Revisiting Community Based Natural Resource Management: A Case Study of the Tchuma Tchato Project in Tete Province, Mozambique.

By

Anthony Michael Maughan Brown

Submitted as the dissertation component (which counts 50 % of the degree) in partial fulfilment of the requirements for the degree of Master of Science in the School of Environment and development, University of Natal.

Pietermaritzburg

1998

Plate 1: Welcome to Tchuma Tchato

Abstract

Community Based Natural Resource Management (CBNRM) is a paradigm that has emerged in response to the perceived failure of past approaches to conservation and development. CBNRM is intended to deliver socio-economic development to impoverished rural communities, who manage natural resources, and harness the utility of these resources as a vehicle for development.

This dissertation revisits the concept of CBNRM, using the Tchuma Tchato project at Bawa, Tete Province, Mozambique as a case study. A conceptual framework for a CBNRM project intervention is developed and used to analyse the Tchuma Tchato project. The role of external agents, and particularly the lead institution, is vital to a project intervention. It is shown that external agents need to be well organised, and they need to interact effectively as a team. External agents need to have the financial and human capacity, and an understanding of CBNRM to play a constructive and effective role in a time-bound project intervention. A project intervention must evolve from a top-down intervention into an autonomous CBNRM programme, that is sustainable, and that can contribute to a process of sustainable development and conservation after the end of a project life. In order to realise this, a project intervention must be rigorously planned and designed. This formulation is critical to the subsequent implementation and operation of a project. It is vital that a CBNRM addresses the key characteristics of CBNRM, and that in doing so, it delivers social, economic and environmental development to the targeted community.

Analysis of the Tchuma Tchato project at Bawa has elucidated that the project is floundering. Application of the conceptual framework to Tchuma Tchato has established causes for this. The primary cause is a weakness in the roles played by the lead institution and external agents. The project was not rigorously formulated. The project has not been effectively managed. The project has failed to address the key characteristics of CBNRM, and it is not contributing to a process of sustainable development. This analysis has facilitated the identification of remedial actions for Tchuma Tchato at Bawa, and recommendations for future CBNRM projects have been made.

Preface

The work described in this dissertation was carried out in the School of Environment and Development, University of Natal, Pietermaritzburg from July 1998 to December 1998 under the supervision of Prof. C. Breen of the Institute of Natural Resources, Pietermaritzburg.

This study represents original work by the author and has not otherwise been submitted in any form for any degree or diploma to any other University. Where use has been made of the work of others, this has duly been acknowledged using the referencing system of the South African Geographical Society.

The views expressed in this dissertation are my own.

Signed:

A.M. Maughan Brown

Table of Contents

Chapter 3: Literature Review and Conceptual Framework

Chapter 4: Method

List of Plates

List of Figures

List of Tables

List of Attachments

List of Abbreviations

DNFFB	Direccoa National de Florestas e Fauna Bravia
IUCN	The World Conservation Union
IDRC	International Development and Research Council
CBNRM	Community Based Natural Resource Management
CBCD	Conservation Based Community Development
CAMPFIRE	Communal Areas Management Programme for Indigenous Resources
CITES	United Nations Convention on International trade in Endangered Species
WWF	World Wide Fund for Nature
NGO	Non-governmental Organisation
ADMADE	Administrative Management Design
pers. comm.	personal communication
pers. obs.	personal observation
UNP	University of Natal, Pietermaritzburg
UNDP	United Nations Development Programme
SPFFB	Provincial Directorate of Wildlife and Fisheries

Acknowledgements

I would like to thank the following people and organisations for their contribution to this dissertation:

My supervisor, Prof. C Breen, for the support, guidance and time that he provided me (from all corners of southern Africa) during the production of this dissertation. I sincerely hope that your time has been worthwhile.

Ms Toni Bodington and Mrs Olive Anderson (Cartographic Unit, Department of Geography, UNP) for their help in the production of site maps.

Mrs Jenny Aitchison, for helping to source the work of a Mozambican artist - which is not easy.

The CSD and the University of Natal for the financial assistance towards the completion of this degree.

The Ford Foundation for generously sponsoring this research, and for affording me the opportunity of experiencing a beautiful part of the world, on a project which encapsulates the essence of the School of Environment and Development.

The management and staff of the Tchuma Tchato project in Bawa, for hosting me during my stay, and for providing the many insights into the Tchuma Tchato project.

Mr Piet Houggard for his generous assistance in hosting me at his beautiful camp at Kafakudzi, for his time devoted to transporting me around the project area, and for his help in arranging transport both into and out of Mozambique.

Mr Manasa Sibanda, a fellow student and friend, who was invaluable as an interpreter.

Mr Michael Murphree for his insights into the project and for assisting me to find this remote part of the world.

Finally, I am most grateful to my parents for their support and encouragement over many years of study.

Chapter 1

Introduction

Chapter 1
Introduction

1.1. Introduction

Chintopo ward in Magoe District, is located in the south west of Mozambique, in Tete province. The area is geographically isolated from Maputo, Mozambique's political and administrative centre (see Figure 1). The people living in Chintopo are socio- economically impoverished, they are mostly rural and they lead predominantly subsistence livelihoods on marginal lands (Murphree 1995). In Chintopo ward, there are no basic services such as water reticulation or electricity. (This is despite the fact that it lies adjacent to Cabora Bassa Dam, that was constructed to have enormous hydro-electric capacity). With the exception of a poorly equipped and under-staffed clinic, health care is non-existent. There are no official health statistics for the region, but malaria, AIDS and dysentery are very prevalent (Namanha pers. comm. 1998). Provision for education is basic, with only primary school facilities and no secondary schools in Chintopo ward. Illiteracy is very high, most women are illiterate, and those who do have an education have usually only had primary schooling (Namanha pers. comm. 1998; Wilson 1995).

The socio-economic impoverishment that is characteristic of Chintopo ward, is in many ways a microcosm that reflects the impoverishment of Mozambique at large. In 1994, annual income in Mozambique was only 88 US Dollars per head, and two thirds of the population were living in 'absolute poverty' according to the World Bank. The mortality rate of infants under five was estimated after the war to be 298 per 1000 and illiteracy was estimated to be 70% (Africa Watch 1992). It was the most indebted country in the world and also the most aid-dependent (Waterhouse 1996).

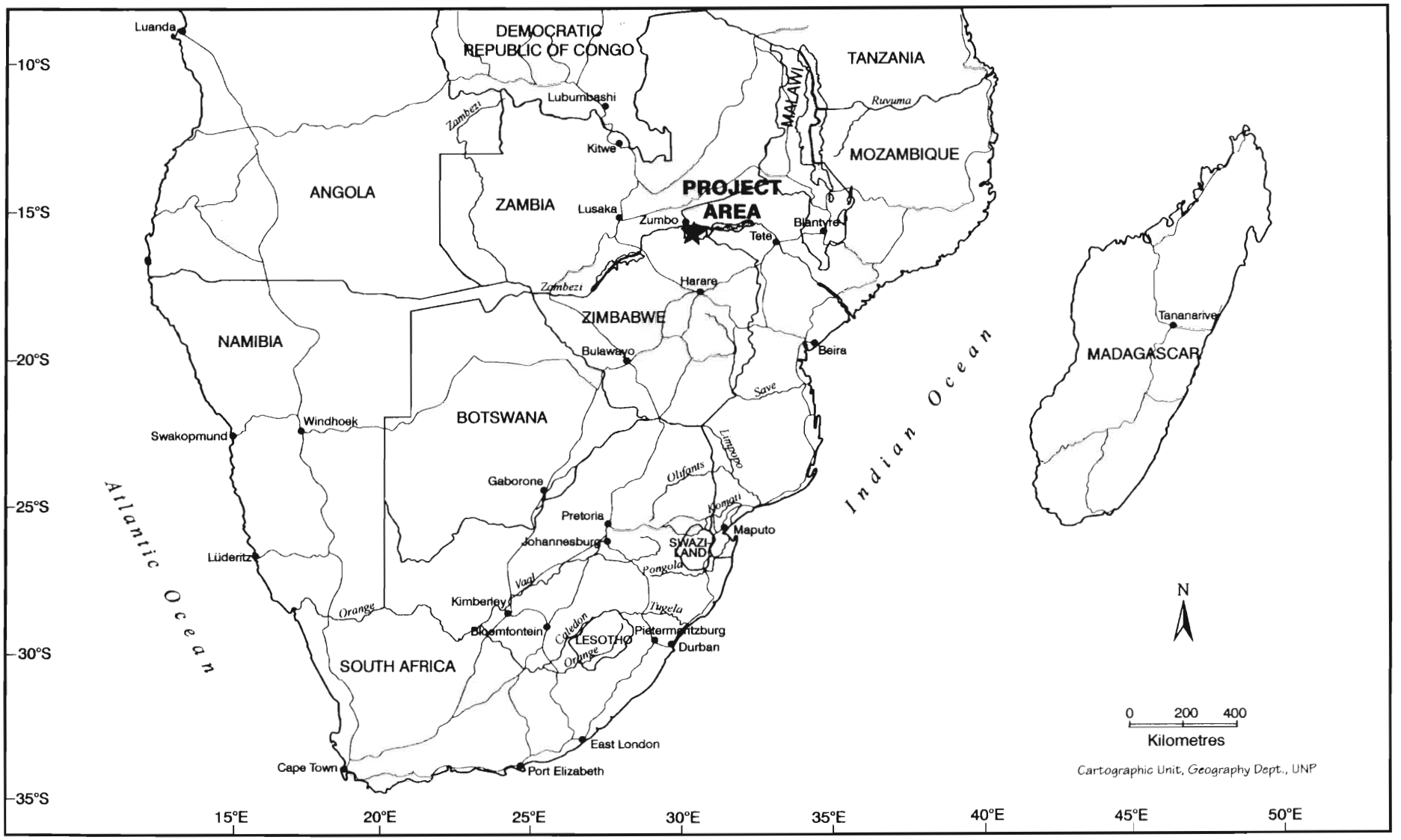


Figure 1: Geographical location of project area

In virtually every sense, Mozambique is socio-economically impoverished as a result of five centuries of exploitation and upheaval, which culminated in civil war between 1975 and 1992. The effects of the war are described in Africa Watch (1992, p.5):

"The total impact of the war on Mozambican society is literally incalculable. Tens of thousands have been killed in the war and hundreds of thousands by the associated hunger and disease. Much of the infrastructure of the society has been destroyed, and national income is at a lower level than before independence. Education has come virtually to a standstill, and an entire generation has grown up without knowing the benefits of even the most basic physical security, let alone social services or economic development".

Mozambique's people, and more specifically the people living in Chintopo ward, have suffered severely as a result of the country's turbulent past, and are in need of measures to alleviate their socio-economic impoverishment (DNFFB 1993; Namanha pers. comm.1998). Community Based Natural Resource Management (CBNRM) is a management strategy that has emerged in recent years, partly in response to the perception that past approaches to development practise in Africa have failed (Anderson and Grove 1987). A perception also exists that there is a need for a change in the orientation of conservation in Africa (for example, Steenkamp and Hughes 1997; Venter, Marais and Breen 1994). In theory, CBNRM offers a way of addressing the dire development needs in Africa, through socially responsible and inclusive conservation management, that utilises natural resources as a vehicle for development (Steenkamp and Hughes 1997). The Tchuma Tchato project at Bawa, is an example of a CBNRM strategy. The Tchuma Tchato project was established in Chintopo ward in 1994, and the project had the alleviation of socio-economic impoverishment as one of its primary objectives.

1.2. The origins of Tchuma Tchato

The Tchuma Tchato project has its origins in a 6 month field study undertaken by two DNFFB (National Directorate of Forestry and Wildlife) officers who were undertaking an assessment of the conservation status of the area on the southern shore of Cabora Bassa dam. The study focussed on the status and distribution of wildlife in the area, wildlife management needs and the nature of conflicts in the area (DNFFB 1993).

The research established that the area had significant wildlife populations concentrated to the west of the Musengezi (see Figure 2) (Murphree 1995; DNFFB 1993). This finding accorded with the fact that Piet Houggard had been operating a successful hunting operation (called Mozambique Safaris) in the area since 1988 (Houggard, pers. comm. 1998). It was also found that "significant conflicts" existed within the region. A range of conflicts existed between communities practising traditional resource utilisation, the private sector (Mozambique Safaris) which represented a more western-style approach to wildlife utilisation, and the government interests represented by local district administrators. It was established that the area had almost no basic infrastructure, and that the community was not utilising its environment sustainably (Namanha and Abacar 1993). The research recommended the establishment of a CBNRM project, as an urgent need to address the problems that existed in the area.

1.3 Distinguishing the Tchuma Tchato 'Project' ,'Programme' and 'Process'

In this discourse the words 'project', 'programme' and 'process' are used in reference to Tchuma Tchato. There are distinct differences between these terms which need to be clarified. It is important that these concepts are distinguished as the 'project', 'programme' and process' have distinct, but interlinking meanings.

As an outcome of the research undertaken by Namanha and Abacar in 1993, a proposal was developed by the DNFFB and the IUCN[1] (DNFFB 1993). The proposal had a number of components. It was developed foremost as part of a process to develop institutional capacity within the DNFFB. Years of civil war, on top of an already disruptive history, had resulted in the Wildlife Department having few resources (financial and human) with which to re-establish conservation management that had been neglected for many years in Mozambique. To a large extent, wildlife had been decimated by years of civil upheaval, protected areas had not been managed, and wildlife policy and legislation was either non-existent or antiquated and was certainly not implemented (Maputo 1996). The 'programme' refers to the broad objectives of the overarching Tchuma Tchato programme that includes institutional development of the Wildlife Department, policy and legislative reform, and the implementation of CBNRM projects.

The proposal was primarily directed at developing institutional capacity within the DNFFB at a national level, and of the SPFFB at a provincial level in Tete. According to the DNFFB (1993):

"The most important activity that this programme would undertake is the building of the capacity of the Wildlife Department to conceive and successfully implement community-based wildlife management programmes that support improvement (sic) of rural lives."

In addition it was stated by the DNFFB that (DNFFB 1993):

"The implementation of a pilot-project in south-western Tete will be a key opportunity for the Wildlife Department to learn practically the challenges of introducing community-based resource management. This can enable us to reflect creatively on policy, and to spread interest

[1]The IUCN were providing technical support to the DNFFB to develop institutional capacity, and re-establish conservation in Mozambique.

and enthusiasm about the opportunities available from these changes in policy. It can also provide the context for the research training under the staff development program";

and that (DNFFB 1993):

"The process of project implementation is one of mobilisation of rural communities and local government structures, and building their capacity for the management of their wildlife resources."

However, the proposal also recommended the establishment of the Tchuma Tchato CBNRM 'project'. The proposal recommended that a CBNRM project would offer the opportunity to utilise the wildlife resource of Magoe District to alleviate socio-economic impoverishment in Chintopo ward. The project was also seen as an opportunity to develop capacity within the DNFFB (DNFFB 1993). It was stated in the project proposal that (DNFFB 1993):

"Magoe District of western Tete Province contains one of the most significant wildlife populations in Mozambique. This resource has a high potential to [sic] improving the economic welfare of local communities and enabling rural development. This potential can be realised through Community Natural Resource Management of this wildlife resource. This potential combined with the need to develop and orientate a new generation of wildlife managers to the theory and practise of community resource management, forms the basis of this proposal. Through this three-year pilot project, Wildlife Department staff would, with the assistance from national and regional institutions, receive applied training in ecology, wildlife management, and social sciences. This would enable them to develop the first community natural resource programme in Mozambique. This would also equip the wildlife department with the staff required to develop and sustain such initiatives across Mozambique."

The focus of this dissertation is the Tchuma Tchato 'project', that refers specifically to the

CBNRM project which has been established at Bawa, Magoe District, Tete Province. The project was primarily intended to deliver socio-economic development to an impoverished community, to promote conservation management, to reduce conflict in the region, and to contribute to capacity building within the DNFFB.

A project is, however, by its definition (discussed more fully in subsequent chapters) a time bound intervention (Cusworth and Franks 1993). A CBNRM project should therefore serve a critical function of developing self sufficient and independent CBNRM process, as far as is possible. A project can not ever be sustainable because, by its definition, it involves the input of external capital (financial and human). A project should therefore aim to develop a self-sufficient process of CBNRM. A primary objective of the 'project' should be that the CBNRM develops towards an end point at which CBNRM becomes a community-based process. The 'process', therefore, refers to the involvement of the community in developing a programme of Community Based Resource Management and the evolution from a top-down project intervention to more autonomous, community-based, resource management.

1.4 Project location

The area selected for the Tchuma Tchato pilot project is demarcated as all the land west of the Musengezi River, and south of Lake Cabora Bassa, as far as the Zimbabwe border. The area is in the north-west of Mozambique. Administratively it falls within Tete Province, Magoe District and Chintopo Localidade. Figure 1 illustrates where the project is located within southern Africa.

1.5 Biophysical characteristics of the project area

The biophysical characteristics of the project area are important as they provide environmental constraints, such as a wildlife carrying capacity and marginal agriculture. These impact on CBNRM and they serve as parameters to some types of development (ie. agricultural

development)

1.6.1 Climate

The area is located within the Zambezi Valley. Climatically it is typically hot and dry with an annual rainfall of between 400 mm and 600 mm per year, and average summer temperatures above 32 degrees Celsius. There is summer rainfall between November and March and almost no rainfall for the rest of the year (Slater 1997; DNFB 1993). The climate of the region is an important environmental variable, as it contributes to marginal agricultural potential in the project area. This makes subsistence agriculture relatively unproductive, and offers limited earning potential. Settlement patterns in the project area are determined to a large extent by the narrow bands of fertile alluvial land along the river-ways, and access to water that these areas offer.

1.6.2 Flora

The predominant vegetation is Acacia and Mopane Savannah. Narrow bands of flood-plain vegetation occur along the Zambezi and the Lake shore and along other major rivers such as the Mpanhame and Musengezi (Murphree 1995).

1.6.3 Fauna

The wildlife in the area is critical as the utilisation of wildlife forms the foundation of the CBNRM project. According to the DNFFB, the area has been identified as containing some of the most abundant wildlife populations in Mozambique (DNFFB 1993). Many large mammals, including elephant, buffalo, hippopotamus, eland, sable, kudu, lion and leopard are found, as well as many species of smaller antelope, warthogs, monkeys, hyaena and wild dogs etc (Houggard pers. comm. 1998). The rivers and Cabora Bassa contain a number of fish species including barbel, bream, tiger fish, vundu and kapenta. There are also some 450 bird species in the area (Houggard

pers. comm. 1998).

Unlike many other parts of Mozambique, where the fauna was decimated during the war, the area contains a relatively abundant wildlife population. This is attributed to a number of factors which would include:

- Access to significant permanent water sources for wildlife;
- the area is bordered by protected areas in Zimbabwe and wildlife migrates through 'wildlife corridors' between Mozambique and Zimbabwe;
- there was a low level of conflict in the region during the war, meaning that wildlife was not exploited by soldiers and the area was also not mined. Such factors impact significantly on wildlife, both through direct loss of animals and through animals learning to avoid the region;
- Mozambique Safaris ensured a level of control over poaching, thus preventing the wildlife decimation that went uncontrolled in the rest of Mozambique during the war.

1.6 Legal status of land in the project area

By law the area is classified as an "open area" with no particular land use specifications. Mozambique Safaris does, however, have sole hunting rights in the area, through a concession which is granted in ten year intervals (Houggard pers. comm. 1998). The land is state-owned although the community has 'rights' to live in the area. The people living in Chintopo have no legal tenure over the land (Fremino pers. comm. 1998). The legal status of the land is however in the process of changing (Wilson pers. comm. 1998), which will be discussed more fully in subsequent discussion.

1.7 Demographic characteristics of the project area

The project area is divided into 11 "communities' or "villages" For administrative purposes the project has identified 6 key villages at Bawa, Chintopo, Nhjenjhe, Capesca, Mwamuirwa, and Chitete (for their location see Figure 2), through which management takes place (Namanha, pers. comm. 1998). In 1996 there were approximately 1863 families living in the area, and the total population was 8086 (Christian Care Food Relief Programme, in Murphree 1998). The area is 2500 square km giving a population density of 3.2persons per square km. The population is however constantly growing and is now popularly believed to be 9 000 (Fermino, pers. comm. 1998). The population growth is discussed more fully in chapter 6. People are settled close to the Zambezi River, Cabora Bassa Lake shore and the Duangua and Mpanhame rivers in an almost continuous string of settlement (pers. obs. 1998). Figure 2 provides a detailed delineation of the project area, including settlement patterns and the location of the six major villages.

People in the area lead predominantly subsistence livelihoods, consisting of subsistence agriculture (concentrated along the river banks), fishing and previously hunting (this practice is now outlawed by the project) (Namanha pers. comm. 1998). The area is agriculturally marginal due to high average temperatures, associated with low rainfall, poor soils, and the heavy infestation of Tsetse Fly (DNFFB 1993; Murphree 1995). A limited number of people are employed in the area with employment opportunities offered by the safari operator (approximately 20 local people), civil posts in teaching and government departments, and now the project itself (approximately 18 local people). Salaries are low. For example, a teacher's salary is approximately 15 US dollars per month. There is almost no occurrence of migrant labour in the area (Namanha pers. comm. 1998).

An important feature of the region is that close linkages exist with neighbouring Zimbabwe and Zambia. Cross border trade of commodities (eg. dried fish, cotton) occurs between Zimbabwe and Zambia. In addition to cross-border trade, communities share infrastructure such as schools

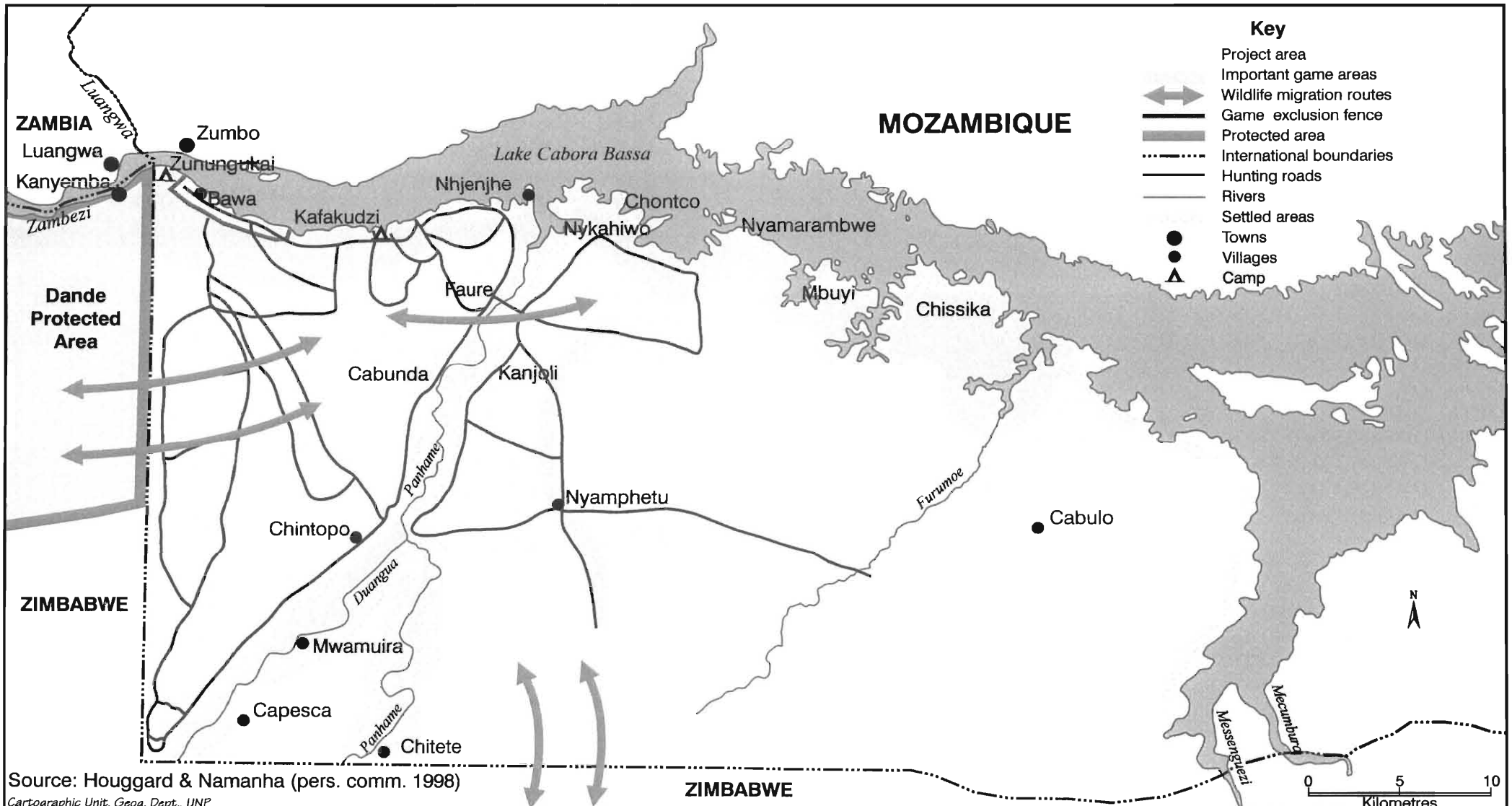


Figure 2: Delineation of Project Area

and clinics, and in most cases there are no formal border controls (pers. obs. 1998). The interaction between these communities is also significant for the project because the 'Chintopo community' has had exposure to similar community based resource management programs in Zimbabwe (CAMPFIRE) and Zambia (ADMADE). This was a significant factor in the project being adopted by the community which saw the project offering some potential development benefits (Murphree 1995).

1.8 Infrastructure of the project area

There is almost no infrastructure in the area (DNFFB 1993; pers. obs. 1998). The roads in the area are few, and they are only accessible by four wheel drive vehicles. The roads have in most instances been opened and managed by the safari operator (Houggard pers. comm. 1998). The road network, which is essentially a network of hunting roads can be seen in Figure 2. There is no telecommunication infrastructure in the region. The provincial capital, Tete, can only be reached through Harare in Zimbabwe. Five of the six major villages have elementary primary schools, which are very poorly equipped, and there is no Mozambican secondary school closer than Tete town (Namanha pers. comm. 1998). The only clinic is in Zumbo and it is very poorly equipped, although the community does make use of clinic facilities in both Zimbabwe and Zambia (where treatment is free). There is no formal commerce (banks) or industry (with the exception of the hunting operation) in the region. An active informal (often bartering) trade in commodities such as fish occurs. Administrative buildings such as the district headquarters and the police station are in a very poor state of repair. The local government offices of Chintopo Localidade can be seen in Plate 2. The primary school at Chintopo is shown in Plate 3. Both of these photographs illustrate the very poor condition of infrastructure in the project area. They illustrate the general status of infrastructure in Chintopo.

Plate 3 : Local government offices - Chintopo ward

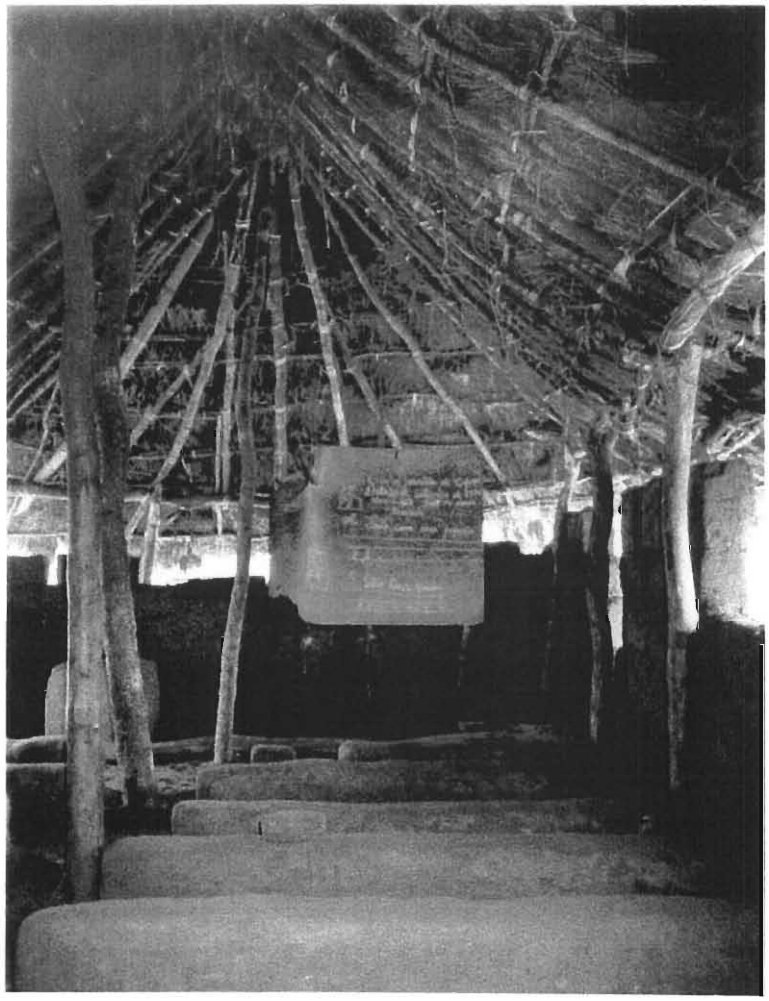


Plate 4 : Primary school - Chintopo

1.9 Project time frame

The project secured donor funding from the Ford Foundation in 1994. Project implementation was initiated in November 1994, and it has been operational since then. The initial funding was for a period of two years. At the end of this phase the funding was extended for a further year (Murphree pers. comm. 1998). A third phase of funding was introduced which provides funding until the end of 1999. There is no indication of what funding, if any will be available after this time (Fremino pers. comm. 1998). This is discussed more fully in subsequent chapters.

1.10 Rationale for this dissertation

CBNRM is a management strategy and development paradigm that has become popular in southern Africa in recent years (Steenkamp and Hughes 1997). It is an approach to conservation and development that is commonly advanced as having the potential to foster sustainable socio-economic development, whilst also promoting a more sustainable approach to conservation management (Steenkamp and Hughes 1997). CBNRM has evolved in response to the perceived failure of past approaches to conservation and development. In theory, the principles embodied in CBNRM are relatively simple. If implemented as one component of an integrated approach to rural development, CBNRM can support reconstruction and development (Curruthers and Zaloumis 1995). However, it is in practise that the real challenge of utilising natural resources to deliver socio-economic development is found. Communities that engage in CBNRM commonly have very limited human resources to draw on. The principles of conservation that CBNRM encourage are commonly in conflict with people's traditional understanding of resource utilisation (Khan 1989). Development needs are often so great as to be almost infinite, and yet the natural resources that are being harnessed are always finite. Commonly, CBNRM is not part of a holistic development initiative. Rather it is set up in isolation with expectations that it can bring

'development' to a region.

There were evidently high expectations placed on Tchuma Tchato. The community in Chintopo ward expected development benefits such as schools, roads, clinics and shops. The DNFFB also saw the project delivering socio-economic benefit to the people in Chintop ward, and institutional development within the Wildlife Department. Very often the expectations of CBNRM are unrealistically high. There are many examples of CBNRM in southern Africa that have not delivered the 'expected' development benefits (Breen pers. comm. 1998).

The purpose of this dissertation is to determine the extent to which Tchuma Tchato has been able to alleviate the socio-economic impoverishment of Chintopo ward, and how successful the project has been in fostering sustainable conservation management in Chintopo. Equally important, is the extent to which the Tchuma Tchato project has evolved from being a top-down development intervention to becoming a self sufficient and independent (as far as is practical) community based resource management programme. The importance of the evolution from a development project intervention, to a community based programme is vital. Mozambique is critically short of resources to promote development and to sustain such interventions. By definition, a project is also time bound, and is therefore not able to deliver long term and sustainable socio-economic development. The function of a CBNRM project should be to develop the capacity of people to develop themselves, and to sustain for example, a CBNRM programme in the long term. Such a process empowers people, while also reducing the demands placed on under-resourced government institutions. But it cannot replace the services reasonably expected of government.

An important feature of Tchuma Tchato, is that the project is the pilot CBNRM project in Mozambique. It is intended to be used a 'blueprint'[2] for the implementation of similar CBNRM

[2]'Blueprint' is used here figuratively. It is acknowledged that no two projects or CBNRM programmes will ever be the same. They may be however be similar and be based on the same underlying principles.

projects in Mozambique. By definition, a pilot, is an experimental undertaking or process (Oxford 1995). A pilot is used as a learning experience and is used to make adjustments where necessary. It is hoped that, by critically examining the organisation and management of the Tchuma Tchato project at Bawa, by highlighting lessons and by making recommendations, the usefulness of Tchuma Tchato as a pilot project will be advanced.

1.11 Structure

In Chapter 2, the extent of socio-economic impoverishment in Mozambique will be shown. This will serve to provide a context in which the Tchuma Tchato project can be considered. More importantly, it will demonstrate the dire socio-economic development needs in Mozambique. The complexity and challenge of a project such as Tchuma Tchato will be shown, and the chapter will distill some of the pressing development needs in Mozambique. Having presented the need for development in Mozambique, and more specifically a CBNRM programme in Chintopo ward, Chapter 3 will provide a literature review. This chapter will present key conceptual ideas and will provide a framework by which Tchuma Tchato is critically examined. The chapter will also distil the key features of organisation and management that are necessary to promote 'succesful' CBNRM. Having identified the key criteria for CBNRM, the method used in this dissertation is presented in Chapter 4.

The Tchuma Tchato project at Bawa is then examined in Chapters five and six. In Chapter 5 the planning and development of the project is considered. Having considered project planning, it is postulated that serious shortcomings in the implementation and operation of the project will exist. In Chapter 6 the organisation and management of the 'operational phase' of Tchuma Tchato is examined. It will be determined whether the project is moving towards a condition of financial and human sustainability. And also, whether the project is delivering the socio-economic development that was expected of it (DNFFB 1993). This will determine whether the project is contributing effectively to the overall reconstruction and development of Mozambique. On the

basis of these findings, Chapter 7 will draw conclusions and will make recommendations for future CBNRM initiatives in Mozambique.

Chapter 2

Mozambique: Socio-economic impoverishment and its origins

Chapter 2

Mozambique: Socio-economic impoverishment and its origins

2. 1 Introduction

The end of the civil war in 1992 marked the culmination of a long history of social upheaval, exploitation, and human rights violations in Mozambique which dates back to the 15th century. Almost 500 years of Portuguese presence and colonial rule, followed by an independence struggle and a civil war have effectively crippled Mozambican society. In 1992 two thirds of the population of Mozambique were living in 'absolute poverty' according to the World Bank (Waterhouse 1996). The infrastructure of the country was extensively destroyed and systems of governance were weak and ineffective. Years of war and social upheaval have profoundly disrupted Mozambican society and have depleted it of untold human potential. In 1992 70% of the population was estimated to be illiterate. It was the most indebted country in the world and also the most aid-dependent (Waterhouse 1996).

The purpose of this chapter is to highlight the need for development in Mozambique, but also the colossal development challenge which Mozambique is faced with. This historical overview will show that in virtually every sense, the country has been crippled by years of exploitation, social upheaval and war. This chapter will illustrate the dire need for development, and it will crystalize, what are, possibly the most critical criteria around which development needs to be focussed in Chintopo ward. It will be argued that the process of development is made difficult because Mozambique is lacking three critical components that create an enabling environment for sustainable development. Mozambique lacks human resources and social capacity, the economy is weak and it lacks economic capacity, it lacks infrastructure and environmental management has been neglected (Hall and Young 1997; Waterhouse 1996; Africa Watch 1992). Although this

chapter concentrates on the broad historical context of Mozambique, it can be extrapolated to accurately reflect the context in Chintopo ward.

2. 2 Early Arab presence

The modern boundaries of Mozambique were not defined until the late nineteenth century. For centuries the people of this area had lived subsistence lifestyles. Farmers grew sorghum and millet; around coastal and inland water systems people fished; and in the south farmers bred cattle. Kings and warlords rose and fell, populations settled and migrated, and frontiers between competing societies constantly shifted (Waterhouse 1996).

The nature of this existence changed somewhat with the arrival of Arab traders who had started to trade in the region as early as the 6th century. By the 9th century Arab traders had settled on the coastline. They mixed with indigenous peoples to create a rich and varied culture and a bustling commerce was established with the chiefs of the interior (Waterhouse 1996). Gold and ivory were traded for commodities such as cloth from India, Persian pottery and Venetian beads. In the interior the ruling aristocracies controlled this trade and levied taxes, while on the coastline it was controlled by Sultans and Sheiks who exported commodities to the East Indies. Trade in the region flourished and for many centuries people co-existed in relative symbiosis (Waterhouse 1996; Africa Watch 1992; Slater 1997).

2.3 Early Portuguese presence

The history of the region was marked by a profound change with the arrival of Portuguese explorers and traders. There had been an enormous expansion of Portuguese merchant shipping during the fifteenth and sixteenth centuries and Portugal had established control over the Indian Spice Trade (Munslow 1983). Attracted by the commerce in the region and the opportunity to

use East African ports as transit depots, Portuguese traders arrived in Mozambique at the turn of the 15th century and by 1510 all former Arab ports were under Portuguese control (Waterhouse 1996). Although Portuguese used the region initially as a transit and depot zone for Indian shipping, they soon set about capturing the lucrative gold trade from the Swahili-Arab merchants (Munslow 1983; Waterhouse 1996).

Mozambique was used by the Portuguese predominantly for its ports which served as depots in the lucrative East Indies Spice trade[1]. However, with the collapse of the Spice Trade towards the end of the 17th century, the major reason for Portugal's occupation disappeared and Portuguese presence dwindled markedly, to be revived later with the onset of the ivory and slave trade (Munslow 1983). Towards the end of the 17th century trade in gold was being superseded by ivory exports - which in turn were superceded by the emergence of the slave trade in the 1760s. This trade precipitated a renewed Portuguese interest in the region. It also marked the onset of a much more destructive and a more extensive exploitation of the Mozambican people. Whereas the impact of the Portuguese had previously been limited to sporadic conflicts with local people and the extraction of limited raw materials, the slave trade marked a much more sinister turn in Portugal's colonial presence. It is estimated that, in co-operation with the *prazos*[2], local chiefs and Swahili traders, the Portuguese sold in excess of 1 million people into slavery in the French colonies, Brazil, Cuba and North America[3]. This trade lasted until the turn of the 19th century and

[1]At the height of the spice trade Lisbon was the wealthiest city in Europe, as it profited from the barter-type trade of one primary commodity for another (Munslow 1983).

[2]By the late 17th century the Portuguese had started to settle inland on privately owned agricultural estates (called *prazos*). These *prazos* were initially run by feudal landlords, but over time they developed into virtually independent kingdoms sustained by slave armies. They were ruled by families of mixed Portuguese-Afro-Goan descent with a strongly African culture (Hall and Young 1997).

[3]There are no complete records of the number of slaves sold out of Mozambique for between $3 and $10 each. It is estimated to have been between 20 000 and 30 000 per year by 1830. However Livingstone noted that for each person sold into bondage, probably four others

it had a crippling effect on Mozambique society, robbing it of immeasurable human potential[4] (Waterhouse 1996). Because the trade involved the collaboration of some local chiefs, it also had the effect of eroding traditional structures of governance, culture and customary structures of law (Africa Watch 1992).

The 19th century marked yet another change in the nature of imperialism and colonial presence in Africa. The renewed expansion of colonial interests was due to the rapid industrialization that was occurring in Western Europe (Munslow 1983). The major colonial powers such as Britain, France and Germany were using the colonies not only as a rich source of raw materials to support this industry, but also as a new market for manufactured products. Portugal was, however, not undergoing similar industrialization, and so its economy did not demand that it consolidate colonial control (Munslow 1983). Portugal was, in fact, so economically dependant on Britain that Portugal has itself been described as a neo-colony and to a large extent "colonial relations" between these countries reflected this [5] (Munslow 1983).

---

died during capture and transportation (Africa Watch 1992).

[4]When slavery was abolished in late 19th century, the Portuguese established the "engage" system - a legal mechanism of ensuring forced labour, which was used on plantations on Reunion, which lasted until the 1960s and which was financed mainly by British capital (Africa Watch 1992).

[5]Intense rivalry existed between the major colonial powers. Portugal was given "concessions" by Britain (a colonial ally), partly to prevent areas coming under the control of other colonial powers, but partly so that Britain could utilise the resources of Portuguese colonies (Munslow 1983).

2.4 Colonial rule (1891- 1974)

A distinguishing feature of the Portuguese colonial presence before 1891 was that the Portuguese had a notoriously weak control of the region[6]. This changed somewhat during the 1880s, which heralded the so called 'Scramble for Africa', during which Portugal established a more formal administrative control over Mozambique, whose boundaries were agreed in 1891 (Waterhouse 1996). However, whereas the major industrial powers of Europe were dividing up the African continent in pursuit of raw material to support a rapidly expanding process of industrialization, Portugal still had a predominantly pre-industrial economy. It is argued that Portugal's colonial empire was motivated more by political myths of grandeur and the 'civilising mission' than by economic motives (Munslow 1983). This was to have a marked influence on the evolution of the colonial governance of Mozambique (Munslow 1983).

The Portuguese were unable to unite the country into one administrative body. Instead the Portuguese sub-contracted the 'pacification', administration and development of most of the colony to private companies, leaving the southern quarter of the state as a labour pool - sold to work on South African mines. These 'administrative companies' were mostly British and were given extensive powers to raise taxes, grant mineral and land concessions, and issue currency and postage stamps [7](Waterhouse 1996). Most revenue was derived from taxation and forced labour of the local population. Traditional chiefs were either co-opted or replaced by '*regulos*', state

[6]Until 1752 Mozambique was "governed" from Goa in India (Munslow 1983). According to Hall and Young (1997), the de facto power over the entire region in the middle of the nineteenth century was in fact Soshangane of the Gaza Empire and "existing Portuguese settlements were reduced to tribute-paying vassalage" (1997).

[7]From 1891-1941 control of Mozambique was given to the Mozambique Company, formed with British and French capital (Waterhouse 1996). Because of this a sizeable portion of the colonial revenue did in fact accrue to Britain (Waterhouse 1996).

paid chiefs who collected taxes, maintained order and recruited labour. In this way, traditional institutions of governance were undermined and destroyed. Until as late as 1961 Mozambicans were press-ganged to work on colonial railways, roads and plantations (Waterhouse 1996).

The colonial government made almost no welfare provision for African people (Waterhouse 1996). Education was entrusted to the Catholic Church, which had limited places in schools and by 1960 only 1 % of Mozambican children were in secondary school. Health care was almost exclusively reserved for the cities, while 94 % of African people lived in rural areas. The 'Indigenous Peoples' Rule' [8] transformed those Africans who were educated, rejected traditional customs, and who had professional employment into honorary Portuguese, known as 'assimilated citizens'. At independence in 1975 only 1 % of the population had been assimilated. The remainder of the population had no legal rights, were required to carry identity cards, and had to fulfil forced-labour requirements (Waterhouse 1996).

2.5 The Independence struggle

Following the conquest of the Gaza Kingdom at the turn of the century, uprisings against colonial rule had been sporadic and localised, and were always quickly countered by the secret police, police and military (Munslow 1983). However the Mueda Massacre in June 1960, in which some 600 villagers were slaughtered during a peaceful demonstration against the administration of Cabo Delgado province, marked a change in African resistance (Munslow 1983; Hall and Young 1997). African resistance became more organised and in 1962 the Liberation Front of Mozambique (FRELIMO) was formed (Munslow 1983; Africa Watch 1992; Hall and Young 1997).

[8]In 1926 fascist dictator Salazar came to power in Portugal and formalised this law of segregation (Waterhouse 1996).

FRELIMO launched a ten year guerrilla struggle against colonial rule in 1964. While other European countries were withdrawing from colonial rule, Portugal clung to power. Portugal received continued western support, including military support from the United States. FRELIMO, by contrast, became increasingly close to China and the Soviet Union and was increasingly hostile to the western world[9] (Munslow 1983; Africa Watch 1992; Hall and Young 1997).

With limited resources and few recruits, FRELIMO's initial struggle met with limited success and was largely thwarted . Portugal was able to capitalise on ethnic divides in Mozambique between the Makonde and Macua, and Portugal managed to gain relative co-operation from the Macua-Lomwe (Hall and Young 1997). FRELIMO opened up several fronts in Mozambique which were largely unsuccessful, and their efforts mostly concentrated on guerrilla operations aimed at destroying the country's infrastructure (Waterhouse 1996; Hall and Young 1997; Africa Watch 1992).

2.6 Independence

By 1974 FRELIMO had not been overly successful in liberating the country. However, in 1974 an army Coup in Portugal was provoked by heavy war casualties in Portuguese colonies. The Portuguese government was overthrown , and this brought a sudden independence to Mozambique (Hall and Young 1997). An agreement with Portugal's new government gave state power to FRELIMO, and in 1975 independence was declared. Without a democratic mandate, FRELIMO immediately set about suppressing opposition political activity. Political organisations were banned and some opposition leaders were executed (Waterhouse 1996; Hall and Young 1997; Africa Watch 1992).

[9]It was unusual during this period of intense Sino-Soviet rivalry that FRELIMO should have received assistance from both of these powers (Hall and Young 1997).

FRELIMO inherited a fragmented nation, with a weak administration. Over 90 % of the African population was illiterate (Waterhouse 1996). The Portuguese fled with whatever capital they could take and they left almost no technical expertise. As a consequence agriculture and commercial activity collapsed and the economy fell apart (Africa Watch 1992; Waterhouse 1996). Although FRELIMO had some initial success in increasing literacy and improving health care, these strides were short lived. FRELIMO had little experience of governance, and with few resources, its heavily centralised development plans soon floundered. In addition, Mozambique was punished for associating with the Eastern Bloc by the imposition of heavily damaging trade sanctions imposed by neighbouring countries. Economic problems were compounded by drought and this led to widespread famine in the mid 1980s (Waterhouse 1996; Hall and Young 1997; Africa Watch 1992).

With a crippled economy, Mozambique eventually entered into an agreement with western powers in 1987. In return for credit, FRELIMO committed itself to the adoption of a 'Structural Adjustment Programme', which promoted a more open economy and removed much state dominance of people's lives. FRELIMO underwent a political transition from a Marxist-Leninist party to a social-democrat identity in 1989, and it introduced a new state constitution(Hall and Young 1997). Despite these reforms Mozambique was still faced with the challenge of overcoming a 'civil war' that had grown in force since the early 1980s (Waterhouse 1996; Hall and Young 1997; Africa Watch 1992).

2.7 Civil war

FRELIMO's economic policies had limited success in developing an independent Mozambican economy, and in promoting social development (Hall and Young 1997) A much more crippling factor, however, was the civil war fought from the early 1980s until 1992. The Mozambican National Resistance movement (RENAMO) was established by Southern Rhodesia's security

forces in opposition to FRELIMO's support for the independence struggle in that country. With Zimbabwe's independence, RENAMO was adopted by the South African Defence Force (SADF), who funded, trained and equipped the organisation in a campaign of destruction aimed at weakening the socialist state of FRELIMO. All physical infrastructure was targeted for destruction, including telecommunications, harbours, roads, railways, power sources, schools, clinics and economic institutions. Civilians were seen as legitimate targets and human atrocities were common[10] (Waterhouse 1996; Munslow 1983; Africa Watch 1992).

Throughout the 1980s the conflict between RENAMO rebels and FRELIMO grew in intensity. Although initially a creation of foreigners, RENAMO did succeed in winning some public sympathy, capitalising on the resentment of people who felt ostracised by the government. On the whole however, the organisation's brutality served to alienate most of the population and it existed almost purely on foreign support (Africa Watch 1992). In 1984 the South African government pledged to end its support of RENAMO in the Nkomati friendship accord, but it continued to give covert support. Kenya and Malawi acted as refuges and bases for anti-FRELIMO activists, and the Comores acted as a supply route for RENAMO forces. RENAMO continued to receive military support from South Africa and the United States until the late 1980s, but the end of the Cold War marked an end to this support (Africa watch 1992; Munslow 1983; Waterhouse 1996).

The war reached its greatest intensity in 1986/87 but by the late 1980s it was clear that no military victory would be possible (Hall and Young 1997). Precipitated by this factor, a severe drought, and the withdrawal of foreign support of RENAMO, peace talks were initiated in 1990 and on 4th October 1992 a Peace accord was signed in Rome. The costs of the war were, however, colossal. The UN estimates that 1 million people were killed during the war through conflict, hunger and

[10]Atrocities include people being forced to watch their relatives and friends murdered and raped, children being boiled alive, and boys being forced to kill their parents (Waterhouse 1996).

disease. Two million refugees fled to neighbouring countries and almost four million people were internally displaced (from a total population of 17 million). The Mozambique Finance Ministry has estimated the cost of the "damage and lost development" to be 15 billion US Dollars. Schools and hospitals lay in ruins. Transport and communication infrastructure and industry had been destroyed. War time sabotage and neglect put some 70 % of the national road network out of use. At the end of the war there were only 12 secondary schools left standing in the country (Waterhouse 1996). According to Africa Watch, "The gains made by FRELIMO after independence had been obliterated" (Africa Watch 1992, p.10).

2.8 Post war and development

When the first democratic elections were held peacefully in 1994 FRELIMO retained power. But it was power over a country which was classed as one of the poorest in the world. Annual income in 1994 was only 88 US Dollars per head, and two thirds of the population were living in 'absolute poverty' according to the World Bank. The mortality rate of infants under five was estimated after the war to be 298 per 1000 and illiteracy was estimated to be 70% (Africa Watch 1992). It was the most indebted country in the world and also the most aid-dependent (Waterhouse 1996).

In virtually every sense, Mozambique was socio-economically impoverished as a result of five centuries of exploitation and upheaval, which culminated in civil war. Mozambique's people have suffered severely as a result of this history, and are in desperate need of 'development' to alleviate their circumstances of socio-economic impoverishment. In line with current thinking, this development needs to be sustainable. For the purposes of this discussion, sustainability is categorised into three generic categories, forwarded for example by Goodland (1995), of sustainability. These are social sustainability, economic sustainability and environmental sustainability (Goodland 1995). Similarly, one can identify critical development needs in Mozambique under the categories of social development, economic development and

environmental development. Close linkages exist between these types of development. In order to achieve sustainable development, it is necessary to develop an enabling environment, by developing each of these domains.

2.8.1 Social development

One can only achieve sustainable development, if there is social development which will result in social sustainability. Social sustainability is achieved, by among other things, systematic community participation and strong civil society (Goodland 1995). There is a strong need to develop human resources and capacity within civil society, which was very weak at the end of the civil war. Discriminatory educational policies during Portuguese rule, and the disruption caused by war has resulted in a very shallow pool of human resources, and a largely illiterate population (Hall and Young 1997). At independence, virtually the entire skilled population, that was wholly or partially of Portuguese descent left the country (Africa Watch 1992). This need is at a community level and at the level of government.

Customary law and systems of governance, were effectively destroyed by the Portuguese, who replaced or co-opted traditional leaders with *regulos*. Socialist policies of FRELIMO further undermined traditional authority and community structures. They were replaced with a centralised and ineffective system of administration. At the end of the war, systems of governance were ineffective, policy and legislative mechanisms were dysfunctional and there was a general lack of human capacity and a lack of resources within government institutions. In addition years of war and neglect means that there is only limited institutional capacity within the Wildlife Department (DNFFB1993; Maputo 1996). Wildlife policy and legislation were non-existent or ineffective, and conservation was completely neglected during the war.

Mozambique's history has had a profound effect on the community in Chintopo ward. Schools in Chintopo, were either not built, or were destroyed during the war. There is a very high level of

illiteracy in Chintopo ward (Namanha pers. comm. 1998). Similarly, health care provision is almost non-existent in Chintopo. AIDS, malaria and dysentery have a major effect on the community in the project area (village chairpersons pers comm 1998). For development to be sustainable there is a critical need for human development in Chintopo ward. Human development will lead to a higher level of institutional development, greater empowerment and capacity will also emerge. With institutional development, sustainable development becomes more likely.

2.8.2 Economic development

'Development' is inevtitably conceptualised in economic terms. Economic development is widely considered to be the best means of alleviating poverty. This will be considered more thoroughly in Chapter 3. The economy of Mozambique was very weak at the end of the war, illustrated by the fact that Mozambique was one of the most indebted countries in the world (Waterhouse 1996). Ultimately the development of the national economy will contribute to socio-economic development in Chintopo. This is, however, beyond the scope of this dissertation.

More important to this discussion is that economic development is an imperative in Chintopo ward. At present livelihoods are made by widespread subsistence agriculture, which occurs on marginal land. There is also extensive exploitation of selected resources such as fish which is used directly as a foodstuff and to trade. Economically, and environmentally this subsistence lifestyle on marginal land is not sustainable, particularly with present levels of population expansion. Ideally, economic development should lead to greater environmental sustainability. It should also facilitate other forms of social development through the development of human capacity. It should potentially contribute to the development of the built environment, with the provision of physical infrastructure such as roads, clinics, schools, and telecommunications etc.

2.8.3 Environmental development

Environmental development is integrally linked to both social development and economic development. Without economic development and social development it is argued that environmental sustainability is difficult to achieve (Goodland 1995). Environmental development includes both physical development of infrastructure and biophysical development or maintenance of the environment. Chintopo ward is critically short of infrastructure. An independence struggle, followed by years of civil war extensively destroyed what infrastructure had existed (Africa Watch 1992; Waterhouse 1996). Infrastructure such a telecommunications, road networks, and water reticulation etc, is critical to create an enabling environment for development. Without basic infrastructure (such as safe water and sewage, clinics and schools etc) that promotes basic human welfare, development processes will be retarded. Without provision for roads, electricity and communication systems, the large scale development of the region will be continually frustrated. This physical development is essential to enable development.

The conservation and management of wildlife, and environmental management in general, is also critical to overall development objectives in Chintopo. Tchuma Tchato is based on the utilisation of wildlife and so conservation and management of this resource is critical. Socio-economic development is based on utilising the wildlife resource and so sustaining this resource, at a level close to its carrying capacity is essential. A wildlife population at its carrying capacity will generate the highest possible sustainable revenue from the resource.

2.9 Conclusion

It is evident that Chintopo ward, Tete province and Mozambique at large are faced with a colossal development challenge. Mozambique is in need of extensive reconstruction and development, that will alleviate socio-economic impoverishment, and that will contribute to economic growth and the overall recovery of Mozambican society. There is a great need for social development, economic development and environmental development. Social development, economic development and environmental development are critical to address immediate socio-economic development needs. There is a need for this development in itself, but also because of the role it will play in creating an enabling environment for sustainable development in the long term.

At the end of the civil war Mozambique was one of the most indebted countries in the world, and it had neither the economic or the human resources necessary to undertake this development independently, at either the level of government or at a 'community level'. High levels of illiteracy and a general lack of empowerment, severely retards peoples capacity to develop themselves. If disadvantaged communities were able to develop themselves this would happen spontaneously in underdeveloped areas around the world. The fact that it doesn't, means that external interventions are inevitable if 'development' is to occur. There is therefore a need for external interventions that serve as a catalyst for the development of human capacity, institutional development and infrastructure in Mozambique. This development should serve to develop an enabling environment and to create the capacity within Mozambican society to develop itself.

The Tchuma Tchato Project which is being examined in this thesis, is but one example of a project in Mozambique that is attempting to promote this development. It is an example of an external intervention, in the form of human and financial capital, that aims to develop institutional capacity in the Wildlife department, to reconstruct conservation management in Mozambique, to promote

the socio-economic development of an impoverished community, and to contribute to policy and legislative reform (DNFFB 1993). This process of development needs to be conceptualised within the very destructive history that Mozambique has had. However, it must also be seen against the wealth of natural resources and the great potential that the country has, described in Africa Watch (1992, p.10):

"It is a tragic irony that Mozambique could be a relatively wealthy nation. A territory twice the size of the state of California has just 15.7 million people, 85% of them living in rural areas. It is endowed with major rivers and mineral reserves, including gold, iron ore, the worlds largest reserve of tantalite, and semi-precious stones. There are at least one million hectares of forests, ranging from Eucalyptus and pine to rare hardwoods. Energy too is abundant, with six billion tons in coal reserves, hydroelectric potential, gas reserves estimated at 320 000 cubic kilometres, and possibly oil".

Chapter 3

Literature Review and Conceptual Framework

Chapter 3
Literature Review and Conceptual Framework

3.1 Introduction

This chapter provides an introduction to some of the key concepts and theories that currently influence development thinking and, more specifically Community Based Natural Resource Management (CBNRM). This chapter consists of two sections. In Section A commonly accepted development paradigms and approaches in the fields of conservation and development are reviewed. It is acknowledged that there is a great deal of academic debate, and great variation in theoretically based practice in this area of development practice. The purpose of this section is not to review the literature of this debate exhaustively, but to engage in it, with a view to developing the structure which will be used in the analysis which follows. Section B will present an overview of the key principles of CBNRM, drawing attention to significant aspects of the debate along the way. In doing so, a conceptual framework will be developed which is used to examine the Tchuma Tchato project in subsequent chapters.

Section A: Literature Review

3.2 Community Based Natural Resource Management

Community Based Natural Resource Management (CBNRM) is a management strategy that has developed in response to the apparent inadequacies in past conservation and development practise. CBNRM recognises that local rural communities have an important role to play in

managing wildlife and other natural resources. CBNRM recognises that resource management can potentially be an instrument of rural development, once communities recognise the economic value of the resource (Le Quesne 1996). They are strategies designed to make conservation sustainable by reducing conflict between the managers of protected areas and neighbouring communities (ie by reducing poaching and increasing access to benefits from resources); to make management more effective by drawing on local expertise; and to contribute to processes of sustainable socio-economic development (Bell 1987). CBNRM has developed as a management strategy in light of Africa's development crisis, the apparent failure of development in Africa, and the need to adopt more socially responsible methods of conservation management in Africa. A perception exists that CBNRM is able to address social development needs, economic development and environmental development needs in a sustainable way.

'Community' is a term that is used in many contexts and with different connotations. It is important to clarify the term before further discussion. Typically the word is used to refer to the fact that a group of people, or section of the population have something in common, as in "a community of interests". This commonality may be as simple as a physical boundary or geographic area. However there are often other important characteristics such as age, race, ethnicity, gender, culture or religion that serve to define a community. A community usually has a psycho-social component. This includes a community sentiment of shared communal values, convictions and goals and there is usually a shared reason for being or acting together (ie a perceived community benefit) (Hawtin, Hughes, Percy-Smith 1994; Kotze and Swanepoel 1983; Hamilton 1992; Chambers 1983).

3.3 Africa's crisis

The crisis in Africa, whether enunciated in terms of sheer human suffering , the threat to wildlife or the spread of desertification, is becoming increasingly a focus of attention in academic and

popular discourse (Anderson and Grove 1987). The last half century has been a period of unprecedented change and progress in the developing world. However, despite this change, millions of people continue to be trapped in absolute poverty - a condition of life described by McNamara in the World Development Report, 1978, as " life so characterized by malnutrition, illiteracy, disease, squalid surroundings, high infant mortality, and low life expectancy as to be beneath any reasonable definition of human decency" (McNamara, in Chambers 1983, p.1). World Bank figures show the number of people living below the absolute poverty line (US$1 per day) in Africa have increased from 68 million in 1982 to 216 million in 1990 (Kaplan 1996). While there has been a dramatic increase in the number of people living in absolute poverty in Africa, there has also been a growing environmental alarm in the face of famine, desertification, and habitat and species loss.

3.4 Conservation in Africa

In Africa conservation developed largely in response to the declining populations of large mammals (Cumming, 1993). Game reserves, which were usually state owned, have encapsulated the colonial approach to conservation and have for many years been perceived as "playgrounds for the rich" (Steenkamp and Hughes 1997, p.16). They have played an important role in the conservation of these areas, but it has usually been to the exclusion, or to the detriment, of local people (Steenkamp and Hughes 1997).

In recent years however, people have come to question the long term sustainability of this conservation approach (Anderson and Grove 1987; Steenkamp and Hughes 1997; Polett and Hearn 1993; Rogers and Bestbier 1997). This questioning is both bio-centric and Homo-centric. Firstly, the practise of conservation management is undergoing major paradigm shifts. There is a realisation that a more integrated approach to conservation management is necessary, that moves away from the past 'preservationist' approach (Rogers and Bestbier 1997). Secondly, conservation that excludes people from their traditional lands has been challenged on humanitarian

grounds, and is also considered to be unsustainable, in the context of the third world, because of the conflicts it generates (Venter, Marais and Breen 1994). And thirdly, conservation has come to prominence in the context of the perceived crisis in Africa, and conservation is now commonly regarded as a vehicle for the development and recovery of the continent (Anderson and Grove 1987). The 'traditional' or 'colonial' view of conservation as a means to protect species and habitat is giving way to a more integrated conservation management that recognises the potential of protected areas to promote much needed rural development.

3.5 Social consequences of the traditional conservation paradigm

Conservation in Africa has frequently meant the exclusion of rural people from protected areas. One of the major problems with this approach has been that communities have been cut off from resources which form an important part of their livelihoods. This represents both an economic loss to communities, as these resources include traditional medicines, food, water, thatch, building materials, and fuel-wood etc; and a social loss, as these resources are often integral to traditional culture (Clarke, Cavendish, and Coote 1996). Past,'colonial', approaches to conservation have therefore had serious socio-economic implications. By displacing people from their lands, it has disturbed well established and often sustainable subsistence livelihoods. Displaced people have commonly resorted to living (and farming) on inadequate land (resulting in environmental degradation), or to urban migration, further accentuating urban development problems. Another consequence of the legacy of conservation in Africa is that rural communities have been alienated from conservation practice to the point of becoming actively hostile to any notion of conservation (Anderson and Grove 1987; Khan 1989).

The alienation of local people by conservation authorities has been reinforced by the sharp discontinuity that has developed between the social and the economic situations inside and outside many conservation nature reserves. The tendency has been for the conflict between local

communities and conservation authorities to increase as populations have increased, placing greater demand on the land as access to land has been restricted (Venter, Marais and Breen, 1994).

3.6 A changing conservation ethic

According to Rogers, the concept and practice of conservation is almost 100 years old, but for most of that time it has lacked a recognisable driving paradigm to link it to the science of ecology, which should supply it with the understanding needed to achieve its task (Rogers in Rogers and Bestbier 1997). Conservation methods that have been implemented in Africa have been distorted by environmental priorities which have been specific to the needs of the developed countries in most of Europe and North America. They have tended to be preservationist in approach and have focussed on preserving large animal species and habitats (Anderson and Grove 1987). It has now been realised that this approach is not ecologically sustainable in the long term (Rogers and Bestbier 1997). Furthermore, there has been a realization that conservation entails more than simply the preservation of species. Conservation takes place in an environment that is multi-dimensional and is influenced by economics, land use , taxation, cultural traditions, political expediency and public opinion (Falk in Rogers and Bestbier 1997). There has therefore been a move towards a more integrated approach to conservation management that extends beyond the 'game fence' (Venter, Marais and Breen 1994). This move has been necessitated by the ecological imperative to practise sustainable conservation, but also by a moral and political imperative to address the dire development needs in Africa.

3.7 Failed development in Africa

The paradigm shift that has occurred to a more socially responsible conservation ethic, has occurred in the context of unsuccessful development policies in Africa. Development policies

pursued by colonial and post-colonial governments have been unsuccessful in many respects, and they have also been extremely harmful to the natural environment and thereby to the prospects of human survival in the long term (Anderson and Grove 1987). Much of the work of development practitioners has also been lacking in critical sociological insights into the potential impacts of their programmes on rural African populations (Anderson and Grove 1987). There is a growing body of thought which believes that development work in Africa has had limited success (Kaplan 1996; Anderson and Grove 1987; McLaughlin 1998 etc). The number of people living in absolute poverty is increasing and the pressure on available land is growing. These factors have led to a search for new approaches to development.

3.8 A new approach to conservation and development

With changes in the conservation ethic throughout the world, there is a new approach (CBNRM) to the utilisation of land, which includes greater access to land and the sharing its resources by a wider range of communities and interests. According to Pollett and Hearn (1993) integrating conservation and nature reserves with the economic development of adjacent rural communities can contribute towards the preservation of bio-diversity and the optimum utilisation and sustainable development of the area as a whole. CBNRM is ultimately a management strategy that is intended to deliver 'development'. If CBNRM was not perceived to deliver development benefits, governments would be less inclined to support CBNRM, if at all, and communities would be very unlikely to engage in a process of resource management. This is especially if CBNRM entails some level of cost, which is usually the exclusion of traditional methods of resource utilisation (for example subsistence hunting). According to Steiner and Rihoy in "The commons without the Tragedy" (Steiner and Rihoy 1995):

"For a community to manage its resource base sustainably it must receive direct benefits arising from its use. These benefits must exceed the perceived costs of managing the resource

and must be secure over time".

Because CBNRM is essentially a development strategy, it is necessary to develop a generic understanding of the term 'development'.

3.9 The concept of development

According to the IUCN, development is: "the modification of the biosphere and the application of human , financial, and living and non-living resources to satisfy human needs and improve the quality of human life" (IUCN 1980, p 1).

Kaplan describes development by an analogy with life (Kaplan 1996, p.5):

"Life is a progression from the simple to the more complex, that increasing complexity brings with it not simply the necessity but indeed the very possibility of 'higher' levels of systems being able to organise themselves, that inherent in complexity is differentiation and division; that self-organisation implies some form of hierarchy leading to integration. That the ability of life to develop ever more elaborate structures and functions, to evolve and adapt to a changing environment, is a function of these patterns which lie at the heart of the developing world".

Community development, as a particular kind of development, has been subjected to a multitude of definitions - but its essence is common to most. According to Hamilton (1992), it is the process by which the efforts of the people themselves are united with those of governmental authorities to improve the economic, social and cultural conditions of communities, to integrate these communities into the life of the nation, and to enable them to contribute to national progress. It is a process that emphasises learning, participation and action and is directed towards improved socio-economic livelihoods (Hamilton 1992; Chambers 1983; Swanepoel 1992). In subsequent

discussion, the importance of these characteristic of development will be shown in the conceptual framework of CBNRM.

The notion of progress is usually linked to a more global concept of development for the nonindustrial world which is usually associated with a move towards modernisation, and industrialisation. Modernisation and industrialisation is associated with economic development, which in turn is perceived to lead to improved socio-economic and political livelihoods (Hamilton 1992).

A further characteristic of development is that it is a process in time. "Development needs time, and flows with the rhythm of time. It cannot be forced, imposed or created. We cannot cause development, we can only nurture the development process" (Kaplan 1996, p.5). Furthermore Kaplan sees development as a form of maturation, and asserts that "the appropriate development stance is one of facilitation rather than force; nurture rather than imposition; respect rather than arrogant presumption. We cannot cause development we can only nurture the development process" (Kaplan 1996, p.3).

One of the key aspects of development as a process is that it is irreversible. This has been persuasively argued by Kaplan:

"Another distinguishing characteristic of development, or of maturation implies is that it is irreversible. Development is a forward moving change. Once the structure of something has developed, it cannot revert to its previous state and continue to grow. If reversion does take place we have not been witness to a development process" (Kaplan 1996, p. 4).

Development also has positive outcomes. Technically, development can be both positive or negative (Hamilton 1992). However in the context of rural development a 'development' is something that has a balance of positive outcomes.

3.10 The concept of sustainable development

The idea of sustainable development is now synonymous with development practise. A widely accepted definition of the term is: "development which meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland 1987, p.4). According to the World Wildlife Fund, sustainable development is the "improvement in the quality of human life within the carrying capacity of supporting ecosystems" (in Goodland 1995). The idea of sustainability is critical to CBNRM. CBNRM needs to develop social sustainability and economic sustainability. Development of the physical environment also needs to be sustainable. It is essential that this development is environmentally sustainable, to preserve the integrity of the natural environment, but also because conservation based development is built around the sustainable utilisation of natural resources.

The phrase sustainable development was coined partly in response to growing alarm from the third world that the industrialised world was trying to take away control of its natural resources, fearing that the environment was being given too high a priority compared with development. The term was developed due to the perceived imperative to balance the needs of development in the developing world with the need to move towards greater environmental responsibility (Adams 1995). Sustainable development captures the idea that it is possible to have development without adverse environmental side-effects. It smoothed over the emerging dichotomy between economic growth based on industrialization and the associated environmental impacts (Adams 1995).

The term does, however, evoke considerable debate (Jickling 1992; Huckle 1991; Bak, 1995 etc). While the aims of the term may be clear, it is far less clear how these aims are to be achieved in practice. According to Jickling, analysis of the various usages of the term has not been able to identify sufficient criteria to elucidate common meaning for action (Jickling 1992). To some it

has become a "powerful new phrase in the lexicon of development studies" (Adams1995). To others it has become a "vague slogan susceptible to manipulation" (Jickling 1992) which is argued to be "logically inconsistent" (Jickling 1992). Huckle asserts that "for some the term sustainable development is an oxymoron - a self-contained *non sequitur* between noun and modifier" (Huckle 1991). Adams asserts that while sustainable development might seem to be a wholly new approach to development, built on new ideas and a new consensus between environmentalists and development agencies, in practice, behind the green rhetoric, change is both less dramatic and less extensive. "Despite its radical promise, it is very much business as usual in the world of development" (Adams 1995). And Jickling believes that it is all too common for people to be aiming for sustainable development "when it is not clear what they are aiming for" (Jickling 1995).

Notwithstanding the rhetorical and often slightly vague character of the term 'sustainable development', it has proved to be popular and compelling for those concerned about poverty, and for those concerned with addressing the exploitation of nature, and the conservation of habitats and species (Adams 1995). The following quote encapsulates the underlying principles of sustainable development as set out in Pearce et al 1989:

"The term sustainable development' suggests that the lessons of ecology, can and should, be applied to economic processes" (Redclift 1993).

Redclift asserts that poverty reduction is the primary goal of sustainable development (Redclift in Goodland 1995). Before environmental quality can be fully addressed, it is necessary to address the development of human needs through social development. Social development is closely linked with economic development, which in turn, is closely linked to the development of the built environment and the maintenance of environmental integrity (Goodland 1995). The need for these linkages makes it impossible for CBNRM to function in isolation. The scale at which sustainable development occurs, is simply beyond the scope of CBNRM. CBNRM therefore needs to part of an overall strategy aimed at realising these development needs.

3.10.1 Social development

According to the above definitions of development, a development is a positive, forward moving and irreversible change. Social development and the development of human resources is critical to the sustainability of any development initiative. It can be argued that social development should be the primary objective of development practise. The development of a community starts with the development of individuals. Human development leads to empowerment. Empowerment entails individuals having greater ability to control, manage and make decisions that affect their lives (Hamilton 1992; Swanepoel 1992). Empowerment also entails the capacity of individuals to integrate with a wider range of people to achieve community goals and to assume ownership of a project or programme. Central to empowerment is the development of people's skills, self esteem and confidence to act independently (Hamilton 1992).

With the development of individuals, and only with it, a community is able to achieve a higher order of development - institutional development (Kaplan 1996). Community based management implies some level of organisational functioning. Therefore, if an organisation is working towards self-sufficient management, it is necessary that it undergoes organisational development, and that a community develops from not having the capacity to manage a project, to having that capacity,

but also having greater capacity in all spheres of life.

As an organisation differentiates and develops in complexity, there is the need to undergo a concurrent process of integration. Without integration the system would fragment, with sub-systems performing in isolation. For development processes to be successful they should therefore show increasing complexity with division or differentiation (and hierarchisation) followed by cohesion or (integration) at a new level or form (Kaplan 1996).

As an organisation develops and becomes more complex, differentiation occurs, leading to 'organ' formation, with functions being carried out by sub-systems to make them more effective. Differentiation, in turn, leads to hierarchisation with certain systems being governed by others to make the whole operate most efficiently. "With increasing complexity there is the need for self-organisation if the organism is to sustain itself" (Kaplan 1996, p. 4). Complexity and self organisation should exist as complementary entities, and they are "both necessary to power the forward movement of life" (Kaplan 1996, p 4). As the community assumes greater proprietorship and management of the CBNRM project, it is necessary that it undergo some kind of institutional development. There is the need for institutions in the community to be developed that enable management of natural resources, and the management of increasingly complex dynamics (such as the interaction with private sector interests, the management of finances etc) that are created. This development will contribute to community empowerment and the ability to manage a project effectively and autonomously (Kaplan 1996).

3.10.2 Economic development

One underlying assumption in 'development work' is that development should be guided by an economic and 'western' notion of 'development'. This assumption is challenged by Daly, for example, who asserts that it is impossible for the world to grow its way out of poverty and that sustainable development in fact means less economic growth (Daly 1993). However, the

predominant thinking is that economic progress is the optimum way of achieving development, often referred to as socio-economic development (IUCN 1980; UNDP 1995; Rio Declaration, 1992; in Department of Environment Affairs (1992) Brundtland 1987).

Redclift suggests that the concept of 'sustainability' is often linked to a paradigm of development which links the notion of 'progress' with economic progress, and not only takes for granted the desirability of dominant economic practises, but also seeks to impose these as widely as possible (Redclift 1993). This view is contained in the "World Conservation Strategy", advanced by the IUCN, which sees economic growth as the only way of tackling poverty and hence achieving environment-development objectives. It is stressed that growth must be sustainable, environmentally aware and egalitarian, integrating economic and social development (IUCN 1980). The Brundtland report stresses that sustainable development rests firmly on the need to maintain and revitalize the world economy (Brundtland 1987).

Economic benefits derived from conservation and its associated wildlife use are perceived to have a much greater potential to address rural poverty than do traditional forms of subsistence land use (Steenkamp and Hughes 1997). This of course, presumes that poverty can best be addressed by engaging communities in the cash economy, and thereby facilitating socio-economic development (UNDP 1995). Conservation is usually practised in areas that are agriculturally marginal, and at best therefore offer limited earning potential. Where income can be generated in such areas it is very commonly in a manner that is not environmentally sustainable (Steenkamp and Hughes 1997).

CBNRM is a management strategy that seeks to manage natural resources with a view to utilising that resource for economic returns. In theory, this revenue can be used to alleviate conditions of socio-economic impoverishment, by developing infrastructure such as schools and clinics which serve a function of social development, and by developing human capacity.

3.10.3 Environmental development

Involving local communities in conservation initiatives is seen to offer two major benefits. Firstly, it is seen to potentially improve conservation and environmental management in Africa, by drawing on local knowledge, by reducing conflict and by giving the community an incentive to manage. The IUCN has launched initiatives such as the World Conservation Strategy, and more recently 'Caring for the Earth' which seeks to integrate development goals with conservation objectives which involve the participation of local people (Steenkamp and Hughes 1997). In these, and other strategies, communities neighbouring on conservation areas are being encouraged to become involved in development projects in or adjacent to protected areas. Perceived development benefits serve as community incentives to preserve the conservation status of these areas (Steenkamp and Hughes 1997; Koch 1995; De Villiers 1995).

Conservation and environmental management by communities is intended to lead to environmental sustainability. However, secondly, natural resources are managed primarily as a vehicle for economic development. Economic development leads to improved chances of environmental quality, but it also leads to the development of the built environment (ie the development of infrastructure).

Development is sometimes described as the attainment of concrete objectives or the building of infrastructure. The building of a school, clinic or road is therefore considered to be 'development'. Very often communities themselves conceptualise the term 'development' as such (Murphree 1993). However these 'developments' are not sustainable or enduring and without the human interest and commitment necessary to utilise them effectively, they serve no lasting function to improve the socio-economic livelihoods of surrounding communities (Swanepoel 1992). Without teachers, a school is just a building, and without medical staff and medicines a clinic is also just a physical structure that cannot of itself be classified as a 'development'.

However, while the development of the built environment is, in itself, not development, developing the built environment plays a critical role in creating an enabling environment for overall sustainable development. For example, clinics enable enhanced healthcare; electrification promotes industry; and road networks facilitate development practise.

3.11 Hunting as a vehicle for development

Concepts such as CBNRM and Conservation Based Community Development (CBCD), represent a paradigm that has developed in the last 13 years (Steiner and Rihoy 1995), that combines the objectives of conservation with those of development. However, it has been noted that communities will only be motivated to participate in conservation management if there are fiscal and development benefits attached to conservation that are greater than other land use alternatives (Steiner and Rihoy 1995). There are two categories of land use in conservation that generate income: non-consumptive nature tourism which includes game viewing, photo safaris, bird watching, and hiking; and consumptive tourism in the form of hunting. The land use option which is chosen is obviously dependent on a number of considerations relating to the local context of each specific instance that are beyond the scope of this discussion.

In general hunting generates substantially more income than do other land use activities. It is much more profitable for communities to use their land as conservation areas, with associated incomes, than to scratch out a living with agriculture (Steenkamp and Hughes 1997). According to Wildnet Africa (1997) "this is no wild claim - the Development Bank of Southern Africa recently did a survey on the profitability of the different forms of land utilisation for the region. Eco-tourism and hunting give up to five times the return per hectare that cattle and dry land cropping do." In "An economic analysis of community-based wildlife utilisation initiatives in Botswana", Barnes also shows that wildlife utilisation is substantially more profitable that agriculture on marginal lands (Barnes 1995).

3.11.1 The hunting for development debate

The use of wildlife by humans has been debated on both ethical and pragmatic levels. The ethical debate (Singer 1976; Nations 1988 in Robinson and Redford 1991) is concerned with whether humans should adopt a Homo-centric or a bio-centric perspective to conservation. The debate focusses on whether humans have the right to use wildlife for their own purposes, or whether wild species have intrinsic rights of their own. The generally accepted answer to this question would seem to be that unless it has some value to humans, wildlife will not be valued. If it has no value to people, then wildlife and its habitat will be destroyed to make land available for other land use activities which do have value. Wildlife can be used for commercial, recreational, scientific, aesthetic or spiritual reasons, but it is essential that people use wildlife, giving it human value and subsequently human protection through conservation strategies (Robinson and Redford 1991). While there remains considerable debate about the merits of hunting as a conservation strategy, it is suffice for this discussion to accept that the human use of wildlife is a pragmatic, if not necessarily moral, imperative in conservation.

3.11.2 Hunting practices in Chintopo

There are currently three different uses of wildlife in the Tchuma Tchato project area and the conservation strategy is at the interface of these, namely: sport-hunting; subsistence hunting and local market-use. Subsistence-use is restricted to situations in which people hunt wildlife for community consumption. Local market use can be described as the exploitation of wildlife for sale or barter in the local market, and usually occurs with minimal capital investment, although the harvesting of animals can be extreme. Sport hunting is a much more market driven activity in which paying clients buy animals for meat or trophy hunting (Robinson and Redford 1991).

Poaching is a term which is also often used in the context of conservation. Poaching can be

defined as any illegal off-take of game or fish, whether for subsistence or commercial use, from a protected area (Oxford 1995). The key criteria in defining poaching is whether or not it is legal, and legality is defined in the context of land ownership and the accepted principles for managing the land. Subsistence hunting or local-market hunting is therefore only poaching if it contravenes management rules of the protected area.

Section B: Conceptual Framework

3.12 Introduction to the conceptual framework

Governments support CBNRM programmes, and a community will be motivated to engage in such a programme, because of a perception that CBNRM offers a solution to socio-economic development needs. CBNRM does have objectives such as conservation and environmental management, but these are commonly (at least to development practitioners and communities) secondary to development objectives. Each CBNRM programme will be unique. It will be influenced by the type of resource involved, the nature of the tenure system, the nature of local community institutions and the motivational dynamics which exist within the community (Murphree1993). CBNRM advocates a participatory approach to conservation, and it is seen to offer long term and sustainable development benefits.

Section A has presented an overview of relevant literature in the area of CBNRM. With this background, Section B will continue this review but will be focussed on establishing a conceptual framework. This conceptual framework will be used in the analysis of the contribution that the Tchuma Tchato CBNRM project has made to development in Chintopo ward. This conceptual framework will consider aspects relevant to the organisation and management of a CBNRM project, and it will highlight some of the key principles and characteristics of a CBNRM

programme. This section will develop a matrix which can be used to evaluate the outcome of a CBNRM project intervention. The ideas presented in this section will be used in the examination of the Tchuma Tchato project at Bawa, in subsequent chapters.

3.13 CBNRM: a strategy to address development needs in Chintopo ward

The Tchuma Tchato CBNRM project at Bawa was initiated as part of a more comprehensive programme aimed at institutional development within the DNFFB, policy and legislative reform. The Tchuma Tchato project was, however, seen as a key opportunity to utilise the rich wildlife resource of the region to deliver socio-economic development to the desperately impoverished Chintopo ward (DNFFB 1993). The development needs of the region can be categorised as social, economic and environmental development needs. Close linkages exist between each of these categories of development and they combine to address the three critical areas of sustainable development (Goodland 1995). The development needs in Chintopo were highlighted in Chapter 2, but are now listed here.

Social development needs in Chintopo include the following:

- development of literacy, and skills within the community;
- development of human capacity and empowerment;
- development of institutional capacity in the community to manage a CBNRM programme;
- improved food security;
- improved health care and general welfare;
- the building of capacity in local government and in the Wildlife Department;
- the reduction of human conflicts in the project area.

Economic development needs in Chintopo include the following:

- income generation to support infrastructure development;
- income generation to support human development;
- income generation to support the CBNRM programme;
- creation of employment opportunities;
- increased household income to promote food security, health and general welfare;
- increased household income to reduce pressure on natural resources such as fish and wildlife;
- increased household income to reduce pressure on subsistence agriculture on marginal lands, thereby facilitating environmental management.

Chintopo also has the following environmental development needs:

- the development of infrastructure, including schools, clinics, shops, roads, and communication systems;
- the development of basic services such as electricity, reticulated water and sanitation;
- the conservation and sustainable use of wildlife and fish resources;
- the overall protection of environmental integrity and environmental management.

3.14 Tchuma Tchato: a CBNRM and development project intervention

The development needs in Chintopo ward are colossal (DNFFB 1993; Murphree 1995). Development, and the alleviation of socio-economic poverty, is an ongoing long term process. It is a process that is also extremely difficult, as is evident in the history of development practise in Africa. However, although socio-economic development in Chintopo ward will occur over a long time frame, the Tchuma Tchato project is a development intervention that is time bound.

According to Cusworth and Franks "a project is the investment of capital in a time-bound intervention to create productive assets"(1993).

In this definition 'capital' refers both to the investment of financial capital and physical resources, and to human capital, as the participation, energy and inventiveness of people is as important (if not more important) than other capital investments. In the case of Tchuma Tchato, this intervention is made by organisations external to the community. A second important characteristic of projects is that they are 'time-bound'. Projects involve capital investments over a limited time frame. During this time, projects should create assets, systems, schemes or institutions which continue to operate and yield a flow of benefits after the project has been completed (Cusworth and Franks 1993).

3.14.1 External intervention

It has been touched upon in previous discussion that inevitably, a development intervention such as Tchuma Tchato, will be identified and implemented by a party external to the community. The community in Chintopo are desperately impoverished. At the initiation of the project the community were battling to seek out a survival after years of civil war, in a region desperately lacking in basic infrastructure, and in the context of a frontier lawlessness (including conflicts with the safari operator over poaching and with police who were corrupt) (Wilson 1995). The population has a very low level of literacy, they felt politically dis-enfranchised because of the remoteness of the region, and they lacked the human capacity or the financial resources to initiate such a project. If the Chintopo community had the capacity to initiate such a project, they would have. If rural communities in general had such capacity, CBNRM programmes would develop spontaneously in rural areas - which they don't.

A top-down approach is therefore a pre-requisite for the establishment of a project in an area with low levels of human capacity, such as occurred in the Tchuma Tchato CBNRM project. The idea

was conceived by officers of the DNFFB and taken forward by members of the IUCN. What becomes critical after the initial idea is conceived, is how such an intervention is managed towards an ultimate goal at the end of the project life. It is critical that the project intervention is designed to evolve from a top-down CBNRM project to a community-based, self-sufficient programme.

3.14.2 Time frame

A project is by definition time-bound. A project involves the input of capital. Because of this capital intervention, a project is not a self-sufficient activity, and so a project is in itself not sustainable. It is therefore critical that a project utilises human and financial capital, so that on reaching the end of the project life, the outcome is a useful and productive asset. The role of external agents and role-players is essential in creating these 'productive assets'.

3.14.3 Productive assets

Although projects are commonly initiated from the top-down, a central objective of a CBNRM project should be for the community to move towards greater autonomy. The project intervention should deliver some form of socio-economic development to the impoverished community. More important to the long term success of the project, however, is that the project should serve to develop an independent (as far as is practical) and economically viable, resource management and development programme that is community based. As far as possible the project outcome should be a CBNRM programme that is able to addresses the social, economic and environmental development needs in Chintopo. The project should develop human capacity within the community which empowers the community to manage the CBNRM programme autonomously. This programme should provide conservation management, and it should utilise wildlife resources to enable sustainable socio-economic development.

3.15 Key principles of CBNRM

According to Steiner and Rihoy, the key principles underlying CBNRM are still being refined as CBNRM programmes evolve (1995). Attempts have however been made to capture the experience and lessons learnt in CBNRM in southern Africa. This experience has led to the elaboration of five key principles, widely acknowledged as capturing the 'optimum conditions' for resource management under communal property regimes (Steiner and Rihoy 1995). According to Murphree, these five principles are (Murphree 1993 in Steiner and Rihoy 1995):

1. **Effective management of natural resources is best achieved by giving the resource a focussed value** - to determine whether the benefit of managing a resource exceeds the cost the resource must have as a measurable value to the community.

2. **Differential inputs must result in differential benefits** - those communities living with the resource and thus bearing a higher cost should receive higher benefits than those who do not bear this cost.

3. **There must be a positive correlation between the quality of management and the magnitude of derived benefits** - an incentive for good management must reward greater investment in the resource with greater benefits.

4. **The unit of proprietorship (ie. who decides) should be the same as the unit of production, management and benefit** - the group which manages the resource should also form the local management institution.

5. **The unit of proprietorship should be as small as practicable, within ecological and socio-political constraints** - smaller social groups are better at managing themselves and the resource than large anonymous institutions.

3.16 Key principles of environmental management in Africa

CBNRM is one type of institutional mechanism that involves the community in natural resource management. CBNRM occurs at a community level. Importantly, it also occurs within a much broader political and institutional environment in which the environment and natural resources are managed, and development occurs. It is therefore necessary to have an understanding of the broader political and institutional environment in which CBNRM occurs. The World Resources Institute has identified what it considers to be the key principles of this broader environment. These principles were identified in an analysis of the environmental management strategies of African countries. They are contained in "New Roots: Institutionalizing Environmental Management in Africa" (Dorm-Adzobu1995). These principles can be extrapolated to also reflect the broader principles needed for an enabling environment for development in terms of CBNRM. They include the following (Dorm-Adzobu 1995).

1. **Institutional choices**: A key role that environmental (and development) strategies are expected to play is to establish a precedent and continuing basis for effective cross-sectoral co-ordination in managing the environment (CBNRM). This entails finding an effective lead institution and preventing inter-institutional conflicts. Specific recommendations include: national policies for the environment (which are cross sectoral in nature) should be co-ordinated at a level higher than that of line ministries; the institutional structure must allow for effective co-ordination outside of government, especially with the private sector and civil society.

2. **Political support**: Political support is the most important prerequisite in the quest for

sustainable development. Government commitment to strategic planning, comprehension of issues at stake, allocation of resources for institutional development, and the general involvement of the political leadership all determine the success of the planning exercise. Every effort must thus be made to ensure support at the highest level, not only for the planning exercise, but for the whole notion of environmental management. That support must also be truly cross-sectoral and come from government, the private sector, and civil society.

3. **Local and sub-national participation**: It is important to effectively include NGO's, indigenous institutions, and concerned individuals in the planning process. Major considerations include decentralization policies, 'national ownership' of the planning process, NGO participation, and planning and implementation instruments. An effective strategic plan for the environment should include commitments to strengthening the role of 'sub-national' government organizations and increasing their responsibility and should call for constant interaction with community and other stakeholder groups. NGO's often play a useful, even essential role in facilitating such participation.

4. **Donor support**: An important element in most planning exercises is the role of donors, which includes the provision of technical assistance, the co-ordination of activities, and the imposition of conditionalities. Donors must take pains to ensure that their role helps to strengthen the country's (and its institutions) sense of ownership of the strategic planning process and elevates the importance of environmental management (CBNRM) in general.

5. **Capacity development**: Obviously, a determinant of any national environmental (CBNRM) strategy's ultimate success is the relative capacity of the institutions and structures that sustain it. The strategic planning process needs to strengthen the capacities of these institutions and the individuals who staff them through training and other activities.

6. **Implementation**: There is a need for strategic plans that are consulted and implemented. To help ensure that this happens, an implementation agenda must be designed as part of the planning process. The key elements of such an agenda are ensuring that a central co-ordinating institution is in place; facilitating that institution's attempts to build bridges with other organizations; conducting a training needs assessment; adopting innovative approaches in the use of policy instruments; monitoring the performance of the planning and implementation process; and developing public awareness and education programmes.

3.17 Key Characteristics of CBNRM

The outcome of the Tchuma Tchato project intervention is important to the long term, and sustainable, development of Chintopo ward. The project is the first development intervention, of its kind in Chintopo. Discussion thus far has shown the key principle of CBNRM as outlined by Murphree (1993). It has also shown that the broad institutional environment is critical to ensure effective implementation of CBNRM. The key principles needed for institutionalising environmental management (which are taken to reflect the principles for institutionalising CBNRM) have been discussed, as outlined by Dorm-Adzobu (1995). It is therefore postulated that in order for CBNRM to have successful outcomes, these principles of CBNRM, and of the broader enabling institutional environment need to be evident in a CBNRM project intervention - such as Tchuma Tchato.

While being acutely aware of the importance of the broader institutional environment, these issues are beyond the scope of this dissertation. This dissertation focusses specifically at the project level and the Tchuma Tchato CBNRM project that was established in Chintopo. The outcome of the Tchuma Tchato project intervention has been touched upon. Based on the five principles of CBNRM and of the broader principles of environmental management, it is possible to distil what can be considered to be the most critical characteristics of a CBNRM programme. It is postulated

that for a CBNRM programme to contribute to social, economic and environmental development needs, it must address these key characteristics. In turn, if development needs are met, it will contribute to the development and long term sustainability of a CBNRM programme. The integral links that exist between the key characteristics of CBNRM and the satisfaction of development needs is illustrated in a matrix, contained in Table 1, that is presented towards the end of this chapter. These key characteristics are now considered. Having considered these characteristics, the way in which these characteristics can be achieved, and how they will contribute to long term development needs will be discussed.

3.17.1 Management of natural resources

Management of natural resources is central to a CBNRM programme. The underlying rationale for CBNRM, is that through the sound management of resources, and the effective utilisation of these resources, development can be facilitated. The strong linkages that exist between natural resource management and development are shown in Table 1. By adopting a more socially responsive approach to conservation, it is argued that conservation will be more sustainable in the long term. The need for sound management and environmental sustainability is made all the more pertinent by the fact that conservation is being used as a vehicle for development. The long term viability of development that harnesses natural resources, is therefore dependent on the sustainable use of these resources. Natural resources should be managed to promote the maximum sustainable development to the community. The management of natural resources should facilitate Murphree's third principle of CBNRM - that there must be a positive correlation between the quality of management and the magnitude of derived benefits. The Long term sustainability depends on the sustainable use of environmental resources (Goodland 1995).

3.17.2 Ownership and land tenure

'Community development' has commonly been conceptualised in Africa as an extension to local

levels of central government institutions (Murphree1993). For CBNRM to be effective, it is important that communities have proprietorship of a natural resource (Murphree 1993). Giving land tenure to a community does not guarantee sound management of natural resources. Similarly it doesn't guarantee that a CBNRM programme will succeed. There are many examples of CBNRM programmes in Africa, in which communities have land tenure, that have not succeeded in delivering development to a community (Breen pers. comm. 1998). Sound management is also not necessarily dependent on tenure. Many areas of common property around the world are well managed, for example the sea shore. Land tenure is nevertheless considered to be an important way of achieving effective community-based management. This is stressed by Murphree (1993, p.12):

"The evidence is that communities can become effective institutions for sustainable resource management, but only if they are granted genuine proprietorship, that is , the right to use the resources, determine the mode of usage, benefit fully from their use, determine the distribution of such benefits and determine rules of access. Any policy which excludes these components will frustrate the goal of making communities effective institutions for resource management".

Tenure gives ownership of resources to a community. Ownership entails the community having the rights to the value of the resource. The 'focussed value' of the resource was outlined as an important principle of CBNRM by Murphree (1993). Communities also need tenure to establish rights of inclusion and exclusion in a project. Tenure indeed also gives a community the right to decide whether to use the resources at all, the right to determine the mode and extent of their use, and the right to benefit fully from this use in the way that they choose (Murphree 1993).

3.17.3 Community involvement

The idea of community involvement is linked to Murphree's fourth principle of CBNRM - the idea that the unit of proprietorship should be same as the unit of production (Murphree 1993).

The importance of community participation has been touched upon in previous discussion, but it cannot however be overemphasized. Table 1 shows that direct linkages exist between community involvement and development, particularly social development and environmental development (ie conservation). It is argued by Bak(1995) and O'Donoghue (1993) that the knowledge and participation of local communities in resource management is essential, because of their extensive knowledge of their own environment (Bak 1995, O'Donoghue 1993). Under the right circumstances, communities can potentially be effective institutions for resource management (Murphree 1993).

It has been noted that in many instances, CBNRM will during its initial stages of formulation and implementation be heavily oriented towards a 'top-down' approach. This will occur when communities do not have the capacity, expertise or the resources to initiate such projects themselves. External interventions are commonly necessary to initiate CBNRM strategies. However, if CBNRM is to become sustainable in the long term, relatively independent of external interventions, it is critical that the project moves towards an orientation that is 'bottom-up'.

Increasingly, confidence is being placed in participatory community based development processes as a way of addressing environmental issues from so-called 'bottom-up' perspective (Taylor 1998). A development intervention will have most chance of success if there is meaningful and lasting human development that builds capacity and empowerment, thus allowing CBNRM to become self sufficient and 'community-based'. For this to happen, development must be a learning process, and there must be extensive and meaningful participation of the people affected by the planning and management a project (Swanepoel 1992). Murphree believes that "the management of communal property resources can act as a powerful catalyst for communal institutional development" (Murphree 1993, p.13). To make development a learning process, people must be guided, given skills and encouraged to take the initiative (Swanepoel 1992). Individuals can learn through their engagement with the process of planning and managing a project, but where necessary formal adult education is also effective in empowering individuals

and developing human resources (Hamilton 1992).

The success of CBNRM projects in Africa will depend on the extent to which management and conservation strategies can come to reflect a broader community of people (Taylor1998). Taylor emphasizes this point and says that "this reorientation to wider public participation, sometimes called community based development, is crucially important if the legacy of authoritarian, top down colonial practices are (sic) to be successfully overturned." The assumption here is that colonial approaches to conservation have not been successful in Africa, and that they need to be overturned.

It is therefore critical that a CBNRM project intervention shows an evolving level of participation by the community and by external agents. At the initiation of a project external involvement will predominate, with limited community participation. However as the project develops there should be an increasing level of community involvement. This increasing involvement should correspond with an increase in community capacity, that is promoted by strategies to develop human capacity during the project intervention. Ideally, a point should be reached in the project life at which community involvement supersedes external involvement. This process is shown in Figure 3. If this point is achieved, it will mark part of a successful evolution from a 'CBNRM project intervention' to a more autonomous 'CBNRM programme'.

3.17.4 Community benefit and incentive to manage

One cannot simply assume that a 'community' wants to manage the environment. It is therefore necessary to understand what will motivate a community to engage in a process of CBNRM and what will ensure that community participation is sustained. This understanding will obviously contribute to successful planning and management. Murphree believes that people seek to manage their environment when the benefits of management are perceived to exceed the costs (Murphree 1993). Community expectations must be clear and realistic. Goals and objectives

must be outlined at the outset of the project, and they must be realistic. It must be clear to communities what they are working towards, and benefits must be tangible. To ensure continued motivation and participation in the project, it is important to combine both short term and long term goals and objectives to work towards (Swanepoel 1992). The project intervention should in itself ensure development benefits. Table 1 shows that development will serve as a powerful incentive for the community to engage in CBNRM. In turn, this will contribute to long term sustainability of CBNRM.

Community benefit and incentive to manage is linked to Murphree's fifth principle - that the unit of proprietorship should be as small as practicable (Murphree 1993). This will lubricate community involvement, by making management by the community simpler (ie the more homogeneous a community, the easier community involvement will be). A smaller community will also mean increased benefit to each individual in that community.

CBNRM is unlikely to succeed if the costs which the community carry, such as restricted access to water and agricultural land, and crop damage from wildlife, are perceived to be greater than the development benefits to be derived from the project or programme (Bell 1987). It is therefore essential that the benefits which the community derive from the project are significant, and they must be perceived to outweigh the costs. 'Development and benefit' is closely linked to reconciling individual and community interests. Bell argues that for a conservation based programme to develop and survive without external enforcement, the benefits conferred must be real and they must not be long delayed (Bell 1987). Murphree asserts that "in modern rural Africa, even in its remotest areas, benefit is most often seen in the peoples thoughts as revenue, cash income convertible into the various goods and services that communities and individuals want or need" (Murphree 1993).

Development benefits must also be both short term and long term. According to Child and Peterson (1991), goals must be set to achieve both long and short term benefit, so that community

interest is sustained (Child and Peterson 1991, p.41):

"Real and immediate benefits, graphically illustrated by cash, cement the relationship between wildlife and economic development. These incentives are crucial to encourage communities to cultivate their wildlife resources. A CBNRM programme should address all three components of sustainable development, namely social, economic and environmental development".

3.17.5 Reconciling individual and communal interests

CBNRM is likely to encounter conflicts between individual and communal interests. For CBNRM to succeed, there must be strategies to reconcile an individual's self interest with the 'community' interest. The individual's urge for self gain and 'community' interest is usually reconciled by introducing individual rewards, and possibly punishment into the system. (Bell 1987). The difficulty will arise when an individual's incentive to act in the communal interest is in fact less than the perceived rewards of working in his / her own self interest. Table 1 shows that individual and community interests will most easily be resolved when individuals derive development benefits from CBNRM.

3.17.6 Effective institutional support

The process of socio-economic development is a complex and long term process. It is usually beyond the capacity of a single organisation to deliver all of the inputs that a CBNRM project requires for it to succeed. The need for a combined effort to achieve a desired outcome is described by Breen *et al*:

"Clearly sustaining development is beyond the capacity of any single organisation. The strength of the process is dependent on the strength of the network of expertise and resources

which can bring the right resources together at the right time and the right place" (Breen, Mander, A'Bear, Little and Pollett 1992).

Socio-economic development is extremely difficult to achieve, as the many development failures across Africa reflects (Kaplan 1996; Anderson and Grove 1987; McLaughlin 1998 etc). The expectations given to CBNRM are also great (for example DNFFB 1993), and the resources available to a particular community or to single institutions are usually limited. Therefore, it is essential that a CBNRM development strategy embraces the need for institutional interactions, and draws on as many sources of financial and human resources that it needs. External interventions need to be appropriate, and key role-players need to interact to ensure the project's intended outcome. It is essential that the external role-players, and most importantly the lead organisation, have the internal capacity within the organisation and the understanding of their role in the intervention process. The lead institution must be well organised; it must have adequate financial and human resources; it must understand the nature of the intervention; and it must understand the role that it is playing in the intervention process. The role of the external role-players is critical in the implementation and early stages of project operation. For these external role-players to effectively organise and empower a target community, it is essential that they are themselves organised and have the capacity required of their role.

A second key area of institutional support is policy and legislative support. This would include the principles for environmental management as forwarded by Dorma-Adzobu (1995). It is essential that CBNRM is supported by a political environment that promotes a CBNRM project intervention. This will also entail that the role of government departments in the process is defined and understood, thereby enhancing the effectiveness of institutional support. These factors contribute to an enabling environment, and without them CBNRM will be retarded.

Table 1: Matrix showing the relationship between the key characteristics of CBNRM and development needs in Chintopo ward.

Development needs	**Key Characteristics of CBNRM**					
Social development	natural resource mngt.	land tenure	comm. involvement	comm. benefit and incentive	reconciling individual and comm. interests	institutional support (including policy, legislation etc.)
community literacy and skill						
human capacity and empowerment						
community institutional capacity						
improved food security						
improved health care and general welfare						
capacity building in local government						
capacity building in Wildlife Department						
reduction in human conflicts						
Economic development						
income for infrastructure development						
income for human development						

income for CBNRM programme management						
employment						
increased household income (to promote food security, health, general welfare and environmental mngt.						
Environmental development						
infrastructure development (including schools, clinics, shops, roads, and communication systems)						
development of basic services (including electricity, reticulated water and sanitation)						
conservation and sustainable use natural resources						
overall environmental management.						

note: arrows in this matrix depict possible linkages, but not the strengths of these linkages. This matrix is in its first stages of formulation, and so only a few of the numerous possible linkages have been shown. Filling out such a matrix would require a participatory process - and it would

be subject to considerable debate. It is beyond the scope of this dissertation to develop this matrix further. With further development it could lead to a useful tool for conceptualising CBNRM. Please also note the following abbreviations: mngt.-management; comm.- community; dvlpt - development. Environmental development is taken to include the development of the built environment and the management of the natural environment.

3.18 Vertical and horizontal linkages in development

It is important that a development concentrates on all three types of development, and recognises horizontal linkages between social development, economic development and environmental development. For example, infrastructure should not be developed without a corresponding development of the human resources and institutions necessary to manage that infrastructure. Similarly, it is pointless to develop human and institutional resources, without appropriate infrastructure development that will allow these new resources to be harnessed.

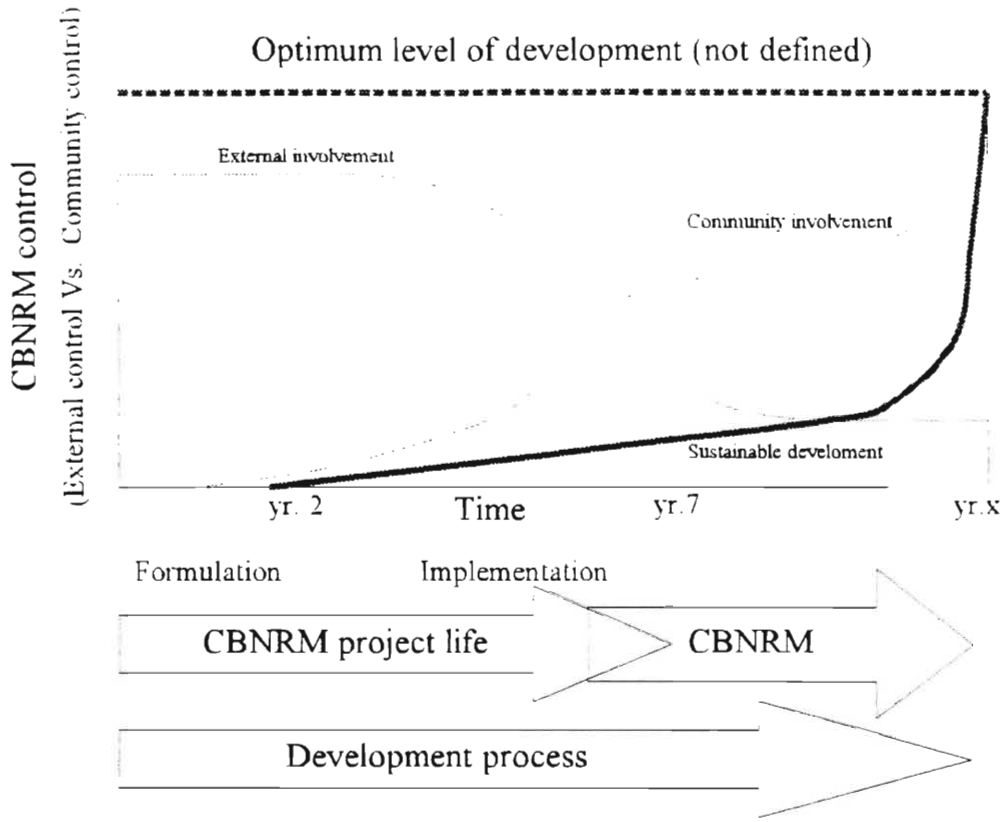
At the same time, it is essential that in development, vertical linkages are appreciated. Vertical linkages are those linkages between the project, government and other institutions, that occur within the broader policy and legislative environment. A development project must exist within a policy and legislative environment that promotes such development. For example, a CBNRM programme will only have a chance to succeed if land laws give communities tenure over their resource, and if communities are entitled to a substantial portion of derived revenues. It is essential that a project is promoted by a political commitment to creating an enabling environment for development. Vertical relationships are also important, in understanding the limitations of a particular project. Very often unrealistic expectations are given to what CBNRM can deliver in terms of socio-economic development. Government, and other external organisations, need to support a process of development in a region, by developing infrastructure such as schools and clinics, and by developing human capacity, and they should not rely on CBNRM to deliver socio-economic development.

3.19 The role of a CBNRM project in the overall time frame of development

This section has covered a number of issue relating to a CBNRM project intervention such as Tchuma Tchato. Figure 3 illustrates many of the issues that have been discussed. It indicates the time frame of an open ended development process. Socio-economic development is an ongoing process in time, that will occur over decades. CBNRM will, in itself, never deliver the extent of development that is needed in an area such as Chintopo. In principle, CBNRM can contribute to this development, but it is only one component that will contribute to overall development objectives being met. In principle CBNRM is a sustainable, long-term process that contributes to development. A project intervention is by definition time-bound, and should therefore lead to the development of sustainable CBNRM at the end of the 'project-life'.

For CBNRM to be sustainable it must be financially sustainable, but also socially sustainable. The changing level of external and community involvement should be designed to change. Initially the project will be led by external agents, with little community involvement. Figure 3 illustrates that during the course of the project life, community involvement must increase as the community becomes empowered. The project intervention should be designed to reach a point at which the community assumes overall control, with greater autonomy in management. There will probably always be some level of external involvement, but by the end of the project life, the community should have definite proprietorship of a project that has evolved into a CBNRM programme.

Figure 3 is also important in clarifying what is being analysed in terms of socio-economic development in this dissertation. It shows the time frame of the project intervention relative to the overall time frame of long-term development objectives. It indicates that the project can have initiated the development process by addressing the key characteristics of CBNRM, which is essential, but cannot have effected 'significant' development changes by the end of the project life.



note: times indicated for project formulation and project life reflect the time scale of the Tchuma Tchato project. They are not intended to be generic.

Figure 3: A conceptual model of a CBNRM project intervention

3.20 Conclusion

CBNRM is a development paradigm that has evolved in response to the failure of past approaches to conservation and development. In theory, the principles embodied in CBNRM are relatively simple. However, it is in practise that the real challenge of utilising natural resources to deliver

socio-economic development is found. Communities that engage in CBNRM commonly have very limited human resources to draw on. The principles of conservation that CBNRM encourage are also often in conflict with people's traditional understanding of resource utilisation. Development needs are often so great as to be almost infinite, and yet the natural resources that are being harnessed are always finite.

In conclusion, a quote from Breen *et al* (1992) provides an eloquent analysis of the challenge of a CBNRM project such as the Tchuma Tchato project at Bawa:

"Relief of poverty has more to do with the redistribution of control over and management of resources than with the redistribution of the resources. Thus, for example, it is not so much the redistribution of land in conservation areas that is at stake. Rather it is the redistribution of control over and management of the land and over the benefits derived from use of the land. Participation in control and management secures participation in the economy, but only if it is real participation with its implications of responsibility and accountability. Exclusion from control and management brings exclusion from the economy."

Chapter 4

Method

Chapter 4
Method

4.1 Introduction

The practice of development is succinctly described by Kaplan (1996, p ix):

"Development is recognised as a major challenge, if not the major challenge, facing us as we move towards the twenty first century. There is no question, however that those who practise development do so within a terrain which has become highly contested and contentious. On the one hand we know that the schisms and inequities which characterise relationships between individuals, communities and nations are tearing at the fabric of social life and beginning to render it untenable....On the other hand we know too that little has been achieved in this regard during the last three to four decades of what has come to be known as the development era. There are many, both within underdeveloped' communities themselves as well as amongst development theoreticians and practitioners who have come to question, and even scorn and ridicule, the very notion of development".

This dissertation analyses the organisation and management of the Tchuma Tchato CBNRM project at Bawa. It is undertaken to determine the present and projected outcomes of the Tchuma Tchato project. The extent to which the project has achieved it's objectives will be determined. The project will be analysed using the conceptual framework that was established in Chapter 3. Project outcomes will be evaluated, based on the stage that the project is currently at (see Figure 3), and what could reasonably be expected of a development intervention of this type - at this moment in time.

4.2 Rationale for this analysis

In this dissertation the words analysis, examination and evaluation are used interchangeably. The terms are synonymous, and are defined by the Oxford Dictionary as follows (1995):

> analysis is "a detailed examination of the elements or structure of a substance";
> examination is "the act or instance of enquiring into the nature of or condition of something, to look closely or analytically";
> evaluation is the process of evaluating, "to assess or appraise"

The need to undertake processes of evaluation in development practise is widely accepted (eg. Swanepoel 1992; Hamilton 1992; Cusworth and Franks 1994). Swanepoel asserts that: "the evaluation of projects is an absolute necessity", because without it community development cannot be a learning experience (Swanepoel 1992). This is particularly true in the case of Tchuma Tchato, given that it was established as a pilot project (with an objective) that would act as a "blueprint" upon which to implement similar projects in other parts of Mozambique. Swanepoel suggests that (Swanepoel 1992, p.95):

> "Development thinking assumes that mistakes will be made and that the identification and analysis of those mistakes will help to make future efforts more effective. Perhaps a mistake can be seen without delving too deeply for it, but it needs deeper scrutiny to get clarity on the context of the mistake, in other words, what caused it and what are its consequences".

Swanepoel further justifies evaluation and issues a warning (Swanepoel 1992, p.95):

> "Because community development is a learning process, and because it strives towards

clear concrete and quantifiable objectives, it needs course adjustments from time to time". Community development usually takes place in an uncertain environment. It is usually not clear what to do to attain the desired result. It is usually not clear what people's reaction will be to a project. It is not clear how people will experience intervention from outside to start a community development project. It is therefore inevitable that things will not always go as planned. Course adjustments will be necessary,....but if evaluation is not a continuous part of the project so that course adjustments can be made in time, chances are (sic) that the deviation will be so severe that nothing can bring it on course again".

There are two types of evaluation according to Swanepoel (1992). The first is a continuous ongoing assessment of the projects performance through its course. The second type which is undertaken in this dissertation is an action performed towards the end of a project[1]. It is important to note, however, that the project is only the catalyst in what should be a long term process of development (as shown in Figure 3). The project should serve to establish CBNRM that delivers development benefit in the long term. For this long term development to be realised, an evaluative exercise is necessary so that corrective measures can be taken, if necessary, and for CBNRM to be strengthened.

According to Swanepoel (1992, p.96):

"It is the final test with the benefit of hindsight which indicates weaknesses and mistakes during the life span of the project and which establishes whether the objective was reached in the most effective way. It also establishes whether the project was successful as a learning process; and whether the action group has gained more than only the physical result it was striving for".

[1]The end of 1999 marks the end of the current phase of funding by the Ford Foundation. It is not yet clear how the project will be funded in the future, or what path of management it will take.(Fremino pers. comm. 1998)

4.3 Scope

The distinction between the Tchuma Tchato CBNRM 'project' located at Bawa, and the Tchuma Tchato 'programme' is critical. The programme has much broader objectives, and time scales, aimed at institutional development within the DNFFB and SPFFB, policy and legislative reform. The Tchuma Tchato project at Bawa is one component of this overall programme. The focus of this evaluation is on the CBNRM project at Bawa. No attempt is being made to evaluate the Tchuma Tchato 'programme'. Where a link exists between the 'project' and the' programme' this will be considered further, but is not the focus of this dissertation. The focus of this dissertation is the CBNRM 'project' that has been established at Bawa.

4.4 Method

In Chapter 3, it was noted that the Tchuma Tchato project at Bawa is an external, time-bound intervention that should create productive assets. The productive assets should be a CBNRM programme that is to a large extent autonomous (it will probably never be completely autonomous), and which is able to meet some (it will never meet all) of the dire socio-economic development needs in Chintopo ward. This dissertation considers the extent to which the time-bound intervention of human and financial capital has contributed to this outcome.

The most important component of the method of this dissertation is the conceptual framework that was established in Chapter 3. An extensive literature review was undertaken, in developing this framework. The framework consolidates what have been identified as the key principles of CBNRM, and key principles of institutionalising environmental management (which are extrapolated to reflect institutional principles of CBNRM). The role of a CBNRM project intervention is outlined in terms of its function to create a 'productive asset' of a CBNRM

programme, and to act as a catalyst for the development process. At the end of the project life, CBNRM should contribute to meeting development needs, in a development process that has an extended time frame (see Figure 3).

A matrix has been constructed of development needs in Chintopo, and the key characteristics that are needed for a CBNRM programme to address these needs. This matrix is illustrated in Table 1. In this analysis, this matrix is used as a tool to determine the degree to which the project meets the key characteristics of CBNRM as outlined in Chapter 3. By considering these key characteristics, the extent to which the project is contributing to a sustainable process of development is considered. Within the time frame of the project, it is unrealistic to expect development needs to have been met. More importantly, is the extent to which the project has started to address sustainable development needs, and whether the project has established CBNRM that will continue to meeting these needs in the long term (see Figure 3).

In Table 1, the axis that contains development needs and the axis that contains key characteristics of CBNRM are integrally linked. For example, if a key characteristic of CBNRM is being met (such as community involvement), it will contribute to a development need (such as capacity building in the community) being met. Similarly, if a development need is being met (such as improved food security), it will contribute to a characteristic of CBNRM (such as conservation management) being achieved.

This analysis of the Tchuma Tchato project follows a selected project cycle in an iterative manner. It follows the project cycle as outlined by Cusworth and Franks which is illustrated in Figure 4. It is possible to recognise a number of distinct phases in a development project. These phases (sometimes referred to as stages) constitute the project cycle. There are many versions of the project cycle that have been proposed. However, they all contain the same basic principles and stages. They are categorised by Cusworth and Franks (1993) as: identification, formulation, implementation, commissioning, operation and evaluation. It is argued by Cusworth and Franks,

that for a development project to be successful it must undergo these stages (Cusworth and Franks 1993).

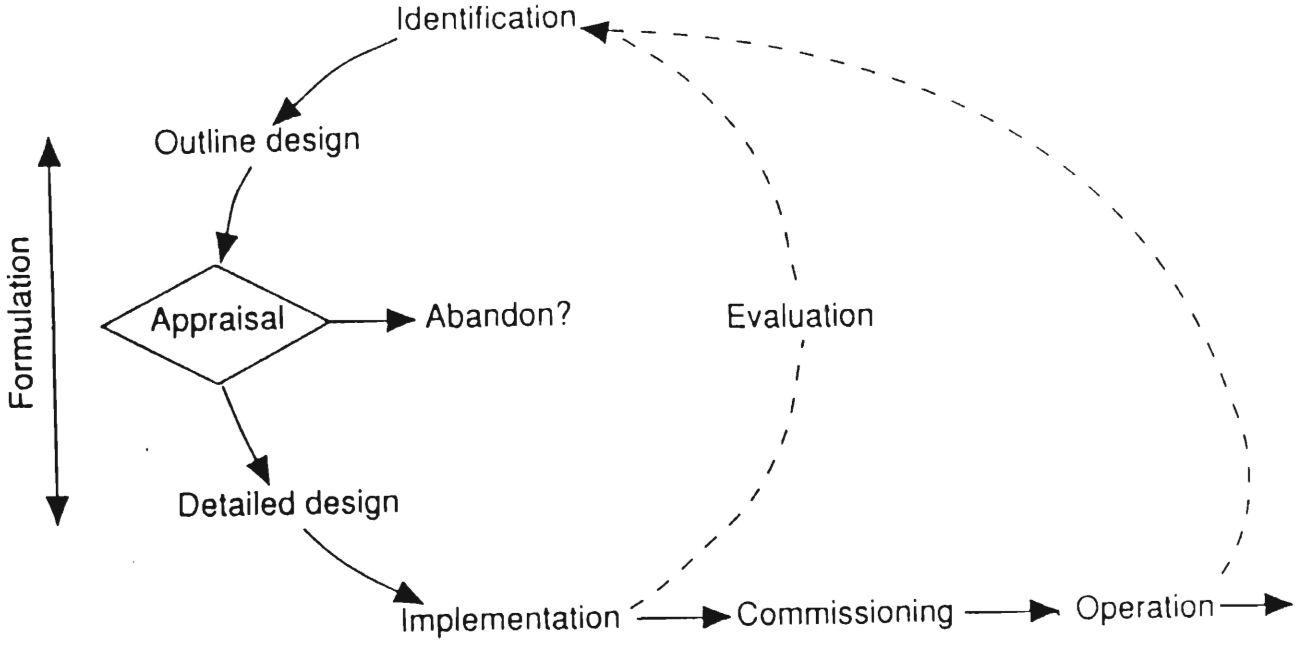


Figure 4: The project cycle (source Cusworth and Franks 1993)

This analysis follows the Tchuma Tchato project from its identification, through its planning, to its end life. At this point, the CBNRM programme should be to a large extent autonomous, and it should be contributing to socio-economic development to Chintopo ward. In this analysis, the Tchuma Tchato project has been divided into two distinct phases. In Chapter 5, the project formulation is considered, which includes identification, and most importantly planning processes (ie feasibility studies, project planning, development of management plans, strategic plans for the future). Project formulation is evaluated against principles of project planning (Lock 1989; Cusworth and Franks 1993; Swanepoel 1992; Hawtin et al 1994). The extent to which the project has been formulated, planned and funded with a view to developing a self sufficient CBNRM process has been examined. Based on this analysis, strengths and weaknesses of the

planning and formulation of the project will be identified. On the basis of these strengths and weaknesses, the outcome of Tchuma Tchato will be postulated.

Chapter 6 will then examine the operational phase of Tchuma Tchato. The organisation and management of the project is analysed, against principles of project management (eg.Cusworth and Franks 1993; Lock 1989; Swanepoel 1992), and more specifically against the key characteristics of CBNRM as outlined in the conceptual framework. This analysis will consider the extent to which external financial and human capital has contributed to project outcomes. Writing about projects and their outcomes, Cusworth and Franks (1993) identify the fact that:

"Development practitioners often blur the distinction between projects and the assets, systems, schemes or institutions they create. This decreases the effectiveness of development through the project approach, because the techniques and approaches appropriate to the time-bound investment of a project are not necessarily appropriate to the continuing operation of the assets".

The underlying reason for the Tchuma Tchato CBNRM intervention, is to enable socio economic development of the region, through the conservation and utilisation of wildlife in Chintopo. Socio-economic development and wildlife conservation is, however, a long term process. The Tchuma Tchato CBNRM project is nevertheless a time bound intervention. Project funding and external support has an end point. Therefore, in order to promote long term socio-economic development and conservation, it is necessary that the project becomes internalised and owned by the community, but also financially self sufficient and viable.

The project intervention should be designed to promote these outcomes. At the end of the project life the community should have the capacity, but also the will, to manage the project independently. If the community do not have this capacity and this will, and if the project is not financially viable without external support, the CBNRM programme will collapse as external

support decreases. If such a collapse occurs, there will obviously be little post project life. If this occurs, the long term prospect for conservation and development, will be no better, than they were when the need for the project was initially identified.

Chapter 6 will consider present and projected project outcomes, making reference to the matrix that has been constructed, and which is shown in Table 1. Based on this analysis, conclusions will be drawn and recommendations will be made in Chapter 7. It is hoped that the overall process of this dissertation will contribute constructively to the role that the project at Bawa is playing, as the pilot CBNRM project in Mozambique, but also to the broader scale of implementing CBNRM in southern Africa.

4.5 Possible limitations to the study

There are certain limitations to this study. Wherever possible attempts have been made to mitigate these limiting effects.

4.5.1 Language

The majority of the population in Chintopo do not speak English. The predominant local language is Chikunda, and most people also speak Portuguese, Mozambique's national language. Shona is also prevalent because many people in the community were refugees in Zimbabwe during the war. The majority of stakeholders were however interviewed in English. During most interviews with community members, a fellow student, Manasa Sibanda , was invaluable as a translator[2]. Any translation which occurred has been noted under personal communication (pers. comm.) in the reference section . Whenever translation occurred the author was present and was

[2]Sibanda was particularly effective as a translator as I worked closely with him, and he had thus had an in depth understanding of my research. Because of this, there was less chance for meaning to be lost and information to be overlooked, which can potentially happen in translation.

careful to ensure that the translator understood the nature of the question[3].

A second limitation of language was that some documents about the project are only available in Portuguese. Where necessary, documents were translated.

4.5.2 External evaluation

An evaluation that is undertaken by a person external to a project will be limited. The external evaluator does not have the experience and subsequent understanding of the project that an internal person would have. This is however offset by the advantages of having an external evaluator. Most notable of these is that the external evaluator enters a project with a degree of objectivity and is not biassed by internal political dynamics. The project process has been reconstructed as carefully as possible, from a number of written sources (Wilson 1995, 1996, 1997; Murphree et al 1995, 1998; Houggard 1996; Namanha 1993 etc), and through personal communication (Murphee 1998, Hougggard 1998, Namanha 1998, Wilson 1998, and Fremino 1998). Namanha (project manager 1994-1997) has been invaluable in validating reconstruction that has been made.

4.6 Method of Data Collection

"In all of my work with development practitioners I have come to recognise that, with the best of them, the 'tricks of the trade' are of secondary importance. A prerequisite for effective practice is the approach, the understanding, the perspective and the value base, out of which the

[3]The danger of meaning being lost in translation, is mitigated somewhat by the fact that emphasis was placed on ascertaining information on processes that have occurred, systems that exist, and overall community sentiments. The intricacies of wording and expression etc. which are potentially lost in translation are therefore not crucial in gathering the above information.

development practitioner operates" (Kaplan 1996, pg xi).

For the purposes of project evaluation "written records must be augmented by observation and discussions....in order to observe not only physical detail, but also the attitudes and perceptions of those involved in a project" (Swanepoel 1992).

Data has been collected in three ways. Firstly, interviews were held with key stakeholders in the project. Secondly, project information has been extracted from project documentation and literature that has been written on the project. Thirdly, information has been collected through observation in the project area.

4.6.1 Interviews

A critical component of the data collection was interviews held with key stakeholders in the project. These stakeholders formed the first category of people interviewed. They were identified from literature on the project. Literature has been written on the planning phase (ie project proposals, reflection documents) and the operational phase. All literature that is available is written by people external to the community (ie representatives of the IUCN; Ford Foundation; SPFFB etc). Key stakeholders in the project were identified as being: the National Department of Wildlife (DNFFB); the Provincial Department of Wildlife in Tete(SPFFB); the IUCN who were instrumental in initiating the project and who have provided technical support to the project; the Ford Foundation that is funding the project; local government officials in Magoe and Chintopo; Tchuma Tchato project management and staff at Bawa; village councils in the project area; and Mozambique Safaris, upon which the project is based - due to revenue derived from hunting. The stakeholders who were interviewed are depicted in Table 2.

Interviews were unstructured. Emphasis was given to understanding the process of project planning and project operation. Focus was given to establishing key strengths and key

weaknesses of the project, as perceived by the various stakeholders. The interviews served to gauge people's sentiments about the project; to reconstruct the project cycle and to glean any views or information that interviewees wished to share. On the basis of these interviews a broad understanding of project processes and project outcomes was gained.

Table 2: Stakeholders interviewed

Stakeholders	
External to the community	**Community members**
National Department of Forestry and Wildlife (DNFFB) Acting National Director of Wildlife Social advisor to DNFFB	**Village chairpersons** Capesca village chairman Bawa village chairman Nhjenjhe village chairman Mwamuira village chairman Chitete village chairman Chintopo village chairman
Provincial Department of Forestry and Wildlife (SPFFB) - lead institution Task team evaluating project management	**Village council members** Bawa council Chintopo council Capesca council Nhjenjhe council
Local government Chef de Posto Chintopo ward	**Randomly sampled community members** school children; fishermen; women at Bawa grinding mill; workers in fields
IUCN - lead NGO Wildlife advisor to DNFFB	

Ford Foundation - donor organisation	
Mozambique representative	
Tchuma Tchato management staff (external to community)	**Tchuma Tchato staff from within community**
Project manager 1994-1998 Project manager 1998 - Head of Game Scouts Head of Maintenance Secretary 1998	game scouts maintenance staff
Mozambique Safaris	**Mozambique Safaris staff from within community**
Managing Director Camp manager Professional hunters	Trackers and maintenance staff

The second category of people who were interviewed includes those who were sampled randomly in the community. People were approached randomly who were involved in daily activities, such as using the Bawa grinding mill. Community members were interviewed to make observations about community sentiments, and to determine the knowledge and awareness of the project in the targeted community. These interviews were used as a gauge of how involved the community are in project management. These interviews also served another important purpose. They served to determine whether the views expressed by the village chairpersons were an accurate representation of views in the community at large. In these interviews there was found to be a close correspondence between sentiments expressed by village chairpersons and the community at large. The sample included fishermen; school pupils; women at the Bawa Grinding Mill; people working the fields and people in the villages. It was established that general community sentiments exist - which were expressed by all of the people sampled in this way.

Care was taken in making contact with people in the community. According to Swanepoel (1992) the initial reaction of the community will directly influence their attitude towards you and their subsequent interaction with you. On the day of arrival, the researcher was introduced to the chairpersons of Capesca, Mwamuira, Chintopo, Bawa, and Chitete villages. The nature of the evaluation, and the reason for conducting it, was explained. Permission to undertake the research was requested and granted. The chairpersons gave their blessings and promised to inform their villages of our work. In addition, the researcher was introduced to the Bawa village at a village meeting held on the third day in the area, but before any contact was made with the villagers. The community again gave its blessing and granted permission to conduct the research.

It was stated upfront that the research was being conducted independently of any role-players in the Tchuma Tchato project, and that it was being undertaken 'for' the University of Natal. It was important that the researcher was not identified as being aligned with project management, funding agencies, government etc which could bias responses. Strictly no promises were made to bring development to the region. It was explained that the research was being done in order to establish 'how' the project was working and peoples attitudes about the project. When it was felt that people might feel threatened by the researcher taking notes and conducting formal interviews (ie. villagers) the interviews took the form of informal discussions. Notes were made immediately after the contact and not during it, as note-taking was observed to make respondents feel uneasy. At all times people were very willing to be interviewed and to share their knowledge and sentiments about the project.

4.6.2 Project documentation

A critical component of this examination has been insights gleaned from project documentation. A number of documents relevant to the project have been reviewed. These include documentation pertaining to the planning of the project, including the project proposal;

conference papers written about the project; project management documents; annual reports on the project; and annual reports from Mozambique Safaris etc.

In sourcing these documents requests were made to the Ford Foundation, the Tchuma Tchato unit in Tete and project management at Bawa, for all documentation on the Tchuma Tchato project at Bawa.

4.6.3 Personal observation in the project area

Personal observation contributed to understanding the complexities of the project and thus to the evaluation. Observations were made by covering the area extensively by boat, by four wheel drive vehicle, by motorbike, and on foot. Areas visited included all six villages, the game scout camp, important hunting areas, Kafukudzi (the hunting camp), Chintopo government offices, and Zambezi lodge (a neighbouring tourist resort in Zimbabwe). In addition professional hunters (PH) were accompanied during three hunts and this contributed to understanding the project area. A community meeting at Bawa with project management was also attended. Important insights about the project were obtained by observation in the field[4]. For example, it was easy to observe the community dissatisfaction with project management at the meeting with the Bawa village.

[4]Examples of personal observations include: finding snares; observing game scouts on duty in Zumbo; observing crop clearance outside of the electric fence; observing the angry community reaction to project management at a community meeting; observing population settlement; observing the ineffectiveness of the electric fence (and its consequent destruction by Buffalo while the researcher was in the area); seeing the extent of community benefit (physical infrastructure) generated by the project; gauging peoples attitudes to the project; and observing the condition of project vehicles and infrastructure etc.

Chapter 5

An analysis of the formulation of the Tchuma Tchato project

Chapter 5
An analysis of the formulation of the Tchuma Tchato project

5.1 Introduction

External intervention is a necessary prerequisite for promoting the development of rural communities, which increasingly come under the influence of external processes. This requires the lead institutions to plan, organise, and equip themselves for intervention. The development process is critically dependent on the capacity of the lead institution, and its understanding of the intervention, during the formulation stages of a project.

This chapter examines the planning and formulation stage of the Tchuma Tchato project. It analyses the project from the time that the opportunity to establish the project was identified, through the formulation and design of the project, until the time at which the project was implemented. Based on this analysis, the project outcome will be postulated. The formulation of the project is analysed in an iterative manner, following the project cycle that was illustrated in Figure 4. Because the target community lacks the capacity to formulate a project such as this, most work in the formulation stage will inevitably be undertaken by parties external to the community, and it will be done with a top-down or interventionist approach.

5.2 Project identification

Identification is the stage at which the need or idea for implementing a development project is identified or formed. This identification can be made by any party, either internal or external to the community where a need is identified or a project opportunity can be realised. Cusworth and Franks point out that many more projects are identified than actually pass through the remainder

of the cycle to completion and operation (1993).

The research undertaken by two DNFFB field officers during 1993, can be classified as the identification stage. It is inevitable that a CBNRM development project such as this will be identified by a party external to the community. The community in this instance were desperately impoverished and they did not have the human or financial capacity to initiate the project themselves (DNFFB 1993). Based on this research, the DNFFB identified that there were dire development needs in the Chintopo community. The area also had an abundant wildlife and an opportunity to develop some form of wildlife-based community development was seen (DNFFB 1993). Hearing of these findings, the IUCN, who were providing technical support to the DNFFB, developed the concept proposal for the establishment of a CBNRM project. The identification of the wildlife resource in Chintopo, the need for development, and the opportunity to establish wildlife-based development that lead to the development of the concept proposal is shown in Figure 5.

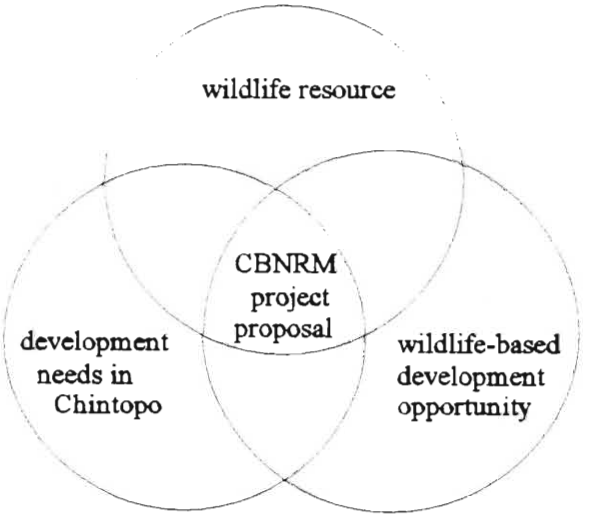


Figure 5: Factors leading to the development of the Tchuma Tchato project proposal

An initial top-down approach was therefore a pre-requisite for the establishment of the Tchuma Tchato CBNRM project. The idea was conceived by officers of the DNFFB and taken forward by members of the IUCN. What becomes critical after the initial idea is conceived, is how such a project is formulated. How it is assessed to be feasible and sustainable, how it is designed to incorporate the key principles of CBNRM, and how it is planned to fulfill a specific role in the development process in a region (see Figure 3). It is essential that the period of project formulation serves to create the foundation of a project with the opportunity to succeed. Not only during the period of project intervention, but more importantly in the long-term, after external financial and human capital into the system decreases and eventually ceases. During project formulation, the end point of the project (and project outcomes) must provide a clear vision for what the project is designed to achieve. Chapter 3 indicates that this outcome, should be CBNRM that will contribute to the sustainable development of Chintopo ward over the extended period in which development occurs (see Figure 3).

5.3 Project formulation

Having identified the need for a project, the formulation stage is critical to the implementation and long term success of CBNRM. During project formulation, it should be determined whether or not the project has the possibility of being viable in the long term. The formulation stage involves the identification of project alternatives, the identification of development needs, the identification of resources, and conducting feasibility studies. There are many important stages in a project life, but project formulation is arguably one of the most critical. It determines project feasibility and outlines the project parameters. Formulation can be broken into a number of stages, that are illustrated in Figure 4, and which are discussed below. It is inevitable that parties external to the community initiate the process of formulation, as they have the capacity, expertise and resources to do so.

Involving the community at this stage is a sensitive issue. Many people argue that communities should be involved during project planning (Swanepoel 1992; Steenkamp and Hughes1997; Chambers 1983). In many ways it is important for the community to be involved, so that from the outset, communities become active in the project, contributing important local knowledge and helping to ensure that interventions are appropriate (Cusworth and Franks 1994; Steenkamp and Hughes 1997). This will also facilitate communities supporting and understanding the proposal. However, it is preferable that a community is only introduced to a project once it is assessed to be feasible in the long term, and likely to proceed. This will avoid the disappointment of a community, desperately in need of a respite from their conditions of socio-economic deprivation, if the project does not pass through the cycle to implementation.

Figure 3 shows that during the initial period of project formulation, there will probably be no community involvement and the process is driven by external agents. However, it can be seen that towards the end of project formulation, the community should become involved. It is essential that the community become involved during the latter stages of planning, so that they support a project before it is implemented, and so that the community are given some feeling of ownership of a project. Figure 3 shows that there should be an increasing level of community involvement after project formulation. Community involvement will increase as human capacity is developed during the project life, until a point is reached at which community involvement supersedes external involvement.

5.3.1 Outline design

In this phase of a project, it is necessary to carry out important preparatory research. It must be to sufficient detail to allow the estimation of technical, social and institutional parameters. It must allow for the preparation of a feasibility study with an assessment of costs and benefits (Cusworth and Franks 1993). It is necessary to determine the needs of the community and the resource

potential of the area in which a project is located. It is also necessary to determine the capacity of the lead institution, as this will contribute to project design and project implementation. It is important that there is a match between what the lead institution is expected to deliver, and the role it is expected to play, and the capacity that it has to fulfil these functions. Where natural resources are being utilised, it is necessary to identify alternative land use options. Project aims and objectives should be formulated (Cusworth and Franks 1993). This phase is critical if the feasibility of the project, including the consideration of project alternatives is to be assessed adequately. Determining feasibility, and selecting the best project alternative, is critical in ensuring a projects long term success.

In response to the work being undertaken by the DNFFB officers, an IUCN team visited the project area in May 1993. According to Murphree (1995) this trip "was significant in setting the stage for the development of the Tchuma Tchato project". Following the research report submitted by Namanha and Abacar, the IUCN developed the concept proposal (Murphree 1995). The concept proposal was made without critical preparatory research having been undertaken. No formal identification of community needs was made. Possible project alternatives were not identified. The natural resources of the area were not assessed to determine what the possible economic returns from the resource were. Key demographic factors such as the size of the target community, and projected population increases were not identified. All of this information is necessary in order to conduct an accurate appraisal of the project, including determining project feasibility (Cusworth and franks 1994).

Equally important, is the fact that the IUCN's work with the DNFFB, had resulted in the determination that the Wildlife Department was short of both economic and human resources, as a consequence of the stagnation of the department during the years of war. The project proposal, stressed the need to develop human capacity in the DNFFB. Among other things, it stated that (DNFFB 1993):

"The department does not know much about how rural communities are using and would like to use wildlife";

"The lack of staff, equipment and staff capacity is a major constraint faced by the Department (sic) in fulfilling its mandate;"

"There is a need to re-equip current staff with skills for working with communities to complement their technical training."

The CBNRM project was, in fact, designed to be used to train DNFFB staff in community based resource management, and was intended to develop capacity in the department (DNFFB 1993). The project was one component of an overall programme to develop institutional capacity and to promote policy and legislative reform (DNFFB 1993). It will be argued in later discussion that the lack of institutional capacity within the lead institution, has profoundly impacted on the Tchuma Tchato project intervention.

5.3.2 Appraisal

Appraisal is the stage at which all aspects of the project design are reviewed (by lead institutions, donors etc.), in order to decide on the feasibility of the project and so decide on whether or not to proceed with the proposal. The knowledge gathered during the preparatory research should be used to conduct cost-benefit analyses of the most advantageous land use options that have been identified. It should be determined whether or not project goals and objectives are realistic and whether or not they can be achieved by the project (Cusworth and Franks 1993).

The Tchuma Tchato project was not appraised by the DNFFB or the IUCN prior to the proposal being submitted for funding in July 1993. The proposal was drafted without any feasibility

assessment or cost benefit analysis. At no time during project formulation were alternatives presented or formerly considered (Namanha pers. comm. 1998). The process of considering alternatives is one of the most critical stages in the planning of a project (Cusworth and Franks 1993).

In June 1994 a field trip was undertaken to the proposed project area by a team of IUCN and DNFFB representatives. According to Murphree (who was on the trip) (1995):

"the objective of the trip was to present to the communities living in the proposed area the concept of the proposal, and further to determine if the project area was appropriate. The intention was not to sell the project but to present the community with alternative land use options and a mechanism to utilise their natural resources sustainably".

It is not clear what alternative land use options were presented to the community, if alternative land use options were ever formerly investigated. The process that was undertaken in project formulation, was not suffice to ensure that the most beneficial project intervention was identified and to ensure that it was feasible in the long term. In addition, it suggests that the DNFFB were involved in engaging the community, before they were themselves properly organised. It has been noted that it is unrealistic that a lead institution will be able to carry a project forward, to engage and develop capacity in the community, if the department is itself institutionally weak.

During this visit all major stakeholders from district to provincial level were consulted about the project, before discussions were held with the community (Murphree 1995). The project was endorsed by the major stakeholders and there was an overwhelming acceptance of the proposal by the community who named the project "Tchuma Tchato" - meaning "Our wealth" in Chikunda.

The project was appraised by the Ford Foundation over a period of 16 months before a funding agreement was reached in December 1994. Commenting on this lapse of time Murphree asserts

that "this highlights certain administrative and bureaucratic processes that need to be examined and corrective measured taken" (Murphree 1995).

5.3.3 Detailed design

Following the decision to proceed, designs should be carried out to sufficient detail to allow project implementation. These designs will typically include organisational structures, outlined institutional procedures, and management plans, including budgeting and financial management plans (Cusworth and Franks 1993). In undertaking a detailed project design it is important to conduct a thorough community profile, to determine the human and institutional resources that are available to the project and the demographic characteristics of the community. The needs of the community and their resources at hand (identified by both outsiders and the community) must be determined (Hawtin *et al* 1994). This is an important opportunity for the community to be engaged in active planning, and thereby assume ownership of the project. It is also an important opportunity for project goals to be outlined and objectives set.

According to Venter *et al*, for any management process to be meaningful, its purpose must be to achieve a desired and predetermined vision. This vision provides both direction for management action and the basis for evaluating the relative success /failure of the process (Venter, Marais and Breen 1994).

A project design was not made before the project was implemented. Project implementation had in fact been initiated in November 1994 prior to a funding agreement that was reached in December 1994 with the Ford Foundation. According to Namanha (pers. comm. 1998), the project proposal that was written in 1993, was that which was used, unchanged, in implementing and managing the project. There were a number of weaknesses in this proposal.

Goals for the Tchuma Tchato project were not clearly defined (DNFFB 1993). In fact, the goals

for the project at Bawa were peripheral to the goals of the broader Tchuma Tchato programme. The two major components of CBNRM, namely the socio-economic development of people and conservation management appear in fact to have been subordinate to the objective to develop institutional capacity within the DNFFB. According to the DNFFB (1993), the stated primary goal of the project was :

"to contribute to a process of institutional development in the Wildlife Department so that it gains the capacity to work with rural communities to conserve wildlife resources in a manner which contributes economically to improved rural livelihoods....The most important activity that this programme would undertake is the building of the capacity of the Wildlife Department to conceive and successfully implement community-based wildlife management programmes that support improvement (sic) of rural lives".

While not disputing the relevance of these goals to the broader Tchuma Tchato programme, it is essential that the project has stated goals and objectives in its own right - which it didn't (DNFFB 1993).

Objectives of the Tchuma Tchato pilot project were not specifically outlined in the project proposal (DNFFB 1993). Project objectives have, however, been reconstructed from a number of sources to consist of the following (extracted from DNFFB 1993; Murphree 1995; Wilson 1997; Namanha pers. comm. 1989):

1. To promote socio-economic rural development by allowing rural communities to manage their wildlife resources sustainably and to allow the community to derive economic benefit from this.
2. To control poaching and promote wildlife conservation management in Magoe district.
3. To serve as a site where applied training can take place in design and management of community wildlife management projects. There is also the opportunity for DNFFB staff

involved in the project to receive formal training at Southern African tertiary institutions.

4. To serve as a site for potential research into community resource management activities, social and ecological aspects of the region.
5. To manage the human conflicts that existed as a result of conflicts of interests relating to the utilisation of the wildlife resources.
6. To serve as the pilot project for community resource management in Mozambique. It was intended to be used as a 'blueprint' of sorts for other similar projects.

The proposal for funding further illustrates weaknesses in project formulation. There is dire need for social development in Chintopo and for the development of human skills and capacity. Despite this, the funding proposal only sought $ 6000 for direct expenditure on the development of human capacity. This represents 3 % of the proposed project budget. Figure 6 contrasts the proposed expenditure on community development with other areas of expenditure such as building construction, vehicles expenses, institutional support etc. There is also no proposed expenditure for the formulation of the project in the funding proposal. Expenditure for feasibility studies, the identification of project alternatives, and for project planning is not included. Given the importance of these activities, and given that the DNFFB probably did not have the financial resources for these activities, funding should have been sought to ensure that project formulation was rigorous. The budget for the project that was proposed in 1993 is contained in Attachment 2.

Writing about the fact that detailed plans and designs for implementing the project were intentionally not made, Murphree asserts that (1995):

"Log frames work with technical support but are inappropriate at community level. Allow the programme to evolve rather than trying to implement the project document."

It is clearly not appropriate to attempt to manage a community-based project with a heavy top-

down approach. According to Murphree, "the highly planned CBNRM projects in the regions tend to be the biggest failure" (Murphree pers. comm. 1998). The actual management and community involvement in this process is a delicate process that needs to be approached flexibly, with sensitivity to community needs, community capacity, but also the capacity of the lead institution. At the community level, implementing detailed plans is clearly not appropriate. However, detailed planning and design is critical at the level of the lead institutions. While external agents are involved in the management of a project, attention needs to be paid to promote a successful intervention and project outcome. The need for detailed planning and design, which takes place outside of the community, is made more pertinent if there is a change in personnel in the project. It facilitates continuity, and builds institutional memory in the intervention process.

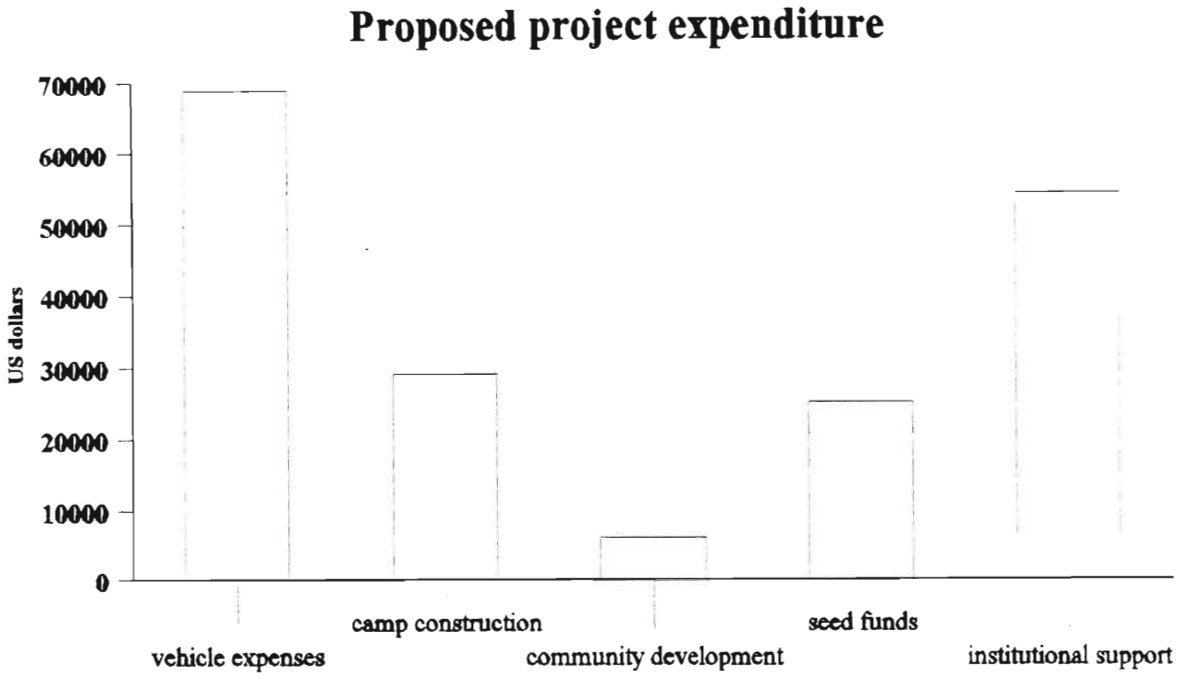


Figure 6: Proposed project expenditure

note: institutional support includes expenses for IUCN field visits, DNFFB field visits, consultants fees etc.

There is no mention of post project life in the proposal. The proposal sought funding for a three year CBNRM project, and no consideration was given to the project at the end of that period. Post project life is critical to a time bound project intervention (see Figure 3). The roles required of the DNFFB and the IUCN are not described in the project proposal. The level of community involvement in management is not described. The project is designed to deliver socio-economic benefit to the impoverished Chintopo ward, yet the potential and the limitations of CBNRM, to do this, are not considered in the proposal. There is no consideration of the need to develop a more holistic and far-reaching development initiative in the region - which would be necessary to deliver the extent of development needed (DNFFB 1993).

5.4 Conclusion

The process of project formulation was evidently not rigorous, and a number of critical activities were overlooked. As a result of this, the project was implemented without adequate consideration for the long term financial feasibility of the project. The project was implemented without clarity on the type of socio-economic development that the project would deliver, or the extent of this development. The project was implemented without management plans and detailed project designs. The project was implemented before the DNFFB was itself sufficiently organised to lead this type of project intervention. The project proposal also suggests that the DNFFB did not have an adequate understanding of the concept of CBNRM (they wanted to develop institutional capacity within the DNFFB to manage CBNRM).

Problems that are evident in project formulation, evidently reflect inherent problems in the institutional capacity of the DNFFB. The project was in fact designed to contribute to institutional development within the DNFFB. CBNRM is a challenging development intervention at the best of times. This challenge was made more difficult in Chintopo, given the levels of infrastructure in the region, and the general level of socio-economic impoverishment that existed

in 1993. Given these challenges, it is perhaps ironic that the DNFFB, (which evidently lacked the institutional capacity to organise themselves), embarked on an intervention aimed at developing capacity within an impoverished rural community.

The project proposal (which was used to implement the project) does not address key principles of CBNRM as outlined by Murphree (1993). It was, in fact, not even determined whether a CBNRM strategy was a viable way of enabling development in Chintopo ward. The failure of the proposed project budget to prioritise human development needs, is indicative of weaknesses in project formulation. Goals and objectives for management were not set and management plans were not formulated. The project did not have a clear time frame in which management objectives could be achieved. A desired project outcome was not even stipulated.

Given the inherent weakness of the DNFFB in 1993, combined with the fact the process of project formulation was weak, and that the project was subsequently implemented with only a weak foundation, it is postulated that the project is unlikely to be operated effectively and have a 'succesful' outcome.

Chapter 6

An analysis of the operation and management of the Tchuma Tchato project

Chapter 6

An analysis of the operation and management of the Tchuma Tcato project

6.1 Introduction

Chapter 5 has considered the formulation of the Tchuma Tchato project. It has been shown that there are a number of weaknesses in the formulation phase of the project. It was postulated that as a result of these weaknesses, the project outcome would be compromised. In this chapter the project cycle is considered from the implementation stage, through project operation to the projects projected end point. Emphasis is given to the organisation and management of the project (ie. the operational phase). This analysis considers the extent to which the project has been successful in developing the key characteristics of a CBNRM programme. In doing, it considers how effectively the project has contributed to initialising a long term process of sustainable development in Chintopo ward (see Figure 3). It also considers the extent to which the project has managed to create the 'productive asset' of an autonomous CBNRM programme at the end of the Tchuma Tchato project life.

6.2 Implementation

Implementation follows planning and design. It is the stage in which management structures are established and physical infrastructure is built. It is the stage which usually involves the largest investment of financial capital (Cusworth and Franks 1994). According to the model of an interventionist approach, one would expect implementation to be predominantly led by external agents, with the involvement of the community, but to a small extent (see Figure 3). It involves organising the lead institution for the intervention, and implementing the intervention on site.

Implementation of the project on site was initiated in November 1994 when Namanha established a tented camp at Bawa. During March and April 1995, Namanha established a game scout unit that had dramatic success in reducing poaching. During this time the "need for a management institution within the community to deal with ever increasing natural resource management issues was seen", and so at "a full meeting of the Bawa community a twelve member (wildlife) council was established" (Murphree 1995).

A student from the University of Zimbabwe was sent to help Namanha with the development of local level institutions (Murphree 1995). With the arrival of funding from the Ford foundation the procurement of equipment accelerated project activities. Project equipment that was acquired included a boat; a motorbike, and a four wheel drive. In addition a camp was constructed at Bawa called Zunungukai. The camp includes office space, and accommodation consisting of eight rooms, a dining room, a bar and bathroom facilities.

It is evident that the project was implemented prior to the DNFFB having the organisational capacity to do so. The project was implemented before the need to develop institutional capacity within the DNFFB and SPFFFB has been effectively addressed. Ironically, the project was initiated as part of a process to develop institutional capacity within the DNFFB (DNFFB 1993).If the lead institution is not effectively organised, it cannot hope to organise an impoverished community, and to implement what is inherently a complex and demanding CBNRM project intervention.

6.3 Operation

The operational phase of the project is the period during which the assets and institutions created by the project are put to work to yield a flow of benefits. It is essentially a period of management directed at ensuring that project goals and objectives are met. In terms of the project, this period

of management should be finite, and should have a definite end point (Cusworth and Franks 1994). There is often no separation in time between implementation and management.

A CBNRM project such as Tchuma Tchato should have a predetermined end point at which external agents, providing technical assistance and funding withdraw. The overall objective of the operation of the project should be to build institutional capacity within the community to manage the CBNRM programme, so that it continues to contribute to the sustainable development of the community at the end of the project life (see Figure 3) . It should also strive to create a system that is economically self-sufficient by the time that funding is withdrawn. If the project cannot sustain itself without external financial support, it will collapse when external inputs into the system are withdrawn. If the project is economically sustainable, but the community does not have the institutional capacity to manage the project independently, it will also collapse when external human support is withdrawn. The failure of such a CBNRM project to achieve economic and human self-sufficiency, will result in a community that is dependent on external support (that creates jobs etc.) at its end point. This dependency will mean that the community is in some ways worse off than before the project intervention. The community will have become dependent on jobs and institutional systems that the project created.

The key characteristics of CBNRM will now be used as a tool to consider the organisation and management of the Tchuma Tchato project at Bawa, to evaluate development benefit and to determine the project's present and projected outcomes.

6.3.1 Natural Resource Management

The project had significant success in eliminating poaching between 1994 and 1997. This can be attributed to the diligent and fearless work of the game scouts and the leadership showed by Namanha (Murphree 1995; Wilson 1995). Poaching was all but eradicated during this time and the wildlife showed a marked increase (Houggard pers. comm 1998). A number of government

officials and police who were involved in poaching were brought to book (Wilson 1995). In addition the community learned to appreciate the new economic value of the wildlife and this was a significant factor in eliminating traditional hunting by the community. The community were shown the focussed value of wildlife, which is according to Murphree a key principle of CBNRM. This change in attitude was facilitated by the fact that the project gained the support of the traditional spirit mediums in the community who represent the wild animals (Namanha pers. comm. 1998). This was a significant development, as a number of animals that are being hunted, are sacred to the community. The anti-poaching effort was also aided by adopting a successful strategy of reforming the major commercial poachers in the region into hard-working game scouts (Murphree 1995).

There has however been one notable exception. At the initiation of the project, there were two White Rhinoceros in the region (Namanha and Abacar 1993; Houggard pers. comm. 1998). In 1996 the first of these rhinos disappeared. In 1997 the second rhino was poached. The poacher now works as a tracker for Mozambique Safaris. He revealed that he had been paid Z$ 500 ($ 20) to kill the animal, by a well known local poacher who gave him the gun that he used (pers. obs. 1998). The authorities are fully aware of the instigator of this crime, but no action has been taken against him.

However, in 1998 there has been a marked increase in the incidence of poaching. Almost 600 snares have been found and 5 traditional guns have been recovered (Midza pers. comm 1998; Sequela pers. comm 1998). Any success in curtailing poaching has evidently not been due to permanent changes in the attitude of the community to wildlife. In addition, of the approximately 600 snares that have been recovered, 500 have been found by professional hunters attached to Mozambique Safaris, during hunts, and less than 100 have been recovered by Tchuma Tchato game scouts (Fremino pers. comm. 1998; Houggard pers. comm. 1998). This reflects a marked deterioration in project management. It suggests that the management institution is weak, and is unable to accommodate a change. It suggests that the SPFFB has not developed the institutional

capacity needed to accommodate this change. Reasons for this will be discussed subsequently, but they stem from a critical shortage of community involvement in project management, ineffective institutional support by external agents, and insufficient incentive for the community to refrain from poaching. Plate 10 shows a collection of snares (recovered this year) and weapons recovered in recent years. Both Fremino and Houggard report that many of the snares recovered had been made from wire cut from the electric fence that was constructed around Bawa, to protect crops from wildlife (pers. comm.1998).

In addition to anti-poaching activities, the Tchuma Tchato project has been involved in issuing fishing licences and in attempts to control netting. Netting of the important breeding sites is however still taking place (Fremino pers. comm. 1998; Houggard pers. comm. 1998). A large number of fishermen are still being caught with illegal nets and with nets that are too small (Fremino pers. comm. 1998; pers. obs. 1998), which suggests that the community are not engaged in the conservation or sustainable use of fish resources. An alarming observation was made that illegal nets that had been confiscated, and nets that are smaller than management regulations, were being repaired and sold back to fishermen. Plate 11 shows a worker repairing a net to be resold. This indicates the absence of effective policy on natural resource management, but also ineffective management. This has its origins in the fact that policy and management issues were not addressed during project formulation. The fact that they have not been developed during project implementation, indicates a lack of institutional capacity within the lead institution, who should have developed appropriate policies (with the affected community) during the project life.

If the success of the project is measured in terms of the conservation and management of wildlife and other natural resources, the project has had mixed success. It has been shown that the community can be engaged successfully in controlling poaching. However it has also been shown that this engagement is not necessarily long term, and that for continued success, the benefit of the project to the community must outweigh its cost.

Plate 10: Sibanda and a game scout viewing snares and weapons recovered from poachers

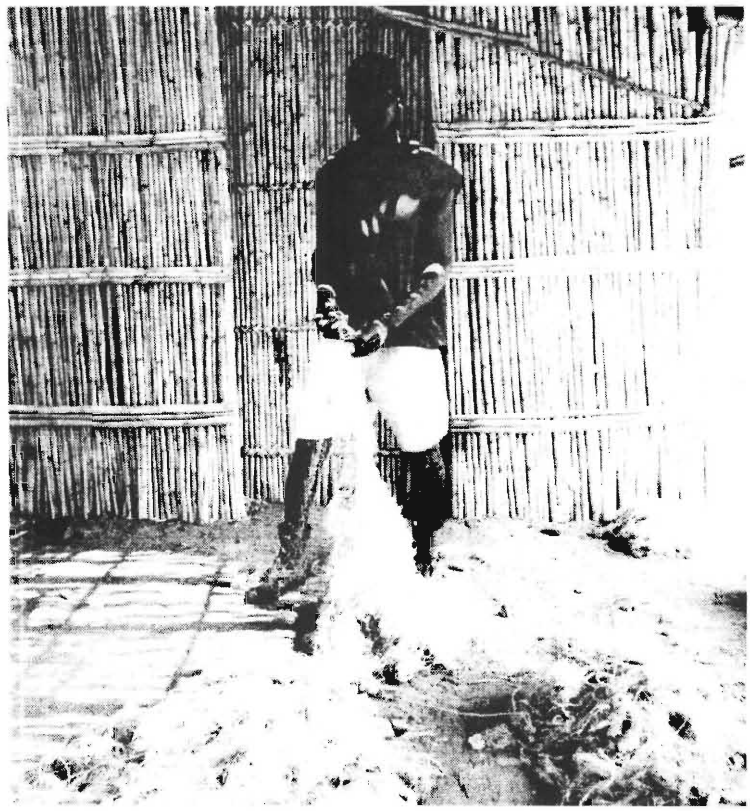


Plate 11: A worker repairing nets confiscated from fishermen

According to Namanha, after the elections people were encouraged to settle in rural areas without any coherent policy (pers. comm. 1998). In addition, the Tchuma Tchato project, has resulted in an influx of people into the area from Zimbabwe, Zambia and from the north bank of the Zambezi who are attracted by perceived development benefits (Namanaha pers. comm. 1998). This trend was noted by Houggard, Namanha, Fremino, the village chairpersons and was also a generally held community sentiment (pers. obs. 1998).

The rapid migration of people into the project area, means that critical wildlife migration corridors are being blocked, and the important areas available to wildlife (such as watering points, and dry season grazing plains) are being encroached. This is depicted in Figure 2 in Chapter 1. Despite the fact that the uncontrolled settlement is contrary to sound conservation management, there has been no action taken to plan for, or control population settlement in the project area (Houggard pers comm 1998; Namanha pers comm 1998). This is despite recommendations by Murphree to address this problem, discussed more fully subsequently (Murphree 1995). Plate 12 shows some of the extensive bush clearing that is taking place to create a field. Ironically this field is located outside of the electric fence at Bawa. Plate 13 shows bush encroachment by an entrepreneur who is opening a shop. There has evidently been a lack of planning in this regard. This invasion of people is detracting from sound conservation management. It is also adding to pressure on the benefits that the community derive from the project.

The project has a finite wildlife resource (ie the sustainable off-take is regulated by the carrying capacity). It is evident that there are already unrealistic demands being placed on this resource, in terms of the benefit and the development that it can deliver (DNFFB 1993; pers obs. 1998). Agriculture is expanding at the cost of natural vegetation and wildlife into marginal lands. This is leading to soil loss, reduced wildlife populations, and siltation of the waterways (pers obs 1998). Tchuma Tchato should have a management plan designed to maximise the hunting off-take, by building the wildlife population to its carrying capacity. This management is not occurring, which

Plate 12: Field being cleared outside the Bawa game exclusion fence

Plate 13: Bush encroachment with the construction of a shop

has alarming consequences for the economic sustainability of the project.

Attachment 3 contains a Table showing all animals shot in the project area from 1992-1998. The project has not shown a trend of increasing off-take. This indicates that wildlife populations of significant trophy animals is not increasing. Houggard reports that he has as many clients as his quota will allow him to shoot (Houggard pers. comm.1998). The revenue from 1998 is lower than in previous years. This is primarily due to a decrease in the number of major trophy animals that are being shot. Figure 7 shows this trend.

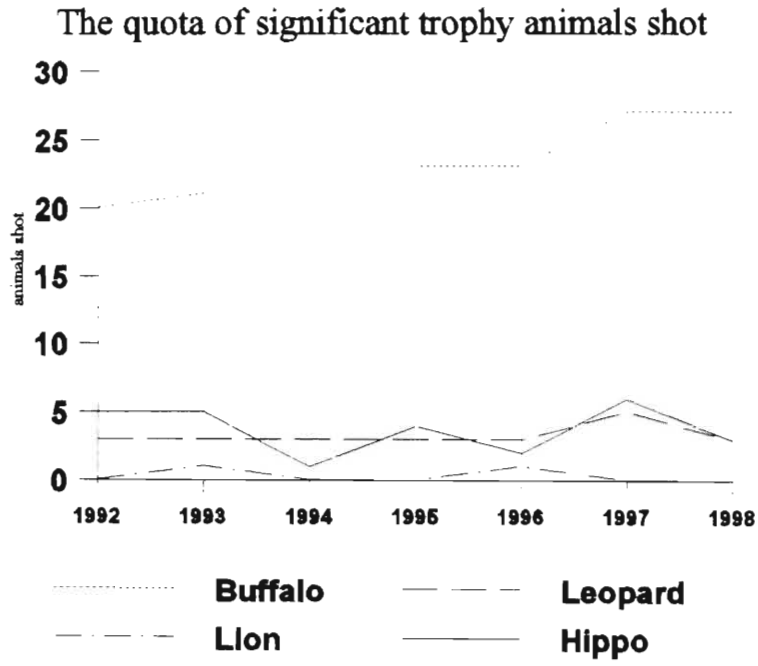


Figure 7: The quota of significant trophy animals shot

The long term viability of CBNRM is going to be seriously jeopradised, if the community see a declining benefit, and reduced revenue from CBNRM. Murphree (1993) has indicated that the level of conservation management must correspond with benefit from that management. Tchuma Tchato is showing that the lack of effective conservation management (ie with control of settlement etc) will lead to reduced revenue generation. Ironically it is precisely the opposite of this trend that it should be showing. Communities should see the increased profitability of stronger conservation management, which would act as an incentive for increasingly effective management. This failure can be attributed to the lack of planning and poor project management in this regard. It suggests that the lead institutions did not appreciate this relationship. If it had, it should have been a fundamental management principle to increase derived revenue by increasing the effectiveness of conservation management.

The decline in revenue shows another alarming trend. The diversification of the economic base of CBNRM is taken to be essential to the sustainability of a programme. At present the project focusses almost entirely on the wildlife resource, with limited focus on income generated by the sale of fishing licenses. The failure to diversify this economic base, has potentially serious implications for future programme sustainablity - evidence of which is already being shown with declining revenues from hunting.

6.3.2 Land tenure

It has been suggested that unless a community has tenure of its land, they will not have adequate proprietorship of the project's resources. Land tenure has been linked to the potential for success of a CBNRM programme. At the initiation of the project, the community had no legal recourse to the land or its resources. By law, Houggard had the hunting concession in the area, and thus the right to exploit the resources for his own benefit, and at the exclusion of the community. One of

the most significant successes of the Tchuma Tchato programme (ie the broad programme based at Tete) is that it has contributed to the development of a new land law that gives tenure to rural communities (Wilson pers comm 1998). The effect of this is that the community now have increased proprietorship of the wildlife resource. However, while this is a very significant development, there is still the need to address a number of fundamental problems before the community can realise the value of having this increased proprietorship. These include issues such as effective resource management, but also issues such as community involvement and institutional support etc., that are discussed subsequently.

6.3.3 Community involvement

It has been suggested that during the initial stages of a community intervention, the process will be led by external agents. These external agents have an important role to play in facilitating the development process, and the emergence of capacity within the community. External agents need to nurture the CBNRM from being a project intervention, to being more autonomous CBNRM. The lead institution should have the capacity to make this 'sensitive' intervention. During the initial stages of a project, the community will inevitably be the passive recipients of 'help' to alleviate their conditions of socio-economic deprivation. If the project is going to eventually become a more autonomous community-based programme, the level of community participation must show a marked increase during the project life. This process that will take many years, and a project life should be suffice to effect the required development of human capacity. The process of evolving levels of external involvement and community involvement is shown in Figure 3. Writing about community participation, Swanepoel and Kotze warn that "community development has frequently been tied to a vague nation of community participation in planned change" (Kotze and Swanepoel 1983).

Table1 shows that there is potentially a strong link between community involvement in CBNRM and social development within a community. Perhaps the most serious shortcoming of Tchuma

Tchato is the level of community participation in management. Figure 3 indicates that towards the end of a project's life, the community should be assuming increasing management responsibility.

In the "Year One Technical Report", Murphree writes that (1995):

"The key to the long term success of this project lies in the development and strengthening of the community institutions. All other activities must be regarded as secondary to this including the development of the main camp at Bawa. The real progress in developing community based programmes lies not in physical structures but in the development of management institutions at the community level and the importance accorded to these institutions by the community themselves."

Despite this assertion by the technical advisor to the DNFFB in 1995, the community are not involved to any significant extent in project management. Community involvement has not increased to a point where the community has the capacity to assume management responsibility. During Murphree's support councils were established in the six villages, with the Bawa council being most active in project activities (Murphree1995). The level of community involvement attained during Murphree's support has not been built upon (pers. obs. 1998). Village chairpersons reported that their role in management has in fact declined markedly over the past year (Masangane, Camposi, Catalula, Zinyembe, Bvundu, Jack pers. comm. 1998). Commenting on the lack of community involvement in 1995 Murphree writes that:

"In the broader sense this perspective has been lost in the Tchuma Tchato programme, with people focussing their attention on the material components of the programme. There is a strong need to reverse this process and during the 1996 winter."

The fact that the community have not been sufficiently involved in project management can

possibly be attributed to the fact that the SPFFB see the project as belonging to their department, and not to the community (Namanha pers. comm. 1998). Community members are employed by the project as game scouts and as general workers. No members of the community are employed in a project management capacity, and these positions are all occupied by people external to the community. Table 3 shows the employee status, and a breakdown of employment offered by the project. It is evident that community members, who draw a salary, are only involved as labour and as game scouts.

Table 3: The status of project employees

Unit	**Position Held**	**Employment Status**	**Affiliation**	**Salary (Z$)**
Administration and Finance Department	Director	permanent	external	not available
	Secretary	permanent	external	1000
Anti-Ppoaching and Public Relations Department	Head anti-poaching	permanent	external	not available
	Game scouts (12)	permanent	community	700
Camp Admin., Equipment and Material Care and Transport Department	Head admin.	permanent	external	not available
	Carpenter	permanent	community	575
	Mechanic	permanent	community	550
	Gardener	permanent	community	575
	Cook	permanent	community	575
	Servants (2)	temporary	community	400
	Builder	temporary	community	450
	Cleaner	temporary	community	400
	Waiter	temporary	community	400
	Guard	temporary	community	400

source: Tchuma Tchato Project manager 1998

There is no management structure on which all six villages are represented (Masangane, Camposi, Catalula, Zinyembe, Bvundu, Jack pers. comm. 1998). Each village has a council and management occurs sporadically with each village on an individual basis. The fact that the 'community' do not have a unified management institution has serious implications for future 'community based management'. The community is a heterogenous body comprising of six 'village communities', and yet they have a shared resource. Without a unified management institution ensuring that the total community is working together, there is potential for conflicts in resource management, and with this conflict the project has a limited prospect of long term success.

Project management does not adequately represent the interests of the community, primarily because the SPFFB have not relinquished control of project management to a community-based management institution. The SPFFB have in fact not facilitated the emergence of such a community based management institution (pers. obs. 1998). The community currently have serious grievances with project management (pers. obs. 1998). These include that management is not controlling the game scouts (and is subsequently not controlling poaching), they are unhappy with project expenditure (in particularly the process of purchasing the Chintopo grinding mill), and the fact that management is allegedly not listening to community grievances (pers. obs 1998). Despite the fact that the community has serious grievances, they have no authority to effect a change in management (Namanha pers. comm. 1998). This is ironic if one considers that the community are considered to have proprietorship of the land, and its resources under new land laws (Wilson pers. comm. 1998). This is discussed subsequently in more detail.

Another problem that pertains to community participation is the emphasis that has been given to Bawa village, at the apparent exclusion of the other six villages. When the need for a management institution "to deal with ever increasing natural resource management" was seen, a

twelve member council was elected from Bawa village (Murphree 1995). When the first revenue from the project became available, it was used by the Bawa community to buy a grinding mill. The fact that a grinding mill was purchased, is in itself alarming, as it suggests an unrealistic understanding of socio-economic development. The only electric fence that has been built in the project area, to protect crops from wildlife, was built around Bawa village (pers. obs. 1998). The emphasis on Bawa was in fact so great, that when it came to distributing the revenue from 1997, there was dissension within Bawa village when the community realised that the revenue was going to another village at Chintopo (Namanha pers. comm 1998). Unless all six villages have equal status, and derive equal benefit from the project, there will potentially always be conflict over the management and utilisation of the common natural resources.

These failures in project management again reflect the failure in project planning. Issues such as the equal treatment of the six villages, determining the distribution of benefit, the conceptualisation of socio-economic development should have been addressed in project planning. The failure to address these issues in planning, has resulted in a consequent weakness in project management, which in turn compromises the ultimate project outcome.

A social development that has occurred as a result of community involvement is a reduction in human conflicts in the region. Both the safari operator and the community reported that the relationship between these two groups was now good (pers. obs. 1998). This was primarily due to a reduction of poaching in the region by the community (Namanha pers. comm. 1998). In addition, the fearless work and leadership of Namanha, resulted in a number of local police, who were involved in poaching, being arrested (Murphree 1995). This eased tension between local government, the safari operator and the community. Recent indications show that poaching is increasing. This factor could potentially lead to growing tension between the operator and the community, as the operator sees his safari company coming under renewed threat.

6.3.4 Community benefit and incentive to manage

In order for a CBNRM programme to succeed, it is critical that the community receive tangible and significant benefit from managing the resource. It is only when an economic value is attached to a resource, such as wildlife, and only when such value is tangible in direct community benefit, that the community will be motivated to conserve and manage that resource.

What constitutes 'socio-economic develoment' or 'significant economic benefit' has not been defined during project planning or project management (Namanha pers. comm. 1998). However, in 1996 the Ford Foundation projected that the annual remittance of the project would be US$ 300 000 by 1998 (Wilson July1996). The community had the expectation that the project would deliver schools, clinics, shops and transport to their impoverished region (Masangana, Camposi, Catulula, Zinyembe, Bvundu, Jack pers. comm. 1998). In 1996 the project remittance was $12 000, in 1997 it rose to $15 000, and in 1998 it is projected to be approximately $13 000. In 1996 Bawa village was the only community to benefit from the project. In 1997 the Village of Nhjenjhe was the only village to benefit from the project and they also chose to buy a grinding mill, which had not been delivered by the field visit in September 1998.

Two grinding mills, which are the only 'physical developments' to have occurred, can not be classified as the sustainable development that the community are in need of, given the discussion of development in Chapter 3. There has been no cash in hand benefit to individuals in the community. The design of the programme means that each village will only 'benefit' from Tchuma Tchato, once in a cycle of six years. Put differently, this cycle is necessitated by the fact that a total population of approximately 9 000 people is having to find a way to share a total income of approximately $15 000 per year. That is, less than $2 per head per year. This remittance serves as no incentive for a community to engage in a project, particularly if the money is not spent on promoting long term sustainable development.

Approximately 18 people have been employed by the project, predominantly as game scouts and as temporary workers. Game scouts have received training. Aside from this, there has been virtually no formal initiative to develop human capacity, to develop skills and to empower people. The management structure, which is discussed more fully later, is doing very little to build management capacity within the community. The community is in not being empowered in a way that would enable the community project to become self-sustaining. The project has provided no provision for skills training, or any other form of adult education that would build human capacity. In the budget proposal to establish the projected, only 3 % of the budget requested was directed at formal community development. The 1997 and the 1998-1999 project budgets, do not even make provision for expenditure on developing capacity in the community, with training workshops etc. The 1998-1999 budget is contained in Attachment 4. During the field visit, however, the first training workshop to occur was being held to teach the Bawa council elementary accounting skills. This was in reaction to the mismanagement of revenue, derived from the grinding mill (Fremino pers comm 1998). Plate 14 shows the first training workshop to be held since project inception in December 1994.

The failure of the project to address the need for human development is alarming. The proposed project budget of 1993 (contained in Attachment 2) indicates that human development was not seen as being a priority (3% of project budget was for direct expenditure on human development). Human development is critical to the process of sustainable development. The fact that this was not addressed in planning indicates that the lead institutions had a naive notion of development, and of the relative importance of different types of development (ie infrastructure versus human development). The majority of capital expenditure was on physical infrastructure such as a camp and vehicles. This expenditure will have a minimal contribution to long term development, if it is not accompanied by substantial concentration on the social aspects of development. Writing about the relationship between physical equipment and rural development at Tchuma Tchato Murphree writes that (1995):

"In any project this (physical equipment) is an important component. The error that is often made and one that is possibly being made on this project is using equipment and infrastructure as an indicator of success. It is understandable that in a country devastated by war that people want to see new equipment and new infrastructure. However this is a rural development project NOT a construction project".

It is evident that the lead institution did not have an appropriate conceptualisation of the process of rural development. Without this understanding in the lead institution, a rural development project is always likely to encounter problems in promoting sustainable development. Murphree writes that "of all the concerns about this project the greatest concern is over the long term sustainability of the equipment and infrastructure that has been purchased for project implementation. The maintenance and replacement cost of equipment is of concern given this programme cannot rely on donor support ad infinitum" (Murphree 1995). Attachment 4 shows the current budget allocation to vehicle and building maintenance is extremely high ($20 000 per year). Given project income from wildlife, this expenditure is simply unsustainable.

Plate 15 shows the grinding mill at Bawa. Ironically, the mill operator who is now employed, expressed dissatisfaction with the project (pers obs. 1998). The community also benefit from meat allocations from the hunting operator. In Plate 16, a hippo that was shot to provide meat to the community is being retrieved by staff of Mozambique Safaris.

A dramatic increase in poaching over the last year, is an indication that the community are no longer engaging the project. This is supported by the widespread dissatisfaction with the project that was encountered (pers. obs. 1998). When anti-poaching activities were first initiated, it is reported that the scouts who were sparsely equipped and not yet paid, worked tirelessly and very effectively to eradicate poaching (Wilson 1995, Murphree 1995). During the field trip it was evident that this enthusiasm no longer existed. On several occasions game scouts were observed

Plate 14: Bawa council being trained in basic accounting skills - the first workshop in four years

Plate 15: Bawa grinding mill- the only 'physical' development at Bawa in four years

on duty in Zumbo. When the game scout camp was visited, it was found to be deserted and we were informed that the scouts had been 'drinking in a nearby village for the past five days' (pers. obs. 1998). Commenting on this, and project management, a game scout noted that:

"The scouts are no longer motivated, the enthusiasm for the project has worn off. I am not happy with project management and the way that it took Fremino three trips to buy a grinding mill for Chintopo. Staying in expensive hotels and using community money to do this " (Rangisi pers. comm. 1998).

This comment shows that there is dissatisfaction with project management. It shows that there is a lack of capacity within the lead institution, if it takes the project manager three trips (of a week each) to buy a grinding mill. The fact that project management is using project money to stay in hotels, is a blatant disrespect to the community and a disregard for the need to make optimum use of revenue - that is intended to benefit the community. It also shows that the project has failed to maintain community incentive. If it has failed to do this, the project has effectively failed. It indicates that the need to ensure community incentive has not been adequately addressed in project operation, because it was not addressed in planning (DNFFB 1993).

It could be argued that the decline in the success of the anti-poaching scouts can be attributed to the failure of project management to sustain anti-poaching activities. However, if one accepts the change in management as the cause of this trend, this has alarming connotations. It indicates that the management institution is not sustainable and there is no continuity in management. If a community-based management institution had been developed this institutional memory would have been created. If the project 'success' (referring specifically to anti-poaching success) is still so heavily dependent on the personality of an external manager, and if it cannot accommodate a change in management, the institution of the project is extremely weak This weakness can be attributed to the fact that the lead institution was weak when the project was formulated and implemented, and judging by current performance, still is. If the lead institution is unable to

organise its own affairs, it is unlikely to be able to develop institutional strength in a CBNRM programme.

Equally importantly, the decline in anti-poaching suggests that the principle of using conservation as a vehicle for development is no longer being embraced by the game scouts. If the importance of conservation has not been embraced by the game scouts, it is unlikely to have been embraced by the community at large. If the community has not embraced this principle, that is fundamental to CBNRM, CBNRM is not sustainable.

In terms of community benefit, and incentive to engage in the project, there is another serious problem. At present the community are being expected to manage the environment, and preserve the wildlife resources (DNFFB 1993). Traditional subsistence hunting has been outlawed by the project. This represents a significant cost to the community. One of Murphree's principles of CBNRM is that differential inputs must result in differential benefits (1993). If the community are being expected to incur the costs[1] of not practising traditional resource utilisation, and they are responsible for the conservation of the area, it is unacceptable to the community that they only derive 33 % of the revenue generated by trophy hunting (pers. obs 1998). At present 33% of derived revenue is insufficient to deliver sustainable development to the community, and it is not providing sufficient incentive for the community to engage the project. This is particularly so, given that none of the money which is allocated to national or local government is being used for the development and benefit of the people in the project area. One of the reasons attributed to some of the CAMPFIRE successes, is that approximately 70 % of revenue directly benefits the community involved in the CBNRM programme (Murphree 1993). The council chairman of Mwamuira comented that: "my heart aches when I think of how much money they get at CAMPFIRE", and was aware that they receive 70% of revenue as opposed to the 33% that the

[1]This cost is very significant. The world Bank has estimated that 80 % of red meat protein in the diets of rural Mozambicans is derived from game meat. Quantified in economic terms this cost is therefore substantial (Murphree 1995).

community at Tchuma Tchato derive.

Although community benefit has been minimal, people continue to be attracted to the project area. They are being allowed to settle without any control. According to the village chairpersons, these people do not have historical rights to the area, and they are mostly migrating into the area from Zimbabwe and the North Bank of the Zambezi (Masangana, Camposi, Catulula, Zinyembe, Bvundu, Jack pers. comm. 1998). This influx of people is evidently causing dissatisfaction in the community, who see any benefit being increasingly dispersed. According to Bobo Bvundu (pers comm 1998):

"These people are coming from the north bank and from Zimbabwe. They do not belong in this community. They take way some of our wealth".

This problem has been evident since as early as 1995. Commenting on the problem Murphree warned in 1995 that "it is critical that the councils review the status of human settlement and distribution. During 1995 there was considerable settlement in the project area and this will soon start to have implications in terms of the resource management options for the area."

Although project management were well aware of these problems during the early stages of the project, nothing has been done. People continue to move into the project area with no control (pers. obs 1998). This shows a fundamental disregard for a vital principle of CBNRM (of resource management). It also shows a disregard for the need to keep the population at a manageable size, and the associated benefits of a relatively small population. It shows that the DNFFB and SPFFB either do not have the will to manage the project effectively, or the capacity to do so. Both of these factors will contribute negatively to the long term success of the project. Both of these factors should have been addressed within the lead institution before they assumed responsibility for implementing this type of project.

6.3.5 Reconciling individual and community interests

It was discussed in Chapter 3 that in order for a CBNRM programme to succeed, it is necessary to reconcile individual and community interests. A problem exists if an individual's incentive to act in the communal interest is less than the incentive to act in his / her own interest. The dramatic increase of poaching in 1998 suggests that this reconciliation is no longer as successful as it was initially during the first years of the project. The increase in poaching is an indication that the benefit of poaching in self-interest, is evidently greater than the communal interest vested in the project. As the community becomes increasingly heterogenous with the migration of people into the project area, it will become increasingly difficult to reconcile the interests of the individual with those of the community [2].

6.3.6 Effective institutional support

Writing about the necessity for effective interactions Breen *et al* argue that (1992):

"Clearly sustaining development is beyond the capacity of any single organisation. The strength of the process is dependent on the strength of the network of expertise and resources which can bring the right resources together at the right time and the right place".

It is shown in Table 1 that effective institutional interactions are an important characteristic of a

[2]It can be argued that the increase in poaching should not only be attributed to individual poachers acting in their self interest. Game meat is sold in the villagers for the equivalent of Z$ 20 (ie less$1) per impala (Midza pers. comm. 1998). It is very unlikely that meat is being sold, and then cooked, in villagers without general public knowledge. The fact that the community is not working against this practise (no poachers have been handed over by the community this year) (Fremino pers. comm. 1998), is an indication that to some degree the villagers condone this poaching.

CBNRM programme/project that will contribute to socio-economic development being realised. A significant factor in the project is that there has not been an effective system of institutional interaction. While it is essential that a community gain a level of proprietorship of a CBNRM programme, effective institutional interactions are a prerequisite for overall project success. In 1995 Murphree wrote that " the difficulties with this project tend to be external and bureaucratic in nature" (Murphree 1995). A number of key role players will now be considered in terms of their involvement in, and contribution to overall project success. This list is by no means exhaustive, but it serves to illustrate the general lack of institutional interactions within the project.

A) Local government

Speaking about the involvement of local government at the initiation of the project Murphree advises (1995):

"On reflection the importance of having provincial and district involvement from the beginning of the process cannot be overemphasised enough. The support and assistance of provincial and district level staff to the Tchuma Tchato project has been exceptional because they have proprietorship of the local level administrative activities of the project".

Local government has an important role to play in the socio-economic development of a region. A partnership with local government, in which development responsibility is shared, will have much greater chance of enabling development than if potential partners work alone.

Although local government, at the level of the District (Magoe Governor) and at the level of the local ward (Chef de Posto Chintopo Localidade) endorsed the project, they have not been effectively involved in project management. Writing about local level administration Murphree (1995) says that "this programme was not developed with provincial and local levels in mind, a

factor which with hindsight was a major flaw in the project design." The Magoe governor has never visited the project (Namanha pers. comm. 1998). At the initiation of the project, the Chef de Posto was involved in regular meetings with the community in which issues of project management were discussed (Murphree pers. comm. 1998). According to the Chef de Posto, he is no longer involved in these meetings (Chocolo pers. comm. 1998). According to Chocolo, no development plans for the region exist (Chocolo pers. comm. 1998). In an interview with the Chef de Posto, it emerged that he sees the responsibility of socio-economic development resting on the project (Chocolo, pers. comm. 1998). This can to some extent be explained by the fact that there is very little capacity in local government (Namanha pers. comm 1998) However, if local government has this attitude, it will lead to complacency , which will detract from what should be a collaborative effort by the project and the government to develop the region.

It is clearly unrealistic for the project to offer a solution to socio-economic problems in isolation. It has been shown that a project of this nature can contribute to development, but on a relatively small scale, and it does not reduce the critical need for government to lead the development process. The fact that there was, and continues to be unrealistic expectations of the project is problematic. It indicates that government, and the lead institution has an unrealistic expectation of what a project such as Tchuma Tchato can deliver. A project should not be implemented before both government and the lead institution understand the potential and limitations of this type of project. If these institutions do not appreciate these issues, project planning and operation will continually be compromised, and many role-players (particularly the community) will become disillusioned with what the project is able to achieve.

A further, and very serious, problem exists in the relationship between local government and the Tchuma Tchato project. According to a national diploma of 1995, the revenue from trophy fees is divided, with the community receiving 33%, national government receiving 35% and local government receiving 32%. In addition to trophy fees, revenue from fishing licenses is also generated. None of the revenue allocated to local government, has been used towards the

development of the project area. In 1996 the money disappeared when it was allegedly stolen out of a local government bank account (Fremino pers. comm. 1998). The revenue from 1997 has also not been used in developing the region. When pushed to account for how the money had been spent, the Chef de Posto of Chintopo ward admitted that he had used the money to repair a road (that is outside of the project area) and to buy spare parts for his motorbike (Chocolo pers. comm. 1998).

The community area aware of this misappropriation of these funds. This has caused major dissatisfaction in the community, who feel that the government is not assisting them in their efforts to develop the region (Masangane, Camposi, Catalula, Zinyembe, Bvundu, Jack pers. comm. 1998).

The chairperson of Capesca had the following to say (Masangana pers. comm. 1998):

"Before the project the government did nothing to develop the area. Now we have Tchuma Tchato and the people are trying hard. But still the government does nothing. Instead, they are stealing our money, our wealth. The people are angry. It becomes difficult to mobilise the community to develop the area".

B) Departments of Agriculture, Health and Education

These departments should contribute to socio-economic development of a region, by building infrastructure and by providing services that are desperately needed (DNFFB 1993). It is acknowledged that these departments are hard-pressed for resources. However, the community clearly had expectations that the project would deliver schools and clinics (Masangana, Camposi, Catulula, Zinyembe, Bvundu, Jack pers. comm. 1998). It is unrealistic to expect a CBNRM project/programme such as Tchuma Tchato to deliver these facilities. It simply does not generated the resources required, and it does not have the capacity (human and financial) to do

so. According to Namanha (pers. comm 1998), these departments have not been involved in the project. They were not involved in formulating the project, or in operation. Agricultural education and extension initiatives would also be invaluable in the Tchuma Tchato project. It would help to improve yields and promote sustainable subsistence practises. However, a number of villages from throughout the project area, reported that they have only been visited once, by a Zimbabwean agriculture extension officer, encouraging them to grow cotton - to be sold to Zimbabwean mills (pers.obs. 1998). The failure to involve these institutions in the project is an oversight.

C) Safari operator

The majority of revenue generated for the community, is through trophy fees. In fact, to a large extent, the project owes its existence to the Safari Operator. Although there is much resentment about how he went about conserving the wildlife in his concession , the fact is that he did. The only significant wildlife population in the region, is found in the area where his hunting has been concentrated. In areas where he hasn't hunted, there has been no control (ie on the north bank), and the wildlife populations in these areas have been decimated [3] (Houggard pers. comm. 1998; Namanha pers. comm. 1998). The safari operator is therefore a critical role-player in the project.

Both the project and the operator should be working together in managing the wildlife population. A partnership would serve to build relations between the community, the project and the safari operator. It would also strengthen the conservation and environmental management of the area, and it would serve to strengthen the CBNRM institution in Chintopo.

[3] The wildlife on the north bank has been completely decimated. A Safari Operator called Baobab Safaris started hunting on a concession on the north bank in 1997, but went bankrupt within one year. In nine hunts only one crocodile was shot (Namanha pers. comm. 1998).

The operator is not involved in project management (Houggard pers. comm. 1998; Namanha pers. comm. 1998). This has, at times, had a negative effect on the relationship between the operator and the project. It also means that conservation management is being compromised.

An example of this, is when an electric fence was constructed around Bawa village[4]. The process was hailed as a success (Wilson 1996; Murphree 1998) because the community were involved in planning and they decided where they wished to put the fence. While involving the community is essential, the safari operator was not consulted. To this day the operator is unhappy with the placement of the fence, because it has restricted wildlife access to one of the most important areas of dry-season grazing. The operator feels that this runs contrary to sound conservation management, and has requested on several occasions to have the fence position adjusted, without success (Houggard pers. comm. 1998).

D) IUCN

IUCN representatives were involved in the formulation and implementation of the Tchuma Tchato project at Bawa. Technical support was provided to establish the physical infrastructure, to develop the anti-poaching unit, and to develop mechanisms to involve the community. During the first year of implementation, the project made a lot of progress, and it was considered by some to be showing signs of success. According to Murphree this success was largely measured by the acquisition of physical equipment (1995). Writing about technical support to a CBNRM programme, Murphree asserts that (1995):

> "within two years of starting a community based programme direct technical support

[4]The fence was constructed to protect village crops from crop-raiding elephants. The elephant population increased dramatically due to anti-poaching activities, and this put pressure on the village crops.

should be decreasing. The continued monitoring, evaluation and research of the process continues, but should increasingly be done by local government and academic institutions".

An important event in the projects history occurred, when Murphree's contract with the IUCN expired at the end of 1995. While initial progress was experienced at Tchuma Tchato, it is evident that much less progress has been made since then. According to Murphree, when he withdrew, he was assured by his Mozambican colleagues that they were confident to continue on their own. Murphree asserts (pers. comm.1998):

"This was a decision made by 'project management', donor and supporting institutions. It was not a decision made at the community level and I recognise that this action was probably premature by about twelve months".

It is clear that the point at which Murphree withdrew was premature. The CBNRM programme had not developed sufficiently out of the project, and there was not the capacity in the community or in project management to take the process further. Figure 3 shows that development, particularly the development of human capacity, is a long term process. One year of technical support is insufficient to develop the level of capacity required by a community for CBNRM. It was also insufficient to develop capacity within the lead institution, who had evidently misjudged what was required of them. Houggard notes that when Murphree left, "the project took a turn for the worse" (Houggard pers. comm. 1998).

The IUCN still receives $14 000 per year for financial administration and technical support to the project. According to Fremino, there has however only been a single visit by the IUCN to the project this year to undertake an evaluative exercise, and there has been no visit to provide technical support (Fremino pers. comm. 1998). In June 1998 an IUCN representative visited the project to investigate problems that were being encountered. It was found that although the community should be more involved in project management, there were no serious problems to

report (da Luz Duarte 1998).

E) DNFFB and SPFFB

While the withdrawal of Murphree of the IUCN marked a decline in project progress, a more significant factor is that the SPFFB has not withdrawn from project management. It is clear that in the project proposal for the establishment of Tchuma Tchato, the DNFFB saw the project as being a 'Wildlife Department Project' (DNFFB 1993). The DNFFB saw project proprietorship and overall management functions as being their responsibility (DNFFB1993). Project management is still paid by the SPFFB (who assumed responsibility for the project during a process of institutional restructuring), which indicates SPFFB ownership. In recent months there has been an intense evaluation of the project and of project management in response to alleged problems in project management (Namanha pers. comm. 1998). During the field visit the camp was running into disrepair. The water pump was not working, the grounds were not being kept, and the chalets were not being maintained (pers. obs. 1998). Plate 17 shows a project vehicle that now lies derelict, despite a budget of $18 000 per year to maintain project vehicles. During the visit to Bawa, there were no project vehicles available for use. In addition the community allege that the current project manager is refusing to listen to their needs (pers. obs. 1998). Anti-poaching has not been managed properly. Earlier in the year, a project four wheel drive was destroyed in an accident when project staff were doing a 'beer-run' for the Kanyemba police (Houggard pers. Comm 1998; Namanha pers. comm. 1998).

The DNFFB and SPFFB undertook this process of evaluation. Despite intense community opposition to project management[5], that has been in place since January 1998 (pers.obs.1998), the

[5]Opposition stems from a number of factors. Fremino has changed the management structure of the project. It is alleged that he refused to have meetings with the community to discuss their grievances. He has not sustained anti-poaching activities and other management functions, such as maintenance of the electric fence, upkeep of the vehicles etc (pers. obs 1998).

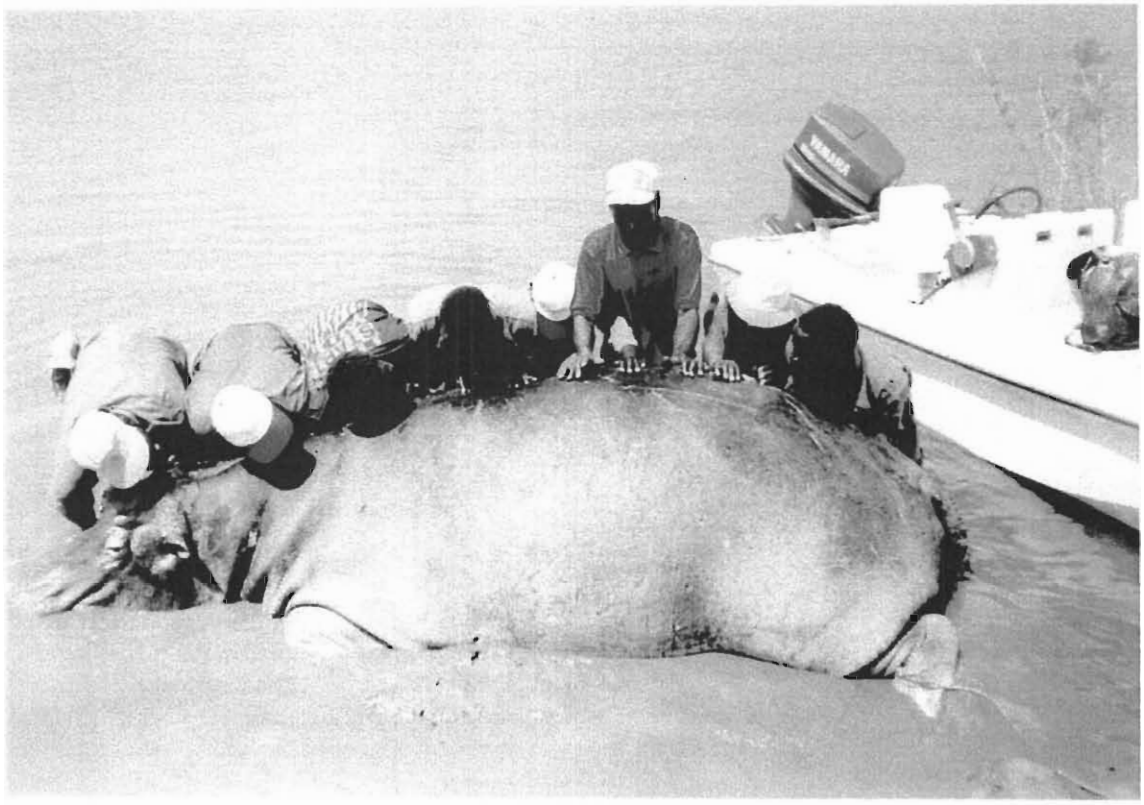


Plate 16: A hippo being retrieved by a staff of Mozambique Safaris to provide meat for villages

Plate 17: A dilapidated project vehicle at project headquarters in Bawa

current project management has been retained after this evaluative exercise - a decision that was taken by the provincial governor of Tete (Namanha pers. comm. 1998). This decision, in itself, underpins the argument that the project has not evolved into a community-based programme, over which the community have proprietorship and managerial responsibility.

Much discussion thus far has indicated a lack of capacity within the lead institution. This factor has been attributed to many of the problems that the project is currently facing. In 1995 Murphree wrote that (1995):

"a major constraint facing this project and others like it, is the availability of skilled personnel for implementation. The project relies heavily on the project manager for its implementation. This creates a dependency by the community on outsiders, the result is a repetition of 'project cycles' that have failed throughout the region, failure occurring once the donor or technical support is withdrawn."

F) Ford Foundation

The Ford Foundation is a donor organisation and is not involved in providing direct technical support. According to Namanha, the Ford Foundation have provided no support to the project other than financial support. Despite recommendations to the IUCN and the Ford Foundation that an evaluative process be undertaken (for example Murphree pers. comm. 1998; Hirschoff 1997), this has not been done (Namanha pers comm 1998). The Ford Foundation spent $100 000 on making a documentary video about Tchuma Tchato, before the community had derived any development benefit from the project (Namanha pers. comm. 1998). At present levels of community income, this is effectively equal to seven years income to the community.

6.4 Evaluation

The previous section has looked extensively at the organisation and management of the Tchuma Tchato project. It has considered how the project has been managed based on a number of characteristics of successful CBNRM that were reviewed in chapter 3. This examination has shown, that for a number of reasons, the project has had only mixed success. In terms of the project's organisation and it's management there are number of factors that have contributed to this outcome. The project intervention has failed to bring any real development to the region, it has failed to develop the human capacity within the community needed to manage a CBNRM project, and the project has failed to establish itself as financially self-sufficient.

Having considered project management, it is possible to re-enter the project cycle at the level of evaluation. Evaluation consists of investigating and reviewing the effects of the project, to see whether the benefits which were planned to flow from it have indeed been realized, and whether these benefits have had their intended consequences. The model of the project cycle, which was shown in Figure 4, shows that the project cycle should be a learning process and that project evaluation should feed into subsequent projects (Cusworth and Franks 1993). Evaluation, and ongoing appraisal, should also be an ongoing process of management, so that adjustments can be made and corrective action taken.

Given that the Tchuma Tchato project at Bawa is serving as a pilot project, the need for evaluative processes to occur is all the more salient. Processes of evaluation have occurred during the project life. In his capacity as technical advisor, Murphree evaluated the project in 1995 and made recommendations to strengthen the project. Murphree pulled out of the project, at the end of his job with the IUCN as wildlife and community advisor to the DNFFB in Mozambique at the end of 1995. This marked the end of the first phase of funding for the project. Despite making strong recommendations for an evaluative exercise, no such evaluation occurred

(Murphree pers comm. 1998, Namanha pers. comm. 1998). In May 1996, an anthropology student from George Washington University, researched the relationship between "the villagers and the wildlife" at Bawa. As part of her conclusions she highlighted a number of problems in the project that have been highlighted in this discussion. She also predicted a number of problems that have (unfortunately) materialsed. As part of her follow up activities she reported on these problems to both the IUCN and the Ford Foundation. Despite the recommendation, from two separate parties, no formal evaluation was undertaken and no corrective measures were made. Instead, the Ford Foundation continues to write that the Tchuma Tchato project at Bawa is a success (see for example Koch 1998 contained in Attachment 5). Attachment 6 contains the conclusions of the report on "The villagers and the Wildlife", upon which recommendations for evaluation were based.

The fact that evaluation has not led to corrective measures is alarming in itself, but even more so given that a second Tchuma Tchato project has already been implemented at Daque.[6] If a project is to act as a pilot, it has to be used as a learning process. But if evaluation does not lead to corrective action, the opportunities to learn from experience are retarded.

6.5 Summary of project outcomes

This chapter has highlighted that for a number of reasons the Tchuma Tchato project has had only mixed success. The project has delivered very little in the way of social, economic or environmental development to the impoverished Chintopo ward. There has been limited development of human capacity in the targeted community. As a consequence of these factors, the project is evidently not sustainable. If the project is not sustainable, the process of socio-economic development that it has initiated is also not sustainable.

[6]Tchuma Tchato - Daque is also being funded by the Ford Foundation.

Human conflicts in the region have been reduced to some extent. The project has provided limited employment opportunities to the population (approximately 18 people), but there has been no significant increase in household income. There has been almost no development of physical infrastructure in the project area, that benefits the community by alleviating conditions of socio-economic impoverishment. The project has not established sound conservation and resource management. Wildlife has not benefited from conservation management, and poaching is now increasing, which suggests that community-based conservation is currently not sustainable in Chintopo.

The failure of the project to deliver development benefit to Chintopo ward is linked to the failure to achieve some of the key characteristics of CBNRM. Natural resource management has been limited. Community involvement in project management has been minimal. Community benefit and incentive to manage has not been adequately addressed. There has been an ineffective system of institutional interaction in project management. Strongly evident is that the lead institution is weak and that it embarked on the project intervention before having the necessary capacity to do so. This has had a significant negative effect on the formulation, and subsequently the operation of the Tchuma Tchato project at Bawa. At present the project has not been successful in establishing CBNRM that is sustainable in the long term. As such, it has failed to initiate a process of development that is sustainable in Chintopo ward.

Chapter 7

Conclusions and Recommendations

Chapter 7
Conclusions and Recommendations

7.1 Conclusions

This dissertation has argued that an external intervention is usually necessary to initiate a process of socio-economic development in impoverished communities. The role played by the external agents, and particularly the lead institution is critical. The intervention process requires strong leadership. External agents must be well prepared and they must have the capacity to make this type of intervention. External agents must have the financial and human resources necessary to work effectively in a project intervention. They must understand the nature of the project intervention, and their role in it. External agents must work effectively as a team in a process that is geared to evolve from an externally driven project intervention, into a community based natural resource management and development programme. The intervention, which is time-bound, must be designed to create the 'productive asset' which is an empowered community. This asset should be a community that has the capacity, but also the will to engage in CBNRM autonomously, and to develop themselves, at the end of the project life.

This analysis has shown that the Tchuma Tchato project at Bawa is floundering. There has been only limited social development, economic development and environmental development. As a consequence, the project is not contributing to a process of sustainable development that is contributing to alleviate the socio-economic impoverishment of Chintopo ward. It has been shown that the project is not, at present, socially sustainable or financially sustainable.

Analysis has shown that the project is floundering principally due to the role that external agents, and particularly the lead institutions (ie DNFFB and SPFFB) have not played. These external

agents have been ineffective. As a direct consequence of weaknesses in the role played by external agents, the formulation and operation of the Tchuma Tchato project has been ineffective. Analysis has shown that the DNFFB (and subsequently the SPFFB) do not have the financial or human capacity that is needed to formulate or manage a CBNRM project intervention. These institutions are not well organised. External agents have not worked well as a team. They evidently did not have an adequate understanding of a CBNRM process. They did not appreciate the complexity of the process, or the roles that they were required to play as external agents.

The model that was used in this dissertation predicted that if the project was not rigorously formulated the project would flounder. Project operation and management is strongly influenced by the process that is undertaken to assess project feasibility, to plan and to design a project intervention. The fact that project formulation was weak resulted in the project being operated and managed with a weak foundation. As a consequence, the project did not address the key characteristics of CBNRM and it failed to initiate a process of sustainable development.

The model of CBNRM that has been used in this dissertation is evidently an effective way of conceptualising the relative roles played by external agents and by the community during the project life. It shows that a CBNRM project intervention is by its nature time bound. It is also limited in the extent of development that it can reasonably be expected to deliver. The model shows that CBNRM can contribute to a broader process (in time and in space) of sustainable development in the long term. For CBNRM to be sustainable, there must be a marked change in the levels of external and community involvement during the project life. If the balance of control does not shift to the community, CBNRM will not become sustainable. This dissertation has also illustrated the linkages that exist between key characteristics of CBNRM and the social, economic and environmental components of sustainable development. The model has proven to be a useful way of conceptualising CBNRM. It could potentially be developed further to be used as a tool in planning, managing and evaluating CBNRM project interventions.

7.2 Recommendations

A number of recommendations can be made. These relate to the Tchuma Tchato project at Bawa, and for future CBNRM initiatives in Mozambique, and southern Africa at large.

7.2.1 Leadership

Committed and effective leadership is a prerequisite for successful intervention. While this was present (ie Murphree) the project made progress. With his departure, and the departure of Namanha, the project has begun to lose direction. A strong project leader should be re-appointed. This person should have the knowledge, the understanding, the resources and the personal characteristics which will enable him/her to manage the process effectively. A dedicated effort must be directed towards developing leadership within the Wildlife Department, at national level (DNFFB) and at provincial level (SPFFB). Leadership must be developed within the community. With the development of leadership within the community, and within the Wildlife Department, the project leader can be phased out in two to three years.

7.2.1 Institutional capacity

The project is floundering as a direct result of a lack of institutional capacity within the Wildlife Department and within the community. Institutional capacity must be developed within the Wildlife Department and within the community. This can be developed within the community by concentrating on human development. The community must be meaningfully engaged in project management. There must be a dedicated effort to introduce adult education workshops. The project budget must be re-formulated to focus on human development. The programme to develop institutional capacity within the Wildlife Department is also a priority. A concerted effort must be made to do so.

7.2.3 Organisation

External agents have not contributed effectively to the project intervention. The Wildlife Department (DNFFB and SPFFB) must be replaced by an organisation that is capable of leading the project, until the Wildlife Department is sufficiently organised , with sufficient capacity to do so. An NGO should be found to fulfill this role. Institutional support to the project must be strengthened. Key role-players must be identified and a team must be established that can support the project intervention.

7.2.4 Management

Project management must be strengthened with a new project leader. Project management must be re-formulated. Goals and objectives must be set. Organisational designs must be made. Strategic management plans that guide the project over the next five years must be made. It is vital that the community become meaningfully engaged in project management. Management must be supported with institutional support from other organisations. Management must address the key characteristics of CBNRM that have been highlighted in this dissertation.

7.2.5 Policy and legislative reform

The process of policy and legislative reform is a priority. The division of trophy fees (35 % to national government, 32 % to local government and 33 % to the community) must be immediately addressed. The financial feasibility of the project and community incentive to manage, hangs on the community receiving a far greater share of trophy fees (similar to CAMPFIRE, for example 70 %). Elephant hunting must be introduced to increase the returns from trophy fees.

7.2.6 Diversification of economic base

There is an immediate need to diversify the economic base of the project, and to increase this base. The above-mentioned policy and legislative reform will contribute significantly to this. There is a need to identify additional sources of income to the project. These must be introduced if the project is to become financially sustainable.

7.2.7 Regional development

CBNRM can only be expected to contribute to a more comprehensive development initiative in a region. There is an urgent need to develop a more comprehensive development programme in the impoverished Chintopo ward and Magoe district. Government must take responsibility for this development. As part of this process, there is an urgent need to develop institutional capacity within local government departments.

7.2.8 Funding Tchuma Tchato at Bawa

There must be a renewed commitment to fund the project at Bawa for a period of at least five years. Without this renewed commitment, the project will collapse. This must be avoided. With renewed funding it is essential that the above mentioned recommendations are addressed. It is a priority to re-formulate budget allocations. Physical infrastructure must only be acquired and maintained, if this equipment can potentially be sustained at the end of the project life. A far higher budget allocation must be devoted to human development.

7.2.9 Future CBNRM initiatives in Mozambique

No new CBNRM projects should be initiated until such time as the Wildlife Department has the

institutional capacity to make interventions effectively. Alternatively, CBNRM should only be initiated if there are lead institutions (such as NGO's) that are available to provide the leadership and support required by this type of project.

7.10 Model enhancement

The conceptual framework that has been developed and used in this dissertation has been shown to be useful. It is a useful way of conceptualising a CBNRM project intervention. It advocates that a project cycle that should be followed, it illustrates the role that CBNRM can play in overall processes of sustainable development, it shows the link between key characteristics of CBNRM and of social, economic and environmental development. This conceptual framework needs to be refined. If it is, it is potentially a useful tool for CBNRM.

References

DRAWING, 1987

(Ed Campbell, B.), CIFOR, Malaysia

Campfire News, August 1998

Chambers, R.(1983): **Rural Development - Putting the Last First**, Longman Scientific and Technical, New York

Child, B. and Peterson, J.H. (1991):**Campfire in Rural Development: The Beitbridge Experience**, CASS working paper, Harare

Child, G. (1995): **Wildlife and People: the Zimbabwean Success**, Future Graphics, Harare

Clarke, J.; Cavendish, W.; and Coote, C. (1996): "Rural Households And Miombo Woodlands: Use Value and Management", in **The Miombo in Transition: Woodlands and Welfare in Africa** (Ed Campbell, B.), CIFOR, Malaysia

Cumming, D. H. M.(1993): "Conservation Issues and Problems in Africa", in **Voices from Africa: Local Perspectives on Conservation** (Eds Lewis, D. and Carter, N.), WWF, Washington

Curruthers, J. and Zaloumis, A. (1995): "People and Parks", Summary of the proceedings of a stakeholder's conference held at Koinania Conference Centre, Occasional Paper 1, Durban, 22-23 May 1995

Cusworth, J. W. and Franks, T. R. (eds) (1993): **Managing Projects In Developing Countries**, Longman Scientific and Technical, New York

da Luz Duarte, M. (1998): "Realatorio Da Visita A Unidade De Bawa", unpublished report on visit to Bawa, IUCN

References

Adams, W. (1995): "Sustainable Development?" in Johnstone, R. J. (ed) **Ex-Geographers of Global Change**

Africa Watch 1992

Anderson, D. and Grove, R. (1987): "The scramble for Eden: past present and future in African conservation", in **Conservation in Africa - people, policies and practice**, Cambridge University Press, Cambridge

Bak, N. (1995): *"The Unsustainability of 'Sustainable Development' in a Southern African Context"*, Southern African Journal of Environmental Education, no 15

Barnes, J. I. (1995): *"Economic Analysis of community-based wildlife utilisation initiatives in Botswana"*, Development Southern Africa, vol 12, no 6

Bell, V. (1987): "Conservation with a human face: conflict and reconciliation in African land use planning", in **Conservation in Africa - people, policies and practice**, Cambridge University Press, Cambridge

Breen, C.; Mander, M.; A'Bear, D.; Little, T; and Pollett, T. (1992): "Social Conceptions of the Roles and Benefits of National Parks in a Changing South Africa", paper presented at a workshop entitled "National Parks in a Changing South Africa", Skukuza, 12 November 1992

Brundtland (1987): **Our Common Future**, Oxford University Press, UNCED

Campbell, B.; Frost, P.; and Byron, N.(1996): "Miombo Woodlands And Their Use; Overview And Key Issues", in **The Miombo in Transition: Woodlands and Welfare in Africa**

Daly, H.E.(1993): "Sustainable Growth: An impossible Theorem" in **Valuing the Earth**, MIT Press, Cambridge

Davidson, B. (1997): "Exhausting But Exhilarating - An Assessment of the recent CITES meeting", African Wildlife, vol 51, no 5

Davies, A. (1997): **Managing for Change - How To Run Community Development Projects**, Intermediate Technology publications, London

Department of Environment Affairs 1902: **Building the Foundation for Sustainable Development in South Africa, Pretoria**

de Villiers, D. (1995): *"Is There Any Hope? - Survival of nature reserves amidst informal settlements"*, African Wildlife, vol 49, no 3

DEAT (1997): **Programme For The Further Implementation of Agenda 21**, Department of Environmental Affairs and Tourism, Pretoria

DEAT (1998): **agenda 21 - an agenda for sustainable development into the 21st century**, Department of Environmental Affairs and Tourism, Pretoria

DNFFB (1993): Community Natural Resource Management and Staff Development Project Proposal, Tete Province, Mozambique, unpublished proposal produced in association with the IUCN

Dorm-Adzobu,, C. (1995): **New Roots: Institutionalizing Environmental Management in Africa**, World Resources Institute

Douglas, R (1997): "Peace, Parks and Prosperity", Internet article, http://www.peaceparks.org.za/news/articles/1997

Ellsworth, L. (1997): "The Road to Financial Sustainability - How Managers, Government, and Donors in Africa Can Create a Legacy of Viable Non-Profit Organizations", working paper for USAID and the World Bank, New York

Foloma, M.; Ye, S.P. and Wilson, K. (1998): "Transcending Boundaries of Scale: Experiences in Mozambique's Tchuma Tchato Programme", paper Presented to the IASCP Panel, Vancouver, Canada

Ghai, D. (ed) (1994): **Development and Environment: Sustaining People and Nature**, Blackwell Publishers, Cambridge

Hall, M. and Young, T. (1997): **Confronting Leviathon - Mozambique Since Independence**, Hurst and Company, London

Hamilton, E. (1992): **Adult Education for Community Development**, Greenwood Publishing, Westport

Hawtin, M.; Hughes, G.; and Percy-Smith, J.(1994): **Community profiling - Auditing Social Needs**, Open University Press, Philadelphia

Hirschoff, P. (1996): "The Villagers and the Wildlife", unpublished report on the relationship between the villagers of Bawa, wildlife and the TchumaTchato project

Hosking, S. (1996): *"Official statistics on the income generated by the hunting industry in South Africa"*, South African Journal of Wildlife Research, vol 26, no 4

Houggard, P. (1996): "Report on the 1996 Hunting Season", unpublished report, Mozambique

Safaris

HSRC (1998): **Sustainable Development, in focus forum**, HSRC, vol 6, no.1, Pretoria

Huckle, J. (1991): *"Education for Sustainability: Assessing Pathways to the future"*, Australian Journal of Environmental Education, vol 7

IUCN (1980): **World Conservation Strategy: Living resource conservation for sustainable development**, Gland publishers

Jickling, B. (1992): *"Why I Don't Want My Children to be Educated for Sustainable Development"*, Journal of Environmental Education, vol 23, no 4

Kaplan, A. (1996): **The Development Practitioners Handbook**, Pluto Press, London

Kennedy, J. (1992): **New Currents, Ancient Rivers: Contemporary African Artists in a Generation of Change**, Smithsonian Institution Press, Washington

Khan, F. (1989): *"The Role of History in Understanding Current South African Attitudes to Conservation"*, South African Journal of Environmental Education, no 10, 1989

Khan, F (1996): *"Living on the Margins - Ecotourism and indigenous people in southern Africa"*, African Wildlife, vol 50, no 3

Kleiner, A.and Roth, G. (1997): *"How To Make Experience Your Company's Best Teacher"*, Harvard Business Review, September-October 1997

Koch, E. (1995): *"Hunting for Solutions - conservation and rural community development in South Africa"*, Optima, September 1995

Koch, E. (1998): "Our Forests, Our wildlife, Our Wealth", in Ford Foundation Report / Winter 1998, New York

Koro, E (1998): "...and just across the Kanyemba border in Mozambique", in Campfire News, August 1998, no 15

Kotze, D. A. and Swanepoel, H. .J. (1983): **Guidelines for Practical Community Development**, Promedia Publications, Pretoria

Le Quesne, T. (undated): "Common Property Theory And Community Based Wildlife Programmes", natleq.html at www.ru.ac.za

Lester, R. K.; Piore, M. J.; and Malek, K. M. (1998): *"Interpretive Management"*, Harvard Business Review, March-April 1998

Lock, D. (ed) (1989): **Project Management Handbook**, Gower Technical Press, Southampton

Mackie, C.S. and Chafota, J. (1995): Aerial Survey of Large Mammals in Magoe District, (North West Tete Province) Mozambique, project paper no 47, WWF, Harare

(Whitesides 1998)

Makobe, K. (1993): **Sharing the Land: Wildlife, People and Development in Africa**, IUCN Environmental Issues Series, no 1

Maputo (1996): "Forest and Wildlife Policy and Strategy", Ministerio Da Agricultura E Pescas, Maputo

Marais, C. P.; and Venter, A.K.(1994): "Managing For The Future: developing An open System Management Approach", Occasional Paper 150, INR, 15 September 1994

McLaughlin, A (1998): *"End of Development"*, Resurgence, No 189, July August 1998

McKenzie, M. C. M. (1997): "The Economic Potential of Game Hunting on a Small Reserve", unpublished thesis submitted to the School of Environment and Development, University of Natal

Munslow, B. (1983): **Mozambique: the Revolution and its Origins**, Longman, London

Murphree, M, W. (1993): **Communities as Resource Management Institutions**, gatekeeper Series no 36, International Institute for Environment and Development, London

Murphree, M. W.; Murphree M. J.; and Mugabe, P. (1998): "Socioeconomic Considerations in the Community Initiation and Implementation of the Save/Game Programme", background paper for the Gwaai River Workshop August 1998

Murphree, M. J. (1995): "On the Road to Tchuma Tchato" unpublished paper for IUCN

Murphree, M. J. (1995): Tete Project - Technical Report Year One, unpublished report on Tchuma Tchato - Bawa

Namanha, L. and Abacar, A.(1993): "Identification Of Issues And Problems For Wildlife Management Strategy, unpublished report

O'Donoghue, R. B.(1993) : *"Clarifying Environmental Education: A search for clear action in southern Africa"*, Southern African Journal of Environmental education, vol13

Oxford (1995): The Concise Oxford Dictionary (9th Edition), Clarendon Press, Oxford

PCI (undated): **The Logical Framework - A Manager's Guide to a Scientific Approach to Design and Evaluation**, prepared by Practical Concepts Incorporated, Washington

Pearce, P.; Markandya, A.; and Barbier, E.B. (1989): **Blueprint for a Green Economy**, Earthscan, London

People and Parks (1993): "Zimbabwe's CAMPFIRE Benefits People", in Parks and People - A New Ground Supplement, Spring 1993

Pinchin, A. (1993): **Conservation and Wildlife Management in Zimbabwe**, Bristol University Press, Bristol

Pollett, E. A. and Hearn, G. (1993): "A summary Report on the Establishment of the Sabi Sand Pfunani Project: An Integrated Conservation and Development Project", INR, Working Paper No 86, June 1993

Redclift, M. (1993): *"Sustainable Development: Needs, Values, Rights"*, Environmental Values, vol 2, no1

Resource Africa (1997), vol1, no 4, December 1997

Robinson, J, G and Redford, K,H (eds) (1991): **The Use of Conservation and Wildlife in Neotropical Wildlife Use and Conservation**, University of Chicago Press, Chicago

Rogers, K. and Bestbier, R. (1997): Development of a protocol for the definition of the desired state of riverine systems in South Africa, Department of Environmental Affairs and Tourism, Pretoria

Scheyvens, R. (1997): "A Framework for Analysing the Impacts of Ecotourism on Local

Communities", published in Proceedings of the First National Tourism Students Conference, New Zealand, University of Otago

Schneider, E. A. (1998): *"Malangatana: Artist of the Revolution"*, African Arts, vol 21, no. 3

Sheperd Smith, J. (1995): *"For The People, By The People"*, African Wildlife, vol 49, no 5

Sibanda, B. M. C. and Omwega, A. K.(1996): *"Some reflections on conservation, sustainable development and equitable sharing of benefits from wildlife areas in Africa: the case of Kenya and Zimbabwe"*, South African Journal of Wildlife Research, vol 26, no. 4

Slater, M. (1997): **Guide to Mozambique**, Struik Publishers, Cape Town

Steenkamp, N. and Hughes, G. (1997): *"Parks are for People"*, African Wildlife, vol 51, no 2

Steiner, A. and Rihoy, E.(eds) (1995): 'The Commons without the Tragedy: Strategies for Community Based Natural Resources Management in Southern Africa", proceedings of the Regional Natural Resources Management programme Annual conference, Kasane, April 3-6 1995, USAID

Swanepoel, H. (1992): **Community Development - Putting Plans into Action**, Juta, Cape Town

Taylor, J. (1998): "Some Thoughts on Participatory Development", short review prepared for the EE Mail based on a presentation given to the School of Environment and Development, University of Natal, June 10, 1998

UNDP (1995): United Nations Development Programme, information leaflet titled 'Sustainable

human development', New York

Venter, A. K.; Marais, C. P.; Breen, C. M.(1994): "Kruger National Park Managing For The Future: Integrating The Goals Of Conservation And The Development of Neighbouring Communities", occasional paper 149, INR 15 September 1994.

Waterhouse, R. (1996): **Mozambique - Rising from the Ashes**, Oxfam Publishers, Oxford

Wilson, K. (1995): unpublished Ford Foundation, Inter-Office Memorandum, February 10, 1995

Wilson, K. (1996): unpublished Ford Foundation, Inter-Office Memorandum, July 23, 1996

Wilson, K. (1997): "Of Diffusion and Context - The Bubbling up of Community-Based Resource Management in Mozambique", paper presented at the conference Representing Communities: Histories and Politics of Community-based Resource Management, Georgia, June 1997

Wilson, K. (1997): "Towards A Strategy For Managing The Hydrological Resources Of The Zambezi Valley", unpublished Participants Statement from the "Workshop on the Sustainable Use of the Cabora Bassa Dam and the Zambezi Valley", October 2 1997

WRI (1989): **Natural Endowments: Financing Resource Conservation for Development**, World Resources Institute, commissioned by the United Nations Development Programme, Washington

Personal Communication

Ken Wilson 1998 (Ford Foundation, Mozambican Programme officer)

Michael Murphree 1998 (IUCN Community and Wildlife Advisor during project implementation)

Piet Houggard 1998 (Managing Director, Mozambique Safaris)

Luis Namanha 1998 (Tchuma Tchato project manager November 1993 - January 1998)

Augustine Fremino 1998 (Tchuma Tchato project manager January 1998 -)

Samiro Magane 1998 (acting National Director of Wildlife, Mozambique)

Chandafira Masangane 1998	(Capesca chairperson)	translator S. Sibanda
Oswell Camposi 1998	(Mwamuira chairperson)	translator S. Sibanda
Adam Catulula 1998	(Chintopo chairperson)	translator S. Sibanda
Austin Zinyembe 1998	(Bawa chairperson)	translator S. Sibanda
Bobo Bvundu 1998	(Nhjenjhe chairperson)	translator S. Sibanda
Enoch Jack 1998	(Chitete chairperson)	translator S. Sibanda

Jose Chocolo 1998 (Chef de Posto Chintopo Ward) translator S. Sibanda

Godfrey Nidza 1998 (camp manager Sunungukai, CAMPFIRE project)

Tonderai Midza 1998 (camp manager, Kafakudzi, Mozambique Safaris)

Lyson Rangisi (game scout, Tchuma Tchato)

Julio Sequela (Head of Game Scouts, Tchuma Tchato)

Richard Rouget 1998 (Professional Hunter at Kafakudzi since 1992)

Mark Harper 1998 (Professional Hunter at Kafakudzi since 1995)

Steve Edwards 1998 (former PH at Kafakudzi)

Wayne Blignut 1998 (co-owner Zambezi Lodge, adjacent to Tcuma Tchato)

Eddie Koch 1998 (environmental writer, who visited the project in 1997)

Attachments

Attachment 1

Biographical notes on Malangatana Valente Ngwenya (1936 -)

Malangatana has come to be one of Mozambique's most prominent artists. His work has been exhibited throughout the world including Europe (at the museum fur Volkerkunde, Leipzig, Germany; and at the Secretaria de Estado de Cultura, Lisbon); the United States (at the National Museum of African Art, Washington; and at the African-American Institute, New York City); and Cuba (at the Havanna Biennial) (Kennedy 1992, p.150).

Malangatana's work has been chosen for inclusion in this thesis, because he uses his work to depict some of the many struggles that Mozambican society has endured in recent times. Kennedy asserts that "his powerful imagery weaves together the strands of indigenous culture with those of an imposed one, so that they still retain all of the stresses and strains of these inherent dichotomies" (Kennedy 192, p.150).

According to Kennedy (1992):

"He uses his pictures to depict conflict, struggle, rape, seduction, religious ritual, witchcraft, and initiation rites.....His haunting canvases, crowded with bodies and bustling with energy, communicate a feeling of crushing pressures in the barrios and streets of Maputo. Soldiers and sailors with weapons and flags consort with prostitutes; weapons, flags, freedom fighters, and pregnant women form a tableau conveying the texture of violence and love and the necessity for change" (p.150).

"His drawings with delicately wrought outlines also articulate an almost tangible pleasure. Space is crammed with rocklike sculptural forms of voluptuous nudes. Masses of heads, limbs, bellies, and breasts are compacted. Images of the cross, of possession, and various creatures with claws and fangs form an ominous alliance. Fascinating details shock, mesmerize, and exert fearful supernatural powers; a lizard like monster nuzzles a man's head" (p.150).

Attachment 2

Proposed project budget

Expenses	**3 Year Budget (US $)**
Establishment of field camp as base for officers and accommodation for staff and researchers	29 000
Basic road maintenance	2 000
Vehicle (4x4) and trail motorbike	30 000
Fuel and maintenance project vehicle	18 000
Fuel and maintenance for motorbike	5 400
Boat and engine	8 000
Fuel and Maintenance of boat	5 400
Development of Seed funds (especially in electric fences for crop protection)	25 000
Training and Dissemination within program	2 500
Training of Game scouts	1 500
Community courses in wildlife population assessment	2 000
Training of local government in appropriate management tools	5 000
Aerial survey to determine settlement patterns and land use.	6 300
Visits by Head of Wildlife (total 20 days per year)	1 800
Visits by Head of community extension (first year 180 days, second year 20 days, third year 20 days)	9 600
Visits by second community extension officer (Second year 120 days, third year 20 days)	6 000
IUCN wildlife policy advisor (60 days year - for 3 yrs)	24 000
Reflective annual review process	8 000
Other consultants for problem solving, training and institutional support	5 000
Total expenditure	$ 194 500

Attachment 3

Hunting quotas shot 1992-1998

Species	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**
Buffalo	20	21	10	23	23	27	27
Leopard	3	3	3	3	3	5	3
Lion	0	1	0	0	1	0	0
Hippo	5	5	1	4	2	6	3
Eland	0	0	0	1	0	0	0
Kudu	0	0	0	0	0	0	3
Impala	13	13	5	9	10	9	10
Baboon	12	3	5	0	1	3	7
Water Buck	0	0	0	0	1	2	0
Sable	0	0	0	0	1	3	1
Bush Buck	4	1	0	2	3	2	2
Grysbok	0	1	0	1	1	1	1
Duiker	0	2	1	1	1	0	0
Warthog	11	2	1	2	1	3	6
Crocodile	0	0	2	2	4	4	7
Porcupine	1	0	0	0	0	0	0
Zebra	0	0	0	0	1	3	0

Attachment 4

Tchuma Tchato (Bawa) Budget 1998-1999

Expenses	**2 year Budget (US $)**
Salaries	38 400
Temporary services	9 600
Travel	3 200
Local ground travel	2 000
Per Diem and accommodation	5 000
Per Diem allowances	1 500
Construction electric fence	25 000
EDP purchase costs	3 000
Office equipment - PCH costs	3 000
Scientific equipment (radio)	15 000
Field equipment - PCH costs	3 240
Marine equipment PCH costs (Daque)	12 000
Vehicle expenses	36 0000
Building maintenance	4 000
Local Miscellaneous costs	4 800
Stationery and office supplies	1 200
Telephone	1 200
Unallocated miscellaneous	11 060
Field project leader	12 000
Field consultant A	5 000
Field subsistence allowance	2 800
Administration services (IUCN management fee)	28 000
Total	**$ 227 000**

Attachment 5

(p.164-167)

"Our Forests, Our Wildlife, Our wealth",

by Eddie Koch

published in **Ford Foundation Winter Report 1998**

PHOTOGRAPHS © BRUCE FRANKENFELD

Our Forests, Our Wildlife, Our Wealth

BY EDDIE KOCH

Bawa, Tete Province, Mozambique—When Luís Namanha arrived three years ago at the confluence of the Luanga and Zambezi rivers in central Mozambique to create a tourist camp near the village of Bawa, he immediately set about making a clearing in the wild vines and creepers that cling to the forests of baobabs and hardwoods on the banks of the waterway.

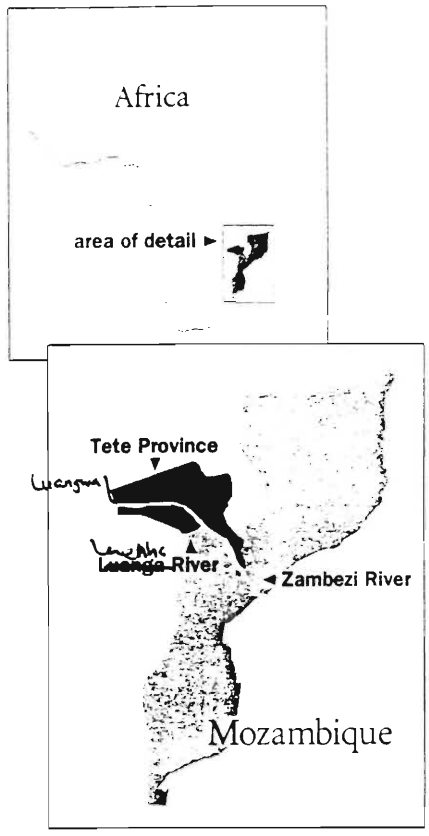
Namanha, 33, did not know it at the time, but when he first struck his bush knife into the dense underbrush, he had begun an extraordinary project that is turning the tide on decades of underdevelopment in the Zambezi Valley.

A ranger in Mozambique's conservation agency, the National Directorate of Forestry and Wildlife, Namanha is manager of the Tchuma Tchato project, which means "our wealth" in the language of the Chikunda people who inhabit Bawa and other parts of Tete Province. The project promotes rural development by encouraging the area's residents to make commercial but prudent use of the wildlife that surrounds them. It is modeled after a similar effort in Zimbabwe called CAMPFIRE (Communal Area Man-

sable, roan, bushbuck, impala, lion, leopard, and other species that abound in the Zambezi Valley's savannah.

Mozambique's president, Joaquim Chissano, ordered an inquiry after the Tete provincial governor informed him of excessive hunting as well as ill treatment of villagers by the safari company. The National Directorate for Forestry and Wildlife then ruled that the company could retain its hunting concession only if it agreed to work with the Bawa community and pass on a portion of its profits to the villagers for local development.

Mozambique Safaris was initially recalcitrant but soon realized that it stood to benefit by cooperating with Tchuma Tchato and the community. Last year, when Mozambique Safaris made its first payment to the community, Mozambican Prime Minister Pascoal Mocumbi traveled from far-off Maputo to hand over US$15,000 to the residents of Bawa. With the money, the villagers decided to buy grinding mills so that they could make their own maize meal in the village.



The Tchuma Tchato project is located near Bawa, where the Luanga and Zambezi rivers meet.

Building Support

Another major breakthrough was Namanha's winning the support of the spirit mediums who represent the ancestral spirits living in the land, trees, rivers, and wild animals of the region. As the most venerated of the village leaders, the mediums have a powerful influence on community decisions. Namanha realized their importance, and he worked hard to win their support. Finally, he made alliances with the mediums who told him how impressed they were that he was able to control foreigners who were pillaging the people's wildlife and also that he had managed to "bring back our son Luciano."

Early in 1995, the mediums informed visiting officials from the Wildlife Directorate that they were ready to welcome the Tchuma Tchato program. Later, when asked what he thought of the program, the medium representing the lion spirit of Bawa said: "Through the Tchuma Tchato project my children are taking care of the animals and are earning a salary to look after their families. There are many animals nowadays. Even elephants abound compared to before when people were just killing them randomly."

The medium representing the spirit of the baboon added: "The young children now have elephants, leopards, buffaloes, and many other animals.... Now when our children eat meat, they can see where it comes from. They see that that is our wealth."

Spreading the Wealth

Tchuma Tchato's success has improved the livelihoods of the people of Bawa, generated new respect for the rich ecology of the region, and created a sense of pride among the Chikunda people. Equally important, the project has helped bring about a spirit of harmony and communal well-being. Now, Tchuma Tchato is poised to expand into other parts of Mozambique.

Since Namanha first arrived in Bawa, Tchuma Tchato has received 33 visits from leaders of villages on the northern shores of the Zambezi River seeking to establish similar programs. In addition, Forestry and Wildlife officials have set up a special Tchuma Tchato unit in the town of Tete to help spread similar programs into other parts of Tete Province. The expansion has been endorsed by the province's governor, Virgilio Ferrão, a land-use planner who was an early supporter of Tchuma Tchato.

Moreover, as word of the project's success spread, the principle of community participation displayed so vividly at Bawa helped shape a new land law that was adopted by the Mozambican national assembly earlier this year. The law recognizes local people's traditional tenure over land and their right to manage it. The law also supports efforts to mediate clashes between community rights and concessions granted to businesses and investors. No other country in southern Africa has created a law that so forcefully proclaims rural people's traditional rights to land. "All too often rural communities acquire rights only over land and resources of limited or marginal value," says Ken Wilson of the Ford Foundation. "If the Tchuma Tchato process can help communities earn a real stake in Mozambique's developing economy, it will present a truly exciting challenge to the rest of Africa and the world."

Next Steps

Tchuma Tchato now plans to extend community rights so that residents can use a wide range of resources — including those at the heart of several mainstream industries now emerging around the Cahora Bassa dam and basin.

For example, the basin teems with fresh-water sardines called *kapenta*. Commercial fisheries are harvesting and exporting *kapenta* catches worth some US$20 million a year. The provincial Tchuma Tchato team is planning ways to take advantage of this new opportunity. Communities along the dam's shores are set to levy a tax on *kapenta* production so as to gain revenues for development.

Sports fishermen from South Africa are arriving in small but increasing numbers to go after the Zambezi River's huge tiger fish and bream. Their appearance is a sign of the growth of ecotourism, an industry that is showing signs of vibrant life in southern Africa. Over the past four years, neighboring South Africa and Zimbabwe have experienced a significant increase in foreign visitors, in line with a worldwide boom in tourists' desire to experience unspoiled wilderness.

To accommodate this demand, local and multinational tourism companies are scrambling into Africa to find new wildlife areas to invest in. Three large companies,

Cooperation Brings New Economic Life To Mozambique

agement Program for Indigenous Resources) that had caught the attention of the Wildlife Directorate's leaders. CAMPFIRE projects are typically managed by local communities in conjunction with trained conservation officials.

Namanha was assigned to Bawa in 1994. He thought it was one of the most beautiful places he had ever seen. It was also one of the poorest. The school was a ramshackle thatch-roofed building with one poorly qualified teacher. There was no health center, no grinding mill, no shops, and primitive transportation. The people were engaged in a constant struggle for economic survival, made more difficult by a kind of frontier lawlessness following 30 years of war and social upheaval throughout Mozambique — the battle for independence followed by an 18-year civil war that ended in 1992. Bawa's enormous wealth — the abundant wildlife — was also apparent, but it was being taken by foreign companies and professional poachers.

Tete province boasts a wildlife area of some 50,000 square kilometers above and below the Cahora Bassa dam, which was built on the Zambezi River in the Cahora Bassa gorge by the Portuguese colonial government in the 1970s. The total region is bigger than Tanzania's huge Selous Park, and probably represents the single biggest wilderness in Africa outside formally protected game reserves.

In addition to the 8,000 people living in about 3,500 square kilometers, the Bawa area has many species of large mammals, some 450 bird species, and a rich variety of fish. There are huge bream, tiger fish, and vundu, a species of river and lake catfish that can live for more than 100 years and can weigh 100 pounds. There has even been evidence of the black rhinoceros, an ancient and now highly endangered animal, in the northern mountainous area of Tete.

The project at Bawa began with painstaking work among the villagers. Namanha set about gaining their cooperation, persuading them that wildlife could be a source of great material benefit to them if used in the right way. First, he organized the people into representative community groups to establish regular patrols to prevent poaching.

Working together, community representatives and conservation officials allocate quotas of animals that may be bagged by safari organizations that bring trophy-seeking hunters into the area. The organizations are charged a fee. The income is used for the construction of classrooms, child-care centers, clinics, or other village services. The remaining funds are distributed among the villagers. Revenue obtained in this way is often far in excess of that earned by local people through subsistence farming or fishing, raising livestock, or individual hunting and selling game.

OPPOSITE PAGE Luís Namanha, with a confiscated elephant tusk, is a ranger in Mozambique's conservation agency. He organized the Tchuma Tchato project, which stopped commercial poaching and enabled the village of Bawa to benefit from its abundant wildlife.

TOP For the people of Bawa, the Zambezi River serves as the main link to the outside world.

MIDDLE The village women insisted that the first revenues generated through their profit sharing with a safari company be used to buy grinding mills.

BOTTOM Mariana Mphande, left, one of Bawa's spirit mediums, and members of the Tchuma Tchato committee

A First Victory

The first important sign that Tchuma Tchato had taken hold in Bawa was when a legendary poacher named Luciano, a powerful man who once boasted of having killed 66 elephants for their tusks, succumbed to Namanha's ultimatum that he surrender or face arrest. When Luciano arrived at the project office, he said: "I am the hunter you have been hunting." Namanha replied: "Good. I want you to work for me."

Today Luciano is the commander of Tchuma Tchato's game scouts. The poacher-turned-game-ranger uses his extraordinary bush skills to train scouts from all over Tete to protect the area's wildlife. His men patrol at night on foot, often walking up to 45 miles. On one occasion, the game scouts were involved in a fire-fight with poachers wielding AK-47 rifles. At other times they have, at great personal risk, arrested people involved in illegal hunting. The scouts' vigilance has "all but ended the rampant slaughter of game," says Ken Wilson, a Ford Foundation program officer who works on rural development and conservation in Mozambique. It has also reduced the incidence of poaching generally throughout Tete.

Another early victory for Tchuma Tchato came in dealing with the Mozambique Safaris Company. In the late 1980s, the company had obtained a concession from the government in Maputo, Mozambique's capital, to bring clients into the Bawa area to shoot buffalo, eland, kudu

Promoting Worldwide Development Through Community Resource Management

The Foundation has been assisting community-based resource management programs since the mid-1970s. Among the countries where the ideas and practices have taken hold are Bangladesh, China, India, Indonesia, the Philippines, Brazil, and Mexico. In the United States such programs are being assisted on Maryland's Eastern Shore and in the Pacific Northwest. Support for these efforts now totals more than $200 million.

Foundation support for Communal Area Management Programs for Indigenous Resources (CAMPFIRE) began in 1986 with a grant to the University of Zimbabwe on behalf of the Centre for Applied Social Sciences, where the CAMPFIRE idea had been developed. Since then the Foundation has granted the university more than $1 million for the center. Assistance to CAMPFIRE projects in Mozambique began in 1994, first to help Tchuma Tchato in Tete Province get under way and then to begin a similar project in neighboring Manica Province to the south. Within this area are the dramatic Chimanimani Mountains, which offer exceptional opportunities to link ecotourism — in which tourists enjoy nature in ways that minimize environmental and social damage — to the principles of community management.

In Mozambique, people now have more control of natural resources.

Four recent grants to the Republic of Mozambique are supporting the expansion of community-based resource management based on the Tchuma Tchato model elsewhere in Tete and in Manica. A $340,000 grant on behalf of the provincial government of Tete and $200,000 for the provincial government of Manica will help expand successful programs in wildlife, fisheries, and joint public-private ecotourism ventures along the Zambezi and in the Chimanimani Mountains. The second grant will enable Manica's Forestry and Wildlife Service to establish for commercial export a new program of mushroom gathering in the forests, a task mainly carried out by women.

A grant of $120,000 to the Ministry of Agriculture and Fisheries is supporting technical assistance to these two provincial programs by the National Directorate of Forestry and Wildlife. An $80,000 grant to the Ministry of Culture, Youth, and Sport is underwriting field research and a conference on ways to balance sustainable resource management with the hydroelectric export potential made possible by the Cahora Bassa dam. It and other dams have caused a dramatic reduction in the annual flood of the Zambezi River, especially in its magnificent delta on the Indian Ocean. There is to date little data on the economic costs to the nation and to local communities of this drastic habitat change for wildlife, fisheries, river transport, and riverine agriculture. With this work and the efforts of the Zambezi Valley Development Authority it will be possible to base river management on solid data.

including one of South Africa's biggest corporations and a Canadian tourism firm, have applied for rights to establish resorts either on the islands near the spectacular Cahora Bassa gorge, or along the shores of Cahora Bassa Lake formed when the dam was built. In addition, some CAMPFIRE projects are establishing lodges and tourist camps on communal land to attract various kinds of "niche tourism" — bird watching and photographic safaris as well as sports fishing.

And since villagers now have clear rights to their land under the new law, they will have many opportunities to enter into joint venture agreements with the large foreign companies that are eyeing the Cahora Bassa area for major tourism developments.

"Our current thinking is to secure for the whole of the Cahora Bassa basin the legal rights won by the Bawa community," says Sergio Yé, Director of Agriculture and Fisheries in Tete Province. "We will do this by planning the integrated development of Cahora Bassa through a combination of commercial ventures, sports fishing, hunting, and tourism. The idea is to see how these programs might complement each other."

To move things along, Marcelino Foloma, head of the Tchuma Tchato unit in Tete province, has drafted a decree that calls for all natural resources in the province to be managed along the lines of the Bawa project. The governor supports the decree, which must now be accepted by the ministries responsible for agriculture, fisheries, and legal, financial, and judicial matters.

If the decree is accepted, the principles and tactics forged by Luís Namanha and his colleagues at Tchuma Tchato could help preserve an enormous natural heritage for the people of Mozambique and their children.

Sitting under a giant fig tree where Bawa's natural resource management council meets, the medium who represents the spirit of Bawa's baboons put it this way:

"Some of us used to poach wild animals and sell them in Zimbabwe and Zambia. Others caught fish and sold them. Each was trying to protect just his own family. Today, because of Tchuma Tchato, we are hunting and fishing with a license, in a business that benefits our families and the community. The fruit of this tree is spreading to the rest of Mozambique, and we are happy."■

Eddie Koch is a writer based in Johannesburg, South Africa.

Attachment 6

(p. 169-172)

THE VILLAGERS AND THE WILDLIFE PROJECT:

Report on a Study
Conducted in
Zimbabwe and Mozambique
September-October 1996
Supported by a Cotlow Grant

by Paula Hirschoff
M.A., Anthropology, May 1996
George Washington University

community confidence or the Campfire project but Masoka did seem to have a stronger belief in itself as a community. Probably a large share of that community spirit was derived from the successful years of Campfire operation. Bawa needs assistance in local leadership development, management training, and environmental education. Outside efforts imposed on the village may fail as did several income generating projects set up by Priscilla, the project director's wife. One of these, a brick-making enterprise, utilizing red soil from the Bawa area, was still operating when I was there, but others, such as a community shop selling cigarettes, sodas, kerosene, and other goods, had gone under by the time of my visit.

Bawa villagers seemed to be resentful of certain individuals who they view as setting themselves above others. A woman who had received midwifery training in Tete said she had been forced to leave Bawa. Perhaps they viewed Priscilla as one of these individuals. Although she was one of them (i.e. Chikunda), she was a relatively affluent outsider (i.e. an educated Zambian). Thus, they rejected her efforts to tell them what to do.

The project, however, does provide an economic stimulus by creating intermittent work for many village men, including construction, roof thatching, and upkeep of the grounds. Permanent jobs that have been filled by Tchuma Tchato villagers include game scout, watchman, cook, secretary, waitress, and boat driver.

Eventually Tchuma Tchato will acquire community projects such as the school, clinic, and hammermill that the CBCD project brought to Masoka. Already, several hammermills are being built in the Tchuma Tchato area with the $12,500 in project proceeds that the government handed over in November 1996.

E. Conclusion

The relationship between the villagers and Tchuma Tchato project fluctuated and appeared problematic. Initially they accepted Tchuma Tchato with encouragement from the project founders, the Masoka contingent, and the government. They needed to place the strange, new enterprise called Tchuma Tchato in a local context, however, incorporating it into the local system of beliefs and values.

Recognizing this need, the project founders followed the Campfire example, paying respect to the local spiritual leaders and the traditions that link them to the natural and spiritual worlds. The trust so established was reenforced by construction of a solar-powered fence which has kept elephants and buffalo away from Bawa's gardens and the village proper.

Traditional communal values also are part of the villagers' relationship to the project. Interviews responses repeatedly

indicated that the desire to bring benefits to the village was the principal driving force for cooperating with the project. Individual benefits such as salaried positions or temporary work appeared less important.

It should be noted that this same sense of community could threaten the project in years to come. Project benefits often serve as a magnet, drawing migrants into an area. Village leaders still distribute land according to customary law. In other words, people do not buy a piece of land; they receive permission to use it. As the population expands, project benefits will be spread too thin to serve as a meaningful incentive for wildlife conservation and cooperation with the project. Furthermore, conflicts are likely to arise between customary law and modern law when the land, which is officially owned by the government, is sold to private interests. The people do not realize they do not have secure land tenure rights.

Incidents in the project's history illustrate the villagers' problematic relationship to the project. The initial hope and faith gave way to negative reactions when the cash benefits did not arrive as expected in November 1995. An incident on March 19, 1996 revealed the deterioration in the relationship. As told to me by project staff, a crowd of Bawa residents reenforced by Zumbo police officers marched up to the headquarters at night when the director and his wife were away and attacked several staffers. The immediate impetus was an incident between a visitor and a Bawa woman but the real cause was probably simmering resentment at the delay in cash benefits. The incident was eventually reported to the provincial governor.

A second incident occurred in August 1996 on the day of a meeting that project leaders arranged to improve relations between the Bawa villagers and the safari operator who runs big game hunts in the Tchuma Tchato area. The people came to the meeting beneath the village tree an hour late, and most of them were inebriated. They insulted both the safari operator and the project leaders at length. The immediate provocation was probably the failure of benefits to arrive but another stimulus was animosity toward the safari operator who had abused the people for years before the project staff stepped in to establish better relations.

Since my study last fall, the villages received the first cash benefits from the project and progress has been made toward construction of grinding mills in three villages. If the project continues, future benefits may include a clinic or a school. Moreover, as a pilot project, Tchuma Tchato is having influence beyond the immediate vicinity. The Tete provincial government has announced plans to replicate the project at three sites in the province. The government and the Ford Foundation, which funds Tchuma Tchato, are working on a provincial unit in Tete with an

office that would oversee short-term training and vehicles for the three sites. The larger project also has a political component. A seminar was held in Tete in November 1996 for officials from government and regional institutions (i.e. CASS, WWF) that are concerned about wildlife management and rural development.

In terms of the Tchuma Tchato headquarters site itself, however, important aspects of a successful village-project relationship that were evident at Masoka were absent. While each Tchuma Tchato village has a wildlife committee, the committees have little actual control over the project.

The education and practical training that would enable them to gradually assume management responsibilities were not taking place at the time of my study. Their relationship to the project seemed to be more like a routine provider/beneficiary arrangement than like the community-based management of the CBCD concept.

Villagers were clearly making sacrifices to conserve the wildlife. Former poachers were protecting rather than hunting the animals. Many respondents talked about their abstention from meat eating, except for times when the safari hunters distribute meat from their kills or on special occasions when the scouts kill an animal for a celebration. The fact that staff and visitors at the headquarters have plenty of meat to eat, while the villagers rarely get to eat meat is a sore point in the village.

If village management is not incorporated into the project, local people will attempt to take control in their own way. During my visit, Bawa villagers reportedly changed the lock on the fence gates, stopped the safari operator at the gate and searched his vehicle. They said they were checking to make sure he was not transporting illegal shipments of meat. He was reportedly outraged at this treatment, but at least some of the villagers felt it was appropriate conduct, as they did when they marched up to the headquarters that night in March.

The people will continue to interact with the project in ways that make sense in their own context but may surprise and dismay outsiders. When resentment toward the project surfaced in negative activity as described above, the victims were bewildered. They wondered why people would respond so negatively to their efforts to help.

Rural people, however, cannot be passive recipients of development assistance. They are interacting with the project in the ways that make sense to them from their own past experiences of impoverishment and warfare. Their discourse on the project is shaped by their cultural context involving ancestor spirits, spirit mediums, sacrifices for the project, and hopes for the future of their community. If appropriate authority and adequate

benefits are not transferred to them, their resentment builds. If the project does not live up to its commitments, they will figure out passive or active ways to resist it and the people involved with it. If they can become proud of the project as a vehicle that they are driving to build their community, the relationship to the project will become more cordial and cooperative.

VI. Follow-up Activities

My major follow-up activities have been slide lectures, which I have presented in response to requests from various organizations. I have also written a couple articles and plan to write at least one more. Following is a list of these activities:

A. Evaluation

1. Discussions with IUCN representative
   for Mozambique, Simon Anstey
   October 20-24, 1996
   Harare, Zimbabwe

2. Report on Visit to Tchuma Tchato
   submitted to Simon Anstey, IUCN Mozambique
   October 24, 1996
   Harare, Zimbabwe

3. Telephone discussions and meeting
   with Ford Foundation representative for
   Southern Africa, Ken Wilson
   Week of October 26, 1996
   Johannesburg, South Africa

B. Slide Lectures

1. Rural Development and Conservation in Africa
   January 21, 1997
   Adult Education Program
   Unitarian Universalist Church
   Arlington, Virginia

2. Wildlife and People in Africa
   January 24, 1997
   Student Environmental Club
   Hopkins High School
   New Haven, Connecticut

3. The Villagers and the Wildlife Project
   April 1, 1997
   Anthropology Department
   George Washington University
   Washington, D.C.

4. Human Interactions with Wildlife
   April 13, 1997
   Sunday Night Live (adult education)