The long-term community forestry and integrated conservation and development efforts have played a role in this conservation success (Chapter 3).

Box 2.2. Estimating sustainability

In East Cameroon, different hunters have preferred hunting areas, based on inheritance and expected availability of game; no official allocation takes place. Hunters tend to rotate between areas *"ostensibly to calm the area"*. These rotations are not obligatory but *"hunters rarely fail to carry [them] out"* (study based on one year of actual observations) (Takforyan, 1996).

In Niger, preliminary analysis of re-inventory data at Guesselbodi following two seasons under a new sustainable offtake management regime (mainly fuel wood and timbers) indicated that regeneration was lower than that predicted and that forest composition was changing in favour of less desirable species. However, this analysis has been called into question and doubts raised over the original sustainability estimates (Otto & Elbow, 1994). The results were felt to have been influenced by the fact that the forests were 'overmature' in terms of optimising productivity.

2.4.2 Social and institutional context

Incentives:

- International and regional conventions promote a link between economic development and biodiversity conservation
- Traditional institutions/rules for managing wildlife exist and in places remain effective and efficient
- Processes of decentralisation in much of the region create the potential for local benefit-sharing and devolution of powers and responsibility.
- Combining poverty alleviation with wildlife conservation attracts considerable external funding in support of institutional capacity development

Disincentives:

- Diverse socio-economic interests and power relations within an individual community
- Competition between local communities and other stakeholders for access to wildlife resources and management.
- Wildlife resources can make an important contribution to government revenues, which acts as a disincentive to benefit sharing
- Government institutions maintain responsibility for national natural heritage but retain a perspective of the irresponsibility of local populations in managing wildlife resources

[3] *"because of the very substantial economic benefits that bushmeat attracts given the high levels of demand from local markets"* (Author's translation)

- New economic, social and political pressures constantly undermine customary management rules
- An entrenched protectionist philosophy among wildlife and forestry officials

Introduction: multiple stakeholders in CWM

The heterogeneous nature of most 'communities' in the region is a major obstacle to promoting CWM, and this is discussed in more detail in this section. Even if it were possible to identify a 'community' as a recognisable entity, communities are just one of a number of key groups with a stake in wildlife utilisation. Other groups include the private sector, the government, the conservation lobby, and the donor community. The degree to which these different stakeholders influence the success or failure of CWM is also analysed here.

Implicit within this discussion are issues of distribution of revenues and power, both within communities and between communities and other stakeholders, and the different roles that the various stakeholders play across the region.

Community

"Local participation must start from a realistic appreciation of what a community is" (Little, 1994: 357).

Communities incorporate a range of different groups and interests according to wealth, access to land, authority, gender, age etc. In Central and West Africa, this heterogeneity is accentuated by a long history of mobility among populations, which continues to this day (Sharpe, 1998; Davies, 1998; see Box 2.3). Throughout the region, vast numbers of people are constantly on the move, in search of seasonal labour or, in the case of fisherfolk and pastoralists, as required by their production system. This mobility affects the relationship an individual or household may have with the wider world, which may in turn reflect or promote differences in wealth and status (Sharpe, 1998). Furthermore, there can be a close link between social and economic factors in defining community. For example, in and around the Korup National Park in Cameroon, where in-migration levels and ethnic heterogeneity is high, Sharpe (1998) proposes that community identity itself comes from the process of clearing an area of forest.

Different groups within communities have different values and priorities which lead to different agendas and perceptions of wildlife and wildlife resources (Milner-Gulland & Mace, 1998, Western & Wright, 1994). These values and priorities are essentially economic (lead by the desire/need for money), socio-political (the desire for power and security) and aesthetic (the desire to conserve biodiversity for its own sake) (Box 2.4).

Assuming homogeneity and consensus within "communities" suggests that men's interests can be taken to represent those of women, that poor people can be represented by the rich, the young by the old etc.. Failure to take a realistic view of communities and acknowledge differences between groups has lead many CWM projects to fail because the management regimes established are simply not accepted by excluded groups (Box 2.5).

The elite within a community is often in a better position to negotiate individual access rights to resources of value, thereby reducing access by the poorer members

Box 2.3. 'Community' in Central and West Africa

In south-west Cameroon, the population is culturally and linguistically diverse and mono-ethnic settlements are the exception rather than the rule. Forest societies were dependent on slaves in the pre-colonial period due to the relatively low population density, and an influx of migrant workers continues to this day. Many of these migrant workers have settled permanently in the area, although they are still *"classed as 'strangers' by local villagers"* (Sharpe, 1998).

In Niger, the Baban Rafi forest has long been a major resource for Fulani transhumant herders, while settled villagers use the forest for NTFPs, such as fuelwood, and farmland. A study in 1991 indicated that the agropastoral population in the forest was growing faster than village populations as increasing numbers of former transhumant herders have settled in the area to farm (Otto & Elbow, 1994). Consideration of the 'local community' around this forest, typical of many wildlife resources throughout the Sahel, would thus need to include groups representing the different production systems, as well as recognising the diversity within each of these production systems.

Andrianarana and Roger (1995) document conflicts within communities living around the Tai National Park in Côte d'Ivoire, particularly between elders and younger community members and between indigenous and immigrant populations, particularly over allocation of land use rights by the state, irrespective of traditional tenure. Plantations in the region attracted migrants with the result that the local population density has increased from 1.6 to 15 people per km² since the 1960s. The indigenous population holds rights to the land according to tradition whereby the person who clears the land has priority rights to that land. However, the capacity to work the land is much greater among the immigrants. This movement makes the issue of access and ownership of land and resources ever present between producers.

of the community. There is no clear evidence that wildlife use or dependence declines with increasing wealth status (de Merode, 1998; Chenevix-Trench, 1997; Hartley, 1996). On the contrary, hunting and timber extraction require resources that the poorest often do not have.

Key operators in bushmeat hunting, for example, are frequently traders who provide hunters with arms, ammunition and cable and place orders for bushmeat (see section on private sector below). Some of these operators in south east Cameroon were identified as members of the local administration, enjoying virtual exemption from controls as they are responsible for their application (Mimbang, 1998).

Having different values and desires for management can limit the capacity of different communities sharing the same resource to work together. In Niger, the Energie II project decided to work with single communities only, following bad experiences with the Gusselbodi Forest Reserve project and co-operatives in Niger (Dubois, *pers. comm.*). Elsewhere in Niger, however, different villages around Takieta Forest Reserve have unequal amounts of forest lying within their village territory. They have expressed a strong desire for co-management and reciprocal rights between villages (Kees Vogt, *pers. comm.*), having identified a shared management objective: maintenance of the forest as a shared sylvo-pastoral reserve.

Box 2.4. Conflicting community interests in CWM

In south-west Cameroon, small scale timber extractors tend to extract individual trees bought from land owners and would prefer to leave smaller trees allowing them reach a saleable size. Land owners, however, see the cutting of larger trees as valorisation of land. Partially cleared land is attractive to small-scale settler farmers who clear the land further, once the small-scale timber extractors have finished their work. (Sharpe, 1998)

Another study in Cameroon found that 89% of the estimated 1,100 NTFP traders in 25 markets in the Dense Humid Forest Zone are women. The markets are often controlled by a "Cheftaine" (i.e. a woman), usually elected by the traders from the local area, who is responsible for the smooth running of the market place, including conflict resolution. In spite of this economic power, women's share of decision-making power at a more macro level remains low (Ruiz Perez, 1998).

In the Ekuri Forest, Nigeria, one powerful chief authorised a timber company to access a forest (for large individual profits) where considerable effort had gone into inventorying the forest resources for local management (Dunn & Otu, 1995; Tunde Morakinyo, pers. comm.). In this case, the individual was defeated by the rest of the village in favour of a common property management regime.

In the Nazinga Game Ranch in Burkina Faso, one of the very first community wildlife initiatives established in the region, the indigenous populations (and the project managers) viewed CWM as a means of getting rid of newcomers who had settled in the area (Lungren, nd.).

Box 2.5. Communities, consensus and CWM

In the Korup area in Cameroon, the Ikenge people in the National Park used the mystic force of the "Ekpe juju" to enforce a ban on hunting by outsiders. However, such forces will only work on people who share the same belief system. Thus anti-poaching committees and the local authorities are also needed to deal with illegal forms of hunting by outsiders (Tamajong and Balinga in Hakizumwami, 1998).

In Mali, local multi-village committees, Walde Kelka, were established around the Kelka Forest in Douentza in the early 1990s as part of a rural development and natural forest management programme. The committees are legally recognised by the state and the project established a positive partnership between the local communities living around the forests and the forest department. However, the forests are also used as dry season forage for the herds of transhumant Fulani pastoralists. These groups have not been included in negotiations over the management of natural resources and do not recognise the Walde Kelka or their regulations. The project is now having to refocus efforts and establish a means of acknowledging the rights and responsibilities of all the different local stakeholders through local level negotiation platforms (Deme, 1998)

Successful management of shared natural resources such as wildlife resources, demands a realistic concept of community and acknowledgement of different interests, competing groups and the need for negotiated consensus (Ostrom, 1995; Williams, 1998). Perhaps the example of the Cameroon system of registering

community forests to common interest groups is one of the most realistic forms of community wildlife management in the region because it effectively explicitly accepts many of the problems described above (P. Burnham, *pers. comm.*, see also Chapter 3).

Community level institutions

Community wildlife management is not a new phenomenon in the region, and customary management systems and institutions have evolved over centuries in response to competition for wildlife resources within and between different groups, as well as for reasons of nutrition and ritual (Box 2.6).

Box 2.6. Examples of traditional wildlife management in Central and West Africa

Totems and taboos are frequently cited as examples of CWM tools (see also Box 2.1). In the Ituri forest in the Democratic Republic of Congo, however, totems and taboos were found to be essentially ritualistic and only applied at particular times when they are the topic of conversation and foremost in people's minds. At other times they would be ignored (Aunger, 1996).

In northern Nigeria, the Hadejia-Jama'are wetland system is a valuable fisheries resource as well as being an important bird sanctuary. Access to the fisheries traditionally depends on the state of the flood and is thought to be determined by the extent to which exclusion is possible and preferable. Thus when the flood is highest, fishing is essentially open to all. However, as water levels lower, access to particular stretches of river or ponds becomes increasingly exclusive. Control of access to fisheries is in the first place imposed by village heads, and outsiders must get permission to fish in the area and give a third of their catch to the head who distributes it among the village elderly or else sells it and puts the funds into a village 'pot'. (Thomas, 1996). The system is under increasing pressure and is revisited later in this chapter.

However, similar assumptions tend to be made about 'community institutions' as about 'communities'. Community or traditional institutions are not always the bastions of democracy they are often thought to be. A frequently quoted example of a successful community resource management system in West Africa is the Dina system in the Niger Delta of Mali. This system was managed by Fulani pastoralists who made the local agricultural communities their slaves and ran an effective management system through a strong and oppressive regime (Moorehead, 1989). Community institutions such as the fon of Cameroon and Nigeria and chiefdoms in the Democratic Republic of Congo, are often undemocratic and highly exclusive, even if highly effective (Chapters 3, 4 and 6).

The effectiveness of some of these institutions is being eroded as part of a process best described as the 'modernity factor' (Box 2.7). Market access, changing legislation and exposure to different social systems through rural-urban and rural-rural migration puts pressure on traditional institutions and hence on wildlife management (Vabi & Schoorl, 1998). However, the potentially positive connotations to these changes in terms of equality and economic development must also be recognised (Sharpe, 1998).

Box 2.7. Increasing pressure on wildlife resources - the 'modernity' factor

Changes in attitude towards wildlife in response to economic pressures and the 'influence of outsiders' are evident in the Conkouati area in Congo. Indigenous populations do not traditionally eat or kill gorillas or chimpanzees, but many young people have recently started to do so. The change has been blamed on the influence of *"outsiders who came to the region for commercial hunting, fishing and working for logging companies"*. (Yakee in Hakizumwami, 1998)

In Gabon, the introduction of a cash economy, coupled with a lack of employment opportunities, have compelled many individuals to hunt commercially instead of for subsistence. Urban growth helps fuel this process by providing a ready market: bushmeat consumption is almost twice beef consumption (Steel, 1994). This is perhaps assisted by the often low prices of bushmeat when compared with domesticated animals (Hakizumwami, 1998)

In the Cercle of Bankass in south east Mali, different stretches of the Sourou river traditionally belong to specific village communities. Access to resources, including the fish in the river, is under the control of the customary Chef de Terre, descended from the person who either first cleared the land or who subsequently conquered his lineage. Anybody wanting to fish in the river needs permission from the Chef de Terre and access is only granted to one or two families. This remains the case where the traditional authorities are strong, but the system is coming under increasing pressure. Under modern law, all land and the resources on it belongs in the first place to the State. Customary leaders are finding themselves confronted by migrant fishermen, who have lost access to fishing areas in the Niger Delta to the north, and who are now claiming access rights to the waters of the Sourou as Malian citizens. (Trench et al., 1997 & pers. obs.)

As wildlife populations across the region decline, better hunting technologies have allowed hunters to become more efficient and effective (Noss, 1997). Shifts in methods of hunting are common (Ngnégueu, 1998), largely in response to the availability of wildlife resources and technologies, the level of demand for wildlife products, the buying power of hunters and environmental conditions. The decline in group hunting provides a clear example of the shift from hunting as a social function to an economic one (Noss, 1997; Hakizumwami, 1998).

The private sector

The private sector is here referring to two groups: large scale timber companies and local traders. In reality, of course, any individual from within the communities described above, engaged in marketing of wildlife resources, is part of the private sector.

Involvement of the private sector in wildlife management depends to a large extent on the degree to which an individual or company can capture the profits from wildlife resources and therefore varies considerably across the region. Dryland forests tend to support a much higher population, but involve lower direct revenues. Stakes are higher, and therefore competition is greater, from the private sector in the more humid forest and savanna regions of Central and West Africa.

Timber companies

International timber companies have been engaged in the region since the early colonial period. Their interests in wildlife resources are entirely economic but their presence in the region is of vital importance to national governments for whom they represent an important source of revenue. Timber companies are also important to local communities both for the investment they make in rural areas and for the jobs and markets (for wildlife resources) they provide, although their record in this is varied.

For example, in south west Cameroon, the government has been all but absent in terms of infrastructure construction. Most infrastructure has been built by timber companies and forest exploitation is closely associated with local perceptions of 'development' (Sharpe, 1998). In Nigeria, on the other hand, the Ekuri villagers decided to 'go it alone' and not award a concession to an external timber company as they are renowned for reneging on their agreements; there is often a ten year delay period before the investments need to be made (Morakinyo, 1994).

'Developments', such as logging roads, made in an area opened up for timber can greatly facilitate hunting and wildlife exploitation. In south east Cameroon, a study compared hunting in a village close to a logging road with another, deeper in the forest. Overall 60-80% of game shot was for sale and the proportion of game sold was much greater in the village on the road near logging camps. Income from hunting was in general low compared to that from agriculture – for 95% of the population, hunting represented less than 5% of income, although in the village near the road hunting represented 10-20% of income for 50% of the population (Takforyan, 1996).

Local traders

Much has been written on the role of intermediaries, often women, in maintaining trade links between rural suppliers and urban markets (eg. de Merode, 1998; Ioveva, 1998; Ruiz Perez, 1998; Ribot, 1998; Steel, 1994). Following the devaluation of the CFA franc in West Africa, the number of individual traders who depend on trade in wildlife resources for their livelihoods increased (Steel, 1994). The number of urban traders in wildlife increased in DRC when the level of wildlife enforcement declined during the recent conflicts in the Great Lakes region (Chapter 4). The importance of intermediaries in influencing the bushmeat market, and thus wildlife populations, has lead to suggestions that taxes and fines on these commodity chains may be the most effective means of controlling bushmeat markets in Central Africa (Oates, 1995, Chapter 4).

National government

Government interests in wildlife resources are a complex mix of economic demands and socio-political gains, complicated by high level individual corruption.

All countries in the region have signed up to, and twenty-two have ratified, the Convention on Biological Diversity[4], following the United Nations Conference on Environment and Development in Rio in 1992. This means that all countries in the region have committed themselves to pursue policies that link local *economic*

[4] The Convention on Biological Diversity's objectives are "the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources."

development and *biodiversity conservation*. This Convention has essentially formalised existing trends and was responding to ever growing pressure within and outside the region to allow greater participation by local communities in the management and benefits of wildlife conservation[5]. More recently, member states in Central Africa have signed up to the Brazzaville Process, which focuses on the conservation and sustainable use of high potential, humid forest (see Brokkhoven et al. 1998).

These conventions give governments access to donor funds to improve departmental capacity and to design and implement the various action plans that stem from such agreements. But there is still a powerful incentive to maintain centralised control over access to wildlife. The revenue obtained from the exploitation of wildlife resources in the dense humid forest zone is arguably far more important than one-off donations (see Box 2.8).

Whilst economic factors are one important element in governments' reluctance to hand over responsibility for wildlife management to community hands, there are also compelling moral reasons. Governments bear a collective responsibility for wildlife resources as part of the national heritage. For technical staff in wildlife and forestry departments, the concept of local communities being capable of managing their resources runs counter to much of their training and, for many years, their raison d'être. Many government level papers describing wildlife management tend to revert to top-down approaches to CWM, where communities are effectively a resource to be managed and used to help achieve the aim of the ministry or department (see Boxes 2.8 & 2.14). Moreover, allowing local communities to take responsibility for managing their wildlife resources can remove a source of income from members of government services who would previously have been paid, illicitly or legitimately, for enforcing management rules (Delsol, 1998).

The decentralisation process underway throughout much of the region in theory creates the framework for greater local say in wildlife management. There is an apparent drive towards local management of wildlife resources in some countries, such as the nation-wide programme supporting village-based development in Burkina Faso, the recent election of rural councils in Mali and the relatively new community forestry legislation in Cameroon. However, handing over power to communities is proving hard in practice and the commitment of these states to giving up actual ownership of resources is yet to be proven.

For example, the decentralisation process in Senegal started in 1966 with establishment of Administration Communales. 1967-1984 saw the progressive creation of Communautés Rurales with financial autonomy and the country is currently in process of regionalisation with the passing of a law in January 1997. The stated aim of regionalisation is to allow the promotion of development policies at local level. Roles are well defined among the different levels with the mandate of the forestry service being to provide advice and information to collectives and the private sector, and to ensure law enforcement.

[5] Another international programme, UNESCO's Man and the Biosphere, promoting the rational use and conservation of resources and the biosphere and the improvement of the social relationship between people and the environment started in 1971 and currently involves 75% of the countries in the region

Box 2.8. Hard choices for national governments

In Côte d'Ivoire, the long term development of the country has depended on exploitation of timber and forest products. However, with little long-term management, the total forest estate has declined from 16 million hectares in the 1960s to 2.5 million hectares in 1995, of which 30% is plantation (Andriamanana & Roger, 1995). The government has responded by designing a management plan that prioritises the maintenance and recovery of the national forest estate to ensure the sustainability of its timber trade (Ibo & Leonard, 1996) with an emphasis on increased surveillance, reforestation and joint management (Yao, 1998).

In a statement made in 1998, the Côte d'Ivoire Ministry for Agriculture and Animal Resources makes clear the various demands being placed on governments and the need to see community conservation initiatives within them. He described the timber industry as a *"veritable pole de desenclavement et de developpement de certaines regions"* (Yao, 1998; also Sharpe, 1998 for Cameroon) and notes the existence of concerns that the costs of systematic environmental conservation are being 'imposed' on developing countries without recognising the need to compromise.

The priority the government of Côte d'Ivoire gives to large scale timber extraction over local community wildlife management is exemplified by the approach adopted by SODEFOR (Societe de Developpement Forestier) to community participation in forest management (Ibo & Leonard, 1996). The Commission Paysans-Forets (CPF) was created in 1992 to enhance *"the participation of rural populations in the rehabilitation of the forest estate in Côte d'Ivoire"* (N'zore, 1998). In reality, the function of the CPF has been to evict populations living inside forest reserves and use their labour as a means of re-establishing the forest estate (Ibo & Leonard, 1996). The lack of resources to pick up recurrent costs once externally funded projects finish is another problem in forest management. (Yao, 1998). The Korup National Park Project, Cameroon, represents 25% of the Ministry of the Environment and Forestry's entire national budget. MINEF is responsible for management, control and development of commercial forestry and logging as well as for protected areas.

In spite of the apparent acknowledgement of local community rights to manage wildlife resources in Senegal, the allocation of 35,000ha of sylvo-pastoral reserve to immigrant Mouride ground-nut cultivators demonstrates the political advantage retained by the government in keeping ultimate ownership of land with the state (Schoonmaker Freudenberger, 1991).

In Nigeria, the Federal Government has in places revitalised the decentralisation process and allocated greater powers to local communities to manage their own resources (see Box 2.14). This process has the effect of creating a third power base to off-set the highly confrontational dichotomy of State and Federation (Caldecott, 1996).

Conservationists / international NGOs

Large international conservation agencies such as the World Wide Fund for Nature (WWF) and the World Conservation Union (IUCN) have considerable influence over the development of CWM through the funds they bring into countries. These bodies are essentially committed to the strategy outlined in the Convention on

Biodiversity, and more recently by the IUCN Strategy Paper which states that wildlife management can only succeed if local communities are involved in and are able to benefit from the process.

However, are these organisations prioritising wildlife management for utilisation or for preservation? The question is important as there is conflicting evidence regarding the compatability of human and wildlife populations. Some authors suggest that secondary habitats can maintain if not increase the abundance of many animal species (Wachter, 1997; Wilkie & Finn, 1990. Chapter 4). However, there is also evidence that management for sustainable extraction is not necessarily compatible with biodiversity conservation, the primary *raison d'être* for these organisations (Bawa & Seidler, 1998; Stuhsaker, 1998; Milner-Gulland & Mace, 1998). Furthermore, undisturbed vegetation is important for conserving many species, including primates, such as the chimpanzee, and regionally important species, such as the bongo and okapi (White, 1992; Wilkie & Finn, 1990).

It has been suggested that the conservation lobby has pursued a strategy of community participation in wildlife management because it allows it to tap significant sources of donor funding that are otherwise devoted to community development (e.g Sharpe, 1998). Indeed, it has been argued that the case for biodiversity conservation has not been helped by the tendency for conservationists to take an extreme view of the urgency of the situation without proper evidence. At Cross Rivers National Park, highly protectionist activities were pushed early at the expense of local participation due to alarmist reviews of the state of the resource, which were later found to be unjustified (Caldecott, 1996). This led to a loss of credibility on the side of the conservationists.

The donor community

The role of the donor community in influencing the development of community wildlife management in the region is fundamental, both directly in their support of international conventions, and indirectly in the drive towards decentralisation and good governance (Brandon & Wells, 1992; Gibson & Marks, 1995).

Donors have tended to accept the view that wildlife resources play a fundamental role in supporting local livelihoods (as evidenced by the number of community wildlife projects in this region and elsewhere) and this has greatly increased the degree of funding available to conservation efforts in the region. These funds have effectively allowed community wildlife management to compete with other wildlife resource management strategies throughout the region (Sharpe, 1998).

The majority of formal CWM initiatives as recognised by the state tend to be donor-funded initiatives in wildlife management around protected areas. However, the support for policies, national and international, that demand greater local participation and equity in natural resource management has lead to increasing donor support for CWM initiatives and the emergence of local NGOs. The funds available to these initiatives mean that a disproportionate amount of the literature is on larger CWM initiatives (as evidenced by the literature referred to in this review). Little literature was available describing the activities of local NGOs who manage and implement CWM projects.

The availability of donor funds raises important questions about the economic sustainability of CWM efforts. A recent evaluation of the Korup National park project found that the rural development component of the project, while accounting for over 50% of a substantial budget, took little account of current thinking on rural development approaches and was often inappropriate. The same criticism has been levelled at the sister project in Cross River State in Nigeria: long delays in funding mechanisms among donors and the desire to avoid creating conflicts between the various stakeholder groups had lead to inertia in the rural development (carrot) end of the project while the more straightforward protectionist activities (the stick) had gone ahead (Caldecott, 1996).

2.4.3 Economic context

Incentives:

- Widespread poverty hence wildlife represents important value to local livelihoods
- Increased market demand and increasingly sophisticated marketing chains increase value of wildlife and hence incentives for sustainable use

Disincentives:

- Widespread poverty can also lead to unsustainable use of wildlife resources
- Damage inflicted by wildlife on local communities.
- Growing market pressures may lead to unsustainable harvesting
- Low value of wildlife relative to other land use options
- Poor opportunities for non-consumptive use through tourism
- External economic and socio-political forces, beyond the control of wildlife managers, affect the demand for wildlife resources.

Introduction

It is difficult to divorce social and institutional incentives and disincentives for CWM from economic factors - many of the conflicts within communities and between communities and other stakeholders described above are purely economic. Wildlife represents an important source of revenue in a region with widespread poverty. It also imposes a considerable cost. Benefit sharing is seen as essential to successful CWM and the death warrant for wildlife populations according to two different schools of thought which are described in this section. Wildlife tourism is frequently proposed as a non-consumptive means of benefit sharing, but its potential in the region is questionable.

External pressures

Natural resources are under increasing pressure throughout the region. Population growth inevitably leads to increased demand for natural resources, but the decline in resource base relates to factors other than pure demography. These are principally economic and socio-political and can have profound impacts on CWM but are largely beyond the control of the managers of wildlife resources (Chapters 3 – 6). For example, the economic crisis which led to the devaluation of the CFA currency in 1984 had immediate impacts on income sources among rural populations throughout West Africa (Joiris, 1996; Mimbang, 1998). In the Sahelian countries to the north of the region, this effect was compounded by two decades of below average rainfall (Pieri, 1989). The devaluation increased demands for exports of forest products (timber, palm oil, cocoa) as well as livestock products (Joveva, 1998;

Vabi & Allo, 1998). In more humid regions, the collapse of the international cocoa and oil palm markets reduced household income (Hakizumwami, 1998) and increased pressure on forest resources (Chapter 3).

The value of wildlife resources in local livelihoods

Studies showing the economic and nutritional value of wildlife products to local communities abound (e.g. Falconer, 1992; Martin, 1995; Noss, 1997; Ngandjui, 1998; Fa et al, 1995; Asibey, 1974; Anadu et al., 1988; Mimbang, 1998; Ngnegueu, 1998). Where wildlife resource use is for subsistence or local markets, the value of wildlife is rarely obvious, making CWM appear less attractive than alternative land uses. Some studies have attempted to quantify dependence on wildlife resources (Box 2.9).

In the few studies which compare wildlife use with other sources of livelihood, the income from hunting is often low relative to that from agriculture (e.g. Takforyan, 1996, Box 2.9). However, wildlife can be one important element of livelihood strategies that encompass other activities, such as farming. For example, an externally funded project in Cameroon viewed forest and agriculture as dichotomous. Local management of natural resources was thought to be based on the continuity of each system separately. In reality, the system of shifting agriculture was found to be dynamic and continuous. Fallow was found to be managed and exploited as part of the overall production system, the relative importance of the different components of the system depending on market demand, labour availability, and alternative labour sources (Brocklesby & Ambrose-Oji, 1997)

While wildlife resources can be important to local populations today, it is possible that other livelihood strategies will be more attractive for future generations. Discussing the views of the hunters living in and around the Korup National Park, Cameroon, Infield (1989) found: *"many of the hunters, particularly the younger men, are anxious to do just about anything rather than hunt, which they view as dangerous, dirty and 'backward' work".*

Wildlife marketing

Relatively low initial investment and high profit margins makes the marketing of wildlife products an attractive proposition for local communities where there are few other economic opportunities. Rising urban populations provide a ready market for natural resources. The net effect throughout the region has been to increase pressure on wildlife populations either directly, through demand for bushmeat or animal trophies, or indirectly, through the destruction of the habitat on which the wildlife depends.

As marketing of wildlife resources continues to grow, there are two schools of thought evolving within the conservation lobby (Box 2.10). The debate rests around the role of markets in supporting or undermining sustainable management.

On the one hand, sustainable use is not thought possible given current and increasing market pressures (eg. Vabi and Allo, 1998). Demand for cash where income-generating activities are severely limited lead to such pressure on wildlife resources that protection by an external (government) body is essential.

Box 2.9. Wildlife as a source of nutrition and income for local communities

In Ghana, 80% of the rural population is thought to depend on bushmeat as its main source of protein and snails constitute 10% of the trade in bushmeat (African Development Foundation, nd.)

Within communities around the Korup National Park in Cameroon, hunting provided the single most important source of cash income for the majority of village households and for the village as a whole, contributing 56% of total village income (hunting and trapping combined, Infield, 1988). Over 80% of biomass offtake from the national park consisted of terrestrial mammals. In the Conkouati area in Congo, hunters sell 80% of their catch. The average household income was estimated to be 1,250,000 FCFA of which 64% came from fisheries, 16% from agriculture and 20% from hunting (Paris, in Hakizumwami, 1998).

In south east Cameroon, Ngandjui (1998) differentiates between:

- professional hunters, (who live in hunting camps along forest roads, including native residents and 'strangers' from elsewhere in the country and from neighbouring countries and for whom hunting is their primary source of livelihood)
- casual hunters (permanent residents who hunt in addition to other activities such as farming, fishing, etc.), and
- sport hunters from Europe.

Of these, the village hunters sold 58% of their catch (a total of 1,735 mammals between 104 individuals), and the professional hunters sold 76% (of a total of 910 mammals between 44 individuals). (No data was provided for sport hunting.)

In the Cross River State in Nigeria, two villages, Old and New Ekuri, are developing a management plan for their community forest together with the forest department. The forest is already an important income source for the villagers who extract *afang (Gnetum africanum)* or "salad", chewing sticks, rattan, bushmeat and bush mango for sale. The *afang* buyers pay the village an annual registration fee and a weekly fee in addition to the cost of the *afang* paid to the women who collect it. This provides the village with an overall income of N4,000 per week (the equivalent of £1 per week per head). Chewing sticks were being sold by the lorry load until the villagers discovered they could get a higher price if they processed the sticks themselves, which they have since resolved to do. Now, a plan to selectively log an area of 50ha (out of a total of 30,000ha of high quality dense humid forest) on a 40 year felling cycle, managed by a village co-operative, will provide the village with a much more significant income (Morakinyo, 1994; Dunn & Otu, 1995).

On the other hand, unless wildlife is seen to have a value to local communities it will be destroyed in favour of other more profitable land uses (e.g. Wilkie et al. 1998; Pearce, 1996).

Unfortunately, the two standpoints remain essentially theoretical and based on ideology, with little evidence in the literature to support either side.

Thus there may be a paradox, whereby wildlife is undoubtedly valuable, but apparently not valuable enough to manage sustainably. This suggests that a new

Box 2.10. Wildlife management and markets

In a report on wildlife use in Cameroon, Vabi and Allo (1998) state that "*Whenever a wildlife species or ecosystem that benefits from community protective measures is equated with goods in the market, the social control on its exploitation gradually breaks.*" He uses the case of the Korup National Park, where species that were once protected but are no longer include: the red river hog, mongoose, forest crocodile, greater cane rat, monitor lizard, yellow-back duiker and forest genet.

Intensification of commercial hunting in the area began in the 1980s coinciding with the:

- Collapse of cash income earners: cocoa and coffee,
- The uncontrolled issue of hunting and firearms permits to members of local communities
- Devaluation of FCFA and the involvement of the army and civil servants in commissioning hunting;.
- Presence of outsiders ungoverned and unpunished by the traditional taboos on hunting, which encouraged hunting by local and external populations alike.
- Establishment of a road network by commercial logging companies, creating marketing opportunities, particularly for intermediaries known as *"buyam-sellam"*.

Vabi and Allo conclude that community myth and ritual practices on wildlife exploitation are vulnerable to market exposure and that *"Given the vulnerability of Cameroon's wildlife resources, it may be in the interest of conservation agencies to provide measures of protection against dangerous market exposure."*

The greater part of the literature supports the view, however, that local communities must benefit from wildlife management. In the case of Korup National Park in Cameroon, the loss of any species is *"disastrous for local people who would lose half of their income. As far as the hunters are concerned, it makes little difference whether they are obliged to stop hunting by law or because there is nothing left to hunt"* Infield (1988).

Advocates of this approach emphasise both the incapacity of governments to manage wildlife and the powerful economic incentive for local management to insure a long-term income. However, they also acknowledge that such an approach depends on the existence of a market and a legislative framework that allows efficient control of wildlife exploitation by the groups concerned. Free-riding will dramatically reduce the incentive to manage wildlife exploitation as ensuring sustainability becomes nigh-on impossible.

economic and policy framework may be needed if sustainable use is to be promoted. One approach to resolving this paradox has been to develop integrated conservation and development approaches, which try to off-set the income lost from restricted access to wildlife resources (Brown, 1998; Chapter 3). Tourism is frequently cited as a way of linking conservation with development, and is discussed below. Another approach looks to ownership of resources, and is discussed within the legal context of CWM.

CWM and tourism in Central and West Africa

Tourism is often hailed as the non-consumptive answer to the problem of assuring sustainable wildlife utilisation; one in which communities can participate and obtain benefits.

A number of protected area management strategies involving communities have looked to tourism as a source of income directly related to the health of the wildlife resource; there is a direct link between revenues accruing to the community and biodiversity conservation (Brown, 1998). However, whilst wildlife tourism may provide some employment benefits to certain members of the community, the potential for tourism in the region is relatively poor, particularly when compared with the East and Southern African tourist trade with which Central and West Africa would have to compete. Constraints to wildlife tourism in the area include poor viewing and visibility (the main exceptions being savannah parks in the northern areas, but which have climatic limitations); and poor human and structural capacity within the tourism sector (Sournia, 1997).

The number of visitors in North, East and Southern Africa are in the hundreds of thousands compared to averages of below 5000 in Central and West Africa (Sournia, 1997). Where the total number of tourists visiting countries are much higher, as in Senegal (300,000), Côte d'Ivoire (200,000) and Togo (100,000), the focus tends to be beach holidays. In Senegal, Niokolo-Koba received a total of 3000 visitors and Djoudj a total of 1500 in 1995, mainly made up of foreign residents. The main exception in the region was DRC, where between 1972 and 1990 the number of visitors increased from 5,000 to nearly 25,000, with over a third going to Virunga National Park. Since the renewed fighting began, however, tourism in the country has declined (Chapter 4).

Competition from other wildlife destinations, continued insecurity, a harsh climate and poor infrastructure are likely to continue to inhibit the growth of the international tourism industry in the region. Specialised sport hunting and tourism aimed at attracting visitors from within the region, however, do have some potential (Sournia, 1997).

2.4.4 Legal context

Incentives:

- Decentralisation processes encourage the creation of local rights over wildlife resources
- Continued effective operation of de facto customary resource management laws

Disincentives:

- Weakening of customary laws by conflicting modern laws and other modernising pressures
- Strong modern wildlife laws which prohibit wildlife use and ownership

Introduction

It is difficult to make generalisations about the legislation in Central and West Africa given the diversity within the region and, in particular, the difference between the Napoleonic and Roman legal systems found in francophone and anglophone countries respectively. However, throughout the region, there is a fundamental dichotomy between *de jure* ownership and responsibility for wildlife resources, which lie with the State, and *de facto* ownership and management, which frequently rest with local communities. This section explores this two-tier system. Centralised state ownership and responsibility for the management of wildlife frequently leads to

a system in which *de facto* local management competes with *de jure* state management regimes. The absence of effective implementation of *de jure* management leaves customary institutions powerless to prevent exploitation by people who do not recognise local rules and regulations, leading in many places to open access regimes.

De jure CWM

Most countries in the region have inherited a legal system established by former European colonies, which centralised land rights and ownership of wildlife in the hands of the state. This situation persists today. In many parts of the region, rights to use wildlife are seriously curtailed by the state; throughout Central Africa, wildlife hunting is officially banned unless specifically permitted by licence (Hakizumwami, 1998). In some countries, traditional hunting rights may be recognised within modern law, but hunting for commercial purposes is generally considered illegal unless officially licensed.

Decentralisation region-wide is pressurising governments to adapt legislation and increase the rights of local communities and private organisations to manage wildlife resources (FAO, 1998). However, this process must be normalised (i.e. making it easy for rural communities to negotiate and make their rights to do so permanent) if management is to be sustainable (Otto & Elbow, 1994). Cameroon has introduced legislation for community forests, but the process is complex (Pénélon, 1996, Chapter 3) and corruption among those responsible for allocation of timber concessions has resulted in areas being allocated twice or even more (Phil Burnham, *pers. comm.*). It takes at least a year to register a community forest, whereas a timber concession may be allocated within a few weeks (Pénélon, 1996).

De facto CWM laws

In reality, *de jure* laws are often subordinate to customary management regimes, due to the lack of capacity of the state to enforce regulations, in which case management is guided by customary law (Box 2.11). For example, the widespread practice of selling bushmeat throughout the region (Vabi & Schoorl, 1998; Takforyan, 1996; Steel, 1994; Chapter 4) demonstrates the widespread lack of regard for wildlife legislation and the lack of capacity for governments to impose it.

Where modern management regimes have eroded the capacity of traditional institutions to enforce rules without providing an effective replacement, there is effectively no management (Adams & Thomas, 1996). There are cases, such as the 1994 Forestry Law in Cameroon (Chapter 3), that suggest it is possible for *de jure* legislation to complement existing customary management systems, but this requires high levels of institutional investment and trust.

De facto CWM is occurring all over the region. But apart from brief reference to the fact that traditional CWM is suffering under the pressures of increasing populations, market demands and conflicting legal status, the literature on *de facto* CWM tends to focus on the economic and nutritional importance of wildlife resources rather than management systems *per se*.

Box 2.11. De jure and de facto CWM

The traditional management system for the Hadejia Jama'are wetlands in Nigeria (see Box 2.6) occurs within the context of national legislation which places control of fisheries in the hands of the Ministry for Environment and Forestry (MINEF). However, in reality MINEF are to all extents and purposes absent from the area and management is entirely de facto (Thomas, 1996). Controlling fisheries use, together with other resources, such as pastures, by a fluctuating population which is thought to reach 50,000 when the Fulani and their cattle move into the area in the dry season, is completely unfeasible if local rules regulating access are not respected. (Adams & Thomas, 1996).

Tenure and ownership

The question of whether local communities would better manage wildlife resources if they had ownership remains hypothetical, as throughout the region, state ownership is the norm.

However, it is important to differentiate between land ownership and security of tenure. Common property management theory suggests that secure access to resources is fundamental to sustained and effective management (Ostrom 1990). Land ownership implies the rights to sell or mortgage land, but this may not be a prerequisite for CWM and can work against the poorest members in any society.

Increasing demand for land, widespread migration throughout the region and insecurity of tenure with the coexistence of modern and traditional tenure regimes create conditions for speculation. In response to in-migration and the allocation of land by the state to non-native populations, people have repeatedly been found to be clearing more land than they currently need to ensure they have land to pass on to offspring (Sharpe, 1998).

Issues of tenure and ownership, legal recognition of stakeholders, and national legislation with respect to wildlife use and management are prominent in debates on participation of local communities in wildlife management. However, competition between communities and other stakeholders is frequently overlooked. Community participation is often dependent on the degree to which communities are allowed to participate in wildlife management by some of these other stakeholders. This perhaps reflects the current status where the balance of power is not in favour of "community".

There is some concern that conditionalities on land use imposed by community wildlife initiatives will reduce tenure security. If communities do not retain the rights to determine rules regulating resource use on their village territories, at worst, community management may lead ultimately to a loss of access to customary land (Neumann, 1997; Joiris, 1996, Box 2.12).

2.5 Conclusions

It is clear that the vast majority of initiatives in the region described as CWM do not fulfil the conditions of being by *and* with *and* for the community (Murphree, 1996). However, a range of levels of community participation within wildlife management

operates in the region. Such a range is, arguably, desirable, given the regional institutional, social, ecological, legal and political diversity in the region.

At one extreme is CWM around protected areas and at the other community management of wildlife resources in the absence of external intervention[7]. These two extremes are summarised below, although the majority of initiatives identified by this and the two previous reviews (Hakizumwami, 1998; Zebu, 1998), lie somewhere inbetween. In these cases, the extent of community participation in defining wildlife management varies, but as a general rule, communities can make management decisions only on the condition that they contribute to conservation objectives.

The extent to which communities participate in all aspects of wildlife management from decision-making, to regulating, to sharing in both the costs and benefits of wildlife management, depends ultimately on the balance of power between the different stakeholders and the relative value placed on a resource by those groups. Chapter 2 concludes by analysing the balance of power in CWM in the region.

2.5.1 From protection...

At one end of the CWM continuum lies protected area management with some form of community involvement. Protected areas are defined by IUCN as:

An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means.

Under this definition, protected areas are essentially areas set aside by the state, within which wildlife exploitation is either forbidden or greatly regulated and regulations are enforced by law. The area is being held in trust for the nation (or frequently the global community) to ensure that the biodiversity it contains is conserved for future generations.

The protected area estate in Central and West Africa is significant and protected areas are still being created (e.g. the 6000 km² Reserve de Faune du Ferlo Nord in Senegal, Kane, 1998 and the 37 410 km² Minkebé Reserve in northern Gabon)[8].

The costs of setting land aside from consumptive resource use are increasingly recognised and proponents of protected areas are under pressure to find ways of reimbursing communities. Different approaches are being experimented with in the region, including:

- allowing limited access by local people to harvest key natural resources (Chapter 6);
- integrated conservation and development approaches, which can take different forms (Chapters 1, 3, 5, 6)[9];
- buffer zone management (Chapter 6).

[7] These extremes are not necessarily mutually exclusive, see Chapter 4.

[8] For details of protected areas estate for the region see the World Conservation Monitoring Centre's website: http://www.wcmc.org.uk

[9] The rationale that development activities will encourage the conservation or the more sustainable use of natural resources is yet to be proven (Gibson & Marks, 1995; Brandon & Wells, 1992; Milner-Gulland & Mace, 1998). See Chapter 3 for discussion of the impact of a programme of livelihood activities on forest conservation.

Protected area management attempting to compensate local people for lost access to resources, prescribes their access to some of the benefit flows from wildlife, while giving them no real decision-making rights (Sharpe, 1998). The management objective of biodiversity conservation is not negotiable. Furthermore, some argue that regulating access to resources within buffer zones can undermine local tenure arrangements (Box 2.12).

Box 2.12. Communities and protected areas

The Okwango Integrated Conservation and Development Programme operating in and around the Cross River National Park in Nigeria was started in 1993, following gazetting of the park in 1991. WWF, the main implementing agency, aimed to protect the area and provide rural development initiatives to compensate for loss of resource access. Inadequate understanding of the rural population and land tenure issues, however, underestimated the momentum behind the expansion in markets for both forest and agricultural products, resulted in the project focusing its attention on the 'stick' of strengthening law enforcement, rather than the 'carrot' of benefit sharing.

The use of community wildlife management projects to effectively extend the protected area into the community areas bordering the protected area has been criticised by a number of authors (Joiris, 1996; Sharpe, 1998; Neumann, 1997). Buffer or 'support' zones have been promoted by large conservation NGOs as a means of ensuring the protection of the wildlife in the protected area, which do not recognise the invisible boundaries of the park or reserve. Buffer zone management generally imposes limitations on wildlife utilisation within the zone. However, the existence of such regulations implies that failure to recognise or respect these regulations carries the penalty of losing access to those lands; local autonomy over what are effectively village territories is lost. Buffer zone or support zone management creating local tenure insecurity has been documented for Cameroon, Nigeria, the Congo, and the Central Africa Republic (Sharpe, 1998; Neumann, 1997; Joiris, 1996).

However, setting aside areas for wildlife populations to recover is not a new concept within African culture (Takforyan, 1997; Blench, 1998). Forest areas have been set aside for hunting or for the collection of wildlife resource, often through the designation of spiritual sanctions (Blench, 1998; Fairhead & Leach, 1994). The population around the 'W' National Park in Niger, for example, were apparently happy to accept the need for a 'no-go' area to allow the wildlife populations there to recover (Benoit, 1997). Such management systems need to be able to adapt to changing conditions and it can be hard to know when and to what extent exploitation can be allowed. In Niger, natural forests became 'over mature' and less productive due to extended non-use and inertia over management issues (Otto & Elbow, 1994).

The issue appears to be one of choice. Much of the protected area literature claims that local communities are too constrained by short and medium term economic demands to be able to invest in preservative measures today, but that given support this is their preferred alternative (e.g. Pénélon, 1996). In a proposal for a CWM project in Côte d'Ivoire and Burkina Faso, the authors, while supporting the use of a participative village management approach, state:
"It is extremely unlikely that some of the essential initial habitat improvement and wildlife management activities would be included as immediate priorities in the

communities' plans. It will therefore be necessary …to propose these activities - which would be paid for by the project - as an additional set of activities for the area and to negotiate the details of implementation with the communities… As the local population gains experience - and begins to benefit from project activities - it is expected that habitat and wildlife management operations would be included in the terroir development plans" (GEF, 1995).

De Garine (1996) points out that while hunters may possess great skills in terms of tracking and knowing their environment this does not make them automatically good conservators of wildlife; their skills are highly functional to assist in successful hunting.

While such statements run the risk of belittling the capacity of local communities to make enlightened resource use decisions, they acknowledge people's economic needs and priorities, which may undermine sustainable CWM. There are, however, a number of cases that appear to support the view that communities place a high value on the conservation of wildlife resources (Box 2.13).

2.5.2. …to sustainable use and community management

At the other end of the spectrum to protected areas are areas where local populations have chosen to manage wildlife exploitation on their land through the application of traditional law or the adoption of bye-laws, and without external intervention. The key at this end of the spectrum is freedom of choice: given that freedom, local people are actively making the decision to manage the wildlife and wildlife habitats within their area, either in preference to alternative land use options such as agriculture or as a complementary element in an overall livelihood strategy. CWM at this end of the spectrum occurs when the benefits accruing to the community from maintaining a wildlife population outweigh the costs (Adams & Thomas, 1996). Freedom of choice is severely handicapped in the region by the legislative restrictions over wildlife resource use and ownership.

Furthermore, while ritual and customary beliefs relating to wildlife management prevail in parts of the region, there is little doubt that greater market opportunities and tenure insecurity continue to drive the perceived value of wildlife resources towards their economic and socio-political functions. The concept of conservation of biodiversity for its own sake holds little currency in a region where the forest estate remains immense and economic hardship prevails.

The customary management of the resources of the Hadejia Jama'are wetlands in northern Nigeria has already been described (Box 2.6). Another example of a community-led approach to wildlife management is that of Ekuri forest in Nigeria (Box 2.14).

2.5.3 Where lies the balance of power?

Management of natural resources essentially involves two components: exclusion and regulation (Ostrom, 1990). Where the resource is commonly owned or where there are shared access rights to a resource, regulations will define who is allowed access and for what.

Box 2.13. Community support for protected areas

In Niger, the Takieta Joint Forest Management Project gradually became aware that there were divisions within local community groups over the desirability of maintaining the forest reserve rather than converting it to agricultural land. The value of the reserve as a source of forage, fuelwood, medicinal plants and other NTFP's was well recognised, but there was pressure from individuals to excise at least a part of the forest to allow extension of agricultural lands. The project decided to hold a workshop in its second year specifically to discuss the future of the forest reserve. The subject of discussion was whether the management of the forest reserve (in collaboration with the forest department) should be divided between village territories or kept as a whole. The workshop involved 200 participants including nearly 100 representatives of pastoral groups. After considerable discussion and debate it was agreed that division of the reserve would inevitably lead to its eventual destruction which would mean the loss of an obviously valuable grazing reserve. The decision was made to keep the forest as a whole (SOS Sahel, 1998; Gill & Kees Vogt, *pers. comm.*).

The Popenguine National Park was the first experiment of community wildlife management in Senegal (Fondation Nicholas Hulot, 1997). Upgraded in 1986 from a forest reserve, the park includes both forest and marine resources. A conservation education programme in the late 80's caught the imagination of one particularly influential woman at Popenguine who established a women's group dedicated to wildlife conservation. The women co-opted the assistance of young men to help with reforestation activities and activities have extended around the park as more communities have set up their own groups and merged with a co-operative group. This multi-village institution has now been officially recognised by the park authorities and has the authority to be involved in maintaining and guarding the reserve, as well as economic activities including tourism, rights of entry, etc.

An interesting result of recent research and discussions in the area has brought to light changes in local people's attitudes to the upgrading of the reserve in 1986. The initial response when the idea for upgrading was first mooted to the adjacent communities was ambiguous. Surveys at the time found elders saw the plan to upgrade to a nature reserve with interest and the only real hostility was from the fisherfolk, who until then had relied on free access to the zone brought within the marine reserve. Surveys ten years later revealed that the local population had not been happy originally, but were now in favour given the benefits it had brought to the area (Ndiaye, 1998; Takforyan, 1993). Vegetation cover has regenerated, including useful plants that had previously disappeared. (Fondation Nicholas Hulot, 1997). Amongst other interesting issues, this case raises serious questions about the accuracy of social surveys in a complex social system.

Wildlife resources, even in the most remote parts of Central and West Africa, interest a broad spectrum of players, for their economic, biodiversity and social values. Wildlife is often important locally as a source of income and sustenance as well as for its ritual properties. Wildlife and tropical forests are exploited by the private sector, in both consumptive (e.g. timber extraction) and non-consumptive (e.g. tourism) ways. Further afield, wildlife and the habitats that support it are of economic, social and political importance to national governments. The national and international conservation lobby and international donors also have interests in

Box 2.14. Ekuri Forest: a case of genuine, de jure, CWM.

The two communities of New and Old Ekuri in Cross River State, Nigeria, are blessed with a village territory that contains around 30,000ha of high quality dense humid tropical forest. While land in Nigeria legally belongs to the Federal State, customary rights to land are well recognised both by the population and the government, and tenure is basically secure.

In addition to providing an important source of NTFPs, the villagers were aware of the potential value of the forest for its timber, but did not want to follow the route of neighbouring villages who had given timber concessions to large scale timber companies in return for promises of investment in local infrastructure only to be disappointed. The contracts signed by the timber companies only committed them to build infrastructure within a ten-year time frame, and the roads, which they used to extract the timber, were generally of poor quality and would not survive a prolonged rainy season.

The villagers of Old and New Ekuri approached the National Park authorities in 1991 following the establishment of the local Okwango ICDP Programme (financed by WWF), which they had heard was interested in assisting communities within the buffer zone of the park in establishing natural resource management systems. Over the course of the following 6 years, the villagers have established the Ekuri Co-operative which has been responsible for carrying out a forest inventory with the help of the forest department and identifying mature trees for harvesting within a 50ha block over a 40 year cycle (Dunn & Otu, 1995; Morakinyo, 1994). The co-operative is currently in the process of establishing a management plan with the help of the Ford Foundation who are assisting the community in developing their management capacity (Rob Moss, pers. comm.).

While the 'project' is facing certain problems, in particular juggling effective management with equitable participation of village members (Morakinyo, pers. comm.), it is the closest example to genuine modern community wildlife management and the most exciting example of community wildlife initiative encountered during the course of this review. It is, however, interesting that a review of forestry in Nigeria by MINEF mentions communities only as users (ie. problems), and describes social forestry as "rural communities are being organised" (Govt. of Nigeria. 1998.)

wildlife for its biodiversity value. The donor community is particularly concerned with the potential for wildlife to benefit rural communities.

The 4Rs

Chapter 2 demonstrates that a key issue in CWM in Central and West Africa is assessing the balance of power among users of wildlife resources and other stakeholders. Elements defining the balance of power can be summarised as the four Rs: Rights; Responsibilities; Returns/Revenues and Relationships. The 4Rs framework was developed as a tool for analysing the distribution of power and responsibilities between the various stakeholders in a forestry context in an African context (Dubois, 1998). It is used here to understand the incentives and disincentives for CWM in Central and West Africa.

Rights

At present, rights over access to, and management of, wildlife resources continue to be concentrated in the hands of the state. However, over the vast majority of the region *de facto* rights remain in the hands of the population. The failure of governments to govern by coercion is helping to drive the push for greater reliance on 'traditional' management institutions (Sharpe, 1998). However, the fact that much state legislation contradicts many traditionally developed approaches, thereby alienating important user groups such as hunters, sends ambiguous signals to communities about their real rights, creating confusion and the loss of a sense of responsibility (Nguinguiri, 1997).

Responsibilities

There is a tendency to see CWM as a solution for under-funded government departments' failure to adequately control wildlife resource access. This view, however, tends to lose sight of the costs of wildlife management to local communities, both in terms of effort and opportunity cost. In the Hadejia Jama'are wetlands fisheries, efforts to promote fish ponds largely failed because of the effort required for their development and up-keep compared to that required for an equivalent, if not better, catch size from wild fish populations (Thomas, 1996). Responsibilities tend to be inextricably linked with rights. They also pose the question, responsibility of whom and for what? A government may feel responsible for maintaining the nation's natural heritage. However, the continued decline in wildlife resources in Central and West Africa demonstrates the incapacity of government agencies to fulfil their role as managers and conservators.

Returns/revenues

The distribution of returns and revenues, again closely related to the question of rights, is arguably the most important issue in reviewing the balance of power between the different stakeholder groups.

Donors and large conservation agencies on the one hand use their 'purchasing power' to push the CWM agenda. Governments, on the other hand, must weigh these potential revenues with those from large scale wildlife resource exploitation, which may be more profitable, at least in the medium term, and provide important revenues for national economic development.

Communities are essentially opportunistic. As long as they have no alternative or as long as governments do not impose restrictions on the wildlife resources that exist, they will continue to benefit from wildlife resource access. They get some benefit from large scale resource exploitation (through labour and market opportunities) and they receive what benefits are provided by external conservation and development agencies in project areas. It is only when communities perceive a clear return, directly to them, from the use of a resource, can CWM occur.

Relationships

The importance of relationships and alliances in CWM lies in the effects such alliances may have on the balance of power.

A particularly important and difficult alliance in the forest zones of the region is between large scale private industry and local communities. Timber, plantation,

mining and oil companies have worked in the region for decades and will continue to do so. While their activities can create serious environmental damage with serious implications for the local resident communities, they also provide many of the services associated with government (infrastructure such as roads, schools and clinics) as well as other important economic opportunities. Their power lies firmly within their ability to bring investment and economic development into the region.

However, the quality of these inputs and their local sustainability is not so clear cut. The primary motive for these large companies to be in the region is profit, and, as demonstrated in the case of Ekuri and elsewhere in the region, such as the Niger Delta, they continue to pose a serious threat to wildlife resources, not to mention local livelihoods in the area (Morakinyo, *pers comm*).

The fifth R: Recommendations

Community wildlife management can only occur where the 'community', and the interests that it represents, holds the balance of power, a condition that is far from reality in most of Central and West Africa today.

New initiatives in wildlife management are required if the combined goals of sustainable wildlife resource use and rural development are to succeed. Such initiatives need to act at three discernible levels:

- At the national and international level there is a need for an appropriate legislative and policy framework that defines clearly roles for the various different actors and guidelines for negotiations within and between these actors where needs and aspirations compete. This may include regulation of wildlife marketing, and guidelines for objective arbitration. Throughout the region this needs to be supported by continued decentralisation of management decisions and roles to the local level. Chapter 2 has shown that CWM is one of a number of possible land use strategies within nation states and across the region as a whole. The decision to pursue CWM as opposed to any other strategy must be recognised as a political decision and one in which communities empowered through decentralisation can engage.
- At the level of national and regional institutions, whether administrative, political or development oriented, support is needed to increase their capacity to play the roles allocated to them more effectively and confidently. This may include, for example, training of wildlife department staff and other development actors (e.g international and local NGO's) in participative approaches and philosophies and the negotiation and conflict resolution skills that are necessary for benefit sharing. Supporting fora for exchanging experiences and lessons learnt across the region is also important in this region, particularly those that traverse the linguistic diversity of Central and West Africa. National institutions also have an important role lobbying for under-represented, marginalised groups who are often over-ridden by more powerful groups.
- At the local level, actions are needed which allow local people and civil society to capitalise on the opportunities presented by decentralisation and the accompanying responsibility to and rights over their resources. This, and the chapters that follow, demonstrate a growing experience within the region, which should be shared and debated among the many different stakeholders involved in wildlife conservation.

Above all, there is a need for a continued objective evaluation of different possible approaches to CWM, both in terms of its impact on wildlife conservation and the potential for CWM to benefit local communities. If CWM is to compete with other land use strategies, stakeholders still need to be persuaded of its benefits.

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Laws and livelihoods in Kilum-Ijim Forest: implementing the new forestry policy in Cameroon to promote conservation with development

Elie Hakizumwami[1] and Emmanuel Fuchi[2]

Chapter summary

The Kilum-Ijim Forest Project was established in 1987 to conserve the Kilum-Ijim Forest, which covers about 20,000 hectares in the centre of the North West Province of Cameroon in the Bamenda Highlands. It constitutes the last significant remnant of Afro-montane forest in West Africa. The biggest threat to the forest is the pressure to clear the forest for agricultural production, as well as encroachment by grazing. Preventing encroachment into this forest is therefore a priority both for conserving the forest and ensuring a sustainable supply of forest products for the local communities. About 200 000 people live within a one day-walk to the forest which is used heavily for various products, the most important being fuelwood, medicines, honey and building materials.

To ensure long-term conservation of the Kilum-Ijim Forest, while improving local livelihoods in ways compatible with maintaining the forest, the Kilum-Ijim Forest Project established a community-based management system for the conservation and sustainable use of the forest. The 1994 Forestry Law in Cameroon, which enables local communities to benefit from forest management, made this possible. Chapter 3 reviews the field experiences of the project in implementing the new Forestry Law.

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[3] We are sincerely grateful to the individuals who reviewed and provided comments on earlier drafts of this report, including Anne Gardner and John DeMaroo from the Kilum-Ijim Forest Project, David Thomas from BirdLife International, Jo Abbot and Ross Hughes from IIED, Kenneth Ango Anga from IUCN-Regional Office for Central Africa, and Phil Burnham from University College London.

The lessons from Chapter 3 can be classified under the following policy and institutional incentives and disincentives:

Policy context

The legislative environment provides an important context from which community-based management of wildlife resources can proceed. A manual was produced in 1998 which interprets the 1994 Forestry Law and sets out the practical steps required to establish and manage community forests. A combination of the two documents assists those wishing to implement the legislation. However, the procedures to establish community forests are lengthy and complex and there remain inconsistencies and difficulties in interpretation. The Forestry Law and the Manual need to evolve in response to the field experiences of those pioneering their implementation. It will be important to develop fora for the policy and practice sides of community forestry to draw from each other.

Institutional context

A community forestry unit exists within MINEF and is charged with developing community forestry throughout the country. However, there is important work to be done by this Unit in advocating community forestry both within MINEF and other sectors of the Government of Cameroon. The opportunities and challenges posed by the new legislation need to be analysed and debated at all levels, both within and outside government. The field experiences of projects such as the Kilum-Ijim Forest Project should provide the Unit with the necessary evidence from which to advocate community forests. Additionally, the legislation is strongly supported by international agencies that are playing an important role in advocating and supporting the implementation of the legislation.

The Kilum-Ijim Forest Project shows how the forestry legislation can help to reconcile the different priorities and histories of *de jure* and *de facto* institutions concerned with managing community forests. It also shows the importance of working through and with existing institutions, such as traditional administrations and forest user groups, wherever possible. Around the Kilum-Ijim Forest, novel and traditional institutions have considerable skills and experience in managing community-based projects, such as schools and roads. These provide an important baseline from which the management of community forests can draw. Furthermore, the structured nature of society among the Kom, Nso and Oku cultures facilitates decision-making and the implementation of rules and regulations.

Chapter 3 shows that the establishment of community forests is a journey in developing capacity amongst government, traditional and community-based institutions to work together towards more participatory forms of management, with a more equitable distribution of rights and responsibilities. The technical management of the forest is likely to fall into place only when the institutional boundaries have been negotiated to the mutual satisfaction of all stakeholders.

3.1 Introduction

3.1.1 The Kilum-Ijim Forest Project

The Kilum-Ijim Forest Project is a project of BirdLife International (an international partnership of organisations concerned with the conservation of birds) and the Government of Cameroon, through the Ministry of the Environment and Forestry (MINEF). The project is working towards the formal designation of Kilum-Ijim as a community-managed forest[4]. This has been facilitated through a new Forestry Law in Cameroon, which incorporates a community-based approach for the sustainable management and conservation of forest resources.

The Kilum-Ijim Forest Project was established in 1987 to conserve the Kilum-Ijim Forest, the last significant remnant of Afro-montane forest in West Africa. Covering about 20,000 hectares, the Kilum-Ijim forest is located in Bui and Boyo Divisions in the centre of the North West Province of Cameroon in the Bamenda Highlands (see Figure 3.1). The forest on Mount Kilum at 3011m, the second highest peak in mainland West Africa, and the adjoining Ijim Ridge, 2000-2500m, is recognised as a globally important centre of endemism. Fifteen montane bird species endemic to Cameroon are found in the Kilum-Ijim Forest. Two of these, Bannerman's Turaco *(Tauraco bannermani)* and the Banded Wattle-eye *(Platysteira laticincta)*, are restricted to the forest and a few nearby forest fragments and are classified as Endangered (Collar et al 1994). The Kilum-Ijim Forest almost certainly represents the only genuine possibility for the conservation of viable populations of these two species. At least six species of mammals found in the forest are endemic to the Bamenda Highlands, and 10 to the Cameroon Highlands. While reptiles and amphibians have been less thoroughly studied, 11 species endemic to the Cameroon Highlands have been identified, of which two are restricted to the forest. There are at least 40 species of plants endemic to the Cameroon Highlands, and five of these are found only in the forest.

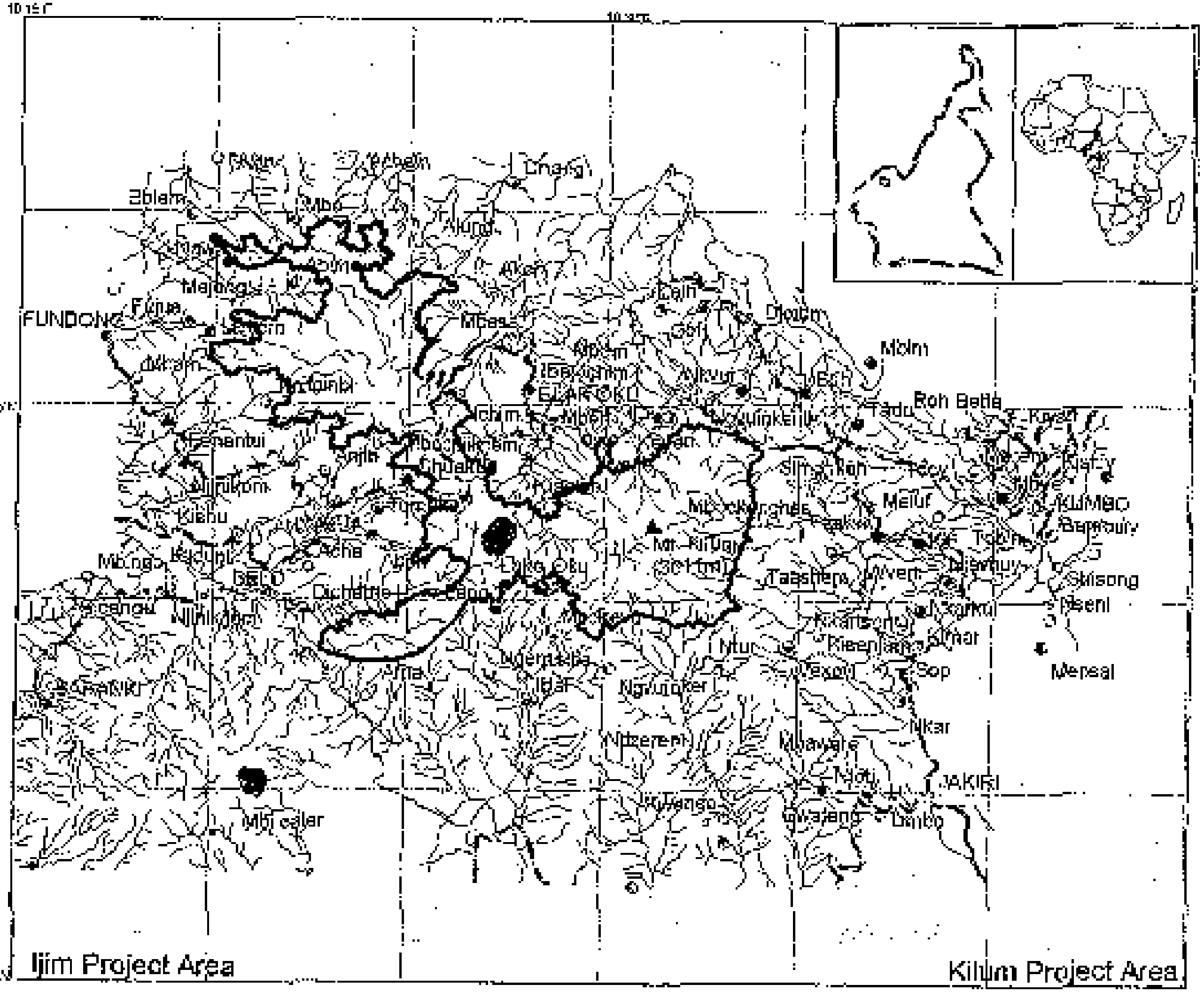
3.1.2 Population

But it is not only for biodiversity conservation that the protection of Kilum-Ijim forest is important. About 200 000 people live within a day's walk of the forest. The people belong predominantly to three ethnic groups: the kingdoms, known locally as *fondoms*, of Nso, Kom and Oku, each of which is headed by a chief or Fon. Use of the Kilum-Ijim forest is divided by ethnicity, the Oku and Nso people utilising the Kilum forests and the Kom people the Ijim forests. Additionally, small populations of Fulani pastoralists and agropastoralists (comprising less than 1% of the total population) are settled within enclaves in the forest.

For all these communities, the forest is a source of natural resources that support their livelihoods, the most important being fuelwood, medicines, honey and building materials. The forest also protects water supplies and is important culturally - many traditions and practices relate to forest plants and animals.

[4] The Kilum-Ijim Forest Project is funded through the Joint Funding Scheme of the Department for International Development, the Dutch Ministry of Agriculture, Nature Management and Fisheries (managed by the Dutch Ministry of Foreign Affairs, DGIS) and the Global Environment Facility (managed by the World Bank).

THE KILUM-IJIM FOREST AREA
NORTH WEST PROVINCE
CAMEROON



- Villages
- Major roads
- Minor roads
- Watercourses
- Forest boundary

1 0 1
Kilometers

N

Geographic projection.
Source: 1:50000 maps Nkambe series 1985; SPOT Image 91-336-95 1986; forest boundary survey (Asanga & Quantal 1993; & Ijim boundary GPS co-ordinates.

Prepared by P. F. Forboseh, Kilum-Ijim Forest Project

November 1993

Preventing encroachment into the remaining forest is a priority both for conserving the forest and ensuring a sustainable supply of forest products for the local communities. The biggest threat to the forest is clearance for agricultural production, as well as encroachment for grazing. Fire, used as an agricultural tool and for hunting, can spread into neighbouring farms and into the forest. All these factors can have an impact on the conservation of birds and their habitat and jeopardise the local supply of forest products (Coulthard, 1996).

The Vikovi group grazing area. With high demand on land for cultivation, there is pressure on available grazing resources. The Kilum Ijim Forest Project has promoted group grazing areas, which combine veterinary care and pasture management with cultivation of fodder crops, such as the Guatemala grass pictured here. Picture: David Thomas

3.1.3 Project objectives

To ensure long-term conservation of the forest, the Kilum Ijim Forest Project has adopted a participatory approach to develop a community-based system of forest management. At the same time, the project is working with the local population to find ways of improving their livelihoods that are compatible with maintaining the forest.

The purpose of the Kilum-Ijim Forest Project is to ensure that the "*biodiversity, extent and ecological processes of the Kilum-Ijim Forest are maintained, and the forest used sustainably by the local communities.*" To achieve this, the project has adopted a four pronged strategy (BirdLife Annual Report, June 1996 - June 1997):

1. To establish an effective, participatory, community-based forest management system for conservation and sustainable use of the forest;

2. To build capacity of communities, traditional authorities and government to implement community forest management;

3. To improve local livelihoods in ways compatible with maintaining forest;

4. To establish a permanent system for monitoring the effectiveness of forest management and to develop a system by which community forest management institutions can monitor the condition of the forest themselves and evaluate their own activities.

Chapter 3 focuses on the first objective and examines a new Forestry Law in Cameroon that was adopted in 1994 and promotes community forestry. It explores the strengths of the legislation and the challenges posed in facilitating the development community forestry at Kilum-Ijim forest. It also describes how the Kilum-Ijim Forest Project has operationalised the Forestry Law in the context of the different needs and aspirations of community, traditional and government administrations.

3.2 Incentives and disincentives for CWM

3.2.1 Political and legal context

Incentives:

- The Government of Cameroon has ratified numerous international and regional conventions relating to biodiversity and community-based natural resource management
- Enabling forestry legislation promotes the establishment of community forests and a manual provides guidance on its implementation
- Existence of informal customary law to deal with conflicts at the village level

Disincentives:

- Unclear distinction between de facto and de jure systems of natural resource management
- Legal procedures to acquire community forest are long and complicated
- Lack of universal support within the Department of Forestry, and the Cameroon Government more generally, for the Community Forest Law

Historical review of land and wildlife tenure in Cameroon

Since Independence in 1960, Cameroon has undergone tripartite colonial rule respectively by the Germans (1884-1916), and the British and the French (1916-1960). Colonial rule introduced legislation that changed the customary tenure and ownership systems. After Independence, the legislation was reviewed but reflected the colonial legacy of state ownership of natural resources. The latest forestry legislation, the 1994 Forestry Law, maintains state ownership of natural resources but enables communities to benefit from their management. The legal history of land and natural resource tenure in Cameroon is summarised in Table 3.1 and is discussed in detail in Egbe (1997, 2000).

The 1994 Forestry Law reflects an emerging political will towards community participation in natural resource management, although it should be noted that the Government of Cameroon has updated its forestry law mainly as a result of external influences (Burnham, 1998; Horta, 1998). Egbe (1997) notes that the introduction of

community forestry in the 1994 Forestry Law is *"one of the impositions of the World Bank"*. Reactions to the new Forestry Legislation amongst individuals and departments within the Government of Cameroon are far from uniformly supportive. Administrators in Yaoundé can choose to accelerate applications for community forests, particularly where they are used *"by members of the national elite to obtain small timber concessions...to sell the timber to large international logging companies"* (Horta, 1998). Alternatively, applications for community forests can become bogged down in the lengthy administration: there are many more steps necessary to declare a community forest than for issuing a logging concession. There is no commercially viable timber in the area of the Kilum-Ijim Forest Project and divisional and provincial delegates support the concept of community forests. However, the passage of documentation through the Yaoundé administration can be slow.

Overview of current legislation relating to the conservation of the environment

There is growing awareness in Cameroon that natural resources need to be managed sustainably in order to ensure their future supply. This awareness is reflected in official policy: the Government of Cameroon co-operates in the conservation of biodiversity through ratifying various regional and international conventions (see Box 3.1).

Table 3.1. Comparison of different land tenure legislation in Cameroon (adapted from IIED 1998)

Main Characteristics	Customary law	German legislation	British legislation	French legislation	1974 Land tenure law	1994 Forestry law
Nature	Oral and underpinned by spiritual beliefs; Community oriented	Written and hegemonic, Does not recognise customary tenure, Colonial rule needs biased	Written and hegemonic Recognises customary law and rights; Colonial rule needs biased	Written and hegemonic; Does not recognise customary rights; Colonial rule needs biased	Written and hegemonic; Does not recognise customary rights; Government and individual needs biased	Written and hegemonic; Recognises community participation in non-permanent forest management
Elaboration approach	Community driven	Very top down	Top down but recognises local control and management of resources	Very top down	Top down	Participation in management of non-permanent forests but essentially top-down.

Box 3.1: Cameroon membership of international conventions and bilateral agreements related to the conservation of the environment

- The Alger Convention on conservation of nature and natural resources (Alger 1968)
- The convention on the protection of cultural and natural heritage (Paris 23 November 1972)
- The Convention on the International Trade of Threatened Fauna and Flora Species • The Agreement on joint regulation of fauna and flora in the Lake Chad Basin (Enugu, December 3, 1977)
- Accord for Co-operation among Central African States relating to wildlife conservation (Libreville, April 16 1983)
- The Vienna Convention on the protection of the ozone layer (Vienna, March 1985)
- The Convention on climate changes (June 14, 1992)
- The Convention on the Conservation of Biological Diversity (June 14 1992)
- The Convention on desertification (Paris, October 1994)
- Brazzaville Process (Brazzaville, Congo, June 1996) which focuses on conservation of Central African rainforest ecosystems
- Yaoundé Agreement (Yaoundé Cameroon, March 1999) on Conservation of Central African forests ecosystems
- Co-operation agreements with international organisations such as IUCN, WWF, OIBT/ITO, OAB/ATO

At a national level, some of the most progressive legislation regarding the environment comes in the form of the 1994 Forestry Law. The overall aims of the policy are to protect the environment and conserve its resources. But the policy also highlights the Government of Cameroon's desire to ensure that the forestry sector contributes to the socio-economic development of Cameroon by involving non-governmental organisations, economic operators and local people (see Table 3.2). One of the objectives of this new policy is *"to increase the participation of local populations in forest conservation and management in order to contribute to raising their living standards"* (MINEF, 1998).

The Cameroonian forest policy gives special priority to environmental issues, which is reflected in the first objective and strategies of the forestry policies shown in Table 3.2. At the heart of the forestry policy is a land-use plan whose objective is to define a permanent forest area which consists of forests belonging to the state (State forest: national parks, faunal reserves, wood production) and to local government (Council forests). Forests that do not form part of the permanent forest are classified as non-permanent forests; that is, they can be put to other uses, including community forests, private forests and agroforestry.

According to MINEF (1998), a community forest is defined as *"a forest forming part of the non-permanent forest, which is covered by a management agreement between a village community and the Forestry Administration. Management of such forests is the responsibility of the village community concerned, with the help or technical assistance of the Forestry Administration"*. Thus, the new Cameroonian forestry policy provides that by associating rural populations in its implementation, especially through the development of community forests, it can conserve the forest as well as secure benefits for village communities.

Table 3.2. National strategies for forest conservation (MINEF 1995)

Objective	Strategy
1. Ensure the protection of the forest heritage and participate in the safeguarding of the environment	1.1 Integrate the environment and balance of ecosystems' component into the policy of land management 1.2 Establish a permanent forest estate and protected areas representing national biodiversity (fauna and flora reserves) 1.3 Develop measures for the protection, improvement and conservation of all forest resources
2. Increase the participation of local populations in forest conservation and management in order to contribute to raising their living standards.	2.1 Organise the timber sector 2.2 Foster conservatory management of forest resources by local communities 2.3 Foster the development of private forest and game breeding in rural areas 2.4 Develop agro-forestry in farming systems
3 Develop forest resources with a view to increasing the contribution to the national economy while maintaining the production potential	3.1 Increase fuelwood and poles supply while conserving the potential through a better utilisation of available resources and to develop the means of production 3.2 Orient demand towards less expensive energy resources or other substitutes 3.3 Promote participatory management by involving all partners in the fuelwood and poles sub-sector 3.4 Organise and promote the informal sector
4. Ensure resource renewal through regeneration and reafforestation with a view to perpetuating the forest potential.	4.1 Regenerate and reafforest using appropriate tree species with well-known silvicultural techniques 4.2 Encourage the involvement of all concerned parties 4.3 Ensure the management of forest galleries and the protection of watersheds
5. Revitalise the forestry sector by setting up an efficient institutional system and involving all concerned parties in the management of the sector	5.1 Redefine the tasks of the concerned parties (administration, private individuals, local councils, NGOs etc.) 5.2 Improve the organisation and co-ordination of institutions involved in the use of forest resources 5.3 Foster training adapted to the objectives of the new forestry policy 5.4 Improve the management of human resources 5.5 Support the development of the forestry sector 5.6 Ensure the financing of forestry activities on priority basis.

Forest zonation has not been carried out in anglophone Cameroon (Northwest and Southwest Provinces) and thus the Kilum-Ijim Forest is yet to be classified as either permanent or non-permanent forest. In spite of this, the Kilum-Ijim Forest Project has proceeded in implementing the Community Forest law as an appropriate piece of legislation to safeguard the forest.

Benefits of the 1994 Forestry Law

In contrast to previous legislation, the 1994 Forestry Law enables communities to manage and benefit from forests (see Box 3.2). To implement the forestry law, the *'Manual of the procedures for the attribution, and norms for the management, of community forests'* (known as 'the Manual') was developed with the support of the Community Forest Development Project, funded by the UK Department for International Development. The Manual is designed to *"flesh out and set out accurately the necessary steps in the attribution and management of Community Forests"* (MINEF, 1998). Subsequently, numerous field projects, including the Kilum-Ijim Forest Project, have mobilised local communities towards forming legal entities for the application and management of community forests for their own benefits.

Staff from the Kilum-Ijim Forest Project acknowledges that without the Manual it would not have been possible to facilitate the development of community forests. The Manual has provided the *"framework for implementation"* (Anne Gardner, pers. comm. 1999). In addition to providing practical guidance in the establishment community forests, the Manual also tries to iron out some of the ambiguities, loopholes and inconsistencies in the 1994 Forestry Law (see Egbe, 1997). The opaque nature of some aspects of the law, e.g. the failure to define the types of assistance provided by the Forestry Department, can *"act as a tool in the hands of dubious bureaucrats who will prefer unscrupulous interpretations which will give them power, money and prestige"* (Egbe, 1997). Beyond the production of the Manual, not much public information about the new law has been forthcoming. This has led some projects to translate parts of the law and the Manual into local languages as a first step in informing local people of new rights and responsibilities (see Pénelon, 1997; Dubois, 1997).

Defining a community

How to define a community is a problem long-faced by anthropologists and development practitioners and comes to the fore in community-based natural resource management (see Chapter 2). In Cameroon, a formal, organisational definition of 'community' is provided by the Manual: *"The community concerned must have a legal personality in the form of an entity provided for under the legislation in force"* (MINEF, 1998). The distinct legal entities are defined in the Manual as *"Associations; Co-operatives; Common Initiative Groups; and Economic Interest Groups"* (MINEF, 1998). However, the Manual also implies a spatial definition to community as community forests: *"shall be those situated near or on the edge of one or more communities, where the inhabitants of those communities carry on activities"* and *"Any forest likely to acquire community forest status shall be given in preference to the nearest adjacent community"* (MINEF, 1988).

These definitions of community are probably far from the definition of a community as perceived by local people. However, around Kilum-Ijim Forest in North West Province, it is not difficult to identify the community. The community refers to a group of people under one leader (a village head) and which has a Traditional Council to settle disputes, including land, and control access to the natural resources[5]. This definition includes the Fulani within the area as they report to a

[5] The situation in this part of North West Province is quite different from elsewhere in Cameroon where populations are multi-ethnic. There is currently much debate and conflict over the contrasts between, and differential rights of, 'natives' versus 'strangers', in these other parts of Cameroon see for example Sharpe (1998).

Box 3.2. Incentives for local communities to apply for community forests.

The following statements from the Manual indicate the benefits that are likely to motivate rural Cameroonians to apply for community forests.

- Forest products of all kinds resulting from the management of community forests shall belong solely to the village communities concerned. Therefore, all products, wood, non-wood, wildlife, fishery resources and special products, with the exception of those forbidden by law, are deemed to be the property of the community.
- Forest products of all kinds resulting from the management of community forests shall belong solely to the village communities concerned.
- Village communities and individuals shall be paid the selling price of the products extracted from forests belonging to them. Therefore, communities are free to enter into contracts for the exploitation of timber in their Community Forests by means of sale of standing volume, exploitation permits or individual felling authorisations.
- The income generated by contracts for timber exploitation and by the extraction of fuelwood and poles under an exploitation permit in a Community Forest shall accrue entirely to community concerned.
- Communities may enter into contracts for the exploitation and marketing of non-timber forest products with individuals or companies that are not community members.
- Communities may enter into contracts for the exploitation and marketing of hunting products with licensed individuals or companies that are not community members.

Source: MINEF, 1998

village head (as well as having their own traditional structures of administration). The problem faced by the project comes not from defining who is the community but how its interests are represented in a legal entity such as a common initiative group.

In Oku, informal groups of intensive forest users, e.g. beekeepers, carvers and hunters, have worked together with the traditional administrations and have been supported by the Kilum-Ijim Forest Project over recent years. The project recognised that the intensive forest users that are already organised into forest user groups would be key to establishing the legal entities (known within the project as forest management institutions) required under the 1994 Forestry Law. However, a broader membership, including people who use the forest in different or more sporadic ways, is required to ensure sustainable forest management. Thus, the new forest management institutions include both forest user groups and other community members. The project has found that intensive forest users are prepared to invest their time in forest management as they receive the benefits of forest use and are keen to maintain active involvement. In Nso, membership fees for the forest management institution are graded according to the level of use, being higher for members of forest user groups who use the forest intensively and lower for more infrequent forest users.

Traditional institutions and the new Forestry Law

Neither the 1994 Forestry Policy nor the Manual makes direct reference to traditional administrations. As a result, there were fears that traditional leaders in Cameroon would reject the Community Forestry Law as it may imply a weakening

of their role in handling forestry issues. In Northwest Province, the Kwifon are the traditional custodians of natural resources and carry out rites in the forest (see Box 3.3). Given the strength and influence of traditional institutions in the Bamenda Highlands, the Kilum Ijim Forest Project has facilitated the development of forest management institutions that work alongside the traditional administration. This promotes complementarity in forest management at the local level. Examples of how the two systems work together are shown in Box 3.3. Another example is provided by a seminar in early 1999, which brought together the forest management institutions and the traditional administrations from all three fondoms. Over the course of several days, common rules for the management of each forest-related resource and activity were developed. The harmonisation was only possible because of the co-operation between the two administrations. Importantly, the common rules establish only minimum standards, ensuring flexibility for tighter restrictions at the local level, where required. These standards will form the basis of the management plan required for each community forest (see below).

Box 3.3. Helping legal entities and traditional institutions work together for forest management

The North West Province of Cameroon where the Kilum-Ijim Forest Project operates has a system of traditional administration with Fons at the head of each group of people of a common ancestry, namely Kom, Nso and Oku. An advisory council, the Kwifon, assists each Fon by issuing laws and ensuring that they are respected. At the village level, the traditional council is responsible for settling disputes and ensuring the implementation of the law. The KwiFon is the traditional custodian of the forest and has particular responsibility for natural resource management. All laws regarding the use of the forest come from the KwiFon. The laws of the KwiFon bind all tribe members and transgressors of the law suffer sanctions, which range from small fines to banishment.

The KwiFon and the traditional councils have accepted the establishment of forest management institutions, the legal entities that ensure that communities comply with the 1994 Forestry Law. However, it should be noted that the de facto enforcement of forest law and order in the village remains with the traditional administrations. The following two examples illustrate this point.

First, despite the creation of forest management institutions, the KwiFon of Kom and Oku have met more than once to discuss strategies to protect the Kilum-Ijim Forest and as a result, on the Kom side, all goats have been removed from the forest. This shows that the KwiFon remain an effective institution for working at a supra-village level, particularly in presiding over boundary disputes and other natural resource conflicts between villages.

Second, when someone is found committing an offence in the forest, s/he is taken by the forest management institution to the Traditional Council for punishment. However, any fine administered by the Traditional Council may be paid to the forest management institution. For example, in 1997, some goats that were seized from the forest in the Nso area were taken to the Fon's palace so that they could be sold. The Fon handed the proceeds from the sale to the appropriate forest management institution to be used for community development.

Box 3.4: Procedures to acquire a community forest in Cameroon

Stage One: Preparation and submission of the application dossier

- Establish a legal entity representing the community group.
- Identify community forest on a map of scale 1:200 000, indicating villages, roads, paths, watercourses, and forest and village boundaries. The area to be allocated as a community forest cannot exceed 5000 hectares.
- Minuted consultation meeting with all sections of the community concerned and representatives of the administrative authorities in order to appoint a management officer and to lay down the objectives and boundaries of the said forest.
- Application dossier should include: stamped application, objectives assigned to the forest concerned, map, name of the community concerned and address of the appointed manager, description of the activities previously carried out in the area of forest concerned, Curriculum Vitae of Management officer and minutes of the consultation meeting.

Stage Two: Preparation and Submission of the management plan and management agreement.

- The Management Plan shall contain an Inventory and the following chapters: Chapter I The Community, Chapter II Location of the Community Forest and Priority Use, Chapter III Description of the Community Forest, Chapter IV Action Programme, Chapter V Undertakings and Signatures.
- The Management Agreement specifies the beneficiaries, the boundaries of the forest allocated to them, the special instructions on the management of areas of woodland and/or wildlife, formulated at the behest of the said communities. It includes the simple management plan and the Articles of Association of the legal entity chosen.

Implementation of the Management plan and agreement

- Annual Plan of Operations and Reporting: the Management Officer must submit annual plans of operation to the representative of the Minister of Forests.
- A Community Forest Management Plan must be reviewed at least every five years by submitting: a five year action programme and a detailed plan of operations for year one, documentary evidence that the community still exists as a legal entity, a document detailing the number and types of exploitation titles to which the Community Forest is subject, a new map of the area (if necessary), information on any changes in the identity of the Management Officers.

Source: MINEF, 1998

But even when the community, and the modalities of co-operation between the new and traditional administrations, have been defined, the number of procedures required for the allocation of community forests can be a real obstacle for communities to acquire their community forest (see Box 3.4). The amount of time (and thus financial and other resources) that must be invested can discourage communities from applying for community forests. It is unlikely that any community could negotiate through the procedures without external facilitation, such as through the support of an NGO.

At Kilum-Ijim Forest Project, substantial formal and informal training of project and government staff has been undertaken to promote understanding of the community

forestry law. This has included dozens of workshops, as well as day-to-day reviewing of progress and procedures in developing an appropriate methodology for interpreting and implementing the law and the Manual. Currently, 16 staff work full-time on developing community forests in nearly 40 villages around Kilum-Ijim Forest. Each technician of community forestry works together with an extension worker in a maximum of four communities.

These reflections on the high investment required in establishing community forests are echoed by Pénelon (1997). Drawing on his experiences from implementing the Forestry Law in Eastern Cameroon, he states: *"The work of preparing the application of a community forest requires the mobilisation of a great deal of resources...It is, therefore, somewhat utopian to speak of these community forests as a tool within the reach of rural people wishing to manage their own resources"*. He goes on: *"Despite legal provisions which stipulate, in particular, that services will be provided free by the forestry administration to help the communities prepare their applications, the cost will remain high"*.

It is unlikely that the intensive implementation of the Forestry Law, as occurs at Kilum-Ijim Forest, can easily be replicated on a large-scale. However, a high investment of resources is deemed appropriate in an area that is important both for local communities and biodiversity conservation.

3.2.2 Institutional context

Incentives:

- A community forestry unit exists within MINEF and is charged with developing community forestry throughout the country
- There is strong support for community forest management from international conservation agencies
- Strong and effective traditional authority complements the new forest management institutions in North West Province, Cameroon

Disincentives:

- As a new area of responsibility, MINEF is only now coming to terms with the implications of community forests and has only limited institutional capacity to effectively implement its community management policy

Three main organisations are important in implementing community forests in the Kilum-Ijim project area: MINEF, the traditional authorities and the village-based forest management institutions. Each of these is discussed below.

National level institutions

MINEF

Since independence, different components of natural resource management (including wildlife, forestry and fisheries) in Cameroon have been under a number of different institutions, including the Ministry of Rural Development, Ministry of Agriculture; Ministry of Tourism; and the Ministry of Environment, making it difficult to co-ordinate activities. To co-ordinate the dispersed forestry and environmental matters, the Ministry of Environment and Forestry was created in

1992, as a result of donor pressure in the run-up to the Earth Summit at Rio. This decision tied in with global moves towards integrating environmental issues (MINEF 1995). However, as the Ministry of Environment and Forestry is a new ministry, it is not yet well established in the national territory. It is particularly weak in the North West Province where there is insufficient infrastructure and lower levels of staffing than in other provinces. For example, many areas lack Chiefs of Post. This makes it difficult for the Ministry to undertake its forest conservation role efficiently.

A Community Forestry Unit has been set up at central level in Yaoundé, supported by the UK Department for International Development. The unit is charged with establishing and co-ordinating the procedures for acquiring community forests. One of its roles is to facilitate networking amongst projects working in the domain of community forest management. An important function has also been advocacy, ensuring the interests of community forestry are represented at the Yaoundé level where there are different levels of enthusiasm for the 1994 Forestry Law.

In spite of the unit, it has been important for the Kilum-Ijim Forest Project to have a strong local presence to facilitate the development of community forests, as the Community Forestry Unit does not have the resources to do this for each community in Cameroon. Currently, only externally supported projects are pursuing the implementation of the new forestry legislation as MINEF is not yet fully mobilised to deal with the consequences of the new legislation. The long term support of international donors to the Kilum-Ijim Forest Project is important, ensuring it can make a commitment to help local communities through the long procedures for establishing and subsequently maintaining their community forests.

Local institutions

Forest management institutions

The creation of legally recognised entities for community forests is not straightforward. The Kilum-Ijim Forest Project has reflected on the best way to introduce the concept to communities. After the forestry law was introduced, the first task of the project was to sensitise local communities to the new law and advise them as to the potential role that the project can play as an 'aide de camp', helping communities to establish community forests. Sensitisation meetings were held with the communities around the forest and each community was given time to discuss the concept of community forests in its own fora and without the presence of government and/or project staff. Thus, each village had the chance to either accept or reject the concept of a community forest. Where a community wants to proceed with acquiring a community forest, it has to outline this interest, in writing, to the Kilum-Ijim Forest Project. The next step is the establishment of an appropriate forest management institution that can be registered as a legal entity. Only when this has been established can the consultations regarding the community forest commence (see Box 3.5).

An elected committee of the forest management institution is responsible for launching a formal application for community forests. The committee is also responsible for carrying out a membership campaign - encouraging each community member to sign a form indicating their interest in the community forest.
As well as championing the legal procedures for acquiring the community forest, the

forest management institution also initiates more practical tasks, such as organising regular patrols, fire trailing along the forest boundary and facilitating the removal of goats from the forest which can damage forest regeneration. In all of these activities, the forest management institution has collaborated with the traditional administration, the KwiFon.

Box 3.5. Facilitating community forests and forest management institutions in Ijim

Forest Management Institutions

The meeting to discuss the forest management institution is attended by a team of government officials, assisted by the KwiFon and project staff. The team describes the range of options for forest management institutions from which the community can choose; including both established organisations (such as Village Development Unions, Traditional Councils, and the KwiFon) as well as novel institutions (such as Forest Management Bodies). The community is requested to go away and think about how best to manage a community forest. Follow-up meetings are then organised with specific groups, such as men, youth, women and the Fulani, in order to discuss their ideas regarding community forest management.

Subsequently, the groups are brought together again to discuss their deliberations collectively. Project staff have noticed that each group tends to defend its own interests. For example, men tend to support the notion of a traditional system of management involving the KwiFon, while women and youth often advocate new forest management institutions. The groups debate in a general meeting how best to manage the forest until they come to a consensus.

The Kilum-Ijim Project has undertaken this process in 10 communities and in all cases a new institution, a forest management institution, has ultimately been decided upon as an appropriate body to manage the forest, with representation by different interest groups, such as men, women, youth and the Fulani. To ensure the sustainability of the institution, the villagers decide upon committee members who are both of acceptable character and likely to stay in the village.

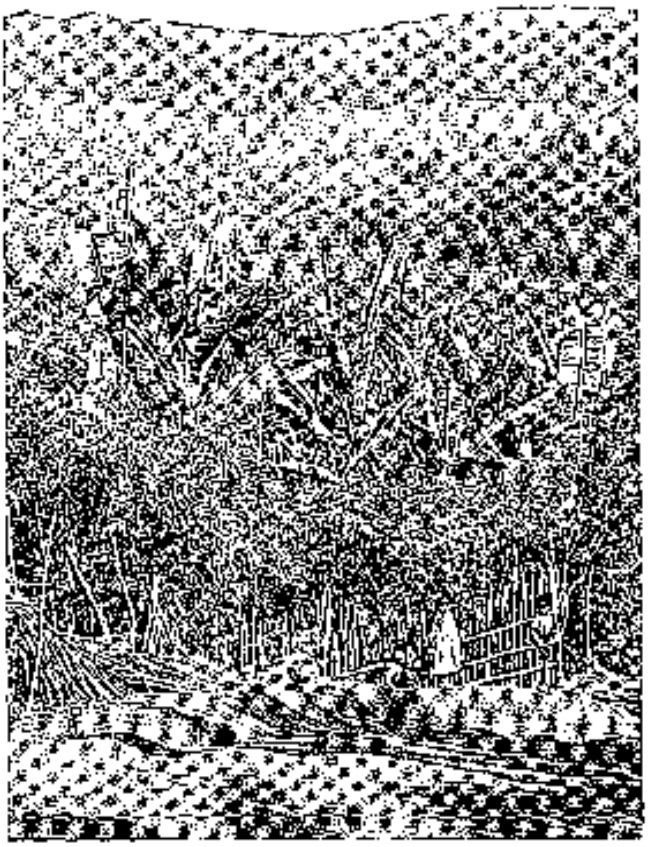
Investigation phase

The investigation phase is the first step in establishing a community forest. Several dozen meetings are required. The project technicians responsible for community forest management go out to the village for several days. During their stay, the technicians seek to develop a shared understanding of the availability of forest resources and their location in the area. This can be achieved using a participatory mapping exercise. Historical matrices and time lines are used to understand resource availability and trends in resource use over time. The resources are also ranked according to their usefulness to various groups. It should be noted that except for mapping, which is done in a large group, each exercise is conducted in separate groups, such as men, women, youth, elders, traditional leaders, the Fulani who are attached to that community etc.. Semi structured interviews are conducted to find out who harvests what, when, where, how, for whom, how much, market availability, etc. Lastly, a transect walk is undertaken in a large group to get people into the forest and see what has been discussed over the preceding days. At the end of the Investigation Meeting, the results are presented to the community to verify all the information that has been gathered.

Traditional authority

Under customary law, the traditional authorities allocate forest land. It was the relative ease with which forest land could be acquired that led to the rapid decline in forest cover at Kilum-Ijim forest in recent decades. However, in 1979, before the Kilum-Ijim Forest Project was initiated, the Traditional Council in Abuk acknowledged the rapid disappearance of the forest and banned further clearance. The Council's plan was that forest land should be given only to young people who did not have access to other sources of livelihood. However, the economic crisis in Cameroon during the early 1980s led to a retraction of government and a return of people to the rural areas and was paralleled by an international decline in the price of key cash crops, such as coffee and cocoa. This pushed local people to violate the traditional law and clear forest land for food crops.

When the project started, discussions were undertaken with the KwiFon requesting them to take action against forest destruction and, later, inviting them to join the project in working towards community forest management. In response, the KwiFon selected seven representatives to accompany the project's community forest management team in the field and established a special commission to investigate forest destruction. In the Kilum-Ijim area, joint efforts between the new forest management institutions and traditional authorities have greatly strengthened the working relationship between these actors and revived the traditional authorities' confidence in and enthusiasm for their traditional role as forest custodians. One indicator of the success of the joint efforts of the traditional and novel institutions is the reduced number of bushfires in the area. In 1997, the Kilum-Ijim Forest Project recorded 25 fires, with at least 18 starting from farmers using slash and burn and ankara (or 'bury and burn') farming methods. But in 1998, the number of fires was reduced to just one. This is attributed, in part, to the shorter dry season in 1998. But it is also due to the sensitisation campaigns run by the forest management institutions, the alternative farming methods introduced by the Kilum-Ijim Forest Project under its Livelihoods Programme, and the intervention of the traditional councils who fine people when farm fires spread to the forest.



The boundary around the Kilum - Ijim forest is maintained by traditional authorities working together with village-based forest management institutions.
Picture: Jo Abbot

3.2.3 Ecological context

Incentives:

- The Kilum-Ijim forest offers valuable natural resources to local communities and they are aware of the negative impacts for their livelihoods if the forest is destroyed
- The biodiversity and mountain scenery of Kilum-Ijim Forest offers potential for tourism
- The biodiversity of Kilum-Ijim Forest attracts international support and interest

Disincentives:

- Many forest adjacent communities see the forest as potential agricultural land
- The large population adjacent to the forest puts the natural resources under severe pressure

Tourism

Kilum-Ijim forest is characterised by beautiful scenery and rich biodiversity with many endemic species of plant and animal. The latter has attracted much international interest and support from conservation agencies and the site offers some tourism potential, although its remoteness is a problem. The roads in the region are poor and even if tourism were to be developed in Cameroon, it is unlikely that Kilum-Ijim would ever become a major tourist destination. Mount Cameroon is much more accessible and offers similar opportunities for hiking and sightseeing and only the keenest ornithologists and naturalists are likely to make the journey to Kilum-Ijim forest. Currently, Kilum-Ijim Forest receives less than 100 visitors per annum. However, the cash outlay of tourists means that the income can be significant to local people as one of a number of benefits of protecting the forest. At a recent meeting of forest management institutions and traditional administrations from across the fondoms of Nso, Kom and Oku, fees for visiting the forest were set at CFA 10 000 per person for the first day and CFA 2 000 for each subsequent day. As visitors pay the fee to the forest management institution at their point of entry, there is an incentive for communities with good access to the forest to develop basic facilities to inspire tourists to choose their village.

Local use of the forest

As few of the forest species are of commercial importance, mainly local people exploit them for their basic needs. The exception is *Prunus africana,* which is discussed in the Economics section. The Kilum-Ijim Forest offers a range of valuable resources to about 200,000 local residents, including water, fuelwood, medicines, honey, tool handles, building materials and wild vegetables (*njomanjuma* or huckleberry). These resources are important to the communities for their livelihoods; other resources, such as the feathers from the Bannerman's Turaco, are important culturally (see Box 3.6). However, while demand for these products means that people value the forest from which they are derived, the large population size means that demand for these resources puts immense pressure on the forest habitat.

Box 3.6: Examples of the cultural importance of the flora and fauna of Kilum-Ijim Forest in local livelihoods

Historically, the red feather of the endemic and endangered Bannerman's Turaco has been used for decorating people for their bravery either at war or in catching a large animal, such as a leopard. Famous herbalists also wore them. Today, people of Kilum-Ijim use the feather for crowning 'nchindos', who act as advisors to the Fon and are members of the Fon's Advisory Council known as the KwiFon. Among plant species endemic to Kilum-Ijim Forest, Fuwu'awu (Dovialis spp.) has a traditional importance in performing the rite of 'iking', which welcomes a new-born baby and protects a family from minor ailments, such as headaches, fevers and migraines.

As well as valuing individual forest resources, the communities also value the role of the forest in protecting the water catchment and providing a healthy and reliable source of water. Box 3.7 outlines some of the benefits of forest protection that local communities have articulated; many of these relate to the increasing availability of water and forest products, particularly wild foods.

Despite these positive perspectives on forest protection, many people living around the forest have insufficient land and feel that the fertile forest land should be allocated for agricultural or grazing purposes. For some people, particularly the youth, forest conservation for posterity or for harvesting forest products is an unwise land use when compared with clearing the forest for agriculture or allowing grazing by animals. A recent study at Kilum-Ijim forest found that while many of the current generation valued forest conservation, there was great concern for the livelihoods of the next generation (Abbot, Neba and Khen, 1999). This suggests that while there are sufficient incentives for the current generation to protect the forest, the forest is likely to become increasingly pressured in the coming years as the growing population clamours for land.

Box 3.7: Valuing the ecology of Kilum-Ijim Forest

A recent study examined local attitudes towards the conservation of the Kilum-Ijim forest. In all of the five communities studied, local people had become more positive towards the concepts of forest boundary demarcation and forest protection over the time that the Kilum-Ijim Forest Project had worked in the area. Some residents had been worried by the arrival of the project in the mid-1980s as it had prevented them from farming in the forest. However, the expression 'turning our eyes from the forest' was used by some villagers to describe their changing perspectives and use of the forest, no longer as a source of agricultural land but of water, medicines and wild foods.

People cited a number of reasons why they have come to feel more positive about forest conservation. Some informants were experiencing natural resource shortages and felt that the project was timely in helping to conserve them. Furthermore, the length of time that the project has worked in the area (11 years on the Kilum ridge and six years at the Ijim site) has enabled people to feel that they have experienced the benefits of forest protection. For example, a man from Mbokevu village explained: *"Before, the forest was not used in a good way and so some streams were already reducing, but with forest protection the stream flow is improving"*. Another man from the same village commented: *"Careless bushfires were destroying the forest. I saw the good from the project and its teachings"*. A woman from Wvem village, who had lost part of her farm when the forest boundary was demarcated, was initially angry with the project but is now content because she had: *"seen for myself that if there is no forest, they'll be a lot of suffering - no rain, no medicine"*. Now she claims that she can collect medicine and honey easily in the forest. A woman from Mbokevu village who had also lost some farm land commented that she was happy with the boundary demarcation as she had *"started noticing some disadvantages of going much into the forest - wild forest fires destroyed hives and farms and polluted drinking water"*, whereas she now *"see[s] the benefits - good honey for medicine and fresh forest water"*.

Many informants cited the improved availability of water as being a reason for their changed feelings towards forest protection. Even though a woman in Mbokevu had lost land when the forest boundary was demarcated, she cited water as being the reason for her now feeling happy with protecting the forest because *"water is used everyday for cooking, washing and bathing"*. Increased rainfall and more permanent streams were frequently cited as a direct result of the project and forest protection. It is difficult to know if, firstly, these rainfall trends are real or secondly, if there is increased water whether it results from efforts to protect the forest or from climatic variation. But in local people's minds there is not doubt about the links between forest protection and improved water supply. While they may have been sensitised to these messages through environmental education campaigns, they also believe they have experienced more water in recent years and so the improved availability of water is an outcome for which the project is directly credited.

Source: Abbot, Neba and Khen, 1999.

3.2.4 Social context

Incentives:

- There is a strong cultural and spiritual connection between local communities and the forest
- The communities are relatively homogenous within fondoms
- A community spirit of self-reliance is reflected in the traditional and modern informal groupings of local people

Disincentives:

- While women are primary users of the forest, they have had only a limited role in decision making about forest resources
- Tensions and conflicting interests within and between ethnic groups and resource users can impede community forest management

Spiritual connections between local people and the forest

There is a close cultural and spiritual connection between the people of Kom, Oku and Nso and the Kilum-Ijim forest. The seats (palaces) of most traditional administrations in Northwest Cameroon are usually built in or around forests. In the Kom, Oku and Nso fondoms, certain rites that are believed to be responsible for good harvests and maintaining the health of the people are always performed in the forest. For example, 'Ntul', a cleansing ceremony undertaken in Kom before the sowing of sorghum is done in the forest. The KwiFon also go up to the forest and perform a rite known as *Ko'a ngang* to ensure that birds do not damage the ripening sorghum crop. Furthermore, it is handed down that Kom people took refuge in the forest before defeating an invading German army. Once a year a traditional Fon's hunt is organised by the people in Nso and all the catch is taken to the Fon. People recognise that degradation of the forest would mean that their beliefs and culture would suffer.

Local organisations for resource management

As described previously, informal groups of fuelwood collectors, carvers, trappers and honey harvesters exist around Kilum-Ijim forest, particularly in Oku. These, and other groupings, indicate the high levels of social cohesion in the area. They also show that group formation and working in groups, as required by the community forestry law, is not a new idea in the Kilum-Ijim area. There are many examples of community-run projects, including roads, water systems and schools, in the Bamenda Highlands. While the management of forest resources is different as it concerns a common property resource, there exist basic skills and experiences in managing resources collectively. In short, community work is part of life.

Additionally, a range of newer development associations exist within the Kilum-Ijim forest area, including the Oku Development and Cultural Organisation, the Kom Development Union, Abassakom Area Development Union, Njinikom Area Development Union and Belo Area Development Union. All these associations have as their prime objective the development of the area in terms of roads and the construction of infrastructure for health and piped water, but they also include elements to maintain the cultural heritage. More recently, some villages have initiated village development unions with the same objectives as the larger area or

region-based development unions described above. The combined experiences of the traditional and novel organisations are of benefit to the pioneering attempts to formalise community natural resource management and demonstrate the high levels of self-reliance found in the Kilum-Ijim area.

Nature of the communities

The population is relatively homogenous within each of the three fondoms of Kom, Oku and Nso. In each of these fondoms, the people speak the same language, as well as having the same culture, customs and beliefs. This homogeneity helps in decision making and action as people tend to attach the same values to, and derive the same benefits from, their common resources, such as those of the Kilum-Ijim Forest. Furthermore, there is relatively homogenous wealth distribution within villages. Unlike many other places where there are large differences in wealth (see Chapter 4), the people in the villages are generally of similar wealth and hence decision making can be easier than it might otherwise be. While committees elsewhere in Cameroon may be dominated by external elites who are mostly resident in cities, the villagers themselves have chosen that people must be resident in the village as one of their criteria for serving on the forest management institutions.

The people of Kilum-Ijim belong to a structured society in which traditional administration is highly respected. The structured nature of the society facilitates community action. The simple fact that the people are organised means that it is possible for them to take decisions and act quickly when the need arises. Furthermore, there are clear entry points for outsiders, such as project staff. The Kilum-Ijim Forest Project has worked through the existing organisations to introduce innovations to improve people's farming and environmental management practices.

Women and decision-making

Historically, women have little role in decision making around the Kilum-Ijim forest even though they are the primary users of the forest for fuelwood, medicines, ropes, vegetables and fruits. In the Bamenda Highlands, the highest authority for decision making about natural resource management is the KwiFon, which is strictly a male society[6] . Even at the village level, where the deciding body is the traditional council, it is uncommon for women to argue in public even though they are part of this structure. Generally women accept what the men have agreed. In order to address the male dominance in natural resource decision-making, women, as well as other traditionally under-represented groups such as the youth and the Fulani, are represented in the new forest management institutions. The position of women on the committees is not tokenism: in almost all cases, women take the role of treasurer and in one case a vice-president. By having women in these key positions, it is recognised that the committee 'can work'. Thus the new forest management institutions offer a first opportunity for women to take responsibility for natural resource management decisions.

Conflicts in natural resource management

Tension between the ethnic groups of Kom, Oku and Nso, and with the Fulani, can impede the process of community forest management. For example, it took more

[6] Women in Kilum-Ijim area have their own sacred societies known as Fumbien (Takembeng in Bamenda) which have been looked to for solutions in times of trouble but do not have the same authority as the male societies.

than four years to mark the external forest boundary of two villages: Mbesa and Ichim (see Box 3.8). Interestingly, the prospect of acquiring a community forest has provided the impetus for some communities to negotiate and mark their boundaries, as without boundary demarcation, it is not possible to apply for a community forest.

Box 3.8. Boundary demarcation and different ethnic groups.

In early 1989, land disputes between Mbesa village in Kom and Ichim village in Oku were so serious that lives were lost. Because of the tensions between the ethnic groups, certain sacrifices, which are performed when a Fon is lost to either ethnic group, were not carried out for a period of more than a decade. This conflict posed a serious problem when it came to demarcating the external forest boundaries for Mbesa and Ichim in order to acquire a community forest. During a period of more than four years, the Kilum-Ijim Forest Project acted as a mediator helping to bring the Kwifons from each fondom together. Recognising the importance of acquiring a community forest, both ethnic groups finally agreed to bury their differences in June 1998 and demarcate the forest boundary for the two areas.

3.2.5 Economic context

Incentives:

- Presence of *Prunus africana* for income generation

Disincentives:

- The local population is relatively poor and the forest offers few opportunities for income generation, at either the commercial or household level
- There is low potential for tourism

Local forest benefits

200 000 people are dependent on the 20 000 hectares of the Kilum-Ijim forest. These people are generally poor, small farmers and rely on the forest for the provision of at least part of their livelihoods, such as fuelwood, medicine, honey, rats, building materials, carving wood, vegetables, wild fruits etc.. Kilum-Ijim is a mountain forest and the fact that there are no species to harvest commercially on a large-scale (and no roads to export products), means that there are few competing interests for the forest. However, the incentives for people to benefit beyond subsistence use of forest resources and to generate revenue from the forest are also low. *Prunus africana* is the one of the few species found in this forest with commercial potential (see Box 3.9). While there is not enough for large-scale exploitation, communities are interested in harvesting and selling the medicinal bark on a smaller scale. Another tree species, *Polyscias fulva*, is known for its quality as a carving wood, but it has been over-exploited in the Oku area, as historically it provided one of the few direct sources of income from the forest. This species is considered endangered in the Oku area of the forest but may offer future opportunities for income generation if the communities manage the forest on a sustainable basis.

Additionally, the Livelihoods Programme of the Kilum-Ijim Forest Project has increased the viability of people's livelihoods, enabling local people to see the forest as a sustainable source of forest-related income rather than just a consumptive resource to be cleared for farmland. The Programme's activities include the

introduction of improved soil and water conservation techniques, improved crop varieties, exotic and local tree species and zero grazing methods. A recent assessment of the Livelihoods Programme (see Abbot, Khen and Neba 1999) found that the it had provided tangible benefits for local people in some villages: *"Villagers claim to have experienced increased yields from their farmlands surrounding the forest through the soil erosion control technologies, agroforestry efforts and improved seeds....The economic empowerment of women has also been another positive outcome with women being able to market surpluses, particularly of beans...Women also claim that they are able to pay school fees and buy clothes from a new source of income, livestock rearing, which was introduced to them by the project"*. As expressed by a woman from Wvem village: *"[The] Livelihood Programme activities have helped people not to go back to the forest. People have realised that the forest has a lot to offer them. If the Livelihoods Programme was not introduced, people would have become frustrated. As these activities were brought in, they seem more happy about forest protection with its advantages"*. These findings show how livelihood activities can both increase the economic incentives for, and encourage more positive attitudes towards, conserving the forest.

Demonstrating use of an A frame. The steep slopes that are farmed around the forest are liable to erosion. The Kilum Ijim Forest Project has introduced technologies such as contour bunding which help reduce erosion and conserve soil and water. Picture: David Thomas

Box 3.9: Medicinal benefits from community forest management

Prunus africana, a tree species with a high monetary value in Cameroon, is regarded as the most important economic species in the Kilum-Ijim forest. Before the 1980s, *Prunus africana* was less known for its medicinal value than for its beautiful wood and calorific value. However, it soon became clear that the species represented a 'goldmine' when PLANTECAM (a pharmaceutical company) established a market for the bark. Subsequently, the tree has been overexploited and often felled for its bark. This had led to a drastic reduction in the number of mature trees of *Prunus africana* in the forest. However, there are many immature trees in the Kilum-Ijim forest and the communities are aware of the benefits they should be able to derive from these in future. *Prunus africana* is certainly a force driving the communities in their quest to manage the forest by themselves.

3.3 Conclusions

There is growing awareness within the Government of Cameroon of the need to sustainably manage natural resources and increase the participation of local populations in the protection of environment. A new piece of legislation, the 1994 Forestry Law, introduces community forests as a way of improving both the management of forest resources and the living standards of local people. However, for this to work, an environment of trust between the government, traditional and community-based institutions must be established and maintained. Mechanisms for ensuring a fair distribution of tangible benefits amongst these partners must be established, linked to clear rules for recognising different rights and responsibilities.

In 1998, a manual, the *Manual of the procedures for the attribution, and norms for the management of community forests* was produced. This aims to flesh out and set out accurately the necessary steps in creating and maintaining Community Forests. The Manual has provided a practical framework for those wishing to implement the 1994 law.

Taken together, the legislation and the follow-up Manual constitute positive signals about MINEF's commitment to devolving the management of forest resources to local communities. However, the procedures to establish community forests are long and complex and it is unlikely that communities will be able to establish them without external support. Indeed, the law is currently being implemented in forest sites where there is the support of international agencies. Furthermore, it is important that the legislation and the Manual are seen as evolving tools to better manage forest resources. The novel nature of the legislation for Cameroon suggests that it should be regularly reviewed, drawing on the experiences of field practitioners who are pioneering attempts at implementation. Additionally, there is a real need to advocate community forests at all levels within government as, is often the case with innovation, there is not universal support for the new legislation.

The Kilum-Ijim forest provides an important case study in the implementation of the forestry law. Community forests are now in the process of being established in nearly 40 communities around the forest. In this part of the Cameroon, there is a long tradition of community work, which, combined with the structured nature of the

society and the respect for decision-making structures, such as traditional administrations, offers much hope that the community forests can flourish in the Bamenda Highlands. The long history of the Kilum-Ijim Forest Project in the area, since 1987, acting to protect the forest and improve local livelihoods in ways compatible with managing the forest is another advantage for the site.

The experiences of the Kilum-Ijim Forest Project suggest that the new forestry law can strengthen efforts to conserve the forest by drawing on the relative strengths of the traditional authorities and new forest management institutions. However, dealing with these different types of institutions (*de facto* vs. *de jure*, formal vs. informal) with their different perceptions, histories and objectives, is not an easy task. Often, each actor will seek to defend their own interests unless, and until, there is confidence and trust in the working relationship. The Kilum-Ijim Forest Project includes some inspiring examples of how these different types of institutions are coming together to manage the forests better. While it will be several more months before community forests are fully established at Kilum-Ijim forest, the experiences outlined here offer practical insights into how the innovative legislation in Cameroon can be implemented. There are lessons not only for the Cameroonian conservation community, but also for an international audience interested in how an enabling legislative environment can provide a framework for community-based conservation of wildlife resources.

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Decentralising wildlife management in the Democratic Republic of Congo: integrating conservation and development objectives in a country at war

Richard Tshombe, Robert Mwinyihali[1], Mafuko Girineza[2] and Emmanuel de Merode[3]

Chapter summary

Chapter 4 documents the experience of field conservation practitioners in the Democratic Republic of Congo (DRC) and translates them into recommendations for conservation policy and practice. It explores how local people and institutions use and manage wildlife, how important wildlife resources are to local livelihoods, and whether they can create the required incentives for developing local systems of conservation management. The wartime conditions that have affected the region for several years provide an important context to the study.

The Ituri Forest and Garamba National Park provide an opportunity to compare areas where conservation agencies have actively supported community wildlife management (the Okapi Wildlife Reserve) with areas where there have been no

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[4] A number of institutions have supported the activities described in this report, including: ICCN, the Centre de Formation et de Recherche en Conservation Forestière, the World Wide Fund for Nature, the European Union's DGVIII Programme 'l'Avenir des Peuples de Forêts Tropicales', the Wildlife Conservation Society and the University of Makerere. We thank several individuals who shared their experience and commented on this report: Terese Hart, John Hart, Fidele Amsini, Kes Hillman Smith, Mbayma Atalia, Jo Abbot and Ross Hughes. We thank Claude Gambalo and Chef Songbolenze Ungua Moke from Garamba for their important contributions to the ideas expressed in this chapter, and regret that the war prevented them from participating more fully in the study. The views and opinions expressed and conclusions reached in this report are those of the authors alone and do not necessarily represent the individual or collective views of any of the supporting or funding organisations.

'community conservation' projects (Garamba National Park). A number of central findings are common to both sites but important differences also exist. These are mainly ecological or relate to the local management capacity, but highlight the importance of looking at the local context in determining the viability of community wildlife management.

Key findings

1. The value of wildlife resources

- Both the Okapi Wildlife Reserve and the Garamba National Park have a high abundance of large mammals;
- The high abundance of wildlife can be explained, in part, by the long term commitment of national and international conservation agencies to wildlife protection;
- The high abundance of wildlife makes a significant contribution to the local economy around the protected areas;
- The high value of wildlife has enabled a sophisticated commodity chain for bushmeat to develop, with several social groups competing for access to the benefits of wildlife. This commodity chain is highly organised and constitutes a form of wildlife management in the absence of any intervention by conservation agencies;
- The high economic value of wildlife resources provides an opportunity for financially sustainable wildlife management by local institutions, including traditional administrations and specific user groups, such as fishing guilds.

2. Local capacity to manage wildlife sustainably

- The communities around the Ituri Forest and Garamba National Park are heterogeneous. Access to the benefits of wildlife resources depends on a number of factors: wealth, gender, ethnic diversity, forced and economic migration, and complex power relationships between various social groups. This poses a significant challenge to the establishment of a cohesive strategy for community wildlife management.
- Traditional authorities differ at Garamba and in the Ituri. Most of the populations around Garamba are characterised by well-established Zande leadership, whereas the loss of effective local leadership has been especially acute in the Ituri. An understanding of the history of traditional systems of authority is essential when assessing the current capacity of local administrations to manage wildlife.
- Community wildlife management initiatives that have excluded traditional administrations have had limited success.
- Various administrations have a stake in wildlife management but are answerable to different constituencies. For example, traditional authorities are answerable to local populations and ruling clans, civil administrations to provincial authorities, and wildlife managers to the headquarters of the national wildlife agency, the Institut Congolais pour la Conservation de la Nature (ICCN), in Kinshasa. Lack of collaboration and communication between these various administrative sectors impedes the development of shared objectives for managing wildlife.

However:

- A partnership between state and traditional authorities provides an effective framework for sustainable wildlife utilisation.
- Appropriate incentive mechanisms for financially and ecologically sustainable wildlife management can be envisaged through carefully planned fiscal de-

regulation, and the sharing of wildlife management responsibility and benefits between local and national authorities.

3. The implications of war
- War has devastated the local economy and increased poverty in the area. The widespread availability of automatic weapons has greatly increased wildlife offtake from the protected areas.
- De-militarisation (arms recovery and withdrawal of military personnel) is the highest priority for both conservation and development agencies.
- Many traditional leaders are recognised by, and have support from, local populations and are well placed to de-militarise their constituencies.
- ICCN, as a 'para-military' organisation, has the capacity to establish and maintain stability in the region whilst maintaining a neutral, non-political role.

4.1. Introduction

Community wildlife management is frequently reviewed in the context of a donor-driven project. But in the Democratic Republic of Congo (DRC), formerly known as Zaire, there have been relatively few aid projects supporting community-based conservation. Yet community-based wildlife management does exist, especially in the form of the bushmeat trade, which contributes substantially to forest people's livelihood and survival strategies throughout Central Africa, as well as supporting a rapidly growing informal economy (Wilkie, Sidle & Boundzanga, 1992; de Merode, 1998). With the collapse of nationalised industry, a failure to attract foreign investment and insubstantial fiscal revenues, the bushmeat trade is of increasing importance to local and national institutions that are looking to the commercialisation of natural resources as a source of taxable revenue. Chapter 4 provides evidence that the bushmeat trade is structured and organised at the level of the community and therefore constitutes a form of community wildlife management. Furthermore, the chapter shows that through the planned use of fiscal incentives and regulations, the bushmeat trade can be used as a basis for sustainable wildlife management.

Wildlife utilisation and management in DRC is characterised by a multitude of stakeholders with multiple objectives acting in a diverse range of social, political and ecological contexts. At a local level, social upheaval associated with new trading opportunities and political conflict has made communities highly dynamic, presenting important challenges to the establishment of sustainable systems of wildlife management. This study explores this diversity by working in two sites that represent complementary contexts: the Okapi Wildlife Reserve and the Garamba National Park (Figure 4.1).

4.1.1 Biological resources

DRC is one of the most biologically rich countries in the world, possessing exceptionally high levels of species richness and endemism and over half of Africa's tropical closed broad-leaved forests (Wolfire et al, 1998). It represents one of the most extensively forested areas on the continent. The country is known to contain 415 mammal species, 1,085 species of birds, 134 endemic terrestrial vertebrates, many endemic plant species, and the region's largest radiation of primates (Wolfire et al, 1998).

At the national level, much of this diversity is managed in the country's network of protected areas and reserves that represent approximately 7.7% of the land (Figure 4.1). Sadly, a legacy of economic collapse and war has severely impaired the ability of government institutions to implement effective wildlife management. However, the limited administrative capacity of national institutions has led to a process of decentralisation, which takes a number of forms.

4.1.2 Decentralisation in DRC

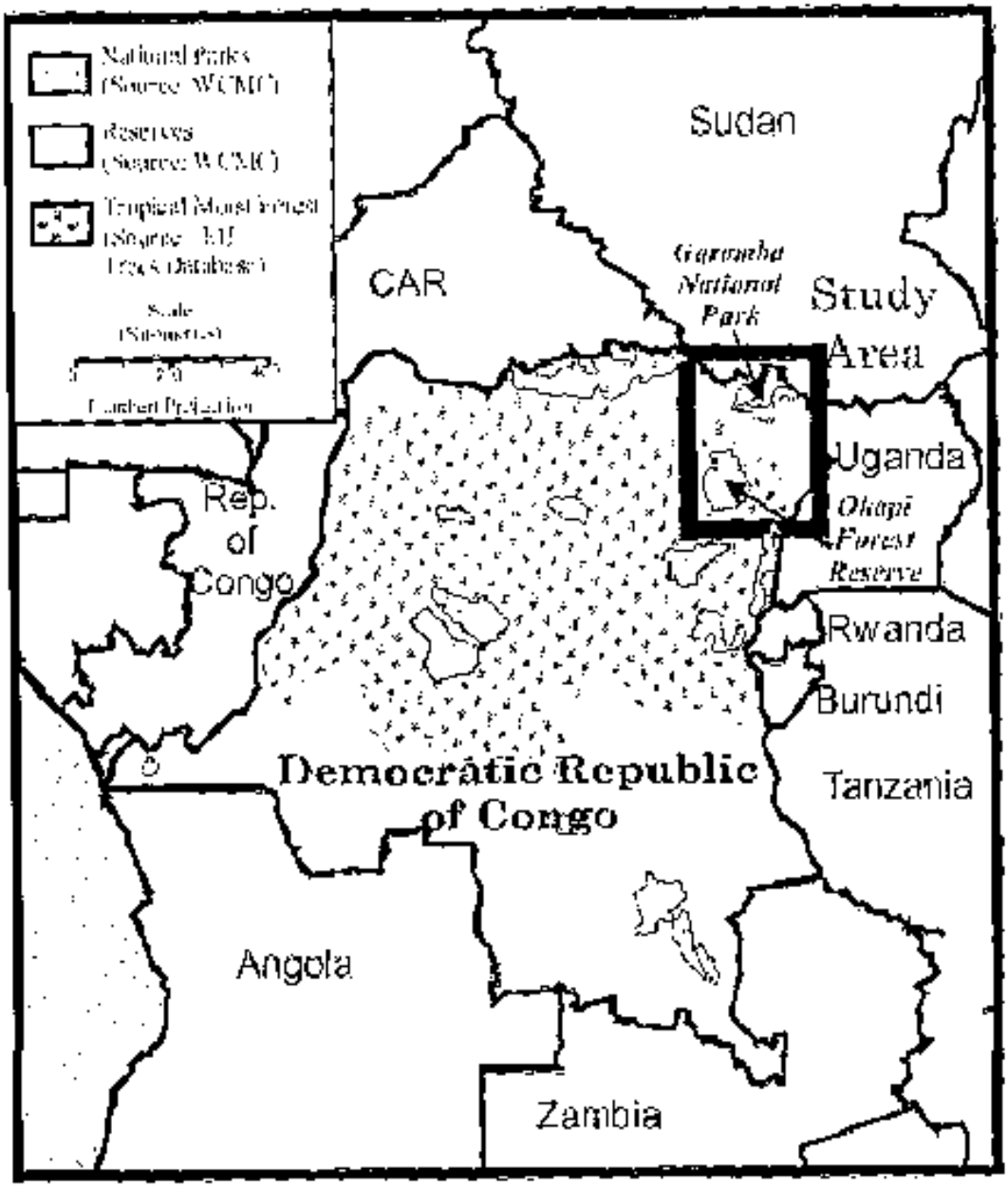
Decentralisation aims to achieve the principle of subsidiarity, whereby a centralised authority only carries out those functions that cannot be undertaken at a lower level in an administrative hierarchy. In the context of conservation policy, subsidiarity involves transferring responsibilities from the central conservation agency to local institutions. Decentralisation is increasingly being promoted by international donors as part of a wider process of structural adjustment, aimed at limiting national government spending (Lutz and Caldecott, 1996). In DRC, this is reflected in a US$20 million programme being proposed by a consortium of international agencies to decentralise the national wildlife authority and deliver 'cost-effective' conservation (UNDP, 1997).

Decentralisation is usually achieved through developing or creating institutions that can sustainably manage wildlife resources. There are several forms of decentralisation in DRC (Table 4.1). Local management systems proposed through a joint ICCN/GTZ programme at Kahuzi Biega National Park offer a form of devolved wildlife management through which control of wildlife resources is transferred to local groups (Kasateka, *pers. comm*). The village conservation committees that have been established at the Okapi Wildlife Reserve provide an example of decentralisation by delegation: management functions are delegated to village groups, primarily as a means of meeting conservation objectives. Delegation at Garamba centres on the use of primes, or rewards, paid to local chiefs in return for their involvement in anti-poaching activities.

While decentralisation programmes form an integral part of national and international development strategies, few of these formal approaches have reached the implementation stages in DRC. The hunting reserves around Garamba provide an example of *de facto* (or spontaneous) decentralisation in wildlife management which has grown in parallel to an expansion of the informal sector, and which is characterised by an absence of official state regulation of people's entrepreneurial activities. Natural resource use, such as the bushmeat trade, is particularly well organised in DRC and constitutes a form of local wildlife management.

Because decentralisation involves transferring responsibility for managing wildlife to lower levels, it is important to understand the structure and functionality of the civil administration and the changing relationships between actors at different levels within the hierarchy (Table 4.2). A *Province* is the largest subdivision of the country and falls under the responsibility of a *Gouverneur*. DRC is divided into 11 provinces. The *District* is a subdivision of a Province and is under the responsibility of a *Commissaire de District*. The Territoire is a subdivision of a District and is led by an *Administrateur de Territoire*. The Executive from Kinshasa generally appoints Governeurs, the *Commissaires De District* and the *Administrateurs de Territoire*.

Figure 4.1. The Democratic Republic of Congo, and the protected areas examined in this report



Since October 1996 and in May 1997, at the end of the war, new authorities were appointed. In 1998 after the rebels captured several provinces in the Eastern DRC, the *Governeurs*, *Commissaires de Districts* and *Administrateurs de Territoire* were sacked and replaced by new leaders reflecting the political aspirations of the insurgents. Thus in recent years, the higher level administrators have been at the mercy of the dramatic political changes taking place in the country.

Traditional power, however, has survived the political turmoil since the DRC became independent in 1960. In contrast to the higher-ranking civil administrations, the traditional authorities (*Chefs de Collectivité*, *Chefs de Groupement* and *Chefs de Localité*) have been maintained. The legitimacy of traditional leaders is challenged neither by political-administrative authorities nor by the military because their authority is tied to customs that are believed to enjoy widespread popular

Table 4.1. Forms of decentralisation and their effects on wildlife management in DRC (de Merode 1999)

	Definition	Example
Delegation	Transfer of functions to lower administrative levels	*Primes* (payment) to traditional chiefs for anti-poaching activities (Garamba). Community management committees at Okapi Wildlife Reserve
Transfer authority, responsibility and financial control from central government to lower levels of social organisation	Transfer of fiscal control of natural resource use to traditional authorities has been proposed at Garamba.	*de facto* decentralisation
Local management systems fulfilling state functions due to a dysfunctional government system.	Informal regulations on the bushmeat trade at both Garamba and Okapi	

recognition. Over the years, the traditional authorities in the north eastern DRC have established local institutions within their constituencies, such as traditional courts and local police, reflecting their increasing relative power and stability. This has not been overlooked by the current regime in DRC. In the process of rehabilitation, following the first liberation war of 1996/7, strong emphasis was placed on the involvement of local communities and traditional authorities. Their integration into the sustainable use and conservation of natural resources is therefore now a high priority for the Ministry of Environment and the national wildlife agency, ICCN.

4.1.3 Garamba National Park and the Okapi Wildlife Reserve

The selection of sites for this study was determined by the dual objectives of providing both a detailed and local understanding of community wildlife management and a basis for developing national level findings and recommendations. The two areas examined are the Okapi Wildlife Reserve and the Garamba National Park and its surrounding hunting reserves, which offer complementary contexts. From an ecological perspective, the Ituri Forest, containing the Okapi Wildlife Reserve, is an example of tropical moist forest typical of the Congo Basin. By contrast, the Garamba National Park ecosystem consists of bush and grassland savanna. These represent the two primary habitat types in DRC (White, 1983). The Okapi Reserve has had formal community conservation activities implemented, whilst the Garamba National Park has not. Each of the sites is described below.

The Okapi Wildlife Reserve

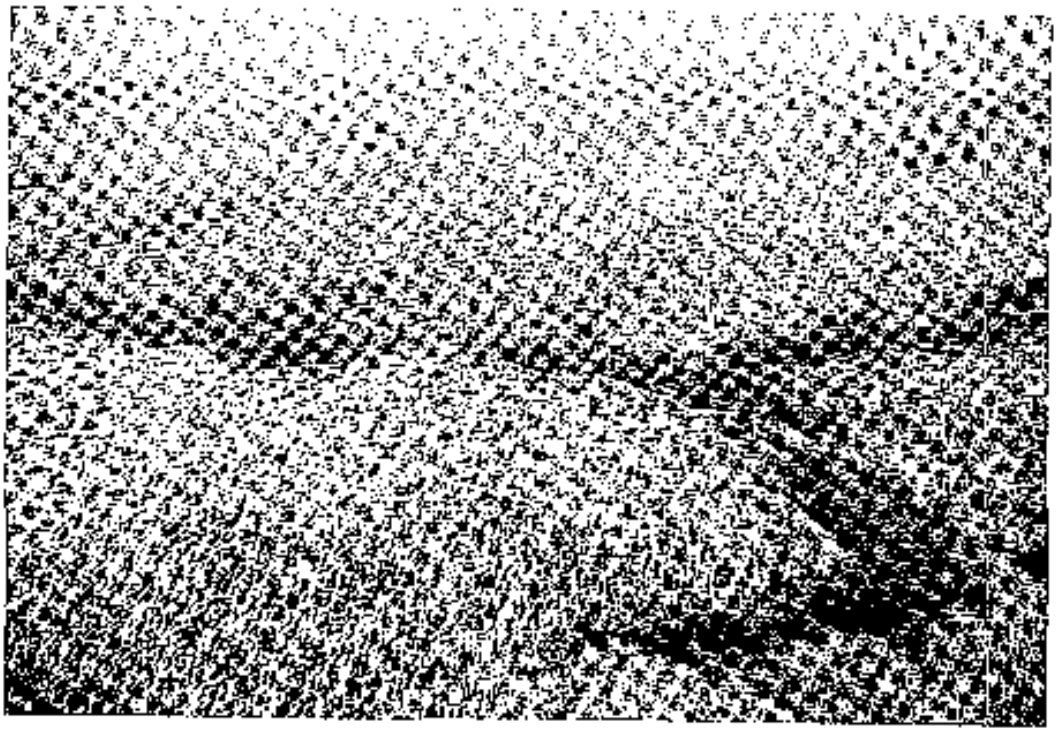
The Ituri Forest covers nearly 65,000 square kilometres, comprises a mosaic of forest types, and possesses the highest recorded number of primates in Africa, and the highest number of mammal species for any single study site in DRC (Sayer et al, 1991). Among these are 13 species of diurnal primates, a high diversity of forest antelope species (duikers, chevrotain) and the okapi *(Okapia johnstoni)*, a forest

Table 4.2 Civil and traditional administrative systems in relation to wildlife management

Authority	Sector	Role in wildlife management
President	Executive, Legislative	Champions wildlife management for national prestige. Legislates wildlife laws
Minister of the Environment (and ICCN)	Executive	Overall responsibility
Gouverneur	Executive	Collaboration with wildlife managers
Commissaire de District	Executive	Collaboration with wildlife managers
Military commanders	Military	Collaboration with wildlife managers
Administrateur du Territoire	Executive, Judiciary	Collaboration with wildlife managers
Commandant de police	Executive, Judiciary	Regulate wildlife offtake: they can arrest and judge poachers, Collaboration with wildlife managers
Chef de Collectivité	Executive, traditional, Judiciary	Collaboration with wildlife managers. Traditional authority widely recognised. Intimate contact with the population.
Chef de Groupement	Executive, traditional, Judiciary	Collaboration with wildlife managers, traditional authority widely recognised. Intimate contact with the population .
Chef de Localité	Executive, Traditional	Collaboration with wildlife managers, traditional authority widely recognised. Intimate contact with the population .
Soldiers	Military	Collaboration with wildlife managers
Police	Executive Judiciary	Collaboration with wildlife managers

giraffe endemic to this region. In recognition of its significance as a biological reservoir and its cultural value for Bambuti hunter-gatherers, the government of DRC created the Okapi Wildlife Reserve in 1992. The Okapi Wildlife Reserve covers 13,720 square kilometres and supports approximately 10,000 mobile hunter-gatherer Bambuti populations, who make considerable use of forest resources, and approximately 20,000 Bantu and Sudanic-speaking farmers. The Ministerial decree which established the Reserve stated that the local Bantu and Bambuti populations that live in or near the reserve should, within strict ecological limits, continue their livelihoods but that the reserve should become *"a model for the integration of conservation with development processes with rural populations"* (Objectives of the Ministerial Decree, 1992).

Human population densities are relatively low in the Ituri Forest (less than one person per square kilometre), but there are high levels of immigration. People from surrounding high-density areas, such as North Kivu (over 300 people per square kilometre), are attracted to the Ituri Forest for the opportunities provided by shifting agriculture and the ease of land appropriation.



Garamba National Park consists of bush and grassland savanna with a network of riverine forest corridors. Picture: Kes Hillman Smith

A formal community conservation project was introduced to the Okapi Wildlife Reserve in 1993 although its activities were curtailed by the war in 1996. Currently, research (wildlife monitoring) and reduced law enforcement activities are taking place.

Garamba National Park

Garamba National Park, gazetted in 1938, was one of the first national parks in Africa (Offerman, 1940). It was established under Belgian colonial administration on the site of an Elephant Reserve. It was adjacent to, and its development was closely associated with, the Elephant Domestication Centre, which had moved to Gangala-na-Bodio (in the south of Garamba National Park) in 1927 because of the abundance of elephants in the region (Troupin, 1956). Residents within the park boundary, who were few as it was an inter-tribal zone and a reserve, were evicted from the park but given long term settlement rights in the hunting reserves. The area has since been managed using a strict wildlife protection strategy. In 1981 the ecosystem was declared a UNESCO World Heritage Site.

The park is surrounded by three hunting reserves or *domaines de chasse*. The reserves were established at the same time as the national park for the regulated use of wildlife resources by resident human populations (Hillman Smith, 1989). Ethnically, the hunting reserves are composed predominantly of Azande in the west, and Logos and Mondos in the east. Living at relatively low densities, their dominant economic activity is subsistence slash and burn agriculture, although gold mining is an important and growing activity that attracts migrants from other regions. Between 1991 and 1998, a significant proportion of the population was forced migrants. The majority had fled from the war in Sudan, and about 80,000 people were resident in eight refugee settlements established by the local authorities with support from

UNHCR (Gambale, *pers. comm.* 1995) An unrecorded number of self-settled refugees lived in the hunting reserves with Congolese relatives. During the second Congo civil instability, many refugees were forced by the Sudanese People's Liberation Army to return to Sudan.

The history of wildlife management at Garamba is one of intermittent periods of active wildlife protection. The national park was established to maintain the high densities of large mammals noted in the area, in particular elephants and rhinoceros (Offerman, 1940) and high investment in conservation occurred until shortly after independence in 1960. This is reflected in the park roads and buildings developed during this period. The findings from the de Saeger (1954) expedition to Garamba indicate high densities of large mammals in the park. The Simba rebellion of the mid 1960s produced political instability and appears to have been associated with unsustainable levels of animal offtake from the National Park, resulting in the reduction of the rhino population from an estimated 1300 in 1963 to "approximately 100" in 1966 (Lindbal, 1972; Hillman Smith, 1989).

A project funded by the UN's Food and Agricultural Organisation began in 1970 and provided support to the National Park Authorities to re-establish an effective wildlife protection system at Garamba. With re-established protection, rhino numbers rose again (Savidge et al, 1976). This project lasted until 1976, after which poaching in the national park is reported to have increased substantially, reducing the rhino population to 15 individuals in 1984 (Hillman Smith, 1989). In 1984, the Garamba National Park Project was established with funding from various international donors, including the World Wide Fund for Nature, the Frankfurt Zoological Society, the International Rhino Foundation and the Wildlife Conservation Society. The project's activities focused primarily on rehabilitation and development of effective wildlife protection. Current involvement consists of a 'holding action' (Barnwell, *pers. comm.* 1999), supporting the field operations by the guards as far as is possible, while raising the support needed to achieve adequate protection, within a broader *and more politically neutral framework consistent with the status of a World* Heritage Site.

4.2. Institutional context

Incentives:

- Donor support from most conservation agencies operating in north eastern DRC has been long term and has supported field activites.
- The growth of animal populations at Garamba has increased the local value of the wildlife resource, contributing substantially to the informal economy. This has provided the financial basis for some local institutions that can potentially alleviate poverty in the region.

Disincentives:

- Both at Garamba and in the Ituri Forest, conservation agencies have failed to recognise the significance of traditional institutions. Consequently, the community conservation initiatives in the Ituri Forest have not been fully implemented, and at Garamba important opportunities for achieving both conservation and development objectives have not been taken forward.

4.2.1 Introduction

In this section, local institutions are compared with centralised, government and international agencies in North Eastern DRC. The analysis explores the consequences of wildlife management and utilisation for meeting conservation and local development objectives. Markedly different processes can be identified at Garamba and in the Okapi Wildlife Reserve, however many of the lessons can be applied to both sites.

The local focus of national and international wildlife agencies

Conservation activities in DRC's protected areas are carried out under the auspices of ICCN. A number of international agencies and NGOs work in partnership with ICCN. These relationships are outlined in Box 4.1.

The working relationship between ICCN and the various donors has produced positive results in terms of the conservation objectives that were set. For example, at Garamba, when investment in wildlife protection was low (1976 - 1986), nine out of 10 of the herbivore species monitored showed a decrease in numbers (Figure 4.2). In contrast, between 1986 and 1995, when there was a relatively high donor investment in conservation, seven out of 10 species increased in numbers. While the processes that have contributed to conservation success at Garamba cannot be regarded as community based, they have maintained a relatively high abundance of wildlife resources.

Both Garamba and the Okapi Wildlife Reserve have benefited from substantial levels of support from external conservation aid agencies. Hart et al (1997) provide a concise description of the relationship that has effectively developed between ICCN and the conservation NGOs in north eastern DRC:

1. the creation of on-site partnerships that work within the protected area system, but maintain operational independence from the national IZCN [now ICCN] infrastructure. The effectiveness of the partner institutions depends on a long term commitment to local conservation problems and an ultimate mission of building the national capacity to promote conservation;
2. training and professionalising promising individuals who can become influential for conservation. Again, long term commitment is necessary to protect national professionals from isolation and demoralisation. Individuals must become partners with links to international networks if they are to be effective for conservation in their own countries.

A long-term commitment to field based institutions has also fostered a more effective basis for tackling objectives that are common to conservation and community development. For example, external agencies have helped establish a remarkably functional and resilient infrastructure. This can provide a basis for local development, such as the tourism activities that have developed at Okapi Wildlife Reserve following the construction of a small guesthouse and camping facilities. Until the recent conflicts, tourism showed great potential as a local industry, driven by the frequent passage of overland trucks. In 1987, 1466 international tourists visited the site, and over 2,500 people visited in 1990. The first signs of a decline in

Box 4.1 Formal institutions supporting ICCN at Okapi Wildlife Reserve and Garamba National Park

L'Institut Congolais pour la Conservation de la Nature (ICCN)

All protected areas, including the Okapi Wildlife Reserve and Garamba, are under the authority of ICCN. ICCN has three objectives:

- protecting fauna and flora in National Parks and Reserves
- promoting scientific research
- developing DRC's natural resources for recreation and tourism

The institute also has a number of additional remits that are specific to particular sites. This includes management of the Okapi Capture Station at the Okapi Wildlife Reserve and the Elephant Domestication Centre at Garamba.

ICCN has one of the most demanding mandates with the most limited operational resources of any government conservation institution in the world (UNDP 1997). Thus, it has welcomed external support from international donor agencies and has developed co-operative links with international NGOs in managing some protected areas.

Okapi Wildlife Reserve

- Wildlife Conservation Society implements its work in the Okapi Wildlife Reserve through a local partner institute, the Centre de Formation et de Recherche en Conservation Forestière. Its activities include promoting understanding of the biodiversity and management of the Okapi Wildlife Reserve, and providing training for Congolese professionals. It also promotes approaches aimed at linking conservation and local people's livelihoods, and disseminates research findings.
- Gilman International Conservation has worked in the Okapi Wildlife Reserve since the 1980s. Its activities involve: the rehabilitation of the 'Station d'Elevage des Okapis' and its administrative and tourist infrastructure, the promotion of tourism in the Reserve, environmental education and the financial support and training of ICCN eco-guards, who undertake both conservation work and are involved in tourism.
- The Harvard Ituri Project started at the end of the 1980s with the aim of studying local livelihoods and interactions between the Bambuti and the Bantu. Today, the project has only limited activities, but provides some funds for a school and a health centre in the northern part of the reserve.

Garamba National Park

The national park is funded through a consortium of international donors who contributed around US$ 500,000 in 1997 (EDG 1998). Prior to 1996, the park operated on a budget of between US$200,000 to 300,000. Over the past fifteen years, these resources have almost exclusively been used for supporting anti-poaching and associated activities in the national park.

- The World Wide Fund for Nature has been the most significant investor at Garamba, and has focused largely on management related activities, including logistical support and the funding of technical experts. WWF has recently raised substantial funds for Garamba from a public appeal in the UK, but has also withdrawn its technical advisors and scaled down its field activities (Pearce, 1998).
- The Frankfurt Zoological Society has supported Garamba by providing half the overall financial support for logistics and a technical advisor until 1991, and aerial support since then.
- The International Rhino Foundation has provided support for ICCN staff through salary supplements and is increasing support through technical advisors, logistical support and contributing to aerial support and monitoring.
- The Wildlife Conservation Society and Save the Rhino International have invested largely in ecological research and monitoring, veterinary support and study, and training.
- The US Fish and Wildlife Service are supporting the ecosystem and rhino monitoring and research, and logistical re-equipment.

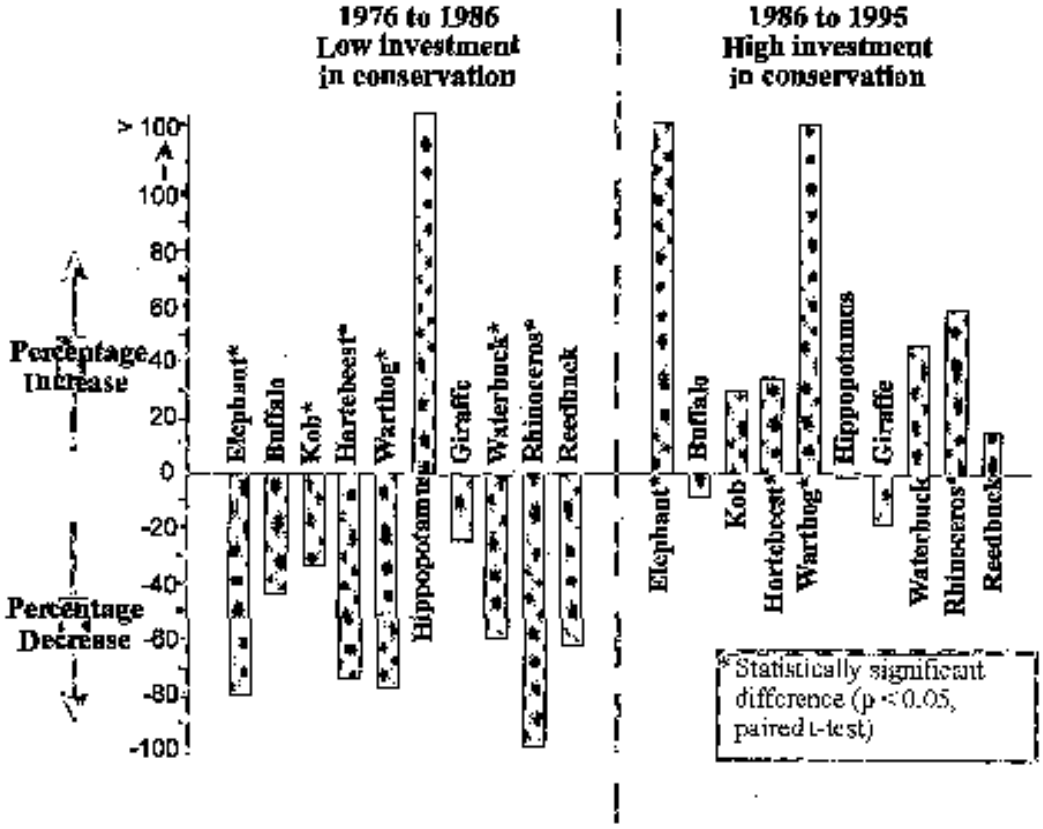


Figure 4.2. Percentage change in mammal population numbers in Garamba National Park between 1976 and 1995 reflecting the impact of support from international conservation institutions (Source: sampled aerial count data, Hillman Smith *et al* 1995, de Merode 1998).

tourist numbers due to political instability came in 1992 when only 1567 visitors came to the Ituri. Currently, there are no international visitors although the site continues to receive several hundred Congolese visitors annually (Marcel Enckoto, *pers. comm.* 1999).

4.2.1 Developing local institutions for wildlife management in the Ituri

In 1993, a community wildlife project was established by the Wildlife Conservation Society with a view to involving local communities around the Okapi Wildlife Reserve in the management of local resources (see Box 4.2). Seventeen conservation committees were established in and around the Reserve, each comprising up to 10 local residents, including both women and Bambuti. Each committee was provided with a bicycle to facilitate communication between the committees and the managers of the Okapi Wildlife Reserve, and monthly meetings were scheduled. This initiative was interrupted by the war in 1996 but was experiencing difficulties in implementation, primarily because of the balance of power between the traditional administrations and conservation committees.

In the Okapi Wildlife Reserve it was felt that new institutions should be created for natural resource management because of the elitist nature of traditional organisations. Previous experiences had shown that chiefs did not always provide

Members of the community conservation project in the Okapi Wildlife Reserve evaluated their activities in a seminar in 1996. Picture: Kambale Kisuki

feedback to their people when agreements were signed with the reserve. Whilst all conservation committees were asked to be under the authority of the chief, most of the 17 community conservation committees established excluded traditional authorities. However, the most dynamic committees were the few that included traditional leaders. Because most of the conservation committees tended to bypass the role of traditional chiefs, the traditional leaders were left frustrated and were unwilling to cooperate.

The creation of new institutions delayed the effective implementation of community wildlife management and increased the distrust between the reserve managers and the traditional leaders. According to customary law, traditional leaders are responsible for natural resource management and their exclusion from the conservation committees led, at best, to inertia, and at worst, to conflict. For example, in 1995 the Chief Apiobo of Walese Karo unilaterally suspended the Community Conservation Committee of Nduye alleging that the agreements between the ICCN and the local authorities concerning the establishment of a patrol post were not fulfilled. In 1994, under what was believed to be the instigation of the traditional authorities, the villagers felled trees across the road so that the reserve managers' car could not reach the village where a meeting was scheduled. In another incident, a chef de collectivité instigated a letter (Box 4.3) which declared opposition to the conservation committees.

Learning from these experiences, community wildlife management activities at both sites are now designed to work with the traditional and local authorities and to involve them directly in the management of the reserve. The conflicts have increased the imperative to work with traditional leaders as their relative stability has increased their capacity to manage wildlife resources.

Box 4.2 Formal attempts at Community Wildlife Management in the Okapi Wildlife Reserve

The community wildlife management project at Okapi tried to address three issues:

Poaching: A system of anti-poaching was developed with the 17 conservation committees that were established. The aim was to monitor illegal hunting activities, and consisted of reporting any killing of protected species, such as okapi and elephants.

Protection of *zones vertes / zones de capture:* *Zones de capture* were established by a private investor in the 1950/60s to supply a zoo at Epulu with okapi. When the Station d'Elevage des Okapis became ICCN property, the *zones de capture* were transformed into corridors for animals moving from one side of the Reserve to another. In 1992, they were officially called zones de capture / zones vertes to indicate their ecological value and commercial hunting, tree felling and agriculture were prohibited within them. Although they have generally been respected by the Bambuti and the Bantu, the conservation committees' reports noted that cultivators from outside the area were encroaching on them. The conservation committees were asked to help control encroachment by reporting it to the Reserve managers, particularly those cases which they could not solve themselves.

Conflict resolution: Two important issues of conflict exist at Epulu: animal crop damage and encroachment by gold miners. Both were addressed by ICCN working in partnership with the conservation committees. Where wild animals affect local people's crops, they can make claims for compensation through the conservation committees. Although gold mining is forbidden in the Reserve, all gold related activities were restricted only on paper until 1995 when the gold miners were formally asked by ICCN staff to leave the gold camps. When the Reserve managers started to evacuate gold camps, meetings were held with the conservation committees to ensure that any conflicts could be solved amicably where ever possible. However, in some cases force was used to ensure that the gold miners left the area.

4.2.2 Local institutions as users and regulators of the bushmeat trade

The role of local institutions that do not have a formal mandate to manage wildlife is often overlooked. But, in DRC, as in many developing countries, local institutions can have a pivotal role in influencing levels of offtake in wildlife and in determining the distribution of the benefits from natural resources. Often the control exercised by the members of these institutions on the bushmeat trade is planned, and therefore must be considered as a form of wildlife management, as opposed to wildlife 'use' (see chapter 2). These institutions vary considerably but have one feature in common: they have a strong local presence, and are therefore able to influence people's wildlife consumption behaviour. They range from large national bodies, such as locally stationed military, to very local village level institutions, such as guilds of traders or fishers.

Because these institutions do not formally manage wildlife, understanding their role is not straightforward. A technique known as commodity chain analysis (Ribot, 1998) was used to understand the institutional roles held by various groups and agencies

Box 4.3 Declaration of Elders and Farmers- Collectivité Kebo- addressed to the Commissaire Sous Régional of Haut-Uele in October 1993

"...We are informing you that all the chiefs of the groupements, the localités, the pygmees, and other citizen, we are farmers and officially we reject the implementation of a Reserve in our land. The [Okapi Wildlife] Reserve will prevent us the use of our land. We are going to be evicted from our land. Why should they take us as stupid? Why should they establish a Reserve without our consent? Do they like our death?..."

Les Vieux Sages de la Collectivité Kebo

around the protected areas. A graphic description of institutional relationships in Garamba is provided in Figure 4.3.

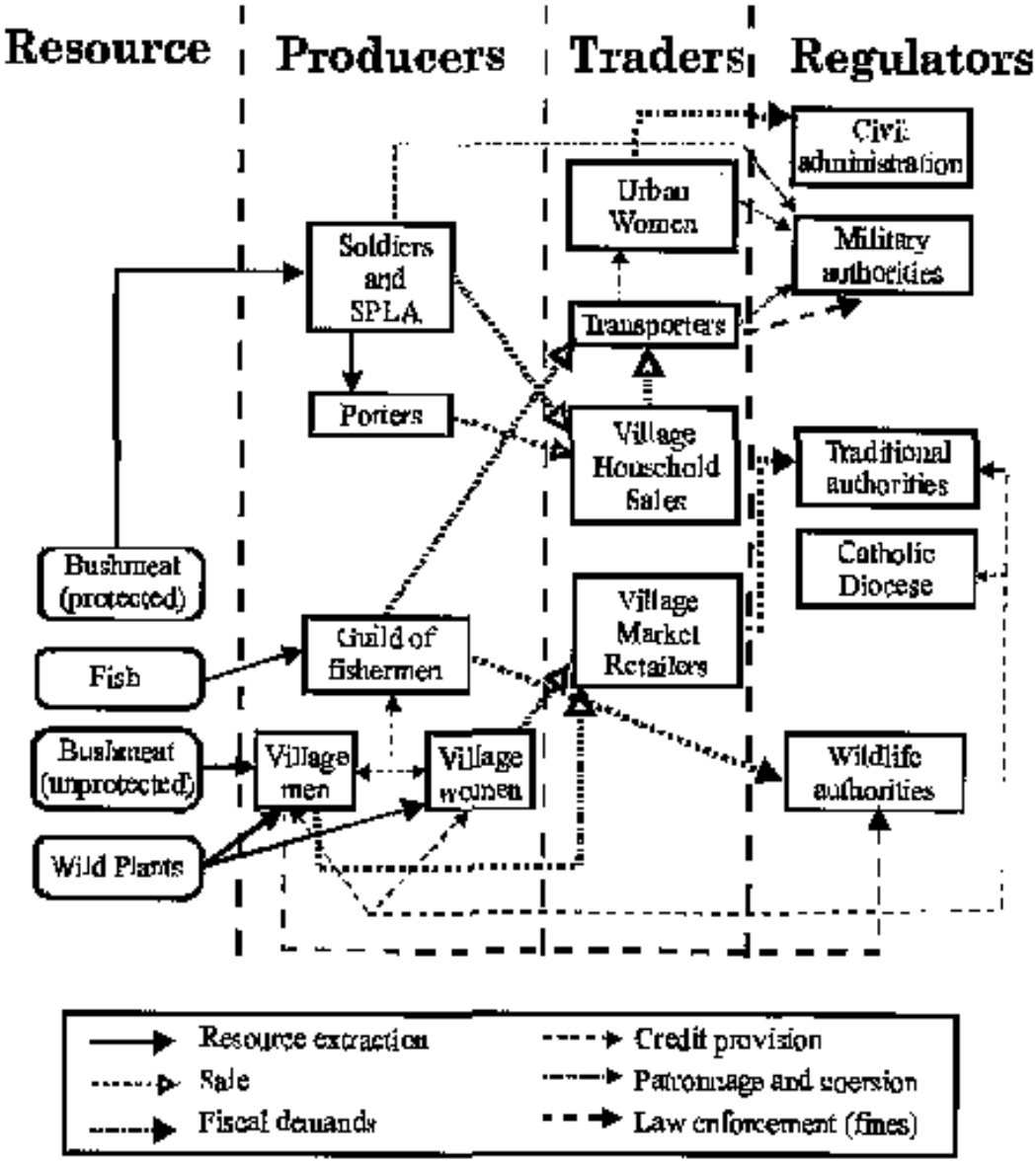
A similar range of local institutions regulates and controls the bushmeat trade at the Okapi Wildlife Reserve. Here, the traditional authorities are in an ambiguous position, being at the same time traders (often working through intermediaries) and regulators. Their regulation does not involve taxation but they have the power to regulate the movements of the producers, the Bambuti who are the exclusive hunters. Two other local groups are involved in bushmeat trading: soldiers, and men and women from both the surrounding villages and small towns. In addition to rural and urban markets, each gold mining site in the Ituri has its own market.

Four types of regulation and control through taxation are found in the Okapi Wildlife Reserve:

- In gold mining sites, the owner of the site taxes any commodity sold within its boundaries;
- Wildlife authorities impose fines on sales of commercial bushmeat, which are determined subjectively;
- Soldiers request that traders share a proportion of their product or the revenue generated from it with them;
- Finally, the civil administration plays a limited role in controlling the products sold in official markets in urban and rural areas.

The complexity of local institutions in managing the bushmeat trade is demonstrated at both sites. Which institutional groups benefit from wildlife resources is a key aspect of *de facto* wildlife management. Different institutional actors that have a stake in the bushmeat trade have developed elaborate strategies for maintaining access to the trade. These strategies primarily include bushmeat extraction by hunters and its sale by commercants, often women. Local institutions also draw revenue from these activities through indirect means such as taxation, coercion and credit provision. For example, prior to 1996 military officers around Garamba established small teams of hunters and traders who had exclusive access to the bushmeat trade, and who provided the officer with a proportion of the income. Traditional leaders at Garamba also tax bushmeat. Because bushmeat is so highly

Figure 4.3. Conceptual framework showing the beneficiaries and the power relationships associated with wildlife resources at Garamba National Park



taxed, the profits from this trade are reduced when compared with other commodities, and this can sometimes have an indirect regulatory effect on the volumes of bushmeat being harvested by hunters. Thus this informal system represents an opportunity for local regulation in the absence of external agencies.

4.2.3 Conflicts of interest between local and non-local institutions

Currently there is an inherent contradiction in the management structure of the protected areas of northeastern DRC. On the one hand, ICCN is legally empowered to regulate and control all the activities within the protected areas. On the other, traditional chiefs have customary power and administrative authority over resource use. At Okapi Wildlife Reserve, traditional chiefs tend to consider the reserve as a

Bambuti hunters divide up their catch, a forest antelope. The Bambuti share the meat among themselves and sell the surplus to farmers and traders.
Picture: J. and T. Hart, WCS

constraint to their authority. This is aggravated by the fact that, out of 10 collectivités found within or around the Okapi Wildlife Reserve, nine are 'Collectivités-chefferies' meaning that the Chief's appointment is made according to customary laws of inheritance. The remaining one is a 'Collectivité-secteur' meaning the chief is appointed according to edicts prescribed from Kinshasa. Thus, the two systems of authority are answerable to different constituencies.

The same is also the case for the military, civil and religious authorities who exercise varying levels of administrative control over resource use. To date, the wildlife authorities both in the Okapi Wildlife Reserve, and at Garamba, have had little collaboration with the highest administrative authorities in the region. The fact that the managers of Garamba and the Okapi Wildlife Reserve are appointed directly by the Ministry of the Environment in Kinshasa, whilst the civil authorities answer to the Provincial administration in Isiro (or Bunia) and Kisangani, has meant that there is no incentive for them to cooperate as they are not accountable to the same administrations.

To resolve some of these operational difficulties, several workshops and conferences have been organised to examine and understand the roles, objectives and limitations of national and international institutions in the wildlife sector. Recommendations from a number of forestry and biodiversity-related studies[5], point to the need to review and streamline the functioning of ICCN through decentralisation and

[5] For example, the European Community Review of ICCN in 1990, Biodiversity Country Study 1990, World Bank Assesment of ICCN in 1991, the first national seminar on biological diversity in DRC in 1995, and the July 1997 project development workshop for the North-eastern parks of Congo.

adoption of improved management approaches. Major institutional issues include:
- insufficient financial, material, and trained human resources to ensure basic operations of protected areas;
- excessive centralisation in the management of protected areas; and
- non-participation of local communities in the conservation and management of protected areas.

The renewed conflict in the region has inevitably postponed the restructuring of ICCN to address these issues, although the PARCID project funded by GTZ has, since late 1998, started re-structuring and developing the functioning of the headquarters of ICCN in Kinshasa. There are limitations to this initiative, however, as the current conflict has separated the concentration of protected areas in the northeast of DRC, under rebel control, from the ICCN headquarters in the west.

4.3. Political and historical context

Incentives:
- The area has a history of local management, and the current decline of state authority has increased the importance of local administrations.
- De-militarisation and reconstruction is a common priority for both the local administrations and conservation agencies, and provides a basis for collaboration.
- Concern for wildlife conservation, as a means for increasing international support and legitimacy, has consistently been expressed at the highest political level.

Disincentives:
- The declining economy and war have undermined the state's ability to manage protected areas.
- Local administrations have been weakened by the agendas of non-local commercial interests under colonial and post-colonial parasitic regimes.
- Wildlife management has not been transferred to traditional administrations.
- Social upheaval and forced displacement of people as a result of war challenge a long term donor strategy for local management.
- The wars have postponed a decentralisation programme within the government administration, which aimed to contribute to improved community wildlife management.

4.3.1 Introduction

In both the Ituri Forest and at Garamba, two factors explain the difficulties in implementing wildlife management: the declining role of the state in recent decades, followed by two wars since 1991. This section outlines how high levels of political organisation at the local level have enabled certain organisations at both sites to adapt, develop resilience to political decline and instability, and provide an opportunity for community wildlife management. At Garamba, the high levels of social organisation stem from a long history of devolved management, whose roots grew from the autonomous Zande kingdoms established in the eighteenth and nineteenth century. In the Okapi Wildlife Reserve, traditional authority is less ingrained in the local administration, largely because of the in-migration to the area throughout the twentieth century. Nevertheless, the experience of implementing community wildlife management in the Ituri has shown that the exclusion of traditional leaders can undermine conservation and development activities.

The impacts of war in north-eastern DRC

From shortly after independence in 1960, the north east of DRC has been characterised by periods of intense conflict interspersed with periods of gradual decline and collapse of state and other economic institutions (Bayart et al, 1999, Tshombe, 1997; Isidore and Isidore, 1997; Gott, 1996). Since 1994, the Great Lakes Region has faced unprecedented political and military instability that has negatively impacted on the social, economic and institutional context in eastern DRC, with profound repercussions for the country as a whole. Existing protected area administrations have struggled to adapt to the turmoil.

Neither the Okapi Wildlife Reserve nor Garamba National Park has been spared the full impact of war (Box 4.4). Both sites were situated on the path of the eastern advance of the conquering *Alliance des Forces Démocratiques pour la Libération du Congo-Zaïre* in 1996. The location of the Okapi Wildlife Reserve on the Trans African Highway, which links DRC to East Africa, made the area a focal point for conflict. Troop movements relied on this highway, destabilising the area and halting conservation activities.

The impact of war is a central theme in contemporary DRC and is explored in more detail in subsequent sections.

Local solutions to conflict

Despite the impacts of war, opportunities still exist at the local level for effective community wildlife management. Locally, certain traditional administrations were remarkably successful in mitigating some of the impacts of the conflict. This is probably for two reasons: first, of all the systems of authority in the region, traditional leadership is the most accountable to the local population. Second, traditional leaders are forced to find solutions to the challenges of war.

Several examples of the successful adaptive strategies of local authorities exist. For example, the region to the west of Garamba National Park, the Azande hunting reserve, avoided the extensive looting and vandalism which was associated with the retreating troops of the Forces Armées Zaïroises. This is understood to be because traditional chiefs in the hunting reserve were able to convince the retreating soldiers that it was not in their interest to cross the Dungu River into their constituencies.

Popular support given to forces which ousted Mobutu's regime in 1996 relied on a widespread desire for change on the part of local populations. Tacit support was provided by traditional authorities in the region for the advancing Alliance forces. The new regime is conscious of the importance of the traditional authorities. While major changes have been instigated for the national institutions, traditional institutions have been deliberately maintained.

However, it is not only the traditional administrations that have a role to play during and after conflict. ICCN, as a paramilitary organisation, continues to function during conflict and has important functions in reconciliation (Box 4.5).

Box 4.4 A summary of events in the Okapi Wildlife Reserve and at Garamba during the recent conflicts (1996 to 1998).

The Okapi Wildlife Reserve was the first of the two sites to be afflicted by conflict. A first group of soldiers (Forces Armées Zaïroises) retreating from the front arrived in early December 1996 and seized all the vehicles. An intense period of looting followed. The soldiers subjected the local populations to unprecedented levels of harassment. Local people were conscripted into providing supplies for soldiers. On a daily basis, the Chef de localité collected food from the local population: goats, rice, bananas, cassava and beans were provided as a means of appeasing the increasingly hostile and desperate soldiers. At least sixteen elephants were killed to provide the soldiers with meat. As the pressures of war increased, people moved away from villages to their gardens in the forest where they built temporary accommodation. Project and reserve staff sought refuge in the forest, assisted by the Bambuti who found them safe areas.

Because of the insecurity, people could no longer work or move around. The thriving informal economy temporarily collapsed, the shops closed and remaining supplies were hidden in the forest. Prices soared and essential services, such as dispensaries, were no longer available. (report from Terese Hart, 1997).

A similar pattern of events unfolded several weeks later at Garamba, with the added complication that the park headquarters at Nagero was used as *Quartier General* for a group of foreign mercenaries recruited by the Mobutu regime. The presence, in the early phases of the war, of project staff, armed park personnel and later of the mercenaries, protected most of the equipment from looting or destruction by the fleeing Forces Armées Zaïroises. However, the presence of mercenaries in support of the old regime led to considerable looting and destruction after they had left. This included park equipment as well as that left by both mercenaries and missionaries alike: *"There has been a civil war during this financial year of the project. Over 90% of the vehicles and equipment needed for park operations and anti-poaching have gone and for a period the guards have been disarmed. This led to anti-poaching patrols from March to June being 14% of those during the same period in 1996. As a result poaching has increased enormously and moved further south into the northern edge of the rhino area, along the Garamba river. Poaching has mainly been for elephants, buffaloes and hippos. One rhino is known to have been poached."* (Smith and Smith, 1997).

4.3.2 The threats to effective local administration

While existing systems of local management provide an opportunity for community wildlife management, historical events have limited this potential. The colonial regime and subsequent practices of government have distanced some traditional administrations from their constituents. The result is a system whereby power has been delegated to traditional leaders as a means of supporting the interests of external stakeholders, such as foreign industrial interests or parasitic regimes. This process has eroded the autonomy of some local administrations and has challenged the ability of traditional leaders to manage resources in the interest of the community at large.

Around Garamba, the ethnic composition of resident populations has remained relatively stable, and the Avongara ruling clans of the Azande have established their

Box 4.5: ICCN's role during and after the war

1. During the war

During the current state of conflict, ICCN's role is somewhat different in those areas that are controlled by the government and those controlled by the rebels. In Government controlled areas, ICCN's traditional mandate is maintained. In rebel controlled areas, ICCN's role is officially maintained, given that the rebel presence is constitutionally illegal. Nevertheless, as ICCN is unable to maintain an effective management presence in rebel controlled areas, the agency brings international conventions into play. Thus, the status of the protected areas, whether classed as a UNESCO World Heritage Site, or benefiting from international donor support, has an important bearing on ICCN's management policies. The UNESCO convention confers international status to both Garamba National Park and the Okapi Wildlife Reserve. The Congolese government transfers responsibility by maintaining these sites as 'neutral zones' and ICCN collaborates with NGOs that are continuing to maintain a field presence.

2. After the war

After the war, ICCN's role will depend on the government in place. If the political climate remains the same, ICCN's traditional role will be maintained, with additional responsibilities to ensure the integration of local populations into the wildlife management process. A policy of joint management and benefit sharing will specifically focus on traditional authorities as a pivotal institution for local management.

Source: Mbayma Atalia, ICCN, *pers. comm.* 1999

roles at the heart of local administration. This has not been the case in the Ituri Forest, where high levels of immigration have strengthened the power base of non-local men, a few of whom have assumed the role of local chiefs. In Zandeland around Garamba, tradition is more important than the state in determining rights of chieftainship, as a chief can only be appointed by the ruling Mbomu family. This excludes outsiders.

The role of traditional authorities during and after conflict

Political conflict has created a situation in northeastern DRC that cannot easily be addressed using conventional systems of protected area management. De-militarisation has become a priority for meeting both conservation and development priorities. The widespread availability of automatic weapons and the presence of unsupervised soldiers have contributed to high wildlife offtakes. They have also constrained local development by restricting village and urban markets and hampering movement through establishing road blocks. Reducing weapons availability is a key priority, but is not easily undertaken by under-funded and often demoralised wildlife administrations. Despite the importance of arms recovery, international funding agencies cannot always lend support to law enforcement activities. Furthermore, experiences at Garamba suggest that patrolling the hunting reserves is logistically difficult and expensive: inadequately supervised armed guards amongst the communities can substantially increase the existing tensions between the communities and the National Park and, moreover, are susceptible to getting involved in poaching.

Important lessons can be drawn from the local successes of traditional leaders in the region. In the *Groupement Kiliwa*, in the hunting reserve to the west of Garamba, traditional chiefs identified a number of factors as having a negative impact on local economic development and devised solutions to each one:

- The presence of unsupervised soldiers discourages people from travelling to markets and selling their products. Consequently, soldiers passing through the village are required to report to the chief and, on presentation of their *ordre de mission* (authorisation to travel), are provided with accommodation. Lack of discipline is repeatedly reported to higher authorities until action is taken.
- Traditional leaders have been able to recover illegal weapons through periodic amnesties and with the help of unarmed *Gendarmes*. This has been remarkably successful: documentary evidence shows that the traditional authority of Kiliwa recovered 61 automatic rifles between 1989 and 1995. These were delivered to the military, civil and park authorities.
- Finally, incursions by armed groups from Sudan have also been a destabilising factor. Chiefs have access to detailed information on Sudanese movements resulting from their close relationship, and the high level of trust, with the community. Incursions by the Sudanese are reported well in advance and can be referred to park authorities.

This experience highlights the mutual benefits that can be gained from a closer collaboration between the wildlife and traditional authorities.

4.4. Legal context

Incentives:

- Site specific legislation recognises the potential role of local administrations in managing wildlife resources
- A combination of state regulations and local restrictions on the marketing of bushmeat has been successful in securing sustainable wildlife offtakes.
- Customary law is understood by local stakeholders, and can be used to address certain resource access issues.

Disincentives:

- Much of the national legislation is outdated, and fails to provide a legal status to local wildlife management bodies.
- When the enforcement of wildlife laws is solely dependant on centralised authorities it has little influence during periods of conflict
- State ownership of land and natural resources precludes the establishment of incentives for sustainable local use of wildlife.
- Current wildlife regulations, based on a regime of high penalties but a low probability of arrest, are unlikely to deter people from hunting unsustainably and also create local resentment against wildlife authorities.

4.4.1 Introduction

This section explores two issues:

- The current legislation governing natural resources, their ownership and use and the strengths and limitations of legislation for managing Garamba National Park and Okapi Wildlife Reserve.

- The implementation of wildlife laws and regulations. Data from Garamba are used to test the efficacy of law enforcement under various economic and political conditions. This provides a basis for comparing law enforcement by state institutions with alternative regulatory mechanisms developed by local institutions.

Laws governing natural resource use

DRC has six statute laws governing resource management and environmental protection. Associated with these are numerous articles relating to the conservation of nature and natural resource use. The most important of these, and their implications, are outlined in Box 4.6. Much of the current legislation is outdated. Furthermore, state legislation, even if appropriate, cannot easily be implemented in the field because of the remoteness of the sites from the capital and the limitations of local management capacities (see below).

The jurisdiction of local administrations in the Okapi Wildlife Reserve and Garamba National Park

The Okapi Wildlife Reserve has only recently been gazetted and, unlike Garamba, this makes it possible to implement a more formal role for local administrations in protected area management. As a consequence, the Okapi Wildlife Reserve could be placed under a dual jurisdiction of ICCN and the traditional authorities. Whilst a number of obstacles to effective joint management still exist (Box 4.6) the Okapi Wildlife Reserve sets a legal precedent for devolved management of wildlife resources in DRC.

In Garamba, no legal mandate has been provided for local authorities to engage in wildlife management. Nevertheless, ICCN officers and external technical advisors have taken steps to legitimise and promote the activities of certain local institutions in the hunting reserves surrounding the park. In response to the success of some traditional leaders in addressing the problem of insecurity in the region, representatives of ICCN, the Garamba National Park Project and the traditional authorities signed a letter of agreement in August 1996. The letter acknowledges the potential contribution of traditional authorities in promoting sustainable wildlife management and provides financial incentives for them to recover automatic weapons. It also provided for the conditional withdrawal of armed guards from the groupements around the park. Furthermore, it instigated a formal dialogue for ICCN officers to work towards devolving fiscal authority to traditional leaders.

Local regulations and the effectiveness of law enforcement

An important aspect of legislation is the extent to which the conservation laws can be upheld. A bushmeat study around Garamba examined the relationship between the flow of bushmeat in the markets and differing intensities of wildlife protection by ICCN. It shows that the volume of bushmeat from protected species is strongly correlated with the enforcement of wildlife protection in the national park; during the months when levels of law enforcement were low i.e. when few weapons were recovered in the Park, high volumes of bushmeat were sold in the urban markets (Figure 4.4). This indicates that law enforcement implemented through a 'fortress' conservation approach is a major factor contributing to the maintenance of stable or increasing large mammal populations at Garamba.

Box 4.6: DRC's legislation concerning natural resources and their consequences

ICCN is centrally controlled from the capital, Kinshasa. The laws concerning protected areas in DRC are part of wider legislation on land and resources which, in theory, strengthens centralised control. This was a deliberate policy to reduce the role of more local institutions.

Land tenure and state ownership: the collapse of the private sector

DRC has a history of state control and ownership of resources. The legislation that relates to land tenure centres around the Bakajika law of 1966 which defines state property and how rights and uses are granted. A process of centralisation and nationalisation of the productive sector followed the Bakajita Laws.

Hunting legislation

Laws, which regulate hunting, were passed in April 1937 and as part of the Forest Decree of 1949. In practice these have all been superseded by a 1982 amendment which provisionally closed commercial and sport hunting. However, this amendment was written as a temporary measure, pending an inquiry that has yet to be completed. In practice, the hunting legislation was complicated by conflicts of interest under the Mobutu regime relating to the ivory trade. Commercial hunting enterprises were considered a threat to the interests of those exploiting the lucrative ivory trade in northeastern DRC.

The Law No 82-002 of 28 May 1982 regulating hunting in DRC establishes the conditions under which hunting is permitted, documents required, and lists animals for which hunting and trapping are prohibited. The hunting legislation in DRC is strongly influenced by international conventions (e.g. Convention on International Trade in Endangered Species, CITES): the Law includes two annexes listing species totally or partially protected and also defines the opening and closing of hunting seasons for each region of the country. The implications for local level wildlife management are limited because CITES influences international trade only and is therefore of limited relevance to the internal bushmeat trade.

Protected areas

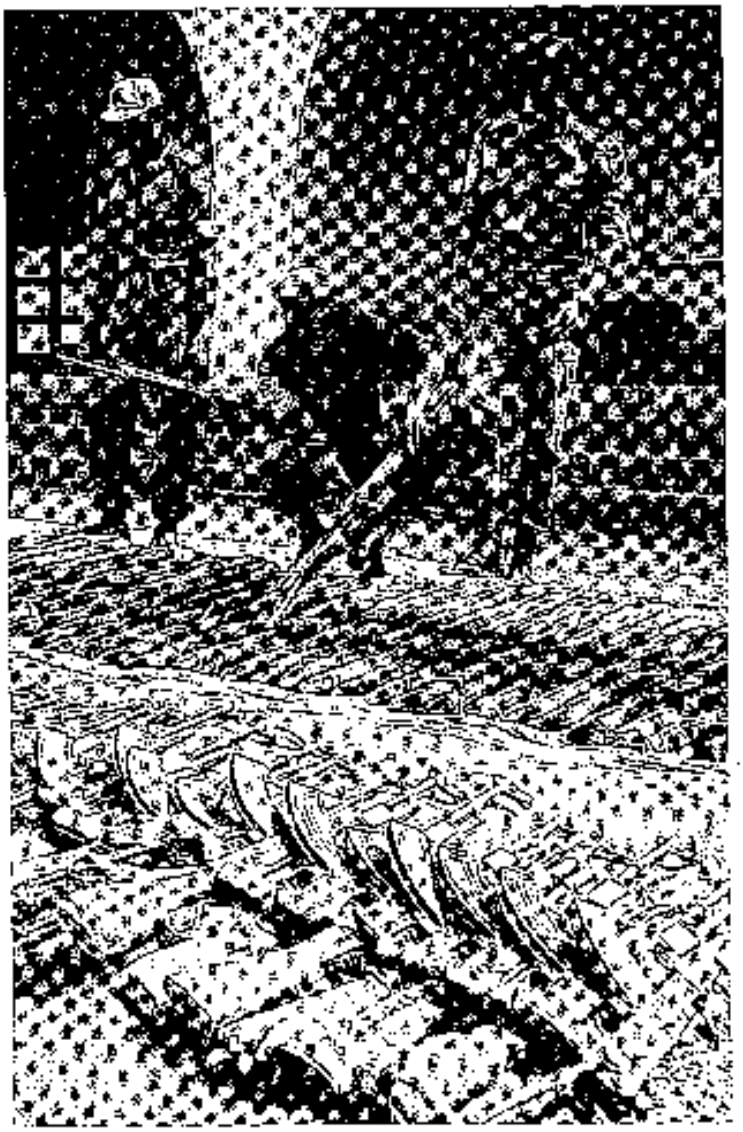
The Ordinance Law of August 1969 defines the condition under which parks and reserves could be created and managed in DRC. It was modified slightly by subsequent Decrees and Ordinances. These laws constitute a legislative framework within which the managers of Protected Areas in DRC operate. Local community participation in natural resource management is not yet addressed in these decrees. Although a new forest law was prepared and finalised to replace the Forest Decree of 1949, it has not yet been adopted.

Site specific legislation

The Okapi Wildlife Reserve was created by a Ministry Decree in 1992. This is based on the Ordinance-Laws mentioned above and the law of 1982 regulating hunting. Whilst these laws relate to the protection of biological diversity, the Okapi Wildlife Reserve was created with the broader objectives of securing local people's access to resources. However, the Decree is not clear about which authority is responsible for modifying the restrictions imposed on the use of natural resources by local communities. This constitutes a dilemma for Okapi Wildlife Reserve's managers: to respect the regulation of biodiversity protection or to involve the local communities in the management of natural resources on which they depend.

It should also be noted that the Ministry of Mines has allocated gold concessions to non-local groups within the Okapi Wildlife Reserve both before and after its creation. Only a Presidential Ordinance has the power to cancel a Ministry Decree, and therefore the rights of non-local groups to the reserve's resources take precedence over local people's access.

Source: Commission Européene 1993



ICCN displays its cache of illegally held automatic weapons, which are used by mainly non-local hunters for killing large, protected species. Some of these weapons were recovered by traditional authorities around Garamba National Park. Picture: Fraser Smith

During the 1996-97 war most market regulations collapsed, the law enforcement capacity of ICCN was greatly reduced, and volumes of bushmeat in the urban markets increased significantly (Figure 4.4). Extensive formal and informal interviews with traders indicated that their patterns of trade changed during the war, and many more shifted their commodities from bulky and relatively low value products, such as manioc flour and palm oil, to the illegal bushmeat trade. The explanation was that prior to the war, bushmeat was controlled by a limited number of women traders whose exclusive access to bushmeat was secured through client-patron relationships with locally powerful institutions, such as the military, the police or traditional leaders. This created a market imbalance: the low volumes of bushmeat sold in the urban markets commanded high prices. Traders who were not included in the client-patron relationships, and who continued to trade in bushmeat, were stopped at military or police road blocks between the town and the park. The war marked the retreat of several garrisons from the area, and so a greater number of urban traders were able to purchase meat from hunters around the park. During the first three months of the war, the number of urban traders dealing in bushmeat increased from 12 to 61. The volume of bushmeat from protected mammal species being sold to urban traders increased by an estimated 515% (de Merode, 1998, see below).

4.5. Ecological context

Incentives:

- Both Garamba and the Ituri have exceptionally high abundance in wildlife. Wildlife resources provide an important contribution to the local economy.
- The ecological evidence at both Garamba and in the Ituri suggests that it is effective regulation and not eviction of human populations that have contributed to high animal abundance. When eviction is not a pre-requisite for conservation, local institutions can play an important role in regulating unsustainable offtake of wildlife.
- The evidence at both sites suggests that the presence of local residents has had a low impact on the abundance of most mammal species. Most forms of hunting are sustainable when human population densities are low.

Disincentives:

- Local authorities regulate village trade in small mammals. They have little influence on trade in large protected mammals which currently appear to be hunted unsustainably by non-resident hunters.
- The benefits of exploiting large mammals cannot be accessed by the majority of the population.

4.5.1 Introduction

It is increasingly argued that the 'human threat' to biological diversity is an assumption that is not always tested using empirical evidence (Brockington and Homewood 1996). Ecological data from both Garamba and Epulu are presented to understand what are the main human impacts on wildlife. In the past, the assumption has been that two forms of human activity have impacted on wildlife: the presence of people living and farming near wildlife populations, and high levels of unregulated offtake by non-local hunters with access to firearms.

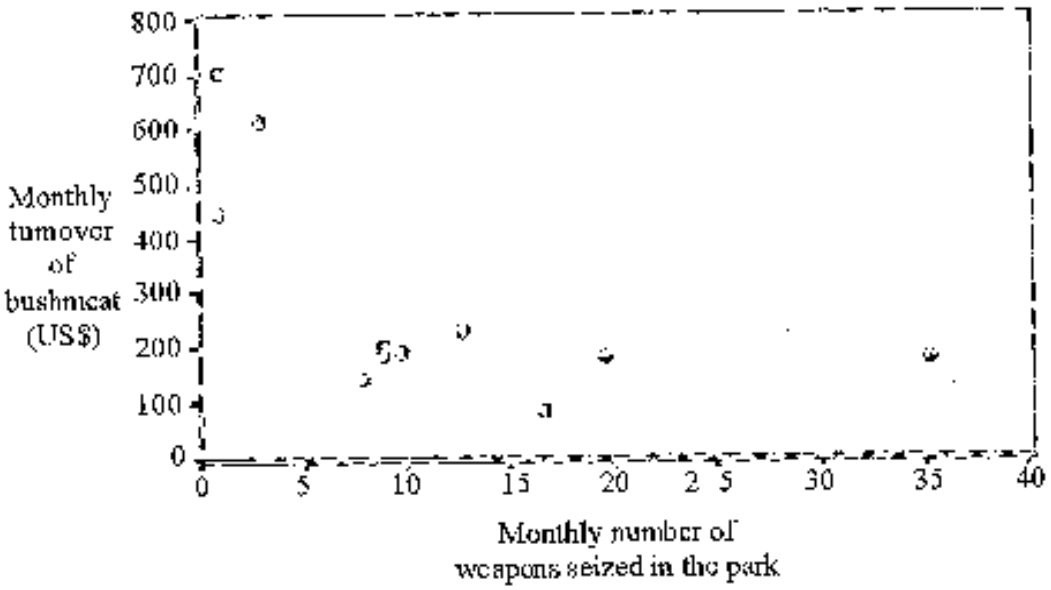
The ecological implications of past conservation policy

Human residency

Long term ecological monitoring at Garamba and in the Ituri Forest (Wilkie and Finn, 1990; de Merode, 1998) has revealed a number of important patterns that explain the threats to biological diversity and abundance. Data from the hunting reserves around Garamba National Park suggest that the distribution and abundance of wildlife is not significantly affected by human settlements (de Merode, 1998). Furthermore, a time series analysis of aerial count data from the northern sector of Garamba National Park, where human populations had been evicted, showed evidence of a substantial decrease in animal abundance between 1976 and 1995 (de Merode, 1998). This suggests that effective regulation, rather than eviction, is likely to be the primary determinant of conservation success and that non-residents have the most significant impact on wildlife (Hillman Smith et al, 1999).

Wilkie and Finn (1990) have documented similar results in their study of animal abundance and species richness in the Ituri forest. Using repeated line transects, they established that only three large mammal species, leopards, yellow-backed duikers and okapi, decreased in abundance near villages. Thus, human impact on mammals as a whole seems limited. However, any human impact on the okapi, being a keystone species, remains a concern that is best addressed by limiting hunting.

Figure 4.4 Scatter plot showing the strong correlation between wildlife protection and quantities of bushmeat in the urban markets around Garamba between April 1996 and February 1997 (Source: de Merode, 1998)



Unregulated offtake

The distribution of mammal populations in and around the two protected areas can be explained by the intensity of law enforcement. At Garamba, proximity to the national park explained most of the overall variation in animal abundance in the hunting reserves, with a much higher abundance of most large mammals close to the national park (de Merode, 1998). Within the national park, the effective enforcement of wildlife regulations is also associated with high animal abundance: the populations of most mammals increased during the period when an external donor funded wildlife protection (Figure 4.2). Furthermore, this increase in animal abundance is largely concentrated in the southern sector of the national park, which is the focus of wildlife protection activities because of the presence of the rhino population.

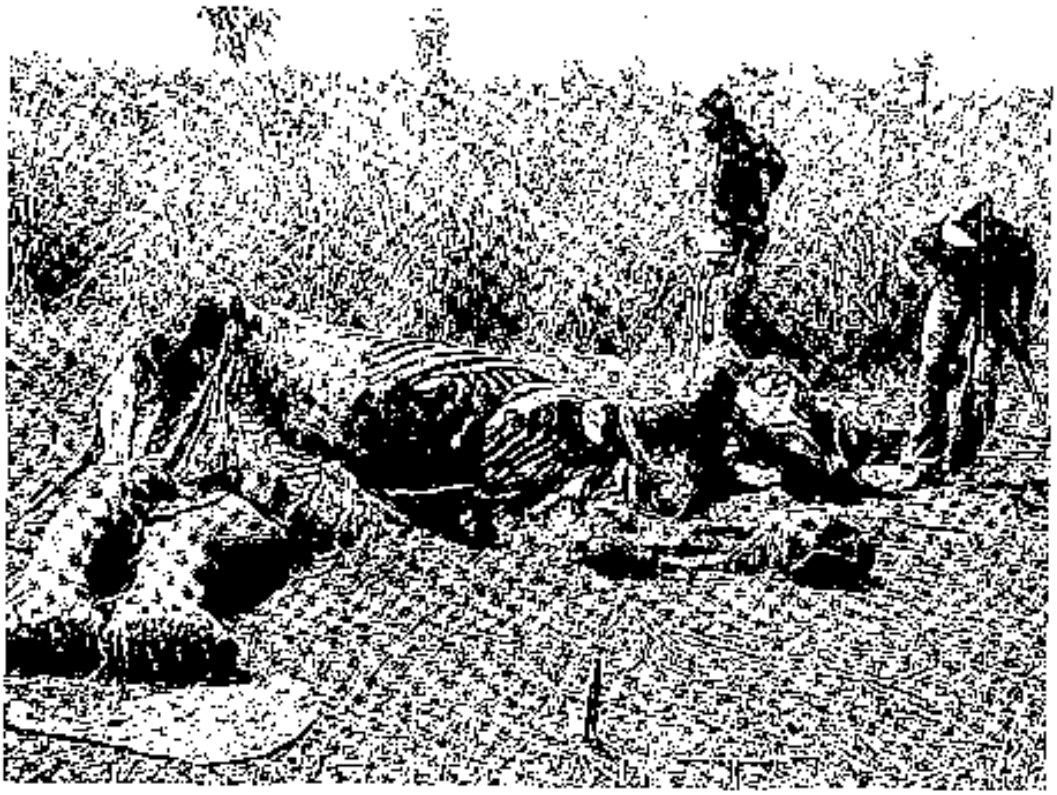
It should also be noted that the data from the hunting reserves around Garamba show that current law enforcement influences species differently. Larger mammals are significantly more abundant near to the national park where they are protected but smaller mammals do not appear to be significantly influenced by distance from the national park (de Merode, 1998). The management implications of this are twofold. First, key mammal populations, such as elephants and rhino, are depleted in the absence of active wildlife protection. Thus law enforcement activities are considered the most appropriate means of conservation. Second, a large proportion of species in the mammal assemblage, particularly the smaller mammals, is hunted without a measurable impact on their distribution and abundance. Market and hunter surveys show that village hunters and village markets focus on these smaller species, suggesting that there is no immediate conservation value in applying law enforcement activities in village markets and on village hunters. Instead, the bushmeat commodity chain (Figure 4.3) and hunting by non-residents of large, protected species, which are traded in urban markets, need to be addressed.

Understanding the real threats to animal populations

The result of the ecological analyses concur with those of the law enforcement data previously discussed (Figure 4.4). A study of wildlife utilisation at Garamba that spanned the period prior to, and during, the 1996-97 conflict illustrates the significant increase in wildlife offtakes in urban markets that are associated with periods of conflict (Figure 4.5) . In contrast, trade associated with village markets, which tended to focus on smaller mammals, is not significantly influenced by the absence of law enforcement during the conflict months. When the intensity of centralised wildlife protection was low during the conflict months, village trade in bushmeat did not increase (Figure 4.6).

Thus, two levels of wildlife utilisation, with different regulators, markets, technologies and ecological impacts, are apparent in northeastern DRC. First, is the exploitation of large mammals, which has a high impact on their distribution. The networks associated with this trade are largely dominated by the military (including the Sudanese People's Liberation Army), together with the civil administration in places such as Dungu and Mambasa. The meat is largely destined for urban markets, some of which are at considerable distances from the source.

Second, village markets trade in smaller mammals whose distribution and abundance does not appear to be significantly influenced by resource use by local residents. In many villages, the trade is largely controlled by the traditional authorities, which both promote commercial activities in the village by creating a climate of stability and exploit them by taxing those who use the market. The potential for village level wildlife management in meeting conservation objectives has already been discussed.



ICCN staff at Garamba National Park regularly encounter elephant carcasses. Large, protected mammals are mainly hunted by non-local hunters and the meat is sold in urban markets.
Picture: Kes & Fraser Smith

Figure 4.5. The estimated daily value of bushmeat from protected species being traded in urban markets between April 1996 to February 1997 (source: de Merode, 1998).
Error bars represent 95% confidence intervals on sampled market data

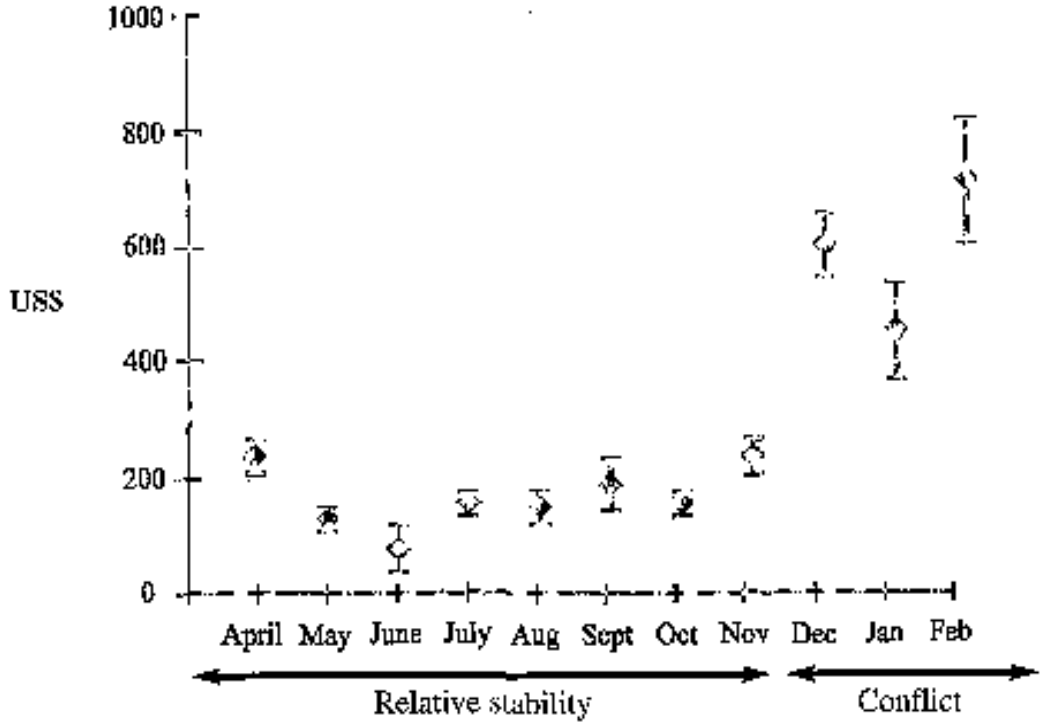
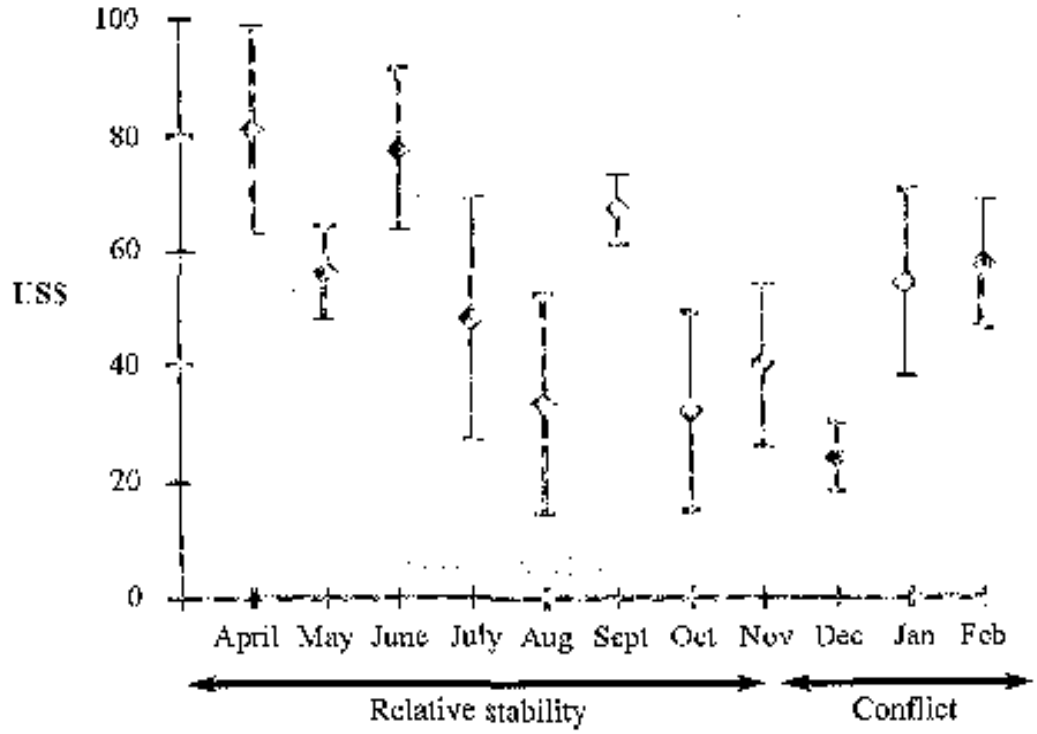


Figure 4.6. The estimated daily value of bushmeat from unprotected species passing through village markets between April 1996 and February 1997 (source: de Merode, 1998).
Error bars represent 95% confidence intervals on sampled market data



4.6. Socio-economic context

Incentives:

- Untapped fiscal opportunities exist that can form the basis of a financially sustainable local administration
- Hunting and wildlife resources are an important form of social exchange amongst economically and ethnically differentiated groups, especially in the Ituri Forest

Disincentives:

- There are few incentives for private sector investment to offset the cost of managing wildlife resources. The war and a lack of adequate infrastructure have discouraged external investors from developing enterprise in DRC.
- Important social differentials in the community have developed over access to wildlife resources.

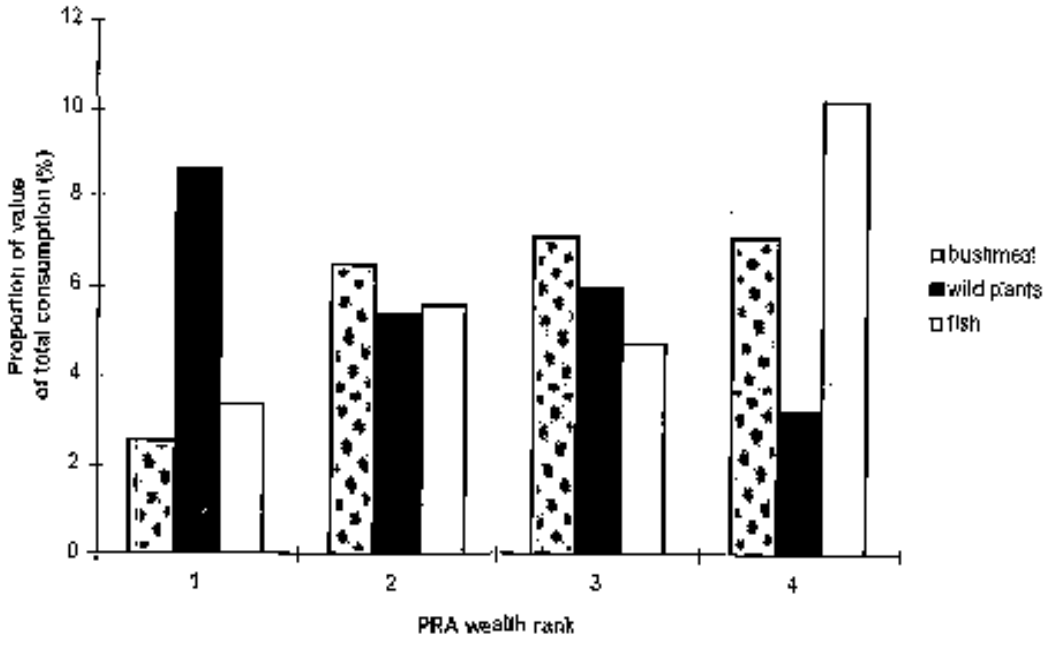
4.6.1 Introduction

It is important to understand who benefits from the extractive use of wildlife. This section looks at direct and indirect wildlife utilisation, and discusses the opportunities for improved governance and more equitable distribution of benefits.

Social groups and access to wildlife resources

Not all the social groups around Garamba and in the Ituri Forest have the same access to wildlife. These differences highlight the challenges in establishing a community-based wildlife management that benefits the full range of social groups in northeastern DRC.

Figure 4.7. The value of wild foods as a proportion of the value of total household food consumption at Garamba (source: de Merode, 1998). Wealth ranks: 1 is poorest, 4 is wealthiest



Wealth

There is great variety in the wealth of residents living around the protected areas in northeastern DRC. The wealthiest sectors, such as the urban traders or those in positions of authority, are largely based in the urban centres of Dungu, Paradje and Mambasa. In the Ituri, immigrants are the wealthiest people, wealth often gained through gold mining. Generally, they are not directly involved in the extraction of bushmeat. Instead, they use their authority, or their connections with people in authority, to control the most lucrative links in the trade: access to the urban markets and the taxes and fines that are imposed on smaller scale traders. In the village, bushmeat is largely used for subsistence purposes, with some being sold in the local market. The poorest members of the community rarely have access to bushmeat: they do not possess the capital to buy the rifles or snares required to hunt animals, and do not have a sufficient income to purchase meat at the market (de Merode 1998).

On the whole wealthier households consume and trade in bushmeat and fish much more than poorer households (Figure 4.7). However, the poorest households make greater use of wild plants. These data suggest that wild foods are important for the community as a whole, but that meat products tend to be luxuries only available to the wealthy. This suggests that with local development, and in the absence of effective regulations and alternative sources of meat, bushmeat use would increase.

The Bambuti at the Okapi Wildlife Reserve are an important exception to this stratified wealth distribution. The Bambuti represent an egalitarian society, sharing bushmeat amongst themselves according to principles and customs which reaffirm the mutual obligations among their kinship networks (Hart 1978).

Gender

A male bias in hunting appears to be a universal feature for most cultures. However, the Ituri Forest provides a rare example of women's active participation in hunting, where women enjoy the cultural and economic benefits of hunting (Bailey and Aunger, 1989). Mbuti communities hunt collectively using nets, and all able bodied members tend to be involved, even children, mothers with infants and the elderly, and receive an equal share of the benefits (Hart, 1978).

Net hunting is practised around Garamba, and large groups are usually involved. Whilst women were never present at the hunts, they are not excluded from the benefits that bushmeat offers (de Merode, 1998). Women's participation in the bushmeat trade appears to be greater than that of men. Women are prominent traders in the markets, both at the village level and in supplying urban markets. Indeed, extensive observations of people's activities at the Sunday markets in Kiliwa village suggest that the market is a social forum for men and a commercial centre for women: while the men congregate at the periphery of the market, women manage most of the stalls.

However, it is unclear whether the distribution of market profits benefits women. This point is raised by MacGaffey (1991), who suggests that Congolese commercial society is exceptionally male biased. This bias is enshrined in the Family Code of DRC (Decree 87-010), which states that a wife must relinquish her belongings to her husband if he can show that her ownership of assets *'portent atteinte à*

l'harmonie et aux intérêts pécuniaires du ménage'[7]. In practice, this gives men the legal basis to control their wives' assets. So, while women are prominent in the trading of bushmeat commodities, they consist of a small minority who are, in any case, tied into highly restrictive client-patron relationships with male military officers or high ranking administrators.

Residency

There is an ongoing debate in Central Africa over the definition of concepts such as 'immigrants' and 'natives' (Sharpe, 1998). It is common for wildlife managers to make a distinction between the two groups. At Garamba, many of those who have recently migrated to the area are forced migrants from Sudan. Around the Okapi Wildlife Reserve, recent settlers tend to be characterised as economic migrants (Peterson 1991). Migrants are attracted by the widespread availability of agricultural land, gold mining and the presence of members of family in the Reserve. Because of their economic power, they have almost taken the place of local farmers in the exchange relationships with the Bambuti that exist around the Ituri (Hart, 1978). A few have been appointed as local chiefs and have achieved economic and political control that is believed to have superseded that of 'local' people.

A practical definition of community was used in 1993 for a human census around the Okapi Wildlife Reserve. It combined a 'resource-user' definition of community (all those who use resources within the protected area) with a 'territorial model' (which defines the community in terms of proximity to the protected area) (Hulme, 1997). Thus people living in the Okapi Wildlife Reserve and within a radius of 15 km were considered as local communities, regardless of their origins. 15 km was chosen subjectively as the radius of the 'territory' on the basis that people living within this distance could easily have an impact on the reserve. Additionally, the chief warden has powers for 40km from the reserve boundary.

Gold and the urban demand for bushmeat have attracted migrant populations at both sites and opened up new markets for bushmeat, which has complicated the management of both protected areas. The Ministerial Decree that created the Okapi Wildlife Reserve cannot replace earlier Decrees made by the Ministry of Mines and thus the mining activities of these non-local entrepreneurs cannot be regulated by wildlife managers.

Whilst there are important differences between the migrant populations in the Ituri Forest and at Garamba, in both areas, groups benefiting most from wildlife resources appear to be a small number of wealthy non-residents. Local hunters tend to select smaller mammals, with correspondingly lower returns. In contrast, hunters who exploit large mammals usually hunt far from their place of residence. At Garamba, intensive household surveys undertaken over a period of one year, showed that only one local hunter from the sample of 128 households studied was exploiting large mammals (de Merode 1998).

Agriculturalists and hunter-gatherers

A characteristic of community-based wildlife management in the Okapi Wildlife Reserve is the relationship between the Bambuti and Bantu speaking groups. The

[7] "goes against the household's harmony and monetary interests" (MacGaffey's translation)

Bantu speaking farmers and the mobile hunter-gatherer Bambuti have an old tradition of exchange. The Bantu provide items from their gardens (rice, beans, oil etc) and the Bambuti provide bushmeat. Each group of Bambuti 'belong' to a Bantu speaking family with whom they exchange items. Increasingly, however, the Bambuti trade surplus bushmeat not only with their Bantu agrarian counterparts, but also with migrant traders or 'middlemen' (Hart 1978).

The legislation developed for the establishment of the Okapi Wildlife Reserve explicitly addressed the need to protect the resource base and the interests of the resident Bambuti populations and their associated Bantu. Although there are no major constraints to their subsistence activities, some Bantu residents are concerned that the increasing trade in wildlife may lead to more restrictive conservation laws in the future.

Village and town economies

There are significant differences in urban and rural populations' access to wildlife at Garamba National Park (de Merode 1998). About 6% of bushmeat sold in the village markets and 59% sold in the urban markets consists of large protected mammals originating from the national park (de Merode 1998). Thus, the bushmeat trade appears to operate at two levels. At the village level, small mammals such as duikers and primates are marketed openly. At another level, greater volumes of meat (derived from larger protected mammals) pass through the region as a concealed trade. Considerable fiscal revenues and fines are extracted from these traders by the civil and military authorities in urban areas.[8]

4.6.2 Foreign investment in wildlife related enterprises

The two sectors that provide the greatest potential for developing local enterprise at both Garamba and in the Ituri are tourism and the bushmeat trade. As is the case for all other sectoral activities, the economic situation of the Ituri Forest and Garamba has been greatly affected by the political crisis affecting the whole country. This has arrested the potential for developing tourism at Garamba and has effectively destroyed the tourism industry in the Ituri, which had been developed over several years.

At Garamba, tourism was never a major income generating activity. Before the conflicts in 1996, the number of paying visitors rarely surpassed 150 per year. However, there is considerable potential for tourism development given the exceptionally high abundance of large mammals and the historical interest offered by the elephant domestication centre on the park boundary. Indeed, during the few months of stability in 1997, positive discussions were held with a European private enterprise interested in investing in hunting and photographic safaris, but the current war appears to have destroyed the investor's confidence. Similar factors have constrained the revenues available through tourism in the Okapi Wildlife Reserve, which has not received the flow of 'overland' trucks that passed through the area prior to the current wars.

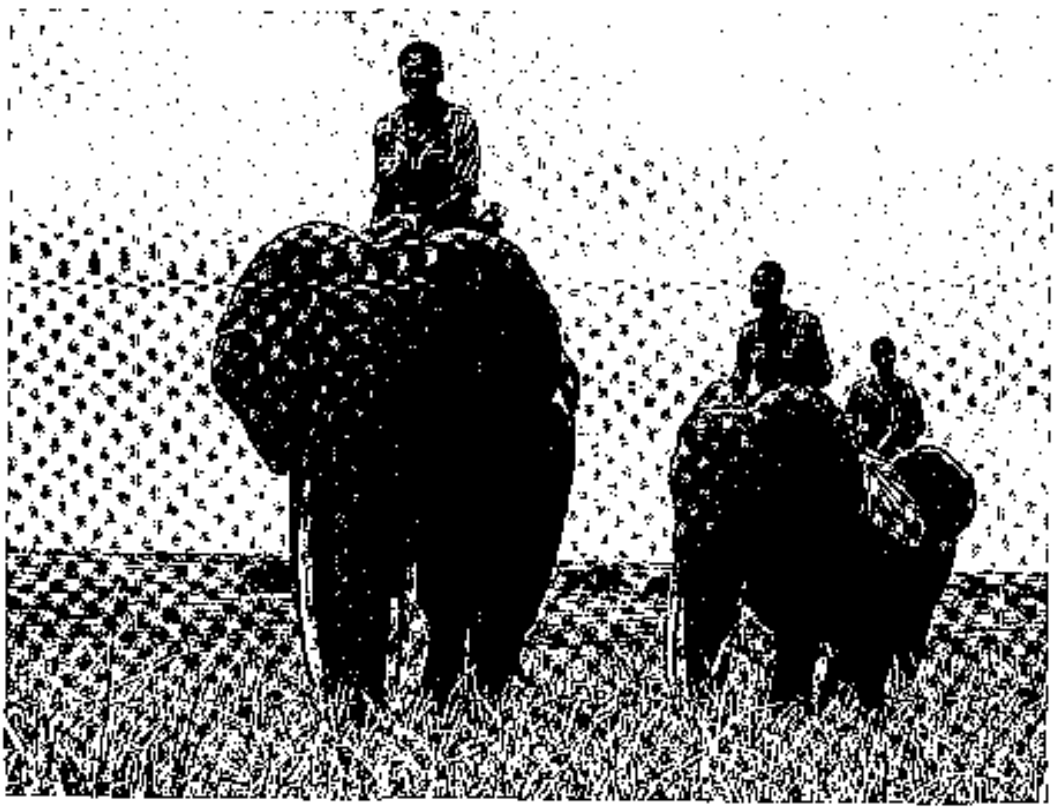
[8] This pattern of wildlife use is not uncommon and has been described elsewhere: data from Equatorial Guinea (Colell *et al* 1995) show that only a small proportion of bushmeat (less than 10%) is retained at the village level, and that this is composed largely of the smaller mammals. Colyn *et al* (1987) also suggest that larger, more lucrative mammals are rarely exploited at the village level in DRC. Juste *et al* (1995) explain the emphasis on urban markets not in terms of availability, but because of the significantly greater purchasing power and therefore demand for meat in the urban markets.

4.7. Concluding discussion

Chapter 4 has explored the factors contributing to, and mitigating against, successful community based wildlife management in north eastern DRC. The incentives and disincentives have been examined from political, historical, legal, institutional, ecological, economic and social perspectives. Three major themes run through these analyses:

1. The economic **value** of wildlife resources is of central importance if there is to be effective incentive mechanisms for community wildlife management.
2. The **capacity** of local institutions to manage resources must be understood before community wildlife management can be considered a viable wildlife management option.
3. The impacts of **conflict** on resource management is an overwhelming consideration. Management options exist but have not yet been addressed adequately by the wildlife sector.

Both the Ituri Forest and the Garamba ecosystem have a high abundance of large mammals. Ecological data collected over the last two to three decades show that wildlife populations have remained ecologically viable. Detailed analysis of animal ecology suggests that this is because of a long term commitment by national and international conservation agencies to implementing effective wildlife regulations, coupled with the fact that local residents, at low population densities, have not had a



The domesticated elephants at Garamba National Park are a potential tourist attraction, offering a unique opportunity to view wildlife on elephant-back. Picture: Kes Hillman Smith

significant impact on wildlife diversity and abundance. Thus, conservation policy has tended to target successfully the real threats to the sustainability of wildlife populations: high levels of unregulated offtake by non-local hunters with access to firearms.

However, the abundant wildlife resources in northeastern DRC are important to the informal economy. Analysis of the bushmeat commodity chain shows how a wide range of social groups has a stake in wildlife resources. While local wildlife utilisation and management (through the bushmeat trade) is highly structured and organised, it is not deliberately attempting to conserve wildlife. However, actions such as those by traditional leaders in restricting the trade in bushmeat and in recovering illegally held weapons, do reduce some of the threats to wildlife populations. There is much untapped potential for local administrations, in particular traditional leaders, to manage wildlife successfully and contribute to the conservation process - although a number of challenges remain:

- 'Traditional authorities' differ in their relative abilities to govern. Wider political and historical processes have often eroded the local capacity of the traditional administrations. Thus, an understanding of the history of traditional systems of authority is essential when assessing the capacity of local administrations to contribute to wildlife management.

- The heterogeneity of the 'community' in the Ituri and at Garamba poses a significant challenge to the establishment of a cohesive strategy for community wildlife management. Whilst local residents may be responsive to traditional leadership, this is not necessarily the case for non-residents who have an interest in wildlife resources. Indeed, in the Ituri Forest, migrants have tended to take over the role of traditional leaders as a means of promoting their economic interests in the region.
- The various administrations that have a stake in wildlife management are answerable to different constituencies. Traditional authorities are answerable to local populations and ruling clans, civil administrations to provincial authorities, wildlife managers to ICCN headquarters in Kinshasa etc. This undermines effective communication and shared objectives between these administrations.

Nevertheless, traditional administrations are important locally, and community wildlife management initiatives that have bypassed traditional administrations have had limited success. This is especially true in the Ituri Forest where the exclusion of traditional leaders from the initial phase of the community wildlife project was one of the major reasons for its limited impact.

The history of conflict in this area is another important reason for exploring further the potential for traditional authority having a role in wildlife management. Local administrations continue to retain some power during conditions of conflict and there is untapped potential for conservation agencies to cooperate with these leaders to ensure that wildlife conservation does not cease during periods of instability. New partnerships with traditional leaders are planned by ICCN which, as a 'para-military' organisation, has the capacity to establish and maintain stability in the region whilst maintaining a neutral, non-political role. Congolese high level administrators within ICCN and the Ministry of the Environment are aware of the significance of traditional administrators in developing a more effective conservation sector. It

remains important that the international donor community, whose staff was not present to witness the critical role played by local administrators during the war, recognises the importance of these institutions for the reconstruction of the conservation sector in DRC.

Okapi Wildlife Reserve and Garamba National Park present a number of opportunities where devolved wildlife management can provide realistic solutions for conservation and development. An effective partnership between state and traditional authorities provides a framework for reducing the costs of wildlife management and improving its positive impact both on local people's livelihoods and conservation. Indeed, appropriate incentive mechanisms for financially and ecologically sustainable wildlife management can be envisaged through carefully planned fiscal de-regulation, and the transfer of some wildlife management responsibility and benefits to local authorities.

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Broadening the focus: linking wildlife conservation to rural development in Niger

Massalatchi Mahaman Sani and Nico M. Barning

Executive summary

How to manage sparse wildlife resources in areas of high human population density is a challenge faced over much of the Sahel. Chapter 5 explores community involvement in the management of the last population of giraffes in West Africa. This small herd of giraffes is found in Niger and is highly symbolic and representative of African wildlife. But the giraffes live in an unprotected natural environment in direct contact with rural communities. This contrasts with much of the continent's wild animals, which now live in national parks and other protected areas. The giraffes constitute a vital element of regional biological diversity and are an indicator of the way it is changing.

But the giraffe habitat, the tiger bush, also provides important natural resources to a large human population. As annual harvests are unpredictable due to climatic conditions, food security can be difficult to achieve. Herding in the tiger bush is an important standby, but tensions over land tenure are becoming more acute. Chapter 5 looks in detail at this imbalance, exploring the trade-offs between agriculture, both farming and animal husbandry, and the safeguarding of the giraffes and their habitat. It describes project activities in the area, which originally focused on giraffe conservation, but which have evolved to work with local people to promote sustainable management of natural resources.

[1] IUCN West Africa, Niamey, Niger

[2] SNV Niger.

[3] Ced Hesse, IIED and Gerrit Bosman, SNV commented on earlier drafts of this chapter. Simon Knight translated from French to English.

The key findings from this study are classified as incentives and disincentives for community management of the giraffes:

Incentives:

- A new rural development policy promotes decentralised and integrated management of natural resources
- The giraffes are becoming a symbol of national pride.
- Since 1996, Niger has been following a programme of administrative decentralisation. To complement this, the PURNKO project has established a decentralised decision-making body.
- Gazetting the giraffe zone as a Biosphere Reserve means that the giraffe has greater legal protection as Niger has signed up to the UNESCO Man and the Biosphere Programme, which provides international legal protection. The Biosphere Reserve is designed to meet the needs of the human and wildlife populations.
- The local population seems to share an interest in protecting the tiger bush, for their own livelihoods and for the giraffes. The PURNKO project has introduced methods of agricultural intensification and soil and water conservation to improve productivity on existing farmland and prevent encroachment into the tiger bush.
- Community members have been involved in developing a monitoring system for understanding the giraffes and their ecology.
- Giraffe-based tourism offers employment opportunities for local people.

Disincentives:

- Niger has been characterised by political instability since independence and has a history of centralised control of natural resources.
- The decentralised decision-making body is not legally recognised and it may be difficult to link it to the formal decentralised administration.
- The Biosphere Reserve was created without full consultation with local people and it is possible that they will not support it.
- It is difficult for the benefits from 74 giraffes to help a wider proportion of local people. The distribution of the benefits from giraffe-based tourism has so far been highly skewed towards a few individuals in one village. Additionally, the population of giraffes and other wildlife is too small to consider consumptive use, such as hunting.
- Although there is little competition between domestic livestock and the giraffes for forage, farmers prioritise their own livestock over the giraffes during periods of forage or water shortage.
- The high-density population living in conditions of sparse natural resources means that it is difficult for local people not to overexploit the resources of the zone. The sale of bushmeat and firewood and the clearing of arable land are means of subsistence that are incompatible with protecting the giraffes. Furthermore, the high population growth rate, one of the highest in Niger, means that resource conflicts are likely to intensify in the coming years.

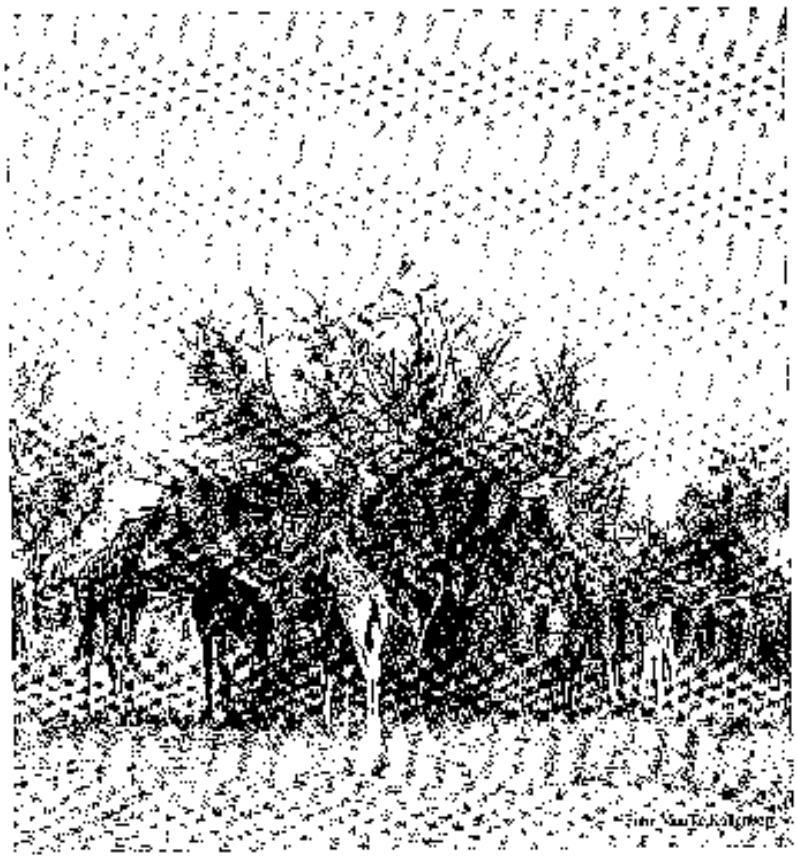
Despite many factors favouring a community-based approach, the low numbers of giraffes, and the increasing demands of the growing population, mean that the giraffes are unlikely to provide direct benefits to the 45 000 inhabitants living in the giraffe zone. However, the giraffes provide an entry point for rural development that tries to meet the needs of both the human and wildlife populations. This is being achieved through an integrated conservation and development approach, helping to

support rural livelihoods in ways that are compatible with maintaining the tiger bush, such as through increasing agricultural productivity and promoting soil and water conservation activities on existing farms. Additionally, the decentralisation programme in Niger offers opportunities for ensuring that the needs of rural people living in the giraffe zone are represented and that the economic benefits from giraffe tourism can be distributed throughout the zone.

The giraffes also act as a catalyst for promoting national, regional and international interest in developing activities that support human and wildlife populations. Responsibility for the protection of Niger's giraffe population should rest at the highest national level and also with the international community. If these stakeholders are committed to the conservation of these giraffes, then incentives for village people in showing restraint in their use of natural resources need to be developed. Ultimately, conservation of the giraffes depends on providing tangible and immediate development opportunities for local people that promote sustainable use of their natural resources, particularly the tiger bush.

5.1 Introduction

The herd of giraffes living in Niger, highly symbolic and representative of African wildlife, is the last population of giraffes in West Africa. They live in an unprotected natural environment in direct contact with rural communities. This is different from much of the continent's wild animals, which now live in national parks and other protected areas. The giraffes constitute a vital element of regional biological diversity and are an indicator of the way it is changing. Furthermore, they are a



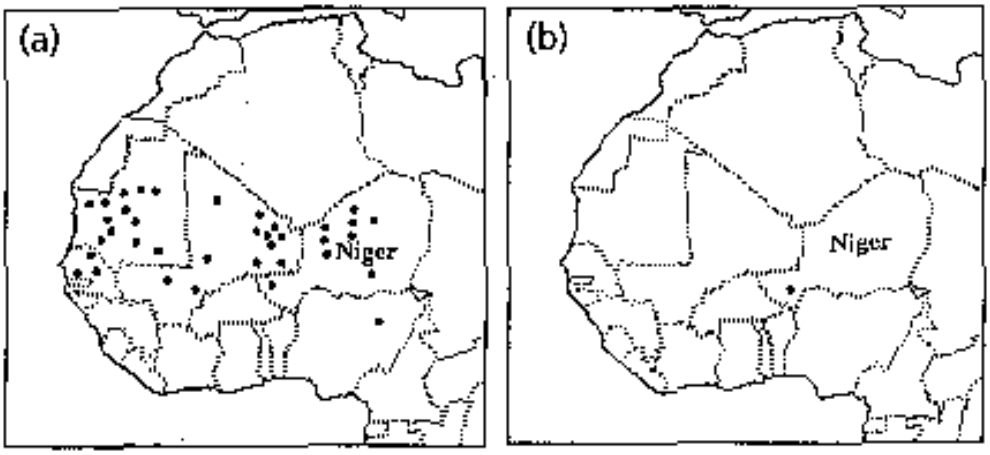
The last population of giraffe in West Africa is found in Niger and numbers just over 70 individuals. Picture: PURNKO/SNV/Niger

matter of considerable national pride, evident at the highest levels. Recently, some national leaders have shown considerable interest in the remaining giraffe population, and the authorities take every opportunity to mention them in their speeches, visits and meetings. Over the last two years, most of the guests of the president and ministers, and people attending important national and international meetings, have been taken to visit the giraffes.

In recent decades, giraffes lived in large numbers in the southern part of Niger and the eastern part of Mali. But the great herds of giraffe that once roamed West Africa have been reduced to a few dozen individuals in Niger (Figure 5.1). In December 1998, Niger's giraffes numbered 74 individuals, rising from 61 in 1997, 49 in 1996 and 62 in 1995. Subjected to various pressures, including poaching, drought and the expansion of agricultural land, the giraffes' last refuge is the Kouré-Dallol-Bosso North region of Niger. This 'giraffe zone' covers an area of 840 km2 and is situated approximately sixty kilometres east of the capital Niamey. The giraffe zone can be sub-divided into three distinct areas according to soil type and vegetation: the Dallol (lowland area), the Fakara (the plateau area) and the intermediate zone (Box 5.1). The giraffes live in small groups and migrate seasonally between the plateau and lowland areas.

Figure 5.1. The distribution of giraffe in North and West Africa (a) at the end of the 19th century and (b) currently.

Source: Ciofolo (1995)



As a migratory species, the giraffes have proved a difficult species to protect. Another threat is the fact that they reside in an area of high population density. The giraffe zone is populated mainly by sedentary, village-based Zarma farmers, living alongside encampments of Fulani and/or Touareg agropastoralists. The 1988 General Population Census estimated a population of 29,500 inhabitants. Natural growth rates are estimated at 4%, higher than the national average of 3.2 %, with an estimated current population size of over 45 000 people (Table 5.1).

Table 5.1. Population growth in the giraffe zone

	Fakara zone	Intermediate zone	Dallol zone	Total
Population in 1988	14500	7900	7100	29500
Population in 1998	22300	12200	10900	45400

Box 5.1. The use by giraffes and local people of the three distinct areas that comprise the Kouré-Dallol-Bosso North region

The Dallol

Throughout the dry season, from October to May, the giraffes roam the northern Dallol Bosso, where they find permanent ponds and good grazing grounds. Because of the permanent surface water, the *Dallol* and neighbouring zones have considerable agricultural potential (dry-season crops) and the land is under pressure from the growing population.

The Fakara

The plateau area is known as the *Fakara*. The vegetation here is known as tiger bush (or *brousse tigrée*) - it resembles a tiger skin when viewed from above - and consists of dark wooded strips of vegetation alternating with bare land. The tiger bush is largely dominated by Combretaceae (80%): *Guierea senegalensis; Combretum micranthum; Combretum nigricans*, with a fair portion of Capparidaceae (12%): *Boscia angustifolia; Boscia senegalensis* and *Mimosaceae* (5%): *Acacia macrostachya; Acacia pennata; Dichrostachus cinerea*. Other species are poorly represented, consisting mostly of isolated individuals, including: *Sclerocarya birrea; Lannea acida; Commiphora africana; Balanites aegyptiaca;* and *Croton zambesicus*. Throughout the rainy season, June to September, the giraffes are concentrated in the *Fakara*, grazing on the shrubby acacias and drinking from the temporary pools that form during the rainy season. The *Fakara* lends itself to livestock farming, and herds of domestic animals graze the *Fakara* during long periods of the year. As the lowland areas of the *Dallol* have all been cultivated, the population has begun to clear the more marginal land of the *Fakara* for agriculture. According to Djibo (1997), in the period between 1975 and 1992, the tiger bush was cleared at a rate of 250 ha/year. Maintenance of this rate would mean the tiger bush would be completely cleared within 25 years, forcing the giraffes out of their habitat.

The Intermediate Zone

The intermediate zone is a transit area, which the giraffes cross when moving between their dry-season and rainy-season grazing areas in May and October. The intermediate zone was once a region of tiger bush, but has been heavily deforested as agriculture has been extended up into the valley sides and as trees have been felled for firewood.

Sources: Ibrahim, 1997; Ciofolo, 1995

Given the population growth, and the expansion of a form of agriculture that is still far from satisfying the food needs of the local communities (see below), the land is increasingly pressured. The result has been the gradual clearing of the giraffe habitat, the tiger bush, even though it is of marginal agricultural value and it is technically illegal to clear land to create new fields without the formal authorisation from local authorities under strict procedures set out in the Rural Code.

Chapter 5 examines whether there is potential for this growing population to meet its food needs without further depleting the giraffes' habitat. Conservation of the habitat seems to be a cost borne by local people, and thus this study seeks to answer the

Interpreting aerial photographs to understand vegetation changes from 1952 to 1992. Picture: Nico Barning, SNV Niger

question: is there scope for community management of the giraffes in such a way that local rural development is stimulated, and the giraffes' future is safeguarded?

5.2 Socio-economic background

5.2.2 Agriculture

In the *fakara* zone, the village-based sedentary farmers are mainly Zarma people, growing only rainfed crops - millet, sorghum, cowpea and maize. In addition, there are (often isolated) communities of Fulani and Touareg agropastoralists practising a combination of agriculture and animal husbandry. The bulk of agricultural produce is grown on small farms for home consumption and any surplus is sold on the open market. Agricultural productivity is low. Because of the growth in population, the area planted with millet is expanding, to the detriment of the tiger bush, and land is no longer allowed to lie fallow. Food security can be difficult to achieve and tensions over land tenure are becoming more acute. As annual harvests are unpredictable due to climatic conditions, animal husbandry has become an important stand-by. For the farmers, this is a home-based activity, with an emphasis on poultry and sheep or goats. To ensure their food supply, some farmers also practise other subsistence activities, including seasonal work outside the area (even into Ghana, Nigeria and the Ivory Coast) and cutting wood for sale.

The *dallol* zone has been densely settled and farmed for a long time. Traditional, rainfed crops, like millet and sorghum, are supplemented by dry-season crops and plantations of fruit trees. The bulk of the population is made up of Zarma farmers, who also practise home-based animal husbandry, but there are also some Fulani and Touareg livestock farmers who also plant some rainfed agriculture. The high

population density, overexploitation of the soil, wind and water erosion, degradation of natural pasture and rapid deforestation has all led to a deterioration in vegetation cover and soil quality. Local farmers make up for low agricultural yields by extending the areas under cultivation and encroaching on fallow land and areas of natural pasture. Farms are generally small and fragmented and market gardening is limited, because of the difficulties in getting the produce to market.

Zarma villagers inhabit the intermediate zone, though there are also isolated encampments of the Fulani and Touareg. Most of the crops grown are rainfed cereals (millet, sorghum, cowpea, and groundnuts). Because of the poverty in this area and the rapid exhaustion of the soil, local farmers are intensifying their efforts to clear wooded areas. In some villages, women cultivate vegetable gardens. This is hard work, as the wells are particularly deep throughout the region (20 to 60 metres). Vegetable production is limited and is reserved for local consumption. Some farmers, who live near the tarmac road, try to increase their income by cutting and selling wood. However, as the vegetation cover deteriorates, the residents of some villages have to go long distances to find fuelwood.

5.2.3 Animal husbandry

The tiger bush of the *fakara* region plays an important role in the local livestock farming systems. All the forested areas are grazed at one time or another during the year by sedentary and/or transhumant (migratory) herds. At the beginning of the rainy season, the local herds graze in the forest, to avoid possible damage to standing crops, and are joined by transhumant livestock. After harvesting, the forested plateau is gradually abandoned in favour of agricultural areas, where the animals graze on crop residues. Throughout the dry season, woody plants make up for the lack of straw from wild grasses or crop residues and provide the digestible nitrogenous materials, vitamins and minerals that the cattle need (Achard, 1990).

In the *dallol*, there are two systems of animal husbandry: *(i) transhumant livestock farming* and *(ii) sedentary livestock farming*. These are in fact complementary, as most villages have both transhumant and sedentary herds, the result of a highly integrated system of agriculture and animal husbandry. Originally pastoral, the Fulani and Touareg have become agropastoralists, practising a combination of agriculture and animal husbandry and living the two associated kinds of lifestyle. During the crop-growing season, the family splits into two: one part moves with the herds in the areas not under cultivation; the other stays put to plant agricultural crops. Thus they combine a field-based sedentary life with seasonal transhumance. The livestock, mainly cattle, may be their own property, or they may belong to sedentary farmers without a tradition of animal husbandry.

A key factor that motivates the local population to tolerate Niger's giraffes is the absence of competition for fodder between the giraffes and domestic livestock. The maximum browsing height on trees and shrubs is between 1.5 and 2 m for cattle, goats and sheep; 2.5 to 3 m for camels; and 3.5 to 4 m for giraffes. Thus, even though domestic animals feed on the same plant species, they are not in competition with giraffes because of the different browsing heights. As there is no competition for the available fodder, local people are less inclined to feel hostile towards the giraffes.

However, there are other forms of competition between domestic livestock and giraffes. When domestic animals lack grazing, such as during droughts, local people are obliged to cut fodder from high in the tree, which was previously accessible only to giraffes. Also during droughts, some farmers may prevent the giraffes from drinking at water holes. Though competition of this kind is fairly mild, it shows that the rural communities give priority to their domestic livestock, from which they derive a direct profit, over the giraffes.

5.2.4 The relationship between arable and livestock farmers

Traditionally, there has been a fair degree of harmony between arable and livestock farmers. The two communities still play complementary roles, in particular when it comes to manuring the fields of the arable farmers. This may occur in one of two ways:

- after harvest, the herds are allowed to roam the fields freely in search of straw or crop residues;
- arable farmers ask the livestock farmers to corral the cattle in their fields.

A pastoralist may look after the animals of several arable farmers, in addition to his own. In exchange, he is given millet and clothing.

In the past, the work of looking after local herds and manure fields led to certain kinds of contractual relationship between arable farmers and 'sedentary' livestock farmers (agropastoralists) on the one hand, and between arable farmers and transhumant pastoralists, on the other. At the present time, changes in farming practices, due mainly to the population growth, are putting this complementary relationship under serious strain.

Because agricultural land is being extended into pastoral land, animals can no longer circulate as freely as they did in the past. In addition, arable farmers, who increasingly own herds of their own, use the crop residues formerly reserved for the livestock farmers for their own animals. This situation is leading to tension between arable and livestock farmers, and results in sharp conflicts.

5.3 Policy and institutional background

5.3.1 Political and administrative decentralisation

Niger achieved independence from colonial rule in 1960. Since then, its political history as a nation state has been characterised by instability, with a series of coups, culminating in the most recent in April 1999. A new constitution has now been adopted and presidential and parliamentary elections were held in October 1999.

During the colonial and post-independence periods, the country's natural resources came under the exclusive control of the state, which became owner of the land and the natural resources attached to it. Where the management of the environment and biological resources was concerned, this meant that decision-making was highly centralised in both formulating and implementing projects and programmes. For a long time, the lower levels of the hierarchy, particularly local communities, were

insufficiently involved in the processes of planning and development. Administrative reform in 1964-5 resulted in the setting up of local authorities with budgets and elected councils, but these were never effectively consulted when it came to drawing up plans. People's lack of legitimacy to own land led to a lack of interest in the sustainable management of resources and tended to result in overexploitation.

The challenge for the latest government of Niger, as expressed in its present programme, is to lay the foundation for a new form of community-based management of natural resources. Niger has several such programmes at the moment which are partly 'adopted' by international aid organisations, including: *Programme National de l'Environnement pour un développment durable, Lutte contre la pauvreté* and *Eau et cadre de vie*. These programmes are at different stages of implementation. An environmental programme was formulated in 1992: "Guiding Principles for a Rural Development Policy". These were adopted by edict and have the full support of the current government. They provide the framework of reference for rural development, laying emphasis on:

- the integrated management of natural resources;
- the organisation of rural society, making local people more responsible for managing natural resources, and changing the role of the state;
- seeking to achieve food security; and
- intensification and diversification of production.

The reforms established a hierarchy of administrative districts that continued up to 1996, based on *départements, arrondissements* and *communes*. The *arrondissements* and *communes* are local authority areas.

A degree of decentralisation in the management of public affairs began in the early 1990s with the creation of *Comités Techniques Départementaux* but this process of decentralisation was never fully carried through in respect of the decision-making powers of the councils and the elected representatives. To remedy this deficiency, new laws were enacted in February 1996, retrospectively creating administrative districts and local authorities and setting out the fundamental principles for the free administration of regions, *départements* and *communes*, together with their competencies and resources. The government is at present making active efforts to implement this redrafting of the administrative map and to organise local elections.

This has set in motion a process of recognising the existence and rights of rural associations, which has implications for the whole programme of exploitation and management of natural resources. The efforts being made to (re)emphasise responsibility at the local level mean devolving authority and (re)legitimising the powers of local communities. This policy also implies *de facto* recognition of a plurality of groups and individual and collective interests in rural society.

The new law governing administrative organisation has not resulted in any changes in the administrative configuration of the giraffe zone, in the sense that it remains sub-divided in the same way as *départements, arrondissements, communes, cantons* and *villages*. Several villages may occupy a single area of territory (e.g. Boula consists of four villages), while the boundaries of the *cantons* and villages within the zone, particularly the boundaries of the village areas, are unclear and give rise to frequent disputes between villages and even between *cantons*.

The agropastoralists are generally settled in the territories of the villages to which they are attached, and disputes over appropriation of land are not a frequent occurrence. Disputes more often arise over damage caused by livestock. There is no vacant land in the whole zone, but each individual has the right to make use of his/her own resources.

Currently, this situation does not pose any major problem for giraffe management. However, with the progress of administrative decentralisation and re-organisation, and given that the giraffes do not recognise artificial administrative boundaries, the question of appropriation is certain to arise. A management mechanism therefore needs to be envisaged for managing migratory resources. This is discussed further below.

5.3.2 The legal context

Heavily influenced until the 1970s by the country's colonial heritage, the legislation governing the protection of natural resources was based on two texts: a decree from 1935 laying down the forestry regime for French West Africa, and a decree dating from 1947 regulating hunting in French overseas territories. Currently, Niger has 317 texts (laws, decrees and conventions) that relate to the environment, 283 of them concerned with internal matters and 34 have international scope.

In recent years, Niger has been quick to subscribe to international environmental commitments, such as conventions on desertification, biodiversity and climate change. At a national level, Niger's policy of conserving natural resources and wildlife has found expression in the establishment of national parks, listed forests and protected areas. Niger is one of the few countries in the region that comes near to achieving the international standards for protected areas: protected areas now account for over 6% of national territory. The country's first protected area, now known as the 'W' National Park, was established in 1937 as a "parc de refuge", before being classified as a full wildlife reserve in 1953, then as a national park in 1954.

Recent legislative reforms in Niger reflect the concern of the authorities to develop an approach that reconciles conservation and development and which will be supported by all parties - public authorities, private interests, the communities likely to benefit, and partners in development. To this end, a number of important pieces of legislation have been adopted, in particular those relating to decentralisation (described above and now confirmed by a basic law); the guiding principles of Niger's rural development policy; the rural code; the water resources code; the institution of environmental impact studies; the mining code, etc.

It is also reflected in the process of revising several texts, in particular those which are conservative or repressive in character (e.g. the law fixing the northern limit for crop growing at 300mm annual rainfall, the forestry code, the hunting code, the fishing code, etc.) and those in need of re-examination to bring them into line with the new political thinking on participatory management and the international conventions and agreements to which Niger has adhered. Thus it seems that Niger's evolving legislative framework is broadly supportive of a community-based approach to wildlife management.[4]

[4] However, national policy and political commitments sometimes fail to present a coherent strategy. For example, in 1996, the government made attempts to capture giraffes as gifts for the governments of Burkina Faso and Nigeria, while the PURNKO project was designed to protect them in situ.

The Biosphere Reserve

In 1988, the Ministry of Agriculture and Environment, concerned for the future of a number of threatened species in Niger, particularly the giraffe, asked the Worldwide Fund for Nature (WWF) for help in gathering information about this species. At the request of WWF, the French Ministry of Overseas Development (Ministère de la Coopération) funded a six-week study to investigate and estimate the number of giraffes, define their habitat and explain their decline in Niger (Ciofolo, 1990).

In March 1992, UNESCO organised a Regional Training and Awareness Seminar for Managers of Nature Reserves and World Heritage Sites in the Sudan/Sahel Region of French-speaking Africa[5]. Among other things, this resulted in the identification of a Biosphere Reserve in Southwest Niger around the 'W' National Park. Biosphere Reserves are internationally designated sites, managed for research, education and training. Biosphere Reserves are designed to conserve for present and future use the diversity and integrity of plant and animal communities within natural ecosystems, and to safeguard the genetic diversity of species on which their continuing evolution depends.

The giraffe zone was identified as a transition zone to the Biosphere Reserve, a zone where development activities based on the sustainable use of natural resources would be allowed. It is hoped that the new international status to the giraffe zone will provide a means of safeguarding the giraffe's habitat and of preserving the tiger bush - a natural resource that is important to rural communities. The success of the Biosphere Reserve depends on three major requirements:

- the conservation of the tiger bush in the Kouré region, which provides habitat and grazing for the giraffes during the rainy season, and is a vital natural resource for the rural communities;
- recognition of the area's protected status by the village people;
- assurance that the giraffes will not leave the region, depriving the rural communities of tourism income.

The legal status of the Biosphere Reserve, and particularly the transition/giraffe zone, still needs to be defined and developed. In delimiting the Reserve, legal provision needs to take into account the distribution, movement and migration patterns of the giraffes throughout the year. It is hoped that a status can be developed that takes into account the demands of both the human and animal populations. Unfortunately, the process of classifying the Biosphere Reserve was undertaken rapidly, without proper consultation with the local population. However, steps are now being taken to remedy this, with a programme of consultations being set up in each of the villages in the giraffe zone to raise awareness about the Biosphere Reserve and understand the aspirations of the local population. Additionally, the different roles and responsibilities of international, national and local actors are being discussed with local people. The legal texts for the Reserve that are eventually put forward need to take into account the whole arsenal of national legislation, the opinion of the local population, and their decision to retain or adopt particular systems and mechanisms for managing the resources of the zone.

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However, many questions have yet to be settled, such as who actually owns the natural resources, and indeed the giraffes? Some farmers say that they would like to have ownership, while others would be content to own the resource-base, but not the giraffes. The consultation process within the local communities is likely to make proposals on this front. Currently, it is unclear as to who owns the giraffes despite the large amount of environmental legislation in Niger.

5.4 Combining rural development with wildlife management: the PURNKO project

In order that the creation of the Biosphere Reserve can effectively link the conservation of the giraffes to rural development, a project was formed in May 1994 in the giraffe region to institute a system of rural development based on the sustainable management of natural resources, including wildlife. The "Wildlife (giraffes), Environment and Land Management in the Kouré and north Dallol Bosso region", also known as the PURNKO project, aims to improve people's quality of life within the limits permitted by the zone's ecosystems, taking into account the factors which will make it possible to safeguard the giraffe and its habitat. This improvement in the quality of life of local people is seen as the best possible way of ensuring the protection of Niger's giraffe population.

The project breaks new ground in Niger through its focus on rural development as a way of protecting Niger's wildlife. The first phase of the project, which ended in September 1998, was concerned with studying the zone's natural resources and the way they are used by the local population, as well as understanding the behaviour of the giraffes. The outcomes of this phase were:

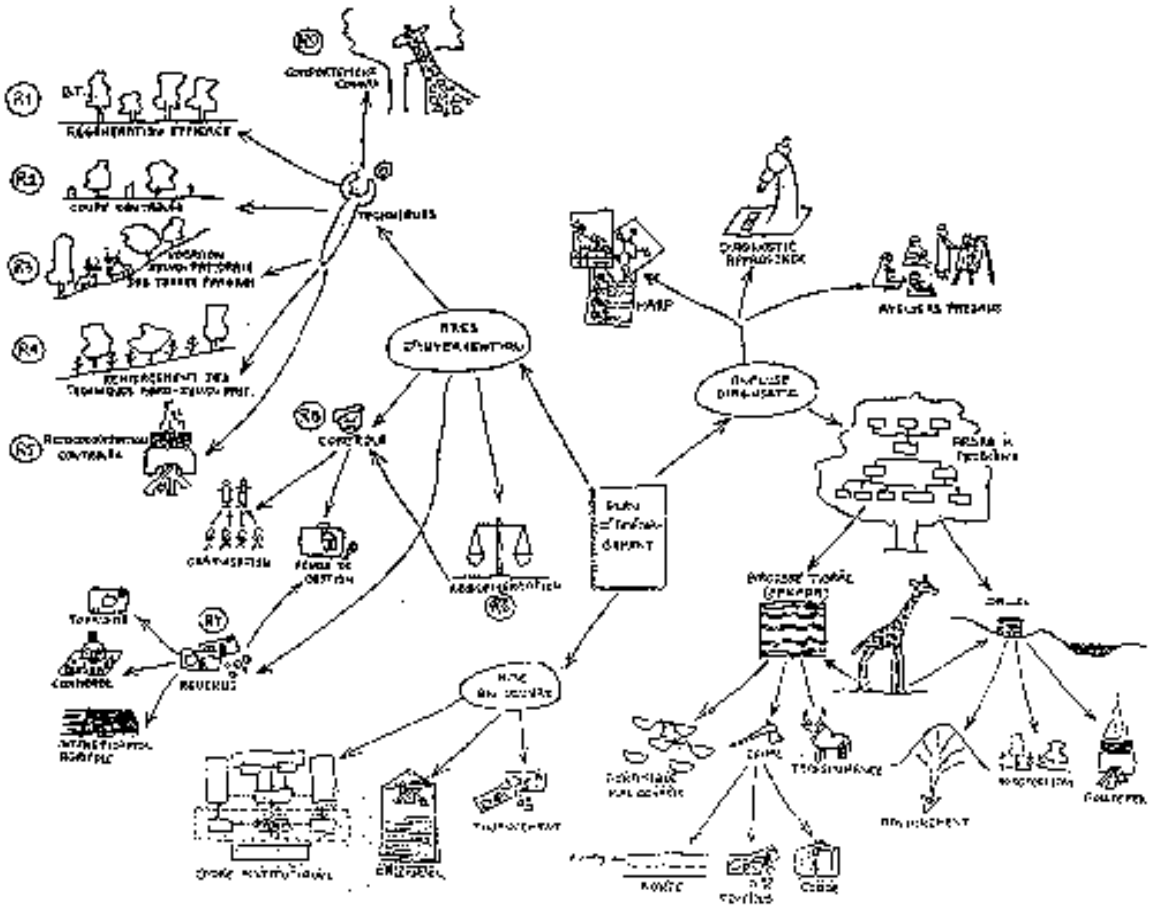
- a master management plan for the zone;
- the zone's integration into the UNESCO-listed Biosphere Reserve; and
- the beginnings of giraffe-based tourism.

During the first phase, a participatory diagnostic analysis enabled local communities to draw up concrete activities for the second phase (Figure 5.2, Box 5.2). These activities include efforts to improve agricultural yields in the three agroecological zones (the Fakara, Dallol zone and intermediate zone); non-agricultural activities to generate income to create space for the giraffe population (e.g. supporting eco-tourism); and activities to protect the tiger bush. The activities are being carried out by the village people themselves, supported by project staff, state technical services and NGOs. The second phase, which started in February 1999, is a transition phase of 19 months to start some activities with the communities and prepare for a larger programme that will start in September 2000.

5.4.1 A participatory approach

Local participation is a necessary component of any form of sustainable development (i.e. one which meets the needs of present and future generations while protecting natural resources), and of eco-tourism in particular. The term "local participation" is here taken to mean the capacity of local communities to influence the outcome of projects, such as wildlife conservation, which have repercussions for their way of life.

Figure 5.2. Participatory planning has improved understanding of the different areas for project intervention in the follow-up phases



In the last twenty years, there has been a gradual change in the attitudes of decision-makers and professionals involved in natural resources management with regard to local participation in the development process. Governments, multilateral development banks and NGOs have begun to admit that coherent development which shows concern for the environment depends on the support of the local population. The capacity of national and local governments to manage the growing number of development projects and programmes effectively is bound to be limited, unless they decentralise the various functions and involve local communities. It will be difficult for multilateral development banks and NGOs to support projects and ensure that they are of benefit to the local population without the involvement of the local people themselves. Where ecologists are concerned, it will be almost impossible for them to preserve a particular resource without the commitment of the local people. Finally, all other considerations apart, those who plan development programmes have a moral duty to listen to the people affected by their projects.

One of the most important aspects of the PURNKO project is therefore the establishment of a Decentralised Decision-making Body (ODD[7]), consisting almost exclusively of local representatives, to help devolve and manage the PURNKO project in the giraffe zone. To give due weight to the different local contexts, there

[7] Organe Décentralisé de Décision

Box 5.2: The objectives of the PURNKO programme

1. **Protection and regeneration of the tiger bush.** To safeguard the tiger bush, it is proposed that an area of 5000 ha will be protected. Clearly, farmers and villagers who own the land will have to be consulted and compensated, either by direct payment or through subsidies for intensifying their agriculture on the fields outside the protected area. The protected area proposal has not been operationalised and needs far more in-depth reflection with both local and non-local actors. Outside the proposed protected area, the degraded tiger bush needs special attention for regeneration e.g. through replanting with species that are attractive to the giraffes. The regeneration activities have already started. Local people are not paid for assisting in the regeneration but receive support from the project in the form of implements and other equipment.
2. **More sustainable exploitation of the tiger bush for timber/firewood.** Protecting the tiger bush will have consequences for local communities and affect their ability to meet their need for woodland resources. An inventory has been carried out and a plan for the management of the woodland resources is being drawn up in consultation with a project partner, Energie II, a project in the area dealing with commercialisation of fuel wood. The management plan involves establishing balanced quotas for each village, a sensitisation programme to alert people to the fuelwood shortages, and plans for the manufacture of improved stoves and the planting of village woodlands. There will also be campaigns to popularise construction techniques that avoid the use of timber.
3. **More sustainable use of fragile sandy soils.** On the slopes of the plateau (sandy soil), there are two major problems: the formation of crusts on the surface of the soil that make it unfit for agriculture, and gully erosion. The total area of fragile sandy soils is estimated to be approximately 150 km². The management plan proposes that soils of this type be used for sylvopastoral purposes. The areas concerned will be preserved and gradually seeded with high-quality forage species, and used for soil and water conservation trials.
4. **Use of better agro-sylvo-pastoral techniques on cultivated land (sandy soils).** Less fragile sandy soils will continue to be used for agriculture. Special emphasis will be put on intensifying agriculture (through the use of chemical and organic fertilisers) and integrating animal husbandry in the arable farming system with the introduction of fodder crops on those soils most suitable for agriculture. For other soils, forestry techniques will be introduced e.g. planting a number of useful woody and herbaceous species in and around the fields to prevent wind and water erosion. It is furthermore planned to support farmers who want to encourage natural regeneration of the tiger bush in their fields
5. **Reducing woodfuel consumption.** A special programme will be set up to encourage the use of wood-saving stoves and alternative fuel. This will not only take place in the transition zone, but also in the capital Niamey where woodfuel is expensive and the price of butane gas is comparatively lower than in rural areas.
6. **Strict control of the vegetation cover by the local population.** The above objectives can only be achieved if activities are regulated by effective village management structures. Mechanisms will be needed to ensure that village patrols protect the area around their own village, and that villagers regulate the sale of woodland resources in rural markets and encourage the use of very fragile sandy soils for non-agricultural purposes. The management plan must ensure that the local management structures conform to current (and evolving) legislation and structures (see below). A legal framework appropriate to the circumstances of the zone will be established to ensure that this is the case.
7. **Supporting autonomous management of natural resources.** Autonomous management of natural resources by the local communities will only occur if adequate finance is available. The activities they undertake must therefore be able to generate sufficient revenue. A loan programme, through voluntary bodies and co-operatives, will be set up to support conservation initiatives. Tourism and trade, as well as agriculture, need to be stimulated by voluntary associations of guides, women's groups (sales outlets) and farmers' co-operatives (sheep raising, cereal banks, intensification of agricultural production).
8. **Consolidate and develop understanding of the giraffe.** Whilst much useful information on the giraffe was collected in the first phase of the project, more precise information regarding the population's dynamics, distribution and feeding habits (involving observation of its nocturnal behaviour) across different seasons and years is still needed.

are two sub-committees: one for the *Fakara* area (Département of Tillabery) and one for the *Dallol* (Département of Dosso). Both committees are made up of delegates sent by the villages in the PURNKO intervention zone to ensure that all villages are represented. The two sub-committees form the ODD committee for the zone as a whole.

Delays in implementing the decentralisation process in Niger led to the ODD being set up in advance of the wider decentralisation programme. But following local elections (which are still to be scheduled), elected councils will be formed in each *commune, département* and region to elect local councillors. This will complete the process of decentralisation whereby locally elected representatives take charge of local development. When this time comes, it is hoped that the ODD, which at present is a transitional structure, will become one and the same as the chamber of elected councillors.

However, legal recognition of the ODD, and its conformity with the decentralisation policy currently advocated by the government, cannot be taken for granted. As local elections are to be held soon, some of these delegates will be able to stand, and could well become local councillors. As the main concern of these local councillors is the development of their own areas, there may well be conflicts of interest and competence between the ODD set up under PURNKO and the local councillors chosen during the elections.

Despite these potential challenges, the ODD is seen as an important way of distributing income from the giraffes to promote rural development more widely in the giraffe zone (see below). The ODD should be in a strong position to settle the question of ownership of the giraffes, particularly if is legally recognised, and it can also act as a legitimate local structure that can lobby for changes. Recognition and clarification of roles and responsibilities is also an issue for the other structures soon to be established, such as the village anti-clearance squads and anti-poaching squads, which are designed to protect the area from outsiders, e.g. from Niamey, coming to cut trees and/or poach the giraffes.

Paul (1987) distinguishes four degrees of intensity of local participation: sharing of information, consultation, decision-making and active implementation[8]. The latter can take place only when local people are ready to act and take initiative in making decisions affecting the project. While much of the early work with people living in the giraffe zone was consultative, it is hoped that more active participation can be achieved through the ODD, with assistance from local NGOs in the area. However, as the PURNKO intervention zone is an area affected by the rural exodus, special attention needs to be given to the activities of women, who stay in their villages throughout the dry season, undertaking the education of the young children and girls, without having any land-tenure rights. The rural exodus hinders the work of PURNKO, because the decisions taken by women may be called into question at a later date when men return. New ways of ensuring representation and respect for decisions taken need to be found.

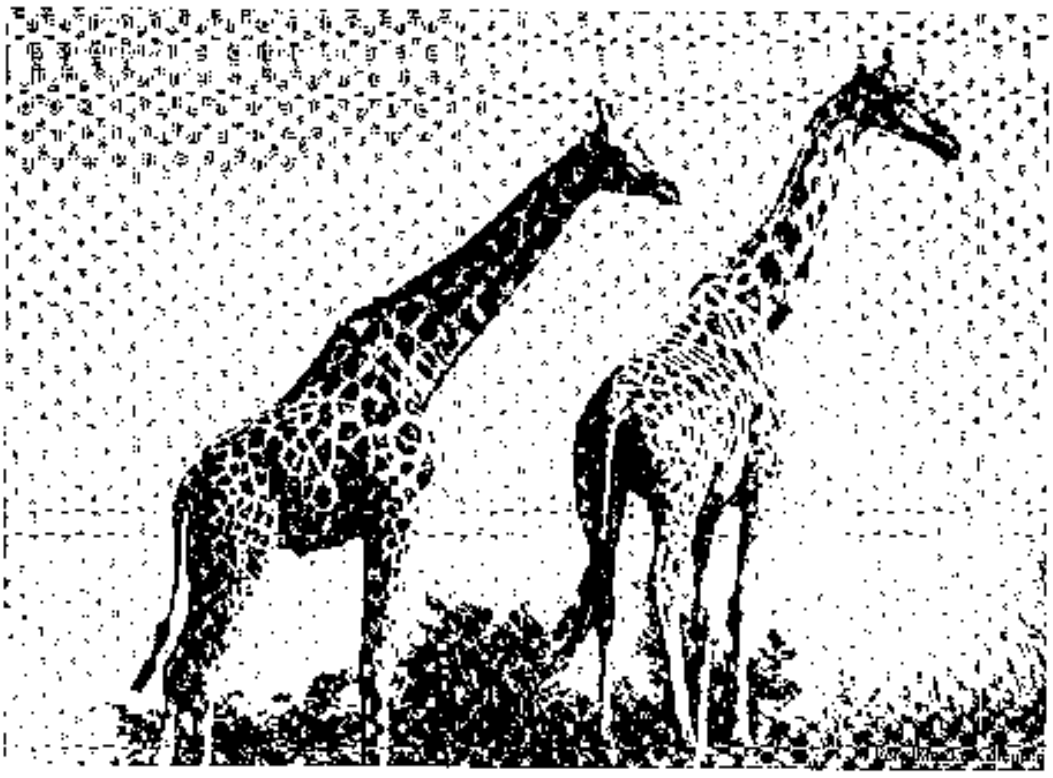
[8] see Chapter 1 for discussion regarding typologies of participation.

5.4.2 Community monitoring of the giraffes

The project has instigated community monitoring of the giraffes. This is based on an informal network of local informants and guides who provide information on giraffe movements (Box 5.3). In addition, five project staff collect data and construct maps on a more structured basis. The small number of giraffes means that individual recognition can be used to identify them using photographs. By monitoring the giraffe population, it has been possible to identify the areas in which they are active, including a main zone (Fakara – Dallol) and a number of secondary ones: Fandou, Gaya and Ayorou. Erratic but fairly frequent seasonal movements extend the area in which the giraffes choose to live. The monitoring and observation of the giraffe population has required the establishment of a national network of informants covering the main axis along which they are active: Fandou – Kouré – Gaya, and a number of villages through which they frequently pass.

Box 5.3: Community monitoring of giraffe movements

The informants are selected from local residents in the main villages of each of the zones who have shown an interest in giraffes and natural resources generally. In the three main centres of Fandou, Kouré and Gaya, the teams were trained in data collection and form filling. Each giraffe is numbered, registered as male, female, young or newborn and can be identified from its photo. Each giraffe observation is logged with information about the time and date, location and the activity it is undertaking. Informants are equipped with compasses, binoculars and photograph albums that contain the giraffe photographs. Additionally, the informants are supplied with the fuel they need to carry out their task, but they receive no financial rewards for undertaking the monitoring. At the end of each month, project staff collect the data forms, which they analyse using a database and Geographic Information Systems (GIS). Periodically, data are presented in report form to partner organisations and to the Ministry.



Soil erosion control measures have been introduced to help regenerate agriculture in the project area. Picture: Nico Barning, SNV Niger

5.4.3 Improved farming practices

The project is attempting to prevent agricultural encroachment of the giraffe habitat by promoting intensified production on existing farmland, and by raising awareness of soil and water conservation techniques. The farming component of the project started in 13 of the 33 villages in the giraffe zone, with trainings on composting techniques and the use of rough phosphate as a fertiliser. Additionally, training courses have been run in 15 villages on soil conservation and the protection of land from erosion. Inputs, such as wheelbarrows, picks and shovels, have been distributed to people who have participated in the courses. A large number of people receive indirect benefits from the project's support for more sustainable livelihoods. Currently, around half of the 45 000 people living in the area are in contact with the project, mainly through village meetings.

Because of the expansion of agriculture and intensive clearing of the tiger bush, the giraffes can cause damage to crops and gardens. Research has been carried out by the project to ascertain the nature of this damage, its timing and frequency, the extent of the losses suffered, and finally the effectiveness of the methods employed to prevent it (Box 5.4). But given that there are only 74 giraffes, local farmers are fairly tolerant of any giraffe damage, particularly as they receive benefits from the agricultural support.

5.4.4 Stimulating local economic development

Though still in an embryonic state, tourism is an important motivating factor for the communities living in the zone. For example, one inhabitant of Kodo, said: *"the giraffes must stay with us because they attract tourists from other parts of the country, and also from other countries"*.

Currently, there are 13 guides who come from the local villages and who have been trained by the project. They have formed an association and show tourists around the

area. For each vehicle visiting the giraffes, there is a fee of 5 000 F CFA[9], which breaks down as follows: 2,500 F CFA for the guides, 1.500 F CFA for the guides' fund and 1,000 F CFA for the village fund or *'fonds local de développement'* (FLD). The fees paid into the village fund are used to subsidise activities in the villages, such as repairing water wells, erosion control activities, cereal banks, and provision of basic equipment including wheelbarrows etc. Every two months the ODD has a meeting and decides upon the use of these funds. The village fund is therefore used across all the villages in the area and is not concentrated in those villages that receive the highest number of visitors. As an example of the kinds of revenue generated from tourism, in February 1997 the guides received sums in the order of 568,000 F CFA, of which 113,600 F CFA were paid into the village fund. This is sufficient to purchase approximately 25 watering cans. During 1997/98, over 3 000 000 F CFA were generated by giraffe tourism.

Clearly, the revenue generated from tourism is small although it can be significant in people's livelihoods. Developing the tourism industry has to be part of a package of activities that are designed to support local livelihoods and conserve the giraffe habitat. Another source of profit deriving from tourism is of course the trade associated with it: tourists visiting the zone buy souvenirs. Tourism demand for crafts goes a long way in making up for declining local demand for craft products. The women in the giraffe zone excel in basketwork, pottery and the decoration of calabashes. Craft activities are taking off. In addition to seeing the giraffes, some tourists also like to visit the villages and surrounding areas, for which local people are given valuable items, or sometimes receive payment.

A large reception centre is currently being constructed in Harikanassou, an attractive area for tourists, to co-ordinate tourism activities. The centre is owned by the ODD but sub-contracted to a private operator. All revenues from the centre are to be returned to the village fund. In addition, local people will be able to benefit more directly from:

- the sale of local products;
- services provided to tourists;
- the opportunity to develop commercial activities around the reception centre.

The ODD will manage substantial development funding from the project, the tourist guides and the reception centre. It will receive applications for funding economic activities, and will allocate funds to groups and individuals to foster the social and economic development of the zone. Consequently, the local people will decide themselves what is advantageous for them, and will learn to conceive, plan, support and carry out a development programme.

However, distributing the benefits equitably within the community is not straightforward. Although the project covers over 30 villages, only eleven have so far benefited from the fund. Furthermore, tourism can never be considered as a serious income generating opportunity for all 45 000 people living in the area, not least because Niger is not internationally attractive as a tourist destination. Research in the communities shows that the farmers want to have a range of management options at their disposal. Tourism can be a fickle industry and, although the returns

[9] The exchange rate is approximately UK£1: F CFA 1000

Box 5.4

Mango trees:
Damage occurs when the trees are bearing fruit. After a number of awareness campaigns, the owners are now fencing their mango trees with wire netting, barbed wire, millet stalks, tree branches, etc.

Cowpea:
Damage occurs at the end of the rainy season. When the crop is harvested, the pods are left in piles in the fields (or sometimes on platforms, 2m off the ground) for several days. The fields are not fenced and a giraffe eats all the pods it can find. Most of the farmers interviewed said that the giraffes eat only the pods of harvested cowpea. The damage is substantial, but does not exceed 50% of total production. The farmers have reacted by gathering in the pods as quickly as they can after harvest.

Millet:
In crossing the fields, the giraffes trample the standing millet, which is the staple food of the local population. This type of damage is occasional, occurring between sowing and harvest. Unfortunately, there is no effective means of protection, as the fields cannot be fenced.

Sorghum:
The giraffes eat the ripe ears of unharvested sorghum. This type of damage is occasional, occurring shortly prior to harvest. As in the case of millet, there is no effective means of protection.

Sorrel and sesame:
The giraffes will eat these plants while they are growing, but not after they have been pulled up. The damage is occasional, occurring in September and October, and can be avoided by harvesting the crop as quickly as possible.

Doum palm:
The giraffes eat the fruit of this species, whose leaves are used by the local people for roofing their houses, and making mats, ropes and baskets. Damage is occasional and occurs during the hot season, when the doum palm is bearing fruit. It is difficult to see how the trees could be protected.

Date palm:
The giraffes occasionally cause damage when these trees are bearing fruit. There is no effective means of protection at the present time.

Calabash vine:
The giraffes tear off and eat the fruits of this plant, which is used by the local people for making household items (spoons, dishes, water containers, floats, musical instruments, etc.).They need to be planted within the village confines if damage is to be limited.

Source: Ibrahim, 1997

are good when everything is working well, families need to diversify their income base. It is for this reason that more consumptive uses of wildlife, such as trophy hunting and culling for meat have been explored as opportunities for the future. As the giraffe is a protected species, any attempt to hunt it is strictly forbidden. However, from studies in southern Africa, the Zimbabwe Trust (1991) estimate that giraffe populations could grow at an annual rate of 5%, suggesting that a quota of 2% could be culled every year to create a sustainable situation. Currently, the population of giraffes is too low for giraffe hunting to be ecologically or economically feasible. But it is worth noting that the Zimbabwe Trust (1991) estimates that a single live giraffe is worth around US $10,000 from tourist viewing.

There is little potential for the consumptive use of other wildlife species in the Biosphere Reserve, apart from wildfowl shooting and some ponds, which have been identified as suitable for sport fishing. However, there are no immediate plans to operationalise these ventures.

5.5 Concluding discussion

This case study has identified a range of factors: political, socio-economic and ecological which act both for and against the prospects for a successful community-based approach to giraffe management. These are summarised as follows:

(i) Incentives for community management of the giraffes:

- A new rural development policy promotes decentralised and integrated management of natural resources
- The giraffes are becoming a symbol of national pride.
- Since 1996, Niger has been following a programme of administrative decentralisation. To complement this, the PURNKO project has established a decentralised decision-making body.
- Gazetting the giraffe zone as a Biosphere Reserve means that the giraffes have greater legal protection as Niger has signed up to the UNESCO Man and the Biosphere Programme that provides international legal protection. The Biosphere Reserve is designed to meet the needs of the human and wildlife populations.
- The local population seems to share an interest in protecting the tiger bush, for their own livelihoods and for the giraffes. The PURNKO project has introduced methods of agricultural intensification and soil and water conservation to improve productivity on existing farmland and prevent encroachment into the tiger bush.
- Community members have been involved in developing a monitoring system for understanding the giraffes and their ecology.
- Giraffe-based tourism offers employment opportunities for local people.

(ii) Disincentives for community management of the giraffes:

- Niger has been characterised by political instability since independence and has a history of centralised control of natural resources.
- The decentralised decision-making body is not legally recognised and it may be difficult to link it to the formal decentralised administration.
- The Biosphere Reserve was created without full consultation with local people and it is possible that they will not support it.
- It is difficult for the benefits from 74 giraffes to help a wider proportion of local people. The distribution of the benefits from giraffe-based tourism has so far been highly skewed towards a few individuals in one village. Additionally, the population of giraffes and other wildlife is too small to consider consumptive use, such as hunting, which could generate larger revenues.
- Although there is little competition between domestic livestock and the giraffes for forage, farmers prioritise their own livestock over the giraffes during periods of forage or water shortage.
- The high-density population living in conditions of sparse natural resources means that it is difficult for local people not to overexploit the resources of the zone. Sale of bushmeat and firewood and the clearing of arable land are means of subsistence that are incompatible with protecting the giraffes. Furthermore, the high population

growth rate, one of the highest in Niger, means that the conflicts over resources are likely to intensify in the coming years.

On balance it seems that despite many factors favouring a community-based approach, the low numbers of giraffes, and the increasing demands of the growing population, mean that the giraffes are unlikely to provide direct benefits to the 45,000 inhabitants living in the giraffe zone. But the giraffes provide an entry point for developing a form of rural development that tries to meet the needs of both the human and wildlife populations. This is being achieved through an integrated conservation and development approach, helping to support rural livelihoods in ways that are compatible with maintaining the tiger bush, such as through increasing agricultural productivity and promoting soil and water conservation activities on existing farms. Additionally, the decentralisation programme in Niger offers opportunities for ensuring that the needs of rural people living in the giraffe zone are represented and that the economic benefits from giraffe tourism can be distributed throughout the zone.

At the local level, a growing awareness on the part of the resource users themselves, following a redefinition of the ways in which land is appropriated, can help reverse the present process of over-exploitation. Thus, in drawing up an overall plan, the strategy adopted by the PURNKO project relies on a process of concerted analysis, reflection and decision-making involving all the users of the area's natural resources, including arable farmers, livestock farmers, arable-and-livestock farmers, women, young people, etc..

The giraffes also act as a catalyst for promoting national, regional and international interest in developing activities that support human and wildlife populations. Responsibility for the protection of Niger's giraffe population should rest at the highest national level and also with the international community. If these stakeholders are committed to the conservation of these giraffes, then incentives for village people to show restraint in their use of natural resources need to be developed, particularly in times of serious drought when conflicts between livestock and the giraffes come to the fore. For example, during drought periods, villagers could be compensated for not cutting some of the species on which the giraffes feed, thus helping to reduce pressure on the giraffes' habitat. Ultimately, conservation of the giraffes depends on providing tangible and immediate development opportunities for local people that promote sustainable use of their natural resources, particularly the tiger bush.

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Sticking to the rules: working with local people to conserve biodiversity at Gashaka Gumti National Park, Nigeria

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Chapter summary

Chapter 6 is based on the field experiences of various people and institutions currently working at Gashaka Gumti National Park in Nigeria. It examines the legal, political, institutional, ecological, social and economic factors that promote or constrain how local people and institutions use and manage wildlife at Gashaka Gumti National Park. These factors act as 'forces', some enabling more integrated approaches to evolve, others inhibiting their spread. The conclusion synthesises these different forces and describes the net opportunities and challenges posed by recent attempts to encourage local responsibility for wildlife conservation at Gashaka Gumti National Park.

Key findings

1. The history of Gashaka Gumti

- Gashaka Gumti was designated as a game reserve in 1973. Local people living inside the game reserve at this time were allowed to stay, subject to certain

[1] World Wide Fund for Nature (WWF-UK)

[2] National Park Service, Nigeria.

[3] Nigerian Conservation Foundation

[4] Department of Forestry; Adamawa State, Nigeria.

[5] We are grateful to the National Park Service (NPS), the Nigerian Conservation Foundation (NCF), the World Wide Fund for Nature (WWF-UK), the Department for International Development (DFID) and IIED for supporting this work. Several people have shared their knowledge with us and commented on earlier drafts. We are especially grateful to Phil Burnham, Richard Barnwell, David Thomas, Jo Abbot and Ross Hughes. The views and opinions expressed in this report are those of the authors alone and do not necessarily represent the individual or collective views of the NPS, NCF, WWF-UK, DFID or IIED.

restrictions. Areas of land, known as 'enclaves', were set aside and demarcated to accommodate these farmers and pastoralists.

- During Nigeria's economic downturn of the 1980s management of the game reserve deteriorated and conservation authorities all but abandoned the enclaves to local people. Forests and wildlife within the enclaves deteriorated during this period.
- Gashaka Gumti was declared a national park in 1991. The new National Park Service recognised that for reasons of political and economic expediency resettlement of enclave communities was not feasible, at least for the present time. But enclave communities are subject to much uncertainty.

2. The legal framework

- There is no legal framework to support community wildlife management at Gashaka Gumti National Park. Under such conditions the long-term future of the park's enclaves was placed in some doubt which made working with enclave communities quite difficult.

3. Local capacity for wildlife management

- The population density of the region is still relatively low although immigration is a growing problem. There is a high diversity of communities living in and around Gashaka Gumti National Park.
- The remote and inaccessible region is seriously underdeveloped. Local communities are keen to support wildlife conservation in the hope of acquiring jobs, roads, schools and health clinics. Enclave communities are keen to be seen to support a conservation agenda in order to avoid eviction.
- Traditional leadership in the region commands a high degree of power, influence and respect both at a local level and within government. Such hierarchical structures are non-participatory however and do not always represent the views of all stakeholders in each community.
- Although responsibility for the management of Gashaka Gumti National Park rests with the National Park Service, a variety of other institutions are also involved as major stakeholders. These include traditional authorities, local and state government, in addition to national and international conservation NGOs. Poor collaboration and communication between these various institutions impedes the development of shared objectives for managing wildlife.

4. The political will to change

- Effective community wildlife management requires political change both at the national and local level. The NPS must be prepared to share responsibility for conservation with local communities and traditional authorities must allow more local participation in decision-making.

5. The value of wildlife resources

- The vegetation of the region includes both montane and lowland rainforests, savanna woodlands and montane grasslands. Biodiversity levels are correspondingly high.
- The region has been heavily hunted in recent decades. Although wildlife populations remain relatively low, levels of hunting have declined since the creation of the national park in 1991. Under these circumstances opportunities for tourism are limited and there is little opportunity to establish any sustainable hunting scheme.

6. The economic value of enclaves

- Enclaves have a very high economic value for pastoralism. Pastoralists living within the enclaves are keen to work with the national park authorities to safeguard their future.

7. Hope for the future

- Enclaves allow people living inside a protected area to continue to practise their traditional livelihoods. Whether or not enclaves enhance or detract from the national park's biodiversity is not certain. It does appear, however, that collaborative management of the enclaves has been relatively successful despite the lack of appropriate legislation. Rates of deforestation and illegal livestock grazing have both declined although immigration in certain enclaves needs to be controlled more effectively. Enclaves clearly enhance the cultural value of the national park and significantly increase its potential for tourism.
- The National Parks Decree was revised in 1999. The revised decree empowers each National Park Management Committee to deliberate upon the long-term future of enclaves although the National Parks Board must subsequently approve any recommendations made by the committee.
- If, as expected, Nigeria's most recent experiment with democracy is successful then national parks will be increasingly compelled to prove themselves more accountable to the concerns and needs of local people. More integrated approaches to management, such as those currently being tried at Gashaka Gumti, will increasingly become the norm.
- Our experiences at Gashaka Gumti will therefore have significance for other national parks both within Nigeria and in West Africa.

6.1 Introduction

Nigeria is a large and extremely diverse country that supports tropical lowland forests, savanna woodlands, montane forests and grasslands and semi-arid scrublands. Levels of biodiversity are high, but rapid population growth and the increasing pressure placed on the country's remaining natural resources have had dramatic effects on vegetation and wildlife. These effects include the destruction of extensive areas of natural habitat to accommodate agricultural expansion, logging to supply timber and fuelwood, and the degradation of savanna grasslands through overgrazing by domestic livestock (NEST, 1991).

In addition to the degradation and destruction of natural habitats, Nigeria's wildlife has suffered greatly from uncontrolled hunting. The importance of bushmeat in the diet of both rural and urban Nigerians has been a strong economic factor in the over-exploitation of wildlife populations (Ajayi, 1971; Martin, 1983). Few species of large animal survive outside protected areas and the populations of many smaller species are also declining (Happold, 1987). Approximately 10% of the total land area of the country has been set aside for conservation including forest reserves, game reserves and national parks. Involving local communities in the management of these protected areas has not generally been encouraged.

6.1.1 Gashaka Gumti National Park

Situated in a remote mountainous region of north-eastern Nigeria (see Figure 6.1), and covering an area of approximately 6,670 square kilometres, Gashaka Gumti is

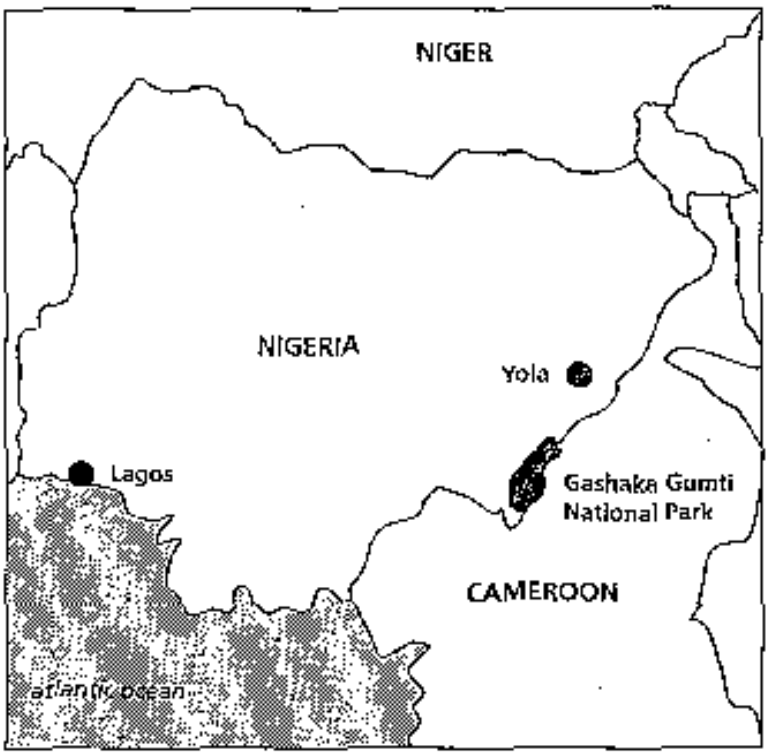


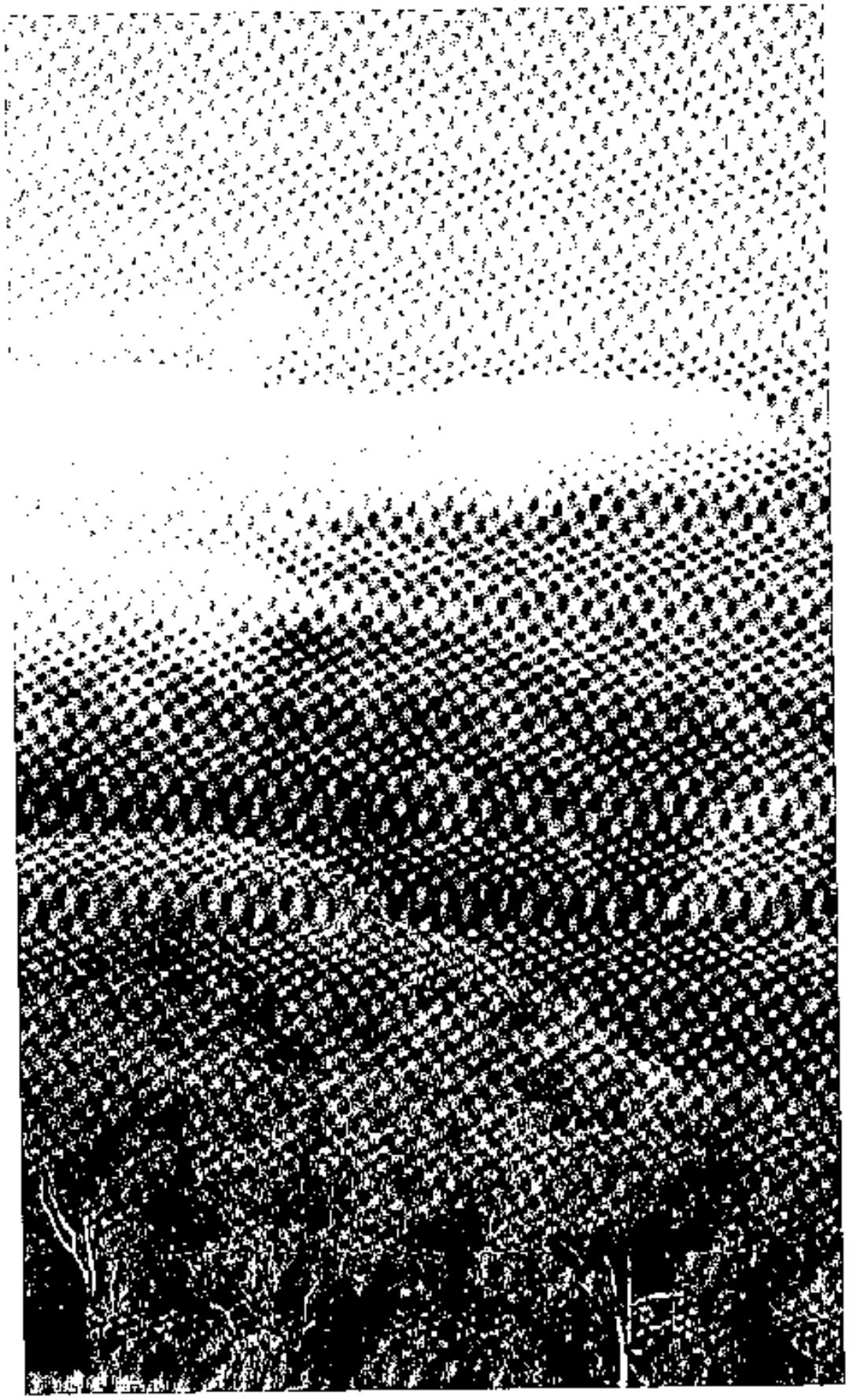
Figure 6.1 The location of Gashaka Gumti National Park in Nigeria.

the largest national park in the country. Dominated by savanna woodlands and grasslands, the northern sector of the park is relatively flat and has an average rainfall of 1,300 mm per year. The southern sector of the park is more rugged however, characterised by steep, thickly forested slopes, and swiftly flowing rivers. This mountainous region contains significant areas of rainforest in addition to savanna woodland and montane grassland habitat. Average rainfall here ranges from 2,000 to as much as 3,000 mm per year.

Gashaka Gumti National Park is known to be an ecosystem of exceptionally high biodiversity, although populations of most large mammals remain relatively low as a result of hunting and disease (NPS/NCF/WWF, 1998). These include typical 'savanna' species such as lion, wild dog, buffalo, elephant and a variety of antelopes; characteristic 'forest' species such as chimpanzee, giant forest hog, various duikers and guenons; and species which are considered to be 'montane' such as the Adamawa mountain reedbuck and the klipspringer. The rivers of Gashaka Gumti also provide important feeding, spawning and nursery areas for migratory fish stocks of the River Benue (Reid, 1995). To date at least 60 different species of fish have been recorded from Gashaka Gumti (NPS/NCF/WWF, 1998).

The history of Gashaka Gumti

The history of Gashaka Gumti as a conservation area dates back to the colonial era when a forest reconnaissance survey of the region during the mid-1950s recommended the creation of a number of forest reserves to protect important watersheds (Trappes-Lomax, 1955). However, it was not until after independence that three separate game sanctuaries were created in 1972. From 1973 onwards the area was managed as two contiguous game reserves at Gashaka and Gumti. The political support required for the establishment of the game reserves was achieved by allowing a number of farmers and pastoralists to remain within the game reserve, inside so-called 'enclaves'. Some roads and bridges were built to facilitate access



A view across Gashaka Gumti National Park showing the vegetation mosaic of montane forests and grasslands. Picture: Andrew Dunn

into the reserve, a number of game patrol posts were established and three non-catering rest-camps were constructed. The boundary of the reserve was demarcated working with traditional leaders (or their representatives) and members of the local communities found living along the boundary.

This momentum was somewhat lost in 1976 however, after North-East State was broken up into three smaller states and Gashaka Gumti became the responsibility of the newly created Gongola State. Development of the game reserve was further hit by the world recession of 1981 that sent oil prices tumbling, revenues upon which the country had come to depend. As a result of the sudden economic downturn, funding of the game reserve was drastically curtailed from 1982 onwards and the existing infrastructure began to deteriorate. Insufficient resources were allocated to ensure that the game reserve was managed effectively and state control over the enclaves was largely abandoned.

In 1986 the Nigerian Conservation Foundation (NCF) conducted a reconnaissance survey of the area and proposed that Gashaka Gumti should be designated as a national park. Clearly the state government no longer had the capacity to manage Gashaka Gumti and therefore the best option was to hand over the game reserve to the Federal Government for management as a national park (the Federal Government had no such shortage of funds). Five years later, Gashaka Gumti was declared a national park under the National Parks Decree Number 36. Today, Gashaka Gumti National Park is managed by the National Park Service under the auspices of the Federal Ministry of Agriculture and Natural Resources. In 1992, a project managed jointly between NCF and WWF-UK was launched to assist the development and protection of Gashaka Gumti[5](see Box 6.1).

The people of Gashaka Gumti

The people of Gashaka Gumti are farmers, fishers, pastoralists and hunters; traditional livelihoods based upon locally available natural resources. They can be conveniently divided into two main groups: those living within the enclaves and those living along the park boundary in the support zone (Figure 6.2).

The enclaves of Gashaka Gumti National Park

When Gashaka Gumti was first proposed as a conservation area during the early 1970s it was already home for relatively large numbers of people and livestock. By working with these people, a compromise was reached which neatly avoided the political, social and economic obstacles associated with any resettlement scheme. A written agreement between North-East State government, the Mambilla Traditional Council and Sardauna local government involved setting aside enclaves within the proposed game reserve for the purposes of human settlement. Certain activities, such as livestock grazing and farming, were permitted provided that they remain compatible with the wider national park objectives of nature conservation. Seven enclaves were created initially and a further enclave was demarcated in 1996. When responsibility for the management of Gashaka Gumti was transferred to the National Park Service (NPS) in 1991 it was quickly realised that resettlement of these enclaves would be both politically difficult and economically prohibitive. They were

[5] The Department for International Development (DFID) provides matching funds for the NCF/WWF-UK Gashaka Gumti National Park Project.

Box 6.1: Phases of support to Gashaka Gumti National Park

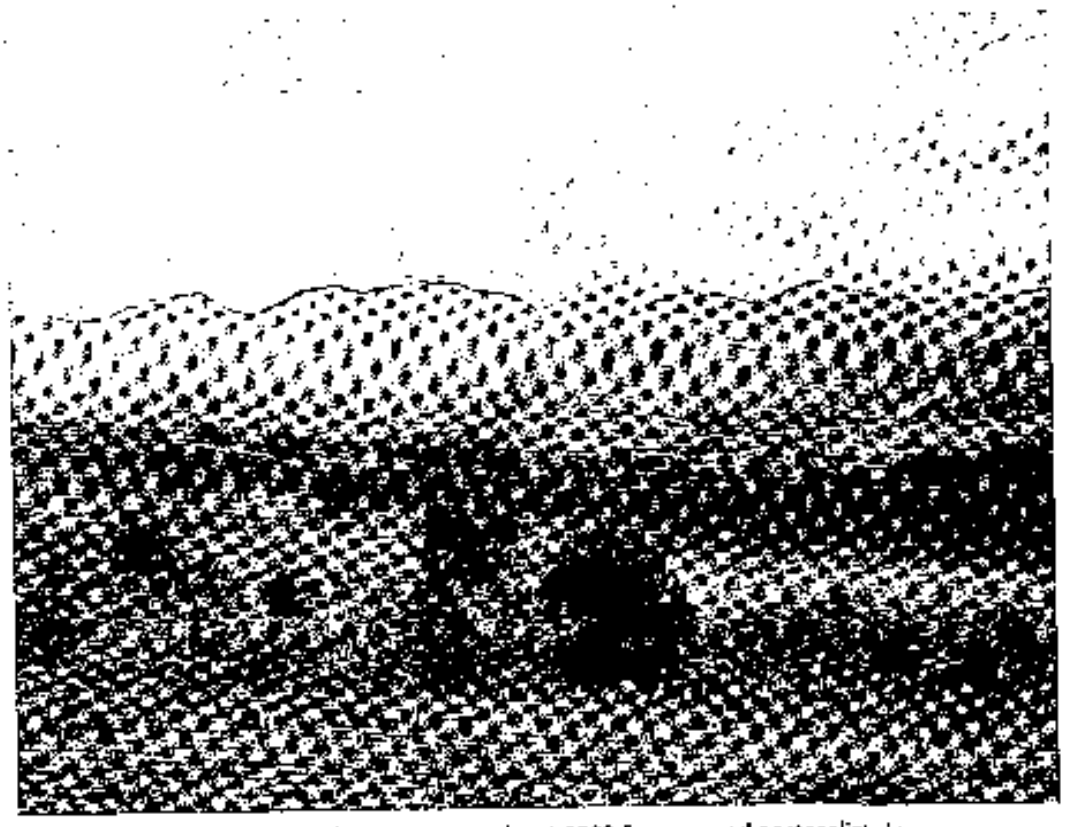
Phase I of the NCF/WWF-UK project helped establish the new national park. Emphasis was placed on improving park protection by providing training, equipment and allowances for park rangers. Existing infrastructure, such as roads, ranger posts and tourist chalets, was rehabilitated. A programme of biological, socio-economic and participatory research provided the basis for a management plan that was finally completed in 1998. A series of enclave agreements was negotiated (see Box 6.5) and a small rural development project was designed to improve the living standard of local people within the support zone and to maintain their support for conservation. A programme of conservation education aimed to raise levels of environmental awareness through a network of school conservation clubs and a series of environmental workshops.

Phase II started in 1998. Building on Phase I, its activities include institutional support for the NPS, encouraging local responsibility for conservation and improved enclave management, research and monitoring, training, support zone development and environmental education.

therefore allowed to remain, at least for the time being. There are three main types of enclave, defined by their altitude (see Box 6.2).

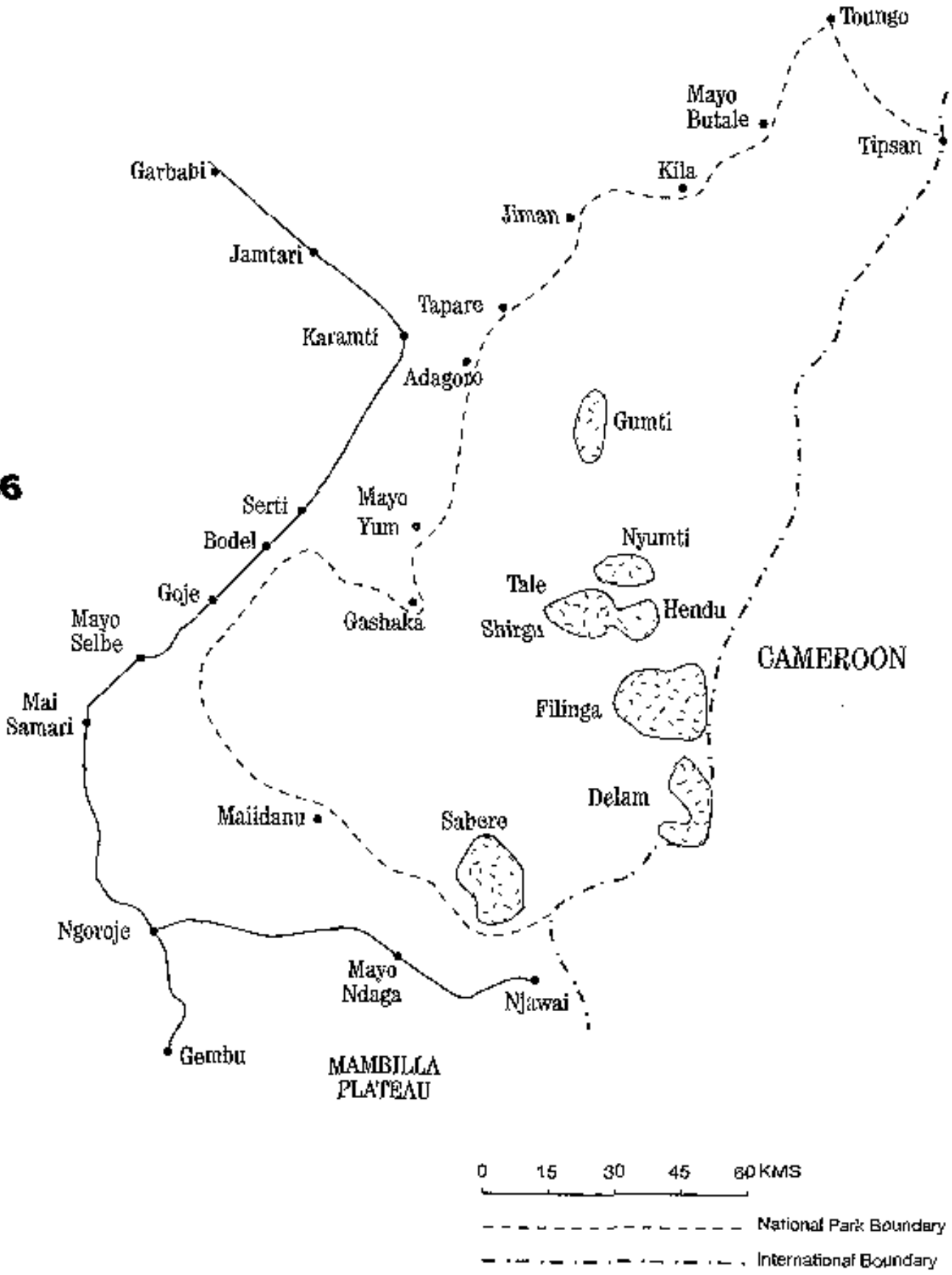
Residents of the Park's support zone

The park's support zone contains at least 45 separate settlements with a total population of more than 42,000 (NCF/WWF, 1998). The support zone is defined as the area surrounding the national park, up to an approximate distance of 5 kilometres, where *stable and compatible land use practices are encouraged* to give an



The sub-plateau enclave of Filinga supports about 1000 farmers and pastoralists in approximately 155 sq. km of gently rolling hills. Picture: Andrew Dunn

Figure 6.2. The villages, towns and enclaves of Gashaka Gumti National Park, Nigeria



Box 6.2: Enclave settlements defined by altitude

Highland enclaves 1,650 to 1,950 metres above sea level.
In historical times, these remote and inaccessible mountains were used as a refuge against slave raiding and tribal warring, and for hunting. It was not until the 1960s that they became permanently settled and were transformed into an important livestock production area. The zone is largely free of tse-tse, has a temperate climate, numerous perennial streams and abundant pasture. There are five highland enclaves dominated by various groups of Fulani (Fulbe) pastoralists with only a few non-Fulani farmers remaining. It has been estimated that highland enclaves contain around 8,000 cattle (Dunn, 1994) and approximately 1,000 people (NCF/WWF, 1998). Highland enclaves still support significant populations of baboon, warthog and bushbuck although the large herds of buffalo that were once a characteristic feature of this region are now increasingly rare. A small yet significant population of the endemic Adamawa mountain reedbuck, *Redunca fulvorufula adamauae*, also survives.

Sub-plateau enclaves 900 to 1,200 metres above sea level.
There are two sub-plateau enclaves within the park at Filinga and Sabere. These enclaves contain a number of small but significant rivers whose floodplains provide fertile opportunities for farming and important grazing for livestock during the dry season. Tse-tse are a greater threat at these lower altitudes and only Filinga is used for grazing livestock during the wet season. It has been estimated that those two areas contain approximately 1,500 farmers and pastoralists. Sub-plateau areas have been cultivated for a number of years and these farming communities are significantly older than the pastoral communities of the surrounding highlands. Filinga contains around 3,000 cattle during the wet season although this figure increases substantially during the dry season when it must also accommodate cattle from the Hendu Highlands and beyond. Sabere may support as many as 6,000 cattle from Mambilla plateau during the dry season. Wildlife is generally more abundant in these sub-plateau enclaves compared to highland enclaves, including buffalo, warthog, baboon, red-flanked duiker and waterbuck. Such remote enclave areas are rarely visited by park rangers however and remain poorly protected attracting hunters and pastoralists from Cameroon and Mambilla.

Lowland enclaves 300 metres above sea level.
Gumti is the only lowland enclave within the national park and is also one of the oldest of all enclave communities containing farming and fishing communities. Enclave floodplains and riparian forests are rich in wildlife. These same floodplains attract large numbers of nomadic Fulani groups and their livestock each dry season despite the fact that livestock grazing here is not recognised by the NPS. Isolated and inaccessible, Gumti farmers are unable to transport their surplus agricultural produce to nearby markets. As with many other communities of the support zone a special relationship has developed between the farmers of Gumti and nomadic Fulani groups. Farmers rely upon the annual presence of nomadic Fulani pastoralists for a market for their surplus produce; nomadic Fulani pastoralists rely upon local farmers to provide them with sufficient grains for the duration of their stay. The human population of Gumti enclave is around 300.

added layer of protection to the national park itself. The region is seriously deprived of basic facilities such as roads, schools and health clinics. There are three main socio-ecological regions within this support zone (Box 6.3).

Box 6.3: Residents of the support zone by region

1. A lowland area, which is largely inaccessible by road and has few social amenities, is home to farmers, fishers and hunters. The human population density is low and wildlife is still relatively abundant. Tse-tse are numerous and livestock avoid this area during the wet season. However, the lowlands are important for livestock grazing during the dry season. Located in 27 different settlements the total human population is approximately 11,000.

2. Various farming settlements are located along the region's main road that links Mambilla plateau with the state capital at Jalingo. Hunting is an important subsistence activity here although wildlife has become scarce. Easily accessible and with land freely available, the area is subject to immigration and rapid population growth. Located in nine settlements the total human population is around 8,000.

3. The southern boundary of the park is known as Mambilla plateau and includes all communities located between the park boundary and the Mambilla escarpment. Although pastoralists dominate the plateau area, farming assumes a greater importance below the escarpment. The region has a very high human population density with a total population of roughly 23,000 located in nine settlements. There are acute land shortages and almost no wildlife remaining.

6.2 Legal and policy context

Incentives:

- Whilst the original National Park Decree of 1991 contained no provisions for community wildlife management either in or around national parks, its revision in 1999 allowed each national park's management committee to decide what level of community wildlife management is most suitable.

Disincentives:

- There is no legal framework for community wildlife management at Gashaka Gumti and under such conditions the long-term existence of the enclaves within the national park is uncertain.

6.2.1 Protected area policy: from game reserves to national parks

The first game reserves in Nigeria were created in the 1950s. Managed by the state government, most game reserves were created from former forest reserves that were considered to have potential for wildlife. Many more were created during the 1970s, which was a period of renewed interest in wildlife conservation (Henshaw & Child, 1972). Many game reserves foundered during the 1980s, a period of national austerity when few resources were allocated to conservation. Today, state governments still lack sufficient resources to manage game reserves effectively and consequently very few of them are functioning. Apart from the lack of funds, the failure of game reserves has been attributed to uncertain political support and a lack of qualified personnel (Anadu, 1987; Happold, 1987).

As key game reserves deteriorated throughout the country, the federal government intervened and replaced them with a network of national parks, having the resources

A Fulani herder from Chappal Hendu enclave. The National Park legislation has created feelings of uncertainty among enclave residents. Picture: Andrew Dunn

to support protected areas and hoping the prospects for tourism would be improved. A National Park Service (NPS) was created by the federal government in 1991 to establish and manage a series of national parks in representative habitats throughout the country. Six national parks were created initially and two more were added in 1999.

Gashaka Gumti was upgraded from a game reserve to a national park in 1991. The transfer of responsibility from state to federal control initially created confusion about who controlled access to resources (Dunn, 1995). Many people began to abandon the enclaves, fearing that eviction was inevitable. Even where people stayed, the new status of national park had implications for local livelihoods (see Box 6.4).

Box 6.4: The new national park and local livelihoods

Crop damage by various species of wild animal is a serious problem for farmers within the support zone (Pepeh, 1996). The damage incurred may account for as much as one third of the annual harvest (Dunn, 1994). Baboons, green monkeys, porcupines and guinea-fowl cause the majority of this damage. Local farmers believe that these animals originate from within the national park and are thriving because of the protection they receive there. Pastoralists also complain that species such as hyaena and wild dog harass their livestock. According to Jibrin Mwa of Chappal Nyumti enclave: *"The hyaenas are increasing because they are eating my cows and because they are protected by the national park"* (Dunn, 1994).

When Gashaka Gumti was a game reserve, animals judged to be a menace to local people were routinely shot by game guards. But rangers in the new national park have not been authorised to assume any crop or livestock protection role. Farmers are prohibited from controlling these pests themselves and from taking any action to protect their crops. Instead they are expected to tolerate crop damage by wild animals without compensation from the park authorities. As Ardo Dikko of Filinga enclave complained: *"When your cattle [the wild animals of the national park] destroy my farm you pay us no damages yet when our cattle stray and graze inside the national park we are arrested. The baboons eat our salt [given to cattle as a mineral supplement] and the national park refuses us compensation. Why?"* (Dunn, 1995). If local people continue to view wildlife as a threat to their livelihoods they are unlikely to support the continued existence of a national park seen to harbour and encourage such animals.

6.2.2 The legal context of community wildlife management in Gashaka Gumti

The National Parks Decree enacted in 1991 meant that all people resident within a national park were considered to be illegal residents, irrespective of whether or not they live inside a recognised enclave. The revision of the Decree in 1999 avoided the controversial issues of enclaves and community wildlife management, instead empowering each National Park Management Committee to deliberate the issues and make specific recommendations to the National Parks Board for approval.

There are strict and uncompromising international standards for national parks (IUCN, 1994) which have gained widespread acceptance among conservationists

worldwide. These generally form the basis upon which countries plan, establish and manage a protected area network. These standards imply that national parks should remain free from all human use and occupation: "*the danger of enclave settlements is that they tend to expand at the expense of the reserve and that they invariably have access routes that cut through the reserve*" (MacKinnon et al, 1986). This traditional approach to protected area management, founded on an essentially preservationist view, dominates environmental policy in Nigeria. Although there is a growing realisation that such models of conservation have not always been successful in protecting biodiversity, some people steadfastly continue to believe that all human use and occupation of national parks is inimical to their wildlife.

The National Park Service of Nigeria was only created recently. Striving to gain national and international recognition for Nigeria's national park system, the NPS is proceeding cautiously. Park management focuses on the basics of protection, development of infrastructure and tourism. Only when these basics have been established is it believed that attention can turn towards the involvement of local people. Although Nigeria has no established history of democracy or local participation in decision-making, it is hoped that the situation will improve given the recent democratic changes in the country.

The enclaves represent an untried experiment in national park management, an experiment that many would rather not risk. There have been significant wildlife declines since local people first occupied the Gashaka Gumti area. Rinderpest is believed to have been introduced into the national park through the enclave cattle: the park's buffalo population, estimated at 10,000 in 1980, was decimated by a rinderpest epidemic that swept through the area in 1983. There is also an added fear that domestic dogs within the enclaves may transmit diseases, such as rabies or distemper, to the park's valuable yet vulnerable wild dog population.

What will happen in the future? Although the present human population of some enclaves remains stable or is in decline, the enclaves at Filinga and Sabere have both seen a recent influx of farmers. Many enclaves also suffered from a wave of deforestation caused by immigrant farmers during the 1980s when management of the game reserve deteriorated and control over the enclaves was largely abandoned. Some deforestation continues to this day at Chappal Nyumti, Filinga and Sabere.

The people of the enclaves desperately wish to stay and the majority is keen to co-operate with the NPS for mutual benefit. While occupation of enclave areas is considered to be a privilege, and not a right, a feeling of insecurity pervades the enclave populations. One of the oldest residents of the enclave at Chappal Hendu expressed his fears: "It is like a marriage from which the love has gone out. Sooner or later the wife knows that she will have to leave" (Dunn, 1995). Fostering local responsibility for conservation is impossible unless local people are able to adopt a long-term perspective. Secure land tenure and the ability of local people to limit access by outsiders is an essential prerequisite for sustainable management of the enclaves (Borrini-Feyerabend, 1996).

Many of the enclave residents hope that the NPS will bring much-needed development to the region in the form of roads, health clinics and schools, which the Local Government Areas surrounding the national park have been unable to provide.

Box 6.5: Negotiation of enclave agreements

In 1995/96, the NCF/WWF-UK project at Gashaka Gumti, on behalf of the NPS, designed a programme of participatory research, initially to gather information as a guide for the future management of the enclaves. Meetings involving the NPS and NCF were held with local traditional leaders (*Jauros, Ardos and Mai'Ungwas*). Village level discussions were also organised. It was clear that local people wanted to co-operate with the NPS but remained unsure what was required of them. The first step was to re-establish enclave boundaries that had deteriorated since the 1970s. Arising naturally from these discussions, a number of basic conservation rules and regulations was agreed upon, together with definitions of local rights and responsibilities. All were subsequently contained in an enclave agreement.

Pastoralists have nowhere else to go and realise the importance of co-operating with the NPS: they often say simply: *"Tell us which way we should face."* (Sarkin Fulani, *pers. comm.* 1998). However, until the National Parks Board decides the long-term future of the enclaves they remain in a state of flux.

Enclave agreements: enlisting local support for conservation

To get round the insecurity generated by the uncertain status of enclaves, 'enclave agreements' were introduced as a way of fostering long term support and improving levels of protection.

Enclave agreements were conceived as a way of formally recognising the existence of the enclaves and outlining clear guidelines for their management and conservation. They are based upon a list of mutually agreed rules and regulations, including local rights and local responsibilities.

In 1995/96, the NCF/WWF-UK project at Gashaka Gumti, on behalf of the NPS, negotiated a number of draft enclave agreements with many of the enclave communities (see Box 6.5). But these agreements were not subsequently ratified by the NPS. With hindsight, these negotiations were premature - it was unrealistic to have expected the NPS to sign enclave agreements when there was no provision for human exploitation of national parks contained in Decree 36. Now that Decree 36 has been revised, the NPS may decide to proceed with enclave agreements, provided that such a move is recommended by the Gashaka Gumti National Park Committee and subsequently receives approval from the National Parks Board.

Even though the enclave agreements have not been ratified by the NPS, their rules and regulations are largely respected by local people and so, in this sense, the negotiations were successful: immigration is better controlled, local people regularly report the presence of poachers and trespassers to the NPS, and rates of deforestation have been reduced. Whether or not local people feel more secure as a result is not certain. Gashaka Gumti's management plan stresses that *"the long-term status of any enclave may be reviewed at any time if its continued presence within the national park is judged to be incompatible with the national park's wider conservation objectives."* (NPS/NCF/WWF, 1998). Thus, although enclave agreements may have promoted a feeling of security, the residents remain insecure. On a more positive

Establishing enclave boundaries led to the development of enclave agreements. Here a NPS officer, the local Ardo and an NCF/WWF guide mark the Chappal Delam boundary.
Picture: Andrew Dunn

note, however, the agreements have provided a first step in initiating and formalising dialogue between the NPS and enclave residents. There remains hope that enclave agreements will provide a model for linking the conservation of the park to the development of its residents.

6.3 Institutional context

Incentives:

- Community wildlife management at Gashaka Gumti is supported by a number of local, national and international organisations.
- Local support from traditional authority is assured, provided that established interests are not threatened.
- Existing traditional structures retain a high degree of influence and respect and are keen to become more involved in the management of the national park.
- Well-established hunting associations within the support zone are keen to assist with the protection of the park.

Disincentives:

- A variety of institutions are involved with the management of Gashaka Gumti including the federal government, state government, local government and traditional government. Consequently conservation of the national park lacks a co-ordinated regional approach.
- Existing traditional structures do not always represent the views of all stakeholders and are often non-participatory. However, they would be unlikely to tolerate the creation of any new institutions that may threaten their interests.

6.3.1 Diversity of supporting institutions

A variety of organisations are involved in the management of Gashaka Gumti National Park including the federal, state, local and traditional governments. In addition, one national and an international conservation organisation provide support for the park, its enclaves and support zone. A management committee provides periodic advice on general policy matters to the General Manager of Gashaka Gumti National Park and is quite influential and powerful. The management committee includes representatives from Gashaka Gumti National Park, NPS, relevant ministries at state level (including Tourism, Agriculture and Natural Resources, and Works and Housing), traditional authorities, a national NGO and a representative of public interest. Recently created 'conservation and development committees' in five different regions of the park work towards sustainable management of the enclaves (see below).

The National Park Service Governing Board is the policy-making body responsible for the overall development and management of national parks in the country and for the coordination of the various national park management committees. The general manager/chief executive of each national park is responsible for the day to day administration and management of the national park. Each national park in the country is administered through a national park management committee.

The relationship between these different institutions is discussed in the next section. Here it is sufficient to note that the management of the park works through existing organisations wherever possible. The only new institutions that have been created are the Gashaka Gumti National Park Management Committee and the five regional conservation and development committees. The challenges of working with existing, rather than novel, institutions, have been recognised:

- It can take time to establish the modalities for collaboration, communication and action (Box 6.6).
- Decision-making within existing institutions, particularly at the local level, is often controlled by local elites such as the village chief, ward chief or the local Fulani leader. Although village elders and influential community members may participate, poorer people and women are largely excluded from the decision making process.

Despite these weaknesses it is considered essential to work through these existing organisations rather than attempting to create any new ones. Traditional institutions retain a high degree of influence and respect and it would be difficult to impose new institutions that would inevitably be seen as threatening established interests and authority. It is also recognised that existing institutions, such as the Traditional Council, are themselves already capable of managing natural resources effectively (see Box 6.7).

Given the importance of the traditional authorities in managing Gashaka Gumti National Park, they are discussed in detail below, together with another institution that offers potential for managing the Park, hunters' associations.

Box 6.6: Getting institutions to work together

Most hunters active within the enclaves are outsiders, people not normally resident within one or other of the enclaves. The local community often disapproves of these hunters and their presence may be reported to park rangers. However since park rangers are not yet stationed permanently inside the enclaves and visit them only infrequently, these reports are often received late or may even be ignored. It is unlikely that local people will continue to report the presence of hunters to park rangers if no subsequent action is taken, or if the action taken is judged to be insufficient (a fine rather than a jail sentence). Recently developed conservation and development committees have been designed to promote cooperation and communication between local people and the national park authorities (see also Box 6.7).

Box 6.7: Working with Traditional Rulers in Gashaka Gumti

The highest level of traditional authority in the region is the *Lamdo* or Chief. Three Lamdos control the Gashaka Gumti area including the Chief of Gashaka (Serti), the Chief of Mambilla (Gembu) and the Chief of Ganye. Each Chief also acts as the Chairman of a Traditional Council that functions to oversee all matters in the chiefdom and to act as a bridge between government and local communities. Members of this Traditional Council are appointed jointly between the Chief and the Local Government. They include a *Sarkin Fulani* to represent settled and nomadic pastoral groups, the *Sarkin Ruwa* to represent fishers, the *Sarkin Baka* who represents hunters and the *Sarkin Noma* who represents the interests of farmers. Regular meetings with all three Chiefs and members of each Traditional Council are required to ensure the smooth running of both project and park activities.

The chiefdom is divided into a number of districts. A Jauro is appointed by the Traditional Council and administers each district. A *Mai'Ungwa*, or village head, is also appointed by the Traditional Council and administers each village in the district. Within each village, a woman known as the *Magajiya Gari* represents the interests of women. An Ardo who is responsible to the Sarkin Fulani governs each pastoral community within the enclaves. The NPS and NCF maintain regular informal contact with all of these individuals.

In addition to these traditional institutions, the national park has recently created five regional committees designed to support the conservation and development of the national park and the support zone. These committees comprise key individuals within each sub-region of the park and may include one or more *Mai'Ungwas*, the *Jauro*, the *Sarkin Fulani*, the State Veterinary Officer and representatives from Gashaka Gumti National Park, Local Government, and NCF. The committees report directly to the General Manager of Gashaka Gumti National Park and meet periodically to provide local perspectives on park management problems, help devise local solutions and alleviate local concerns about park issues. The committees are also used to keep local communities informed of recent developments within the national park, for information sharing and exchange. At Filinga for example the committee recently helped plan the livestock vaccination campaign and assisted in the resettlement of communities responsible for the continued deforestation of park watersheds.

The role of traditional authority

Traditional leadership in the Gashaka Gumti region commands a high degree of power, influence and respect both locally and within government. These leaders are largely the direct descendants of the Fulani who conquered the region during their jihad of the 1840s. Three main chiefs control the Gashaka Gumti region: the Chief of Mambilla, the Chief of Gashaka and the Chief of Ganye. Traditional rulers recognise that the National Park Service has significant resources at its disposal and may be better able to provide the region with much-needed development than local or state government. Given the organised and established nature of traditional institutions, the NPS has worked to ensure that the support of these influential and powerful rulers is carefully maintained (see Box 6.7). While these hierarchical institutions are not democratic and communities rarely participate in the decision-making process, any decisions made by these leaders are usually obeyed. To assist the establishment and development of the new national park, the Chief of Gashaka was appointed as the first Chairman of Gashaka Gumti National Park Management Committee, which meets periodically to advise the General Manager of Gashaka Gumti National Park on policy issues. This appointment assured the national park of the required level of political support in the region.

Enlisting hunters to protect local wildlife

A number of traditional hunters' associations, *Kungyan Maharba*, survive throughout northern Nigeria, although their influence is declining. They are led by the *Sarkin Baka* (or Chief Hunter), who is elected by local hunters. The association reports directly to the local Chief through the *Sarkin Baka* who also sits on the Traditional Council. The hunting association functions to control all hunting activity within the local area. Members of the association have exclusive rights to hunt in the local area. Hunting rules and regulations are decided by each association at an annual meeting and often prohibit the killing of pregnant females, females with young, and dominant males. Hunting activity is restricted to certain times of the year as determined by the association. The association has many other functions, including dispensing traditional medicines and knowledge. Members of the association are highly regarded by the local community.

A popular hunting association exists in Toungo, situated at the north-western corner of the park. This association formerly controlled all hunting activity in the northern park sector and in surrounding areas. The role of the association has changed somewhat today and it has become responsible for protecting people within the Chiefdom of Toungo against cattle thieves and armed robbers. When Gashaka Gumti National Park was created in 1991 the potential role of the hunters' association was largely overlooked although some of its members were employed as park rangers. Some members indicated their willingness to help the NPS combat poaching but their offer was ignored until recently, when the park authorities started a process of dialogue with the association. There are hopes on behalf of all concerned that an effective partnership between the hunter's association and the NPS will result in better levels of protection for park wildlife. If this partnership proves successful, other hunting associations in the support zone could be revived.

6.4 Political context

Incentives:

- International and national non-governmental institutions promote community wildlife management at Gashaka Gumti National Park.
- Revenue generation by traditional and local administrations in the region relies heavily on the continued existence of enclaves within the park.

Disincentives:

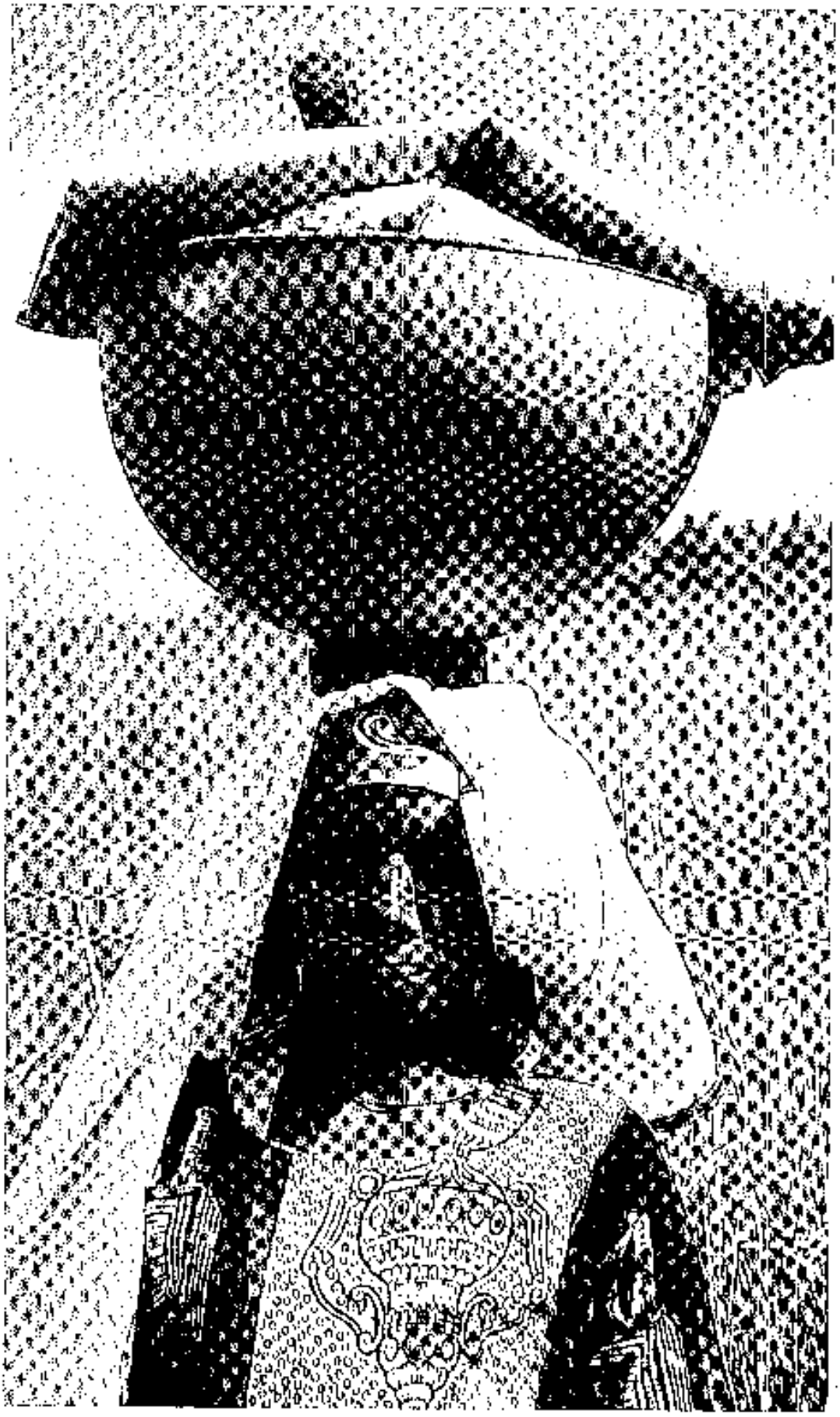
- Non-governmental institutions have only limited influence on the NPS.
- The concept of community wildlife management does not enjoy universal support at the national level.
- Nigeria has no established history of democracy or local participation in decision-making.
- Movements which advocate the rights of indigenous people may be viewed with suspicion and alarm by the federal government.

6.4.1 The role and influence of governmental administrations

Support for the continued existence of enclaves within the national park comes from both local and traditional government for a number of reasons. The NPS falls under the jurisdiction of the federal government, which is the best resourced of the different layers of government. In contrast, the three Local Government Areas of the Gashaka Gumti region (Toungo, Gashaka and Sardauna) are chronically underfunded and relatively weak. Increasingly they are seeking to maximise the revenue that can be raised within their own area of jurisdiction through the collection of various taxes. The large herds of cattle within the enclaves are one of the Local Government Areas' most significant sources of revenue, a source they would be extremely reluctant to forgo. Thus, even though they have little power, local government supports the maintenance of the enclaves within the national park.

The traditional authorities also rely on taxation to support their administrations. The Chief of Gashaka relies heavily upon a continued Fulani presence within the enclaves for much of his economic support. All Fulani within the enclaves pay annual taxes or *jangali* according to the size of their cattle holdings. By overstocking the enclaves, therefore, the Chief of Gashaka can generate more revenue. However, as the Chairman of Gashaka Gumti National Park Management Committee he is expected to guard against overstocking of enclave areas. The Chief is careful to balance these competing demands.

State government is responsible for issuing hunting licences within its areas. However, since the creation of the national park in 1991, Taraba State and Adamawa State are no longer allowed to issue hunting licences in any of the three Local Government Areas which border the national park. This has resulted in the loss of a revenue raising function for the state government.



A Fulani woman from Filinga with a calabash of yoghurt. Women control the sale of milk in the markets but have only a limited role in natural resource decision making. Picture: Andrew Dunn

6.4.2 The role and influence of non-governmental and external organisations at Gashaka Gumti

The Nigerian Conservation Foundation (NCF) is the foremost non-governmental conservation organisation in Nigeria and an associate member of the World Wide Fund for Nature (WWF). Established since 1982 to promote all aspects of conservation, NCF manages a number of conservation projects throughout the country. Designed to enhance biodiversity and sustainable resource use, these projects have focused mainly on forest conservation, environmental education and legislative advocacy. NCF has a seat on the National Parks Board and is also represented on each national park management committee. Despite these linkages, the federal government mistrusts NGOs and NCF has only limited influence over the NPS.

WWF has undergone significant changes in recent years. From its beginnings as an agency solely concerned with the preservation of a few endangered species, it has since evolved into an agency that seeks to integrate conservation with development (WWF-UK, 1998). Although biodiversity concerns remain paramount, it is realised that these objectives will only be achieved by linking conservation with human needs.

The involvement of the UK's Department for International Development (DFID) as a donor at Gashaka Gumti is also significant because of its emphasis on poverty elimination, gender-sensitive development and participation. Given the male bias of existing power structures at Gashaka Gumti, the NCF/WWF project is working with women's groups in the support zone and enclaves, initially to help them get legally registered with the local and state government.

6.5 Ecological context

Incentives:

- After a long period of decline, animal populations show signs of recovery.

Disincentives:

- Wildlife populations remain relatively low. Hunting is prohibited and there is no opportunity for the active management of large mammal populations by local communities.
- It is difficult to involve communities on the border of the national park whose direct use of all park resources is strictly forbidden. .

6.5.1 Hunting and wildlife populations

As would be expected from the high levels of habitat diversity, Gashaka Gumti supports exceptionally high levels of species diversity. In excess of 1,000 different plant species are known to occur within the park in addition to more than 400 species of bird, over 300 species of butterfly, more than 100 species of mammal and over 60 species of fish (NPS/NCF/WWF 1998, Knoop, 1995). However, wildlife populations are generally low and a long-term decline is evident. The large elephant herds of Gashaka Gumti had been almost eradicated by the 1950s and since the 1970s large herds of buffalo are no longer a common feature of the national park. The general decline in wildlife has not affected all species however and local farmers maintain that certain species, notably the baboon, Tantalus monkey and porcupine, have all increased dramatically in recent years (Dunn, 1994; Pepeh, 1996).

All hunting inside the national park is prohibited under the provisions of Decree 46 of 1999. Since the creation of Gashaka Gumti National Park, hunting has declined and many species have shown a slow but gradual recovery. For example, elephants recently returned to Gashaka Gumti from adjacent areas in Cameroon and hippopotamus are extending their range in the park. Only a few species are sufficiently abundant to permit sustainable offtake quotas each year through hunting for bushmeat purposes. But sport hunting, a feature of some protected areas in Cameroon, is prohibited in Nigerian national parks.

6.5.2 Linking conservation to development

Development has the potential to increase local incomes and improve living standards. But a clear link between development benefits and conservation action is important for development as 'compensation' will not necessarily change people's attitudes and behaviour (Kiss, 1992; Larson *et al*, 1998)[6]. Convincing farmers and fishers on the boundaries of Gashaka Gumti that their long-term future depends upon the protection of watersheds within the park is not a simple matter. Pastoralists within the enclaves may be able to see healthier and fatter cattle now that they have used enclave agreements to prohibit grazing in the enclaves by outsiders. It is less certain that the provision of primary schools and health clinics for a few communities living on the park boundary (see Box 6.8) has resulted in less poaching inside the park. Yet to maintain the support of people living outside the park some form of development as compensation for their loss of access is essential, even if it fails to change their attitudes and behaviour towards conservation (Wells, Brandon & Hannah, 1992).

Box 6.8: Working with people in the Support Zone

There are two distinct communities in Gashaka Gumti: residents of the enclaves and those living in the park's support zone. Different approaches are required to work with each of them. Enclave agreements offer opportunities for improving livelihood security and protecting biodiversity (see Box 6.5).

But communities living in the support zone are forbidden access to all park resources. Attempts to maintain their support have taken a more traditional, compensation approach to protected area management. This includes a road rehabilitation and maintenance programme that provides local communities with improved access to markets, health services, education facilities and extension services. Other benefits include the construction of two primary schools, a health clinic, although spread rather thinly, support for women's associations and the training of traditional birth attendants. Planned developments include the provision of wells and improved methods of honey production.

6.6 Social context

Incentives:

- The population density is still relatively low. The region is significantly underdeveloped. Local communities are keen to support wildlife conservation in the hope of acquiring infrastructure, services and economic opportunities.

[6] See Chapter 3 for discussion of how a programme of livelihood activities, linked to natural resource use, appears to have changed attitudes towards and use of the Kilum-Ijim Forest, Cameroon.

- Local expectations have not been unduly raised and local communities generally support the presence of the national park.

Disincentives:

- Benefits are not evenly distributed between stakeholder groups and decision-making is restricted to elites.
- Enclave 'communities' and access rights are not always clearly defined and it can be difficult for the community to impose sanctions against the transgressors of local regulations.

6.6 1 Defining the local community, user groups and access rights

Heterogeneous 'community'

The Gashaka Gumti region is characterised by a relatively low population density (around 6 people per square kilometre), mostly concentrated along the region's newly improved road network. This low population density means that pressures exerted on the national park by the surrounding communities are relatively slight.

There are, however, many different communities within the support zone and enclaves of the park. The diversity of ethnic groups in the Gashaka Gumti region is remarkable; a recent survey recorded more than 40 different ethnic groups within the park's support zone (NCF/WWF, 1998). All of these heterogeneous tribes retain a tradition and history of migrations from other lands. It is unlikely therefore that any of them represent the original inhabitants of the area (Kirk-Greene, 1958). There is also heterogeneity within ethnic groups; the 'Fulani pastoral community' for example, is composed of a number of different clans and groupings, amongst whom there is periodic conflict over access to grazing land, especially during the dry season.

Formalising relationships with user groups

A number of different user groups exploits the national park resources, although not all of them do so legally. The NPS can only work with legally recognised user groups, such as pastoral groups within the enclaves, but not with others, such as the semi-nomadic pastoral groups, common in the region during the dry season. The legality of user groups was determined during the creation of the game reserve in the 1970s, although some of the local rights decisions now appear quite arbitrary. For example, the pastoralists on Mambilla plateau were allowed dry season access to Sabere enclave, but semi-nomadic pastoralists were refused dry season access to Gumti enclave.

De facto access rights

Gashaka Gumti has existed as a conservation area for almost 30 years. De facto access rights to various areas of the national park are well-defined locally although these are largely restricted to grazing and fishing rights. For example, the fishing rights of enclave communities at Gumti and Filinga were recognised by the former game reserve but have not yet been explicitly sanctioned by the national park authorities. The rights of local people to collect wild foods or medicines from within the national park have not been recognised, although some local communities are allowed access to certain traditional places of worship which now occur within the park boundaries. The NPS has yet to come to terms with the diversity of people, resources and 'rights' of access that it inherited from the former game reserve.

6.6.2 Strengthening the capacity of user groups

Immigration and encroachment by 'outsiders[7]' pose the greatest threat to the long-term sustainability of the enclaves. If the human and livestock population of the enclaves cannot be controlled, then their residents know that their long-term future is bleak. Enclave residents need a mandate to limit access by 'outsiders'. Locally agreed rules and regulations governing the use of enclave resources (provisionally contained within the enclave agreements) have not yet been officially approved by the NPS. Despite this, pastoral groups have been relatively successful in controlling access by outsiders (see Box 6.9). But communities may be unwilling to enforce all of the enclave agreement rules, especially where gangs of armed poachers are concerned. A strong partnership between park rangers and each enclave community is therefore essential. Unfortunately there is no permanent ranger presence in many of the enclaves and so this partnership does not function as it should (see Box 6.6).

Box 6.9: Controlling access to enclave areas

Many of the enclave areas were originally colonised in the 1960s when local rulers and government adopted a policy which encouraged colonisation of the highland areas now contained within the enclaves. Large numbers of pastoralists and their livestock settled in these highlands, in turn attracting farmers hoping that pastoralists would provide them with a ready market for their produce. Since the national park was created in 1991, however, rates of immigration have declined, partly because of the negotiation of enclave agreements. These negotiations highlighted the important role and responsibility of local systems of management for conservation. Local herders have come to realise that it is in their own interests not to allow outsiders access to the enclaves. With support from the traditional authorities immigration can be effectively controlled – for no-one can settle in the enclaves without their permission and approval.

Although temporary immigration during the dry season is being successfully controlled in most enclaves, there are financial and political reasons why local chiefs may not wish to co-operate with park efforts designed to control permanent immigration. Although temporary residents of the enclaves are not liable to any formal taxation, permanent residents are liable to pay tax on an annual basis and pastoralists are taxed according to the number of their cows. Revenue from this tax, known as *jangali*, amounts to a substantial figure each year and is shared between the local government and Chief.

Local perspectives on the National Park

Combining development with conservation has widespread appeal but it is often difficult to achieve in practice (Wells, Brandon & Hannah, 1992). There can be problems when conservation projects do not deliver on promised development benefits. For example, at Cross River National Park, in south-eastern Nigeria, the expectations of local people were raised amid hopes of overseas funding and the promise of large development projects. When these developments failed to materialise, it has proved difficult to work with local communities (EDG, 1998).

[7] 'Outsiders' are generally considered to be people who periodically exploit certain enclave resources but who live outside the enclave, although the situation is not so clear-cut. For example pastoralists living at Chappal Hendu are allowed access to Filinga enclave each dry season and could be considered to be 'outsiders'.

At Gashaka Gumti however, expectations that the park would benefit local people in any significant way were not raised. Yet the region is significantly under-developed and there is widespread poverty. Local Government Authorities are under-funded and lack the resources to ensure that all rural communities have access to health, education, roads or safe water. The few development benefits that the national park is able to offer, such as roads, clinics and schools, have done much to maintain local levels of support for Gashaka Gumti National Park.

Gauging the real opinions of local people regarding the national park can be difficult. Most people within the enclaves appear to tolerate its presence, and some may even be willing to actively co-operate with conservation programmes, provided they are allowed to remain in the enclaves. To date, enclave areas have been sympathetically managed and there have been no evictions. Certain local management practices such as livestock grazing and transhumance, annual burning regimes, fishing and the subsistence collection of forest products, have all been allowed to continue. In addition enclave communities benefit greatly from the newly improved road network and from a livestock vaccination campaign. There are some complaints from farmers regarding the problem of 'crop pests' and also from herders concerning alleged attacks on their livestock by hyaena and wild dog. However, enclave residents realise that they are not in any position to complain too loudly and must therefore accept these costs if they want to remain inside the enclaves.

By contrast, people living along the park boundary are not yet involved in park management to the same extent. Despite the imposition of natural resource restrictions, and the relative scarcity of benefits provided so far, it would appear that most people remain relatively satisfied with, or at least are not openly antagonistic to, the presence of the national park (NCF/WWF, 1998). This may be due to a number of factors:

- Expectations were not raised unduly when the national park was first created.
- The Gashaka Gumti region is neglected and under-developed with little prospect of any immediate improvement. The national park is seen by many local people as their best chance for development in the immediate term.
- Restrictions contained within Decree 36 have not yet been strictly enforced. The NPS at Gashaka Gumti National Park is attempting to work with local people and settle disputes by negotiation rather than confrontation.
- 'Conservation' within the area is not a new issue: for example, government restrictions on hunting have been in place for nearly 30 years.
- The region is one of low population density and there is much space and many resources around the national park.

6.6.3 Distribution of benefits and costs

Benefits from the national park have not always been distributed evenly. In the enclaves for example, richer pastoral Fulani groups have come to dominate local non-Fulani farming groups. This is most clearly seen during the dry season when farmers often suffer damage to their crops caused by livestock belonging to Fulani but rarely receive any compensation.

Given their powerful position, the Fulani pastoralists are probably the most satisfied among the local community. They have been allowed to remain within the enclaves,

although they still fear eviction and lack long-term security. The most dissatisfied people include those who have been deprived of access to resources, such as local hunters and nomadic Fulani herdsmen, who migrate in and out of the area. It also includes those for whom the costs of conservation remain unacceptably high, such as local farmers (both within the enclaves and the support zone) who have to tolerate crop damage by wild animals without compensation.

6.7 Economic context

Incentives:

- High value of the support zone for local livelihoods: herding, fishing and farming
- Bushmeat and fisheries are highly valued commodities within Nigeria.
- Potential value of tourism.
- A protectionist approach is costly and may be partly offset by encouraging local responsibility for management.

Disincentives:

- All hunting is prohibited both within the national park and in the support zone surrounding the park.
- Fishing is also prohibited inside the national park (outside of the enclaves) although it is permitted within the support zone.
- Tourism faces a number of logistical constraints.

6.7.1 The importance of Gashaka Gumti for local livelihoods

The Gashaka Gumti region is essentially an agricultural province; it is also one of the richest pastoral areas in the country, while its fine river systems provide valuable fishing. Although the region is still sparsely populated there has been growing immigration in recent years. Despite this, there is no shortage of fertile land for farming and a wide variety of crops are grown. Hunting and fishing are widely practised as subsistence occupations.

Pastoralism

There are two main types of pastoralism associated with the Gashaka Gumti region: semi-nomadic and settled. Semi-nomadic pastoralists tend to retain some permanent settlement during the rainy season but migrate to find better pasture for their cattle once the rains have stopped. Large numbers of these Fulani pastoralists arrive in the Gashaka Gumti region during the dry season, causing significant problems for the NPS and some farming communities. Most Fulani today are no longer nomadic and have become fully settled however. This trend is particularly noticeable in certain highland regions, which combine abundant rainfall, good pasture and remain free of tse-tse.

There are problems associated with the settled form of pastoralism however. On Mambilla there is significant gully and sheet erosion whilst some of the original grasses have been replaced by less nutritious species (Blench, 1985). Vegetation changes have also occurred within the enclaves as a result of livestock grazing although there is no evidence to suggest degradation or irreversible soil loss (Dunn, 1994; Conder, 1996). Presumably as a result of continuous trampling by grazing cattle, some areas have become dominated by tough, coarse grasses such as

Sporobolus. These invasive grasses are generally less palatable than the species which they have replaced. Fulani herders within the enclaves acknowledge that local pastures are not as productive as they used to be and milk yields of their cattle have declined (Dunn, 1994). In some areas, such as Mambilla, bracken, *Pteridium aquilinum*, has spread extensively.

Despite these problems, it is important to stress that there are no comparable areas (temperate climate, free of tse-tse, abundant pasture and water) for herding left unoccupied in Nigeria. The value of this region for livestock grazing cannot be over-emphasised and pastoralists are therefore willing to do almost anything to avoid eviction. There is therefore significant potential for enlisting the co-operation of pastoralists to improve the protection and conservation of the enclaves.

Fishing

As cattle are generally absent from the lowland areas of Gashaka Gumti, at least during the wet season, people traditionally depend on fishing for their protein requirements. The region has an abundance of well-stocked rivers and fishing is an important subsistence occupation for large numbers of people. Commercial fishers are also attracted to the region, particularly in the dry season. However catches are reported to have declined in recent years and the water level of many rivers seems to have fallen for unknown reasons (NCF/WWF, 1998). Declining catches may well be linked to the use of dynamite and synthetic poisons, such as dieldrin and gammalin, for fishing.

Since all fishing (other than sport fishing) is prohibited inside the national park, there is little opportunity for enlisting local fishers to help protect the park's rivers. Local fishers could, however, become more involved in the management of rivers within the support zone. An environmental education campaign is required to ensure that local people are aware that rivers within the park function as important spawning and nursery areas for fish stocks. As fishers living downstream, they depend on the protection of the rivers within the national park for their livelihoods.

Hunting

Bushmeat is a highly valued commodity within Nigeria, with both economic and cultural importance. Despite the restrictions on hunting (see Section 6.4), a considerable amount of hunting occurs both in and around the national park, and is a serious problem in certain areas of the support zone and in some enclaves including Sabere and Filinga (NCF/WWF, 1998). There is some subsistence hunting by local people but by far the greatest problem is hunting by 'outsiders'.

The control of hunting outside the national park is the responsibility of the state government, yet it lacks the resources to implement these restrictions effectively. Bushmeat is readily available in many urban centres surrounding the park. Large quantities of bushmeat originating from the Gashaka Gumti region are also transported to southern areas of the country where such delicacies are scarcer and demand higher prices. Working with local conservation and development committees (see Box 6.7) and hunting associations (see Box 6.8) to improve levels of park protection may help provide a solution to this problem, although this will also have to be combined with more effective patrols by park rangers.

Tourism

Gashaka Gumti has considerable potential for tourism based on its scenic, recreational, biological and cultural value. A number of recreational pursuits are being developed, including wilderness trekking, mountain climbing, sport fishing and horse riding. There are also various biological attractions, such as chimpanzees, rainforests and bird-watching. Local people benefit from ecotourism by acting as guides and porters and through the sale of local goods, such as crafts and basic foodstuffs.

There are, however, a number of significant constraints to developing ecotourism. Large mammal populations, other than primates, are relatively low and opportunities for game viewing are limited, especially during the wet season when visibility is restricted and access to the park difficult. The park is located in a remote and inaccessible corner of north-eastern Nigeria with poor links to the rest of the country. Park infrastructure is under-developed and there are few roads, bridges or accommodation facilities. Perhaps most significantly Nigeria has little international appeal as a holiday destination for foreign tourists although this image should improve as the political situation in the country stabilises.

The majority of the financial returns from ecotourism accrue to the federal government, reducing local incentives to promote Gashaka Gumti National Park as a tourist destination. Currently, the financial cost of protecting and managing Gashaka Gumti is certainly far greater than any financial benefits generated from tourism, and it is unlikely that this situation will change in the forseeable future.

The financial costs of conservation

The financial costs of protecting a national park as large as Gashaka Gumti are significant. In the absence of a permanent road network park rangers must patrol on foot: these patrols are often restricted to well-worn footpaths, leaving large areas of the surrounding bush unprotected. Huge efforts have recently been made to ensure that sufficient numbers of park rangers are available to protect the park effectively. Despite the fact that 135 have now been employed it has been recommended that a further 60 park rangers are required to provide effective levels of park protection (NPS/NCF/WWF, 1998). For many years government salaries were unable to keep pace with inflation and park rangers were compelled to supplement their salaries through farming. Salaries were significantly increased in 1998 but this is likely to place a severe financial burden on the NPS in the future in terms of the number of staff it can employ.

Under such conditions it may be possible to offset some of the high costs of conservation by encouraging greater local responsibility. The enclave agreements (see Box 6.5), conservation and development committees (see Box 6.7) and hunters' associations are some ways this approach is being pursued.

6.8 Conclusions

The management of natural resources at Gashaka Gumti is clearly subject to a wide variety of influencing factors, some which facilitate management by local people and others that constrain it. Reflecting the views of different stakeholders, this study has attempted to separate the various incentives and disincentives involved.

6.8.1 The enclave approach

Although enclaves still represent an unresolved legal issue, their creation has avoided the political, social and economic costs that would have been caused by resettlement. Whether or not enclaves detract from or enhance the overall value of the national park is unclear. It does appear however that enclave agreements, cooperation between local people and the NPS, and better immigration controls are already improving the security of local livelihoods. Collaborative management is also increasing biodiversity protection by reducing poaching and deforestation. However, the unfavourable policy context continues to contribute to insecurity for people within the enclaves, in turn having negative implications for conservation. Despite this insecurity, pastoral and farming groups within the enclaves realise that they must actively co-operate with the NPS if they are to be allowed to remain.

6.8.2 Spreading the word

Our experiences at Gashaka Gumti have widespread significance for the seven other national parks in Nigeria as they attempt to balance long-term conservation goals with the short-term needs of local people. Provided a protected area is sufficiently large, experiences at Gashaka Gumti suggest that the area can be zoned to accommodate both traditional livelihoods and the conservation of biodiversity. Other lessons include:

- *The importance of traditional authority.* Traditional institutions remain so powerful and influential in the region that any imposition of more democratic institutions would be met with strong resistance. Thus, it is felt that wildlife management is best achieved through existing traditional institutions rather than through the imposition of new ones. However, other community groups, such as women, can also be supported.

- *The economic value of the resources to be conserved.* People will only conserve those resources they value; thus the economic value of the enclaves for pastoralism is significant. Pastoralists within the enclaves are keen to prohibit access by outsiders in order to safeguard the productivity of their own pastures. By linking the continued presence of large numbers of wild ungulates in the enclaves with the livestock vaccination programme it is hoped that pastoralists will have a greater incentive to discourage poaching in the enclaves.

- *Conservation through compensation.* Although the benefits of collaborative management with enclave communities may be apparent, this is not the case for communities living outside the park who have no access to park resources. Their support for the continued presence of the national park may rely upon more traditional compensation schemes, such as roads and schools.

Now that the National Parks Decree has been revised it is left to the National Park Management Committee and the National Parks Board to decide what to do with the enclaves at Gashaka Gumti National Park. If, as expected, Nigeria's most recent experiment with democracy is successful then national parks will be increasingly compelled to prove themselves more accountable to the concerns and needs of local people. More integrated approaches to management, such as those currently being tried at Gashaka Gumti, will increasingly become the norm.

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Promoting partnerships for managing wildlife resources in Central and West Africa: an overview of the issues

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7.1 Introduction

Chapter 7 summarises the key findings from the literature review (Chapter 2) and the four case studies in Cameroon, Democratic Republic of Congo (DRC), Niger and Nigeria (Chapters 3 - 6). It is based on discussions held at a workshop in January 1999 which brought together most of the authors of the preceding chapters (Annex 1). The chapter begins with definitions of how the terms community, wildlife and management have been understood in this study. The key findings are then clustered around the framework of incentives and disincentives for community wildlife management that was developed to promote a comparative analysis of wildlife initiatives (Chapter 1). The social and institutional factors that affect the management of wildlife resources are described first, followed by the political, legal and policy, economic and ecological contexts. Conclusions and recommendations for developing a partnership approach to managing wildlife resources in Central and West Africa can be found at the end of the chapter.

7.2 Defining and adapting community, wildlife and management

The initial theme of this regional study, as of the broader Evaluating Eden project, was community wildlife management. But community, wildlife and management are three

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problematic terms that are open to different interpretations. We start this chapter with a discussion of how we have understood and used these terms in this publication.

7.2.1 'Community'

Much has been written in the anthropological literature on community identity (see Chapter 2). All the case studies have had to deal, on both a conceptual and practical level, with the question: *Who is the community?* Each of the case studies is explicit about how the community is defined in its case. And the literature review (Chapter 2) outlines in more detail how community has and has not been defined in the region, together with some of the problems faced when certain community groups are excluded.

Agarwal (1997) suggests that *"much of the current literature on conservation and resource use sees community in one of three ways: community as a spatial unit, as a social structure, and as a set of shared norms"*.

All of the initiatives described in this publication have communities that can be defined *spatially* as people residing in or near a protected area. Equally, each of the initiatives has people who are more mobile, for example as pastoralists, hunters and forced or economic migrants, and who do not fit into a simple spatial definition of community. Because of their mobility, these groups can present logistical problems for resource management, in terms of how they are represented and the legitimacy of decision-making at certain times of the year when seasonal residents may be absent (Chapter 5). Furthermore, there are attitudinal challenges as to who sees whom as resident and having greater claim to being part of the community (Chapters 4 & 6).

There are also problems in defining the social unit that forms a community as most are not homogenous. People who are mobile often have a different ethnic background to a more spatially-defined group. Furthermore, differences within a spatially defined community can also be profound meaning that the 'community' rarely functions as one interest group (e.g. Chapters 4 & 6, Solly, 1998).

Common interests and shared norms offers perhaps the most inclusive definition of community. The legal entities established under the Forest Law in Cameroon, which are defined spatially and in terms of common interest, come close to this definition of community (Chapters 2 & 3). Agarwal (1997) warns, however, that this definition of community should not give great comfort: *"Norms cannot be taken as a set of static beliefs that communities hold, never to give up. They come into being in relation to particular contexts, as an outcome of various interactions and political processes, and even when codified and written they do not cease to change"*. This dynamism in the relationships between 'the community' and other groups, and between community groups and their management of natural resources, is a challenge that all of the initiatives in this review have to address.

The Nigerian case study highlights the conflicting interests that can occur amongst multiple users of natural resources, such as pastoralists, hunters, fishers and farmers, and the difficulties of developing a common vision for national park management (Chapter 6). The Ituri forest in DRC presents an example of changing relationships, in this case between the Bambuti hunter-gatherers, the Bantu agriculturalists and

newer residents who have been attracted by economic opportunities or forced to move because of conflict (Hart, 1978). How and which of these groups is represented by novel conservation committees and the traditional administrations in the Ituri is discussed in Chapter 4. Furthermore, the evolving nature of traditional administration in the Ituri is contrasted with the more formal Azande structures at Garamba National Park less than 300 kilometres away, and the implications of this for wildlife management are highlighted.

Who is the community? is clearly an important conceptual and practical consideration. Additionally, our studies suggest greater emphasis should be placed on addressing the question: with whom does the 'community', or community groups, interact to manage wildlife resources? An institutional assessment of the management of wildlife resources is crucial, as rarely is a community working in isolation from a broader range of local, national and international actors (Chapters 2 – 6). The blurring of institutional boundaries suggests that it makes little sense to single out any one group of actors, particularly one so ill-defined as 'community', to promote wildlife management. This is discussed further below.

7.2.2 Wildlife

A dictionary definition of wildlife would limit a study of community wildlife management to 'wild animals' (Oxford Dictionary, 1994). But Chapters 2 - 6 suggest that a range of both plant and animal resources contributes to local livelihoods in the region. Bushmeat is a key resource for subsistence and income generation in the case studies from the more tropical forest regions, particularly in DRC (see Chapters 2 & 4). But forest resources, such as fuelwood, medicinal plants and wild vegetables in Cameroon (Chapter 3), and pastoral grazing in Cameroon, Niger and Nigeria (Chapters 3, 5 & 6) rank highly as valued natural resources. Given the importance of both plant and animal resources, we have chosen the term wildlife resources to encompass wildlife and the habitats on which they depend (Chapter 2, cf. IIED 1994). This definition excludes cultivated plants and domesticated animals but can include habitat enhancement, such as pasture improvement through burning.

7.2.3 Management

Management is taken to refer to the application of rules and regulations that govern the offtake of wildlife resources. This definition distinguishes wildlife management from the large, ethnographic literature on wildlife use in the region. Conservation management involves the application of these rules and regulations to ensure the long term sustainability of wildlife resources, but this is clearly only one form of management and there can be other objectives of management, some of which conflict with sustainable management (Chapter 2). Chapter 4 defines management in terms of planning and the organisation of people but, as highlighted in Chapter 2, the key point is that management requires intent and deliberation and "does not include laissez-faire unless this is a deliberate and measured strategy".

7.3 Incentives and disincentives

The analytical framework used in Chapters 2 - 6 identified the political, legal, institutional, ecological, social and economic incentives and disincentives for community management of wildlife resources. The rest of this chapter discusses

these different forces that are enabling or stifling the development of partnerships for managing wildlife resources in Central and West Africa.

7.3.1 Social and institutional context

Wildlife management: with and by whom?

Western and Wright (1994) define community-based conservation as *"by, for, and with the local community"*. Chapters 2 - 6 suggest that an exclusive focus on the community is inappropriate for wildlife management. Of greater importance is the balance of power given the inter-relatedness of communities with external actors, including government departments, the large and small scale private sector, and international and national NGOs. Wildlife management occurs as a partnership between these different groups of actors (cf. Dubois, 1997). Further, and as discussed above, there are multiple interests within 'communities', including traditional organisations, common interest groups of resource users and novel resource management institutions. Thus, our findings support those of Agarwal (1997) that community groups must form 'layered alliances' to secure their role in the conservation management of wildlife resources . We suggest that collaborative, rather than community, wildlife management better describes the experiences outlined in this study.

Our analysis concurs with that of Dubois (1997) that we have moved beyond a simple interpretation of community participation in natural resource management. But the need to dissolve the artificial boundary between external actors and the community and to promote partnerships has important implications for managing wildlife resources (Agarwal, 1997). First, community groups and external actors enjoy access to different resources, such as capital, connections and information. Second, within the community, different actors enjoy differential access to the resources of external actors and thus more powerful individuals or community groups can more easily further their agendas. This is explored in Chapter 4 where commodity chain analysis is used to separate the differential power relations and access to resources of the wildlife, military, civil and traditional authorities and private operators in DRC.

Local institutions

While the social dimension of resource management is an important hangover from the community participation euphoria, Dubois (1997) suggests that political negotiation has emerged as a more sophisticated way of understanding the relationships between people and natural resources. Increasingly, the political character of natural resource management *"requires negotiations between institutions which represent all existing interest groups and especially the weaker ones"*, such as community groups, who often do not have access to information and resources to negotiate successfully with external actors (Dubois, 1997). Similarly, to deal with the divergent interests of multiple actors within and outside communities, Agarwal (1997) suggests that the political processes amongst actors should become the focus. Box 7.1 shows his conditions for community-based conservation.

Taking this more political and institutional approach, Chapters 2 – 6 outline the range of organisations that are involved in wildlife management and describe the incentives and disincentives for each of them in supporting a partnership approach.

Box 7.1. Moving towards community-based conservation

- Representative and accountable local institutions
- Regular and open elections within local institutions
- Local metering, monitoring and sanctioning
- Control over resources by community institutions
- Federated organisations of community user groups.

Source: Agarwal, 1997.

For example, Chapter 2 analyses the balance of power in managing wildlife resources which, *"even in the most remote parts of West and Central Africa, interest a broad spectrum of players for their economic, biodiversity and social values"*. In Niger, newly established decision making bodies provide an opportunity for local voices to be represented at a regional level in resource management (Chapter 5), fulfilling many of the conditions for collaborative resource management, as outlined in Box 7.1.

The forest management institutions established in Cameroon to comply with the 1994 Forestry Law also come close to fulfilling the 'institutional solutions' to the challenges of wildlife management (Chapter 3). The Cameroon case study shows how alliance building has helped develop consensus amongst different institutional agendas. The new legal entities established in villages around Kilum-Ijim Forest have started from the precedent of working with existing groups, not trying to usurp their role. This has meant developing trust amongst, and defining different institutional roles and responsibilities for, the existing forest user groups, traditional administrations and novel forest management institutions. The case study from the Okapi Wildlife Reserve in DRC makes similar recommendations about the importance of balancing the interests of novel and traditional institutions (Chapter 4).

Traditional administrations

Within local communities, traditional administrations can play an important role in managing wildlife although *"they are often ignored in formal planning and implementation"* (Murphree, 1994). The male-biased and undemocratic nature of traditional organisations means that novel, elected organisations are often seen as the 'ideal' development solution. However, the case studies from Cameroon, DRC and Nigeria show the specific rationale for why traditional organisations are seen as appropriate for taking a key role in wildlife management, not fully representing 'the community' but as a legitimate community group. In each case the traditional administration has the capacity to manage wildlife resources, having established systems for metering, monitoring and sanctioning natural resource use and often an historical mandate for natural resource management (Chapters 3, 4 & 6). Additionally, the traditional administration may have a legal mandate, constituting one of the lowest devolved levels of government (Chapters 4 & 6).

In each case study, the authors show how the traditional administrations are working with a range of other community groups and external actors, including civil, wildlife and military administrations. The Cameroon case study also shows how the blending of traditional and novel institutions has revitalised traditional administrations and reinforced their traditional role as custodians of natural resources (Chapter 3).

The Sarkin Fulani of Chappal Hendu enclave, Gashaka Gumti National Park, Nigeria. The Sarkin Fulani represents settled and nomadic pastoral groups on the Traditional Council that acts as a bridge between the government and local people. Members of the Traditional Council are appointed jointly by the traditional chief or Lamdo and the Local Government.
Picture: Andrew Dunn

The relationship between traditional and novel institutions is important as it is increasingly recognised that although women are often primary users of natural resources, they rarely have direct representation or decision-making in natural resource management through the existing organisational structures. Maguire (1996, in Guijt and Shah, 1998) notes: *"'the community' [is] all too often the male community"*. This is certainly the case for traditional administrations and often for other formal institutional structures at the local level. By contrast, novel institutions and coalitions of community user groups offer groups previously marginalised from decision-making, including women but also migrant people, the opportunity to influence the rules of engagement for the collaborative management of wildlife resources (Chapter 3).

Chapters 3 - 6 demonstrate the importance of looking at who has the capacity to manage wildlife resources at the local level. The influence, respect and legitimacy of traditional administrations in most of our case studies, both locally and nationally, means that community wildlife management can be ineffective where these groups are excluded (Chapter 4). Furthermore, the Cameroon case study shows how traditional administrations can be an entry point for collaborative wildlife management, opening up local dialogue and developing opportunities for moving towards more democratic and inclusive structures for natural resource management (Chapter 3). However, the efficacy of traditional and customary organisations must be evaluated according to the same criteria as any local institution (Little, 1994).

Non-local institutions

However, not all institutions are local and the ingredients for success in Box 7.1 fail to take account of the wider influences on wildlife management. Alliance building must occur both horizontally amongst local resource users and managers and vertically if sustainable partnerships for wildlife management are to be established. Decisions regarding the management of wildlife resources are often taken in places remote from resources users and in ways that perplex local actors. This is demonstrated by the time it takes to process community forest applications in Yaoundé, Cameroon (Chapter 3), the centralised allocation of mining concessions in Okapi Wildlife Reserve, DRC (Chapter 4), the reduction in field support by an international conservation NGO at Garamba National Park, DRC (Chapter 4), the capture of giraffes as gifts for neighbouring governments, Niger (Chapter 5) and the failure of the National Park Service in Nigeria to ratify enclave agreements after they had been negotiated with local people (Chapter 6). Decisions such as these undermine local efforts to develop partnerships for managing wildlife resources. Furthermore, they suggest that the balance of power is tipped away from the local level towards the interests, decisions and influences of government headquarters, more powerful government departments, conservation organisations and the private sector (Chapter 2).

This is a depressing prospect for wildlife managers who, based in places remote from the policy making centres, often feel powerless to make headway within their own organisations, let alone contribute to a comprehensive national strategy for managing wildlife resources.

The development of partnerships for managing wildlife resources requires much greater investment in time, resources and trust-building resources than a purely

community-based approach. It also requires advocacy using both direct policy negotiation and indirectly, through the pressure of alliances of local groups, NGOs and movements, a tradition which is much stronger is Latin America and Asia than in Africa (Little, 1994). Devolution has the potential for ensuring greater local representation in legislative decision-making (see below) although the activities of external actors, including the private sector, conservation organisations and donors, are often unaccountable to the local level.

Chapter 2 describes the national and local, and individual and collective, interests which governments must balance, illustrated by an example of forestry and large scale timber extraction in Côte d'Ivoire. Chapter 3 shows how the Cameroonian government has tried to deal with competing interests for forest-based revenue by developing different types of forest areas, from logging concessions to community forests. However, there remains a difference between drawing up a national policy, which is often supported by an external agency, versus having the commitment to implement it and ensure that the priorities of remote local populations are balanced with the immediate and pressing influences of other interests.

Decentralisation

Different forms of *de jure* and *de facto* decentralisation of wildlife resources (Chapters 1 & 4) offer opportunities for balancing local and non-local interests in wildlife resources. The Niger case study describes attempts to link the management of wildlife resources to the formal processes of decentralisation to achieve the goals of rural development (Chapter 5). The case study from DRC represents the opposite end of the spectrum, whereby instability and the decline of the state have resulted in a *de facto* decentralisation of wildlife management to a range of civil, military and traditional authorities (Chapter 4). In both cases, achieving economic growth through realising the value of a number of resources, including wildlife resources, is a more important objective than conservation of wildlife resources. What is important from a sustainability perspective is that these forms of indirect wildlife management can have local checks and balances that avoid depletion of wildlife populations, either through elected organisations, as in Niger, or the informal systems of control managed by civil, military, wildlife and traditional authorities, in the DRC. However, as noted in Chapter 2, the formal processes of decentralisation being advocated in the region are developing slowly and are yet to become *"normalised i.e. making it easy for rural communities to negotiate and make their rights to do so permanent"*.

7.3.2 Political context

The four country case studies show very different degrees of political commitment towards more collaborative forms of managing wildlife resources. At one end of the spectrum are Cameroon and Niger, which are experimenting with policies which promote devolved forms of management and decision making – although this may be influenced, at least in part, by external interests (Chapters 2, 3 & 5, IIED, 1999). In Cameroon, this is confined to the forestry sector while in Niger localised decision making extends across rural development. In both these countries, important *de jure* steps towards developing new partnerships for managing wildlife resources have been made - although both case studies show how slow is the process of democratising resource management, and how costly it is, in terms of time and

institutional resources. Political will does not mean that practice will change, or change very quickly. Indeed where policies are strongly influenced by external agencies, the policy process may stall once the policy has been drafted and little concerted implementation may take place.

At the other end of the spectrum is Nigeria, which has had a recent history of centralised decision-making. This has precluded localised decision making, particularly with regard to national parks, which, as in many countries, have a centralised mandate in Nigeria. Recent political changes in Nigeria offer hope for more collaborative management of national parks, enabling each park to present management proposals which respond to local realities (Chapter 6).

DRC is an interesting example of where political will has had little influence over wildlife management. The case study shows how local systems of wildlife management have evolved to fill the vacuum created by a declining state (Chapter 4). Dysfunctional political structures in DRC have strengthened the capacity of local institutions. These institutions do not have an explicit objective to manage wildlife, but rather to create stability through demilitarisation of an area, which can result in reduced offtakes of wildlife as an important spin-off.

Looking to the future, DRC shows signs of following other Central and particularly West African states in committing to decentralisation, particularly in regard to protected area management. The case study shows two impacts of conflict, first in undermining *de jure* processes of decentralisation, and second, in promoting *de facto* forms. However, there may be convergence between these two processes as the innovative administrative structures and relationships which have developed at the local level during political instability may eventually gain national recognition, showing how practice can inform political will and ultimately policy change (Chapter 4).

7.3.3 Legal and policy context

All the case studies highlight the importance of national level policy in impeding or facilitating collaborative management of wildlife resources. Enabling policy in Cameroon comes in the form of the 1994 Forestry Law which makes provision for community forests, enabling local communities to benefit from forest management. This legislation has enabled several initiatives, including the Kilum-Ijim Forest Project described in Chapter 3, to begin to facilitate the process of establishing legally recognised forest user groups, giving greater security to local communities. Similarly in Niger, new opportunities for wildlife management are offered by the decentralised rural development policies (Chapter 5).

In DRC, national park legislation explicitly precludes local wildlife utilisation. However, DRC's protected areas have a long history of supporting the sustainable use of resources by resident communities. At Garamba, three hunting reserves around the national park were established in the 1930s to cater for the subsistence use of natural resources by the local communities. In the current context of collaborative wildlife management, this seems progressive legislation. The recent gazettement of Okapi Wildlife Reserve means that legislation is in place that recognises the existing Bantu and Bambuti residents as legitimate users of the

reserve's resources. However, economic decline and instability in Congo mean that *de jure* legislation has been difficult to implement. This has led to de facto systems of wildlife management being developed (Chapter 4).

By contrast, the lack of enabling policy in the Nigerian context prevents the development of a long-term conservation approach that instils security among residents. Gashaka Gumti was declared a national park in 1991 under the National Parks Decree Number 36 which considers all people resident in a national park to be illegal. This poses a problem for the approximately 3000 people living in settlements within the national park because, while accepted locally as an integral part of the park, their presence is technically illegal. Their insecurity of tenure is highlighted by the comment of one resident: *"It is like a marriage from which the love has gone out. Sooner or later the wife knows that she will have to leave"* (Chapter 6). Political reform in Nigeria offers opportunities for providing greater security to these residents in return for enlisting their support for park protection.

Beyond policy

Although an enabling policy environment seems important for developing the modalities of collaborative management of wildlife resources, this is only a first step or an *"opening of the door"* (MINEF, 1998). Legal texts can often be ambiguous and novel legislation is not without its loopholes and inconsistencies. The 1994 Cameroonian forestry legislation has been particularly criticised in this regard (Egbe, 1997). Additionally, novel legislation must be well understood by users or *"dubious bureaucrats prefer unscrupulous interpretations which will give them power, money and prestige"* (Egbe, 1997). To this end, a manual outlining the procedures for establishing and managing community forests under the new legislation in Cameroon was developed (MINEF, 1998, Chapter 3).

Beyond legal inconsistencies, implementing policy is a challenge in itself. The Cameroon case study provides important insights into how to interpret policy at the local level (Chapter 4). Often it is important to translate legal texts into local languages as a first step in informing local people of new rights and responsibilities (see Péneton, 1997 for Eastern Cameroon, Dubois, 1997).

Furthermore, it is important that the policy cycle is seen as a dynamic process and that field experience is evaluated to inform and reform policy. As Kotey et al. (1998) note in regard to Ghanaian forestry policy, it is important that policy is continually refreshed from practice: *"policy works when the 'wheel' of data collection, consultation, policy formulation, implementation, monitoring and evaluation can be continually kept in motion"*. Dynamising the policy sector, and maintaining the policy review process, is a challenge faced in all four of the country contexts. It is particularly valid in countries, like Cameroon, where legislative reform is supporting *"untried and unknown entities"* (MINEF, 1998) and/or where policy has been developed with high levels of external support.

Clearly, institutional reform needs to track political and legal reform, but can be much more difficult to change. Chapter 3 highlights the real investment needed to implement the enabling forestry policy in Cameroon, particularly in terms of developing institutional commitments and capacities amongst civil, traditional and forestry agencies. From another site in Cameroon which has experimented with

establishing community forests, Pénelon (1997) states: *"The work of preparing the application of a community forest requires the mobilisation of a great deal of resources...It is, therefore, somewhat utopian to speak of these community forests as a tool within the reach of rural people wishing to manage their own resources"*. As noted in Chapter 2, new policies mean new ways-of-working and new skills, which foresters and wildlife managers may only now be beginning to come to terms with.

7.3.4 Economic context

The big picture

Chapters 2 -6 demonstrate the influence of the macro-economic environment on the management of wildlife resources. From slumps in coffee prices precipitating forest clearance in Cameroon, the collapse in oil price signalling the beginning of economic downturn in Nigeria, political instability slowing administrative reforms in Niger, to war in Congo undermining tourism and conservation efforts, the larger national, regional and international context impinges heavily on progress towards developing partnerships for wildlife management. Many of these processes are beyond the control of local people and local wildlife managers and represent the stochastic nature of wildlife management. But they show the importance of buffers and contingency plans to deal with unpredictable changes in pressures on natural resources. As the study from DRC shows, it can be important to have high dependence on local administrations, as these are often the structures that survive periods of instability, uncertainty and conflict (Chapter 4).

Tourism

Tourism is often hailed as a way of linking local communities to the benefits of wildlife protection (Chapter 2) but the case studies suggest limited economic potential for developing international enterprises around wildlife resources. This is for a number of reasons: remoteness of the site, lack of infrastructure, the limited or specialised nature of the wildlife resources, and political instability (Chapters 3 – 6). Although more tourists are visiting developing countries and taking part in nature-based tourism than ever before, recent research suggests that tourism has failed to meet all the costs of protected area management, let alone the opportunity costs of land conversion in the Congo basin (Wilkie and Carpenter, 1999a).

While Wilkie and Carpenter provide a damning picture of tourism as a viable option for sustainably financing protected area management in Central Africa, their conclusions should be qualified. Their analyses reflect a regional context of risk and instability that influences the economy as a whole and is not specific to tourism. Viable options for generating revenue from wildlife resources are scarce, and therefore tourism must be assessed as part of an overall portfolio which seeks to optimise the local and global value of the resource rather than meeting all the costs of conservation on its own. Furthermore, the revenue tourism generates can be significant to local people as it provides an additional cash source of income (Chapters 3 & 5), and spin off industries, such as the craft making associated with giraffe tourism in Niger (Chapter 5).

Only one of the five sites studied currently has a functioning tourism industry (giraffe viewing in Niger), although Chapter 5 highlights the limited number of people who currently benefit from it. The attraction of the Bambuti ('pygmies') and

the chance of seeing okapi brought relatively high numbers of tourists to the Okapi Wildlife Reserve in DRC prior to the conflicts – and this was with low levels of investment in infrastructure (Chapter 4). It is this combination of cultural attractions and unique and charismatic species, such as okapi, lowland and mountain gorilla and bongo, that make tourism a potential local industry. But as Wilkie and Carpenter (1999a) suggest, other conditions also need to be fulfilled (Box 7.2) if tourism is to become a major source of revenue. Few of the initiatives described in the case studies meet these conditions. Thus, while tourism revenue should be explored in an opportunistic way, Chapters 2 – 6 suggest it may not always generate significant local and national revenues from wildlife resources.

Box 7.2

Tourism is only likely to be a major source of revenue for a protected area if it:

- has unique and charismatic species
- can provide guaranteed wildlife viewing
- is close to an international airport or major tourist centre
- offers easy (short), comfortable and safe access
- provides high standards of food and accommodation
- is close to other tourist attractions such as beaches and cultural features
- offers unique landscapes, and
- is moderately inexpensive.

Source: McNeely et al, 1992 in Wilkie and Carpenter, 1999a.

Safari hunting

Safari hunting may offer greater revenues than tourism. This is discussed, but not realised, in Chapters 4, 5 & 6. The more robust nature of hunters compared to tourists means that they are prepared to travel for long distances and endure greater hardship, meaning that safari hunting does not have to meet all the conditions set out in Box 7.2. While the revenues from safari-hunting are high, problems of security hampered efforts to develop this in Congo (Chapter 4). Wilkie and Carpenter (1999b) suggest that the problems of repeat visits and the relative high cost of hunting in Central Africa may impede the development of this as a source of wildlife generated revenue. However, cost is rarely an issue for sport hunters who prioritise access to unique trophies (such as bongo and giant eland) over financial considerations. The region also has a captive francophone market whose hunting opportunities elsewhere in Africa are linguistically challenged (Tello *pers. comm.*).

Generating local value

On a more pragmatic level, local initiatives, such as harvesting the bark of *Prunus africana* in Cameroon (Chapter 3), trading in bushmeat in DRC and Nigeria (Chapters 4 & 6) and selling fuelwood for the urban market in Niamey, Niger (Chapter 5, IIED, 1999) make significant contributions to people's livelihoods. But mechanisms must be put in place to ensure firstly, that there are ways of limiting offtake so that harvesting can be sustainable, and secondly that benefits accrue to local people. Chapter 4 shows how the value of traded bushmeat in DRC accrues to wealthy, non-residents and new residents. Chapter 3 shows how community forests in Cameroon offer a way of regulating access and adding value to local people's livelihoods through trade in forest products.

In addition to resources that are traded, Chapters 3 – 6 show the high value that people attach to the subsistence use of natural resources for food, energy and medicine. It is important that these sometimes 'hidden' values are articulated or alternative land-use options can have a spuriously inflated value. For example, a study in the Hadejia-Nguru wetlands in Nigeria showed that local livelihoods depend heavily on the wealth of wild resources harvested from the floodplain, including doum palm, potash, firewood and wildfoods (IIED & HWNCP, 1997). These findings strengthened previous studies that suggested that the economic returns from just farming and fishing in the floodplain were more favourable than existing and planned water developments that divert water from the wetlands (Barbier, Adams and Kimmage, 1993, in IIED & HWNCP, 1997).

Livelihood approaches, which attempt to twin conservation of natural resources with the development aspirations of local people, are described in Chapters 3, 5 & 6. Improved farming and grazing techniques and the development of new markets for

Collecting firewood at Chappal Shirgu enclave, Gashaka Gumti National Park, Nigeria. Fuelwood is important for cooking and heating in the high altitude enclaves. Picture: Andrew Dunn

natural resources, such as honey, have been introduced in Cameroon (Chapter 3). Soil and water conservation techniques and fuel efficient stoves are the focus in Niger (Chapter 5). Compensation measures, including roads and clinics, have been developed at Gashaka Gumte, Nigeria (Chapter 6).

Evaluation of the livelihoods programme at the Kilum-Ijim forest, Cameroon, which has been running for more than a decade, shows that livelihood activities can have a conservation impact by helping to change people's attitudes towards and use of forest resources (Chapter 3, Abbot et al, 1999). This finding has important implications for the management of wildlife resources, particularly where opportunities for international enterprises, such as tourism and/or sport hunting, are limited. Livelihood approaches are also important when thinking about the beneficiaries of improved resource management. Marginalised groups, such as women and poor people, are often primary resource users and are able to benefit directly from approaches that improve local livelihoods (Abbot et al, 1999).

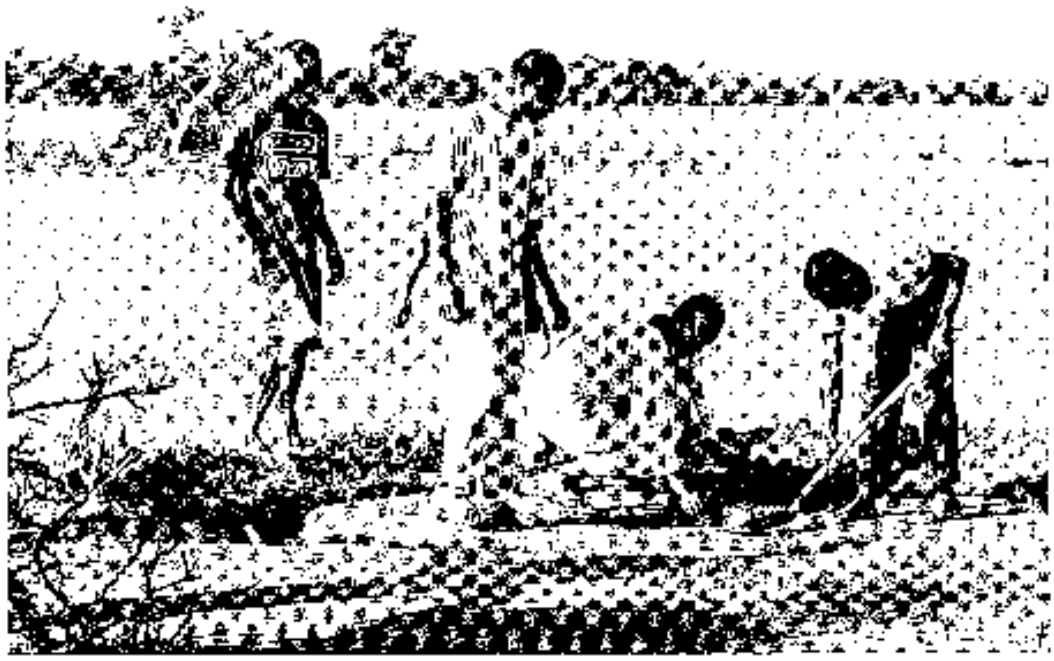
7.3.5 Ecology

Diverse contexts

Ecological factors are important in determining the distribution, productivity and diversity of wildlife resources. Wildlife poor areas in the drier regions support a large rural population. Wildlife resources in the more humid areas tend to correlate with relatively low rural population density but have a more discrete national and international value that can be captured by individuals or groups (Chapter 2).

Undoubtedly, the commercial value of the resource base greatly affects the incentives for promoting more local forms of wildlife management. In Niger, the low wildlife abundance and diversity means that there are few options for managing the

Beekeeping is a traditional activity at the Kilum-Ijim Forest, Cameroon and the white honey that is produced is highly valued. The livelihoods project has helped improve the hives, through the Kenya-top bar hive pictured here, and through processing and marketing. It has also introduced bee-keeping to sectors of the communities which do not traditionally keep bees, notably women. Picture: D.H.L. Thomas



Soil and water conservation activities have helped improve people's livelihoods in the transition zone to the 'W' Region Biosphere Reserve, Niger. Picture: Nico Barning, SNV

resources. But, the sparse wildlife must compete with high-density human populations, who herd their animals in the woodlands and clear woodlands for farming. The revenue that can be generated from the small population of giraffes is not sufficient to support the large human population, hence the project has placed increasing emphasis on supporting local livelihoods through the sustainable use of natural resources (Chapter 5).

By contrast to the Sahelian vegetation, the rich montane and tropical forests further south offer many more management opportunities to governments, the private sector, conservation and donor agencies and local people (Chapter 2). In these areas, wildlife management must compete with, for example, mining concessions from the national level (Chapter 4) and grazing and farming at the local level (Chapters 3 & 6).

Understanding impacts

Collaborative management often implies bringing together previously opposing actors, such as local communities and wildlife managers, and it is therefore important to understand the difference between real and perceived threats to animal ecology. The 'human threat' to wildlife resources is often not clearly articulated or understood. For example, Chapter 4 showed that human residency per se does not necessarily have an impact on animal populations. In the Okapi Wildlife Reserve and Garamba National Park, the threats to wildlife resources stem from non resident populations and from the absence of enforcement of wildlife regulations. This suggests that the presence of local populations can be compatible with wildlife conservation providing there is effective enforcement – a role that the local residents can play a role in upholding. Garamba National Park shows how traditional administrations, who govern populations resident in the hunting reserves, have been instrumental in the recovery of automatic weapons which are used by non-local

hunters (Chapter 4). While eviction has been a cornerstone of past conservation policy, Chapter 4 shows that this can be counter-productive: eviction implies the removal of local administrations who can be instrumental in controlling unsustainable offtakes by non-residents. Enclave residents in Gashaka Gumti National Park have also played a role in limiting wildlife offtakes from non-local populations (Chapter 6) but also bring new challenges for protected area management, including disease transmission from domestic to wildlife populations, habitat conversion and unsustainable fuelwood use.

Self sustaining regulations

Of key importance to conservation management is the abundance and hence the economic value of wildlife resources. The case studies from DRC show how high value resources can potentially generate sufficient revenue to fund sustainable management without external intervention (Chapter 4). This could occur through taxing the bushmeat trade and using the revenue to enforce regulations concerning wildlife offtake. In the absence of resources of sufficient commercial value, Chapters 3 and 5 show how external intervention can encourage the sustainable intensification of local livelihoods and the development of new income generating opportunities that are compatible with conservation management. However, there are sufficient incentives for the new forest management institutions in Cameroon to regulate the offtake of important subsistence resources, such as fuelwood, medicinal plants and wild vegetables (Chapter 3).

Sustainable offtakes and wildlife monitoring

Chapter 2 outlines the difficulties in measuring sustainable offtakes, particularly for complex assemblages of species. These challenges are accentuated in both dense forest and unpredictable environments of the region. Whilst sustainable yields have been prominent in the applied ecological literature, they are based on mathematical models and remain largely theoretical (see Chapter 2). In their place, the identification of mechanisms for regulating offtake are emerging as key factors determining the viability of wildlife utilisation as a tool for conservation. The commodity chain developed in Chapter 4 identifies local institutions and the power relations between them that regulate wildlife offtakes. This understanding underpins the achievement of sustainable yields but requires effective monitoring to ensure sustainability in the longer term.

Wildlife monitoring has been the preserve of wildlife technicians and there are few examples in the region of the adaptation of these methods for use by local actors, although Chapter 5 describes how local people form a key part of the giraffe monitoring in Niger. This linking of management and monitoring at the local level provides a basis for sustainable wildlife management. However, the systematic monitoring of wildlife populations is rarely happening alongside community wildlife initiatives making it difficult to assess the conservation outcomes of collaborative management (Chapter 2).

7.4 Conclusions

Chapters 2 – 6 have highlighted the many innovative forms and diverse contexts in which collaborative management of wildlife resources in Central and West Africa is taking place. The diversity in approaches perhaps reflects the diversity of the region

and highlights the need to draw on local opportunities as much as global models for managing wildlife resources.

The preceding chapters demonstrate the numerous incentives for developing partnerships for managing wildlife resources that exist, but also the many constraints towards implementing more collaborative approaches. The title of this publication, *Promoting Partnerships*, reflects the importance of bringing together competing interest groups, and negotiating amongst them, to move towards collaborative management of wildlife resources.

Our findings concur with those of Dubois (1997), that we must move beyond a simple interpretation of community, and understand that participation in management of natural resources *"should be accompanied by the development of mechanisms which allow for the negotiations of stakeholders' roles. This implies changes in existing power structures"*. This shift in focus, to broaden from the community to a range of local and non-local actors, has implications for the implementation and skills-base of those implementing these approaches.

The following are the key conclusions generated from Chapters 2 - 6:

Community wildlife management is better understood as collaborative management of wildlife resources

A range of both plant and animal resources contributes to local livelihoods in the region and thus the term wildlife resources has been chosen to encompass wildlife and the habitats on which it depends.

Our studies suggest that the divide between the community and external actors is blurring and there are few examples of communities managing wildlife resources in isolation from a range of other actors. This means that negotiation between different institutions with different roles and agendas in resource management becomes key. Dealing with different institutional agendas is not easy: it requires time, high levels of trust and a flexible approach. Emphasis must be placed on ensuring that those in the weakest positions, in terms of access to information and resources, have an equal footing in the negotiation process and are not marginalised by more powerful groups.

The community is better understood as a number of local interest groups amongst which management must be negotiated

Community is a problematic term. Many 'communities' in Central and West Africa defy definitions based on spatial criteria or homogeneous social units. People in Central and West Africa are often on the move, either in search of economic opportunities, as part of seasonal migration patterns or as the result of conflict. 'Community' is better understood as a number of common interest groups amongst which management of wildlife resources must be negotiated. This definition promotes a more inclusive approach to identifying local resource users, emphasises the often competing nature of different interest groups and initiates a process of negotiation to resource access and management. Such an approach ensures that resource users who are not well linked into decision-making structures, such as

women or seasonal harvesters, are able to contribute to resource management decisions.

In some contexts in Central and West Africa, traditional administrations can play an important role, as a legitimate community group with the capacity to manage wildlife resources

Three of the country case studies show the important role that traditional administrations can play in managing wildlife. Often, these institutions have both an historical mandate and the capacity to establish and maintain harvesting rules. It is important, however, that the traditional administration is seen as an important local interest group that can contribute substantially to resource management, and does not replace or usurp other interest groups. This is because these institutions are rarely democratic or gender balanced and where they have exclusive control can reinforce local power structures. However, where there is strong local and national respect (and/or a mandate) for these administrations, then it can be important to harness their powers, and sustainable resource management can be undermined when they are excluded.

Meeting the costs of the collaborative management of wildlife resources.

The costs of collaborative management can be met either locally (from the economic value of the resource) or globally (from the international community's willingness-to-pay for Central and West African wildlife resources). Conservation through the generation of local revenues from wildlife resources is more sustainable as it does not depend on external support. However, it requires careful management to ensure that it contributes to conservation management as well as economic growth. Where wildlife resources are of insufficient local value, external support can help create the conditions under which conservation management can occur. In both cases, collaborative management must ensure that the financial revenues are invested in local stakeholders for the conservation of wildlife resources.

An enabling policy environment facilitates collaborative management of wildlife resources, but must be tracked and driven by institutional reform.

Enabling policy provides a framework within which collaborative management of wildlife resources can develop. New policy, and that developed with heavy influence from external agencies, rarely meets all of its objectives but provides a starting point. Policy development should be seen as a dynamic, on-going process.

For policy to work, two conditions must be met. First, people at all levels from implementing ministries to resource harvesters must be aware of new policy and its implications for them. Second, people at all levels need to have the appropriate skills to implement policy. Often, new policy requires new skills or ways of working and institutional reform must both track and feed into policy reform. The *de jure* and *de facto* decentralisation processes that are occurring throughout Central and West Africa provide new opportunities to develop new policy and institutional arrangements for the collaborative management of wildlife resources. However,

sufficient resources also need to be invested in developing the capacity of implementers to work in new ways, which are often different to the environment in which they were trained.

Many of the opportunities for realising the value of natural resources are local, and approaches that support local livelihoods can bring important benefits to users of wildlife resources. International enterprises, such as tourism, may have more limited potential in the region.

Opportunities for realising the value of wildlife resources, for example through tourism and sport hunting, may have only limited potential in Central and West Africa. There are specific contexts, high in unique biodiversity or cultural attractions, where tourism can generate local revenues. But instability and poor infrastructure suggest that these enterprises are unlikely to add value to local economies to the same extent as can occur in other regions, such as southern or eastern Africa or south Asia.

Interventions that support local livelihoods through enhancing subsistence technologies and developing income generating opportunities appear to offer important ways of enabling local people to realise the benefits of wildlife resources. Furthermore, livelihood activities can be targeted to ensure that those whose livelihoods depend heavily on natural resources, such as women, poor people and migrants, can benefit from improved management.

7.5 Recommendations

Our study makes the following recommendations for better developing the collaborative management of wildlife resources in Central and West Africa.

1. *Maintaining and monitoring objectives.* The overall objective of collaborative management is the conservation of wildlife resources through the development of incentives for stakeholders to sustainably manage them. Implementing agencies should maintain this clear remit and be evaluated according to the conservation and livelihood outcomes of collaborative management. Improved monitoring of community wildlife initiatives is a prerequisite for the outcomes of collaborative approaches to be assessed.
2. *Legislative and policy framework:* National and local policy must be reviewed to promote an enabling environment for the collaborative management of wildlife resources. The aim of policy reform should be to provide a framework which recognises local wildlife managers and their ability to adapt legislation to complex and dynamic local circumstances. Such a framework should be seen as a first step in building innovative alliances which form the backbone of collaborative management. A failing of past processes has been the lack of political commitment at the national level to any reforms. To address this, policy reform must adopt a principle of subsidiarity whereby as much legislative power is devolved to wildlife managers as can be addressed at the local level.
3. *Communicating policy:* The collaborative nature of managing wildlife resources has implications for who needs to know about policy. New policy must be properly communicated vertically and horizontally to a broad range of

stakeholders, from farmers and traditional leaders to extension officers and ministers – both within and outside natural resource departments. Resources need to be allocated to ensure that the necessary workshops, roundtables and translation take place so that all interest groups can help develop policy and understand the implications of it for them.

4. *From practice to policy:* Policy development must be seen as a dynamic process and an effective policy environment is best developed through reviewing practice. There is extensive and long-term field experience in diverse contexts in the region from which to draw but new ways of learning about, and sharing, the impacts of policies that support the collaborative management of wildlife resources must be found. In particular, methods of promoting feedback between policy makers and practitioners should be encouraged. Given the instability of some countries in the region, the generally poor communication and the diversity of international languages (French, English, Spanish and Portuguese) innovative forms of information sharing should be developed. These should help policy makers to learn about the potential and pitfalls of policy development, and practitioners to learn how to interpret and implement policy at the local level. Multi-stakeholder fora are needed but mechanisms for initiating and maintaining dialogue between different groups are in their infancy and new inclusive processes need to be found at both national and local level[6].

5. *Developing capacity:* To achieve the collaborative management of wildlife resources, capacity must be developed within implementing institutions (e.g. civil, wildlife, traditional and community administrations) to facilitate negotiations between different, and often competing, interest groups. Following Dubois (1997), we suggest that capacity development must occur in two ways. First, developing capacity for negotiation, ensuring that a level playing field exists amongst competing interest groups. This means supporting the weakest interest groups, often local or community-based, and ensuring they have access to resources and up-to-date information to negotiate from a position of strength. Second, collaborative management of wildlife resources is a long term endeavour, and skills and systems for building and maintaining relationships, including trust, transparency, accountability and conflict resolution must be developed within and between interest groups.
6. *Reinforcing not usurping institutional roles:* A large number of institutions are already involved in the management of wildlife resources. Any initiative to support or enhance this management should start with an assessment of these institutions and build on existing structures, such as traditional administrations, local user groups, and commercial interests. A clear mandate and objectives for establishing novel groups must first be negotiated with existing institutions and complementary *modus operandi* developed. Where possible, alliances of local users and managers of wildlife resources should be supported to help shift the balance of power towards those with most to gain from secure and sustainable management of wildlife resources.

[6] Cf. Korcy et al's 1998 review of the conditions for sustainable forest management in Ghana

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The **Evaluating Eden** project's conceptual basis and earlier review of key issues in community wildlife management (CWM), which resulted in the **Whose Eden?** report (IIED, 1994), **Whose Eden?** focused mainly, although not exclusively, on experience in Africa, and was based largely on a review of literature. **Evaluating Eden** was initiated to take forward the debate on community wildlife management, by widening the geographical focus and looking beyond the literature.

The **Evaluating Eden** project is a collaborative research project supported by the Development Directorate (formerly the DGVIII) of the EC and the Dutch Ministry of Foreign Affairs–DGIS which aims to explore the myths and realities of community-based wildlife management. The project is coordinated by IIED with regional research teams from collaborating institutions in South and South-East Asia, South and Central America, West, Central, East and Southern Africa, Canada and Australia.

The **Evaluating Eden Series** contains reports from each of these regions together with individual case study reports and theme papers.

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