

**Community-based Natural Resource Management, Livelihood Diversification &
Poverty Alleviation: a case study of NG 22/23 and associated communities,
Okavango Delta, northern Botswana.**

By

CAITLIN MARY LEPPER

Submitted in partial fulfilment of the academic requirements for the degree of Master in
Environment and Development in the Centre for Environment, Agriculture and Development,
School of Applied Environmental Sciences, University of KwaZulu-Natal.

Pietermaritzburg 2006

ABSTRACT

This paper presents a case study from Ngamiland, northern Botswana where community-based natural resource management (CBNRM), through a joint venture agreement (JVA) between a Community-based Organisation (CBO) and the private sector for non-consumptive tourism has been implemented with the objective of contributing to localised poverty alleviation and livelihood diversification through employment and CBO fee revenue. The economic contribution of these benefits is considered with respect to commonly accepted norms and standards within the development ideology of sustainable development and its global measurements; therefore, a brief background of the concepts of poverty, livelihood and ecotourism is presented to provide context for the evaluation of CBNRM as a preferred land-use in Botswana. An evaluation of the significance of wage employment revenue and consequent remittances in the specific case study is intended to contribute to existing studies which have primarily emphasised the contribution of CBO fee revenue only to households. It is concluded that wage employment revenue makes a significant contribution at a household level to localised poverty alleviation and livelihood diversification compared to the insignificant contribution of CBO fee revenue.

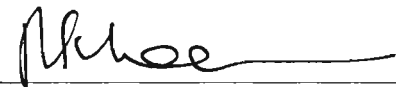
PREFACE

The work described herein was undertaken in the Centre for Environment, Agriculture and Development, University of KwaZulu-Natal, Pietermaritzburg Campus, under the supervision of Jessica Schroenn of the School of Economics and Finance, Faculty of Management Studies at the University of KwaZulu-Natal, Pietermaritzburg campus; and the co-supervision of Helen Suich, Resource Economist for Conservation International.

I hereby declare that this is an authentic record of work and has not in its entirety, nor in part, previously formed the basis for the award of any degree of this or any other University. Wherever use is made of others' work, it is duly acknowledged in the text.



Caitlin Lepper



Jessica Schroenn



Helen Suich

ACKNOWLEDGMENTS

Thank you to my family who gave me the opportunity to pursue this degree and the confidence that I could realise the outcome.

To Africa, for allowing me to walk its paths, explore its soul and share in its strengths and weaknesses. I am wiser yet humbler for it and indebted to its people and land for their willingness to be a subject of exploration and discovery.

Ke itumetse, Vundimtiki staff – with special blessings to Phetso and Kelly.

It is my hope that this thesis will assist, even if in just a minor way, to striking the delicate balance between development and conservation. It is with a deep desire for the welfare of both that I pursue such an issue.

ABSTRACT.....	ii
PREFACE.....	iii
ACKNOWLEDGMENTS	iv
LIST OF FIGURES, BOXES, TABLES AND PLATES.....	viii
LIST OF ACRONYMS	x
COMPONENT A.....	1
CHAPTER 1: GENERAL OVERVIEW OF THE STUDY	1
1.1 Introduction.....	1
1.2 Background and rationale of study	2
1.3 Problem statement.....	3
1.4 Research aim and objectives	3
1.5 Assumptions and limitations of the study.....	4
1.6 Structure of the dissertation	4
1.7 The literature review	5
CHAPTER 2: DEVELOPMENT AND CONSERVATION DISCOURSES RELEVANT TO BOTSWANA’S CBNRM PROGRAMME.....	5
2.1 Development discourses.....	6
2.1.1 Measuring development.....	10
2.1.2 Poverty	11
2.1.3 Livelihoods.....	19
2.2 Conservation ideologies.....	25
CHAPTER 3: LINKING DEVELOPMENT, CONSERVATION AND CBNRM.....	30
3.1 The introduction of CBNRM	30
3.1.1 The concept of Total Economic Value (TEV) and CBNRM.....	31
3.2 Tourism theory and context related to CBNRM.....	33
3.2.1 Botswana’s tourism statistics	33
3.2.2 Evaluating tourism’s potential economic contribution	34
3.3 The introduction and implementation of CBNRM in Botswana	42
3.3.1 Botswana’s CBNRM model.....	43
3.3.2 Botswana’s CBNRM programme	47
CHAPTER 4: BOTSWANA: BRIEF HISTORY AND CURRENT PROFILE	52
4.1 Social profile	52
4.2 Political profile, relevant policy and frameworks	54
4.3 Economic profile.....	59

4.4 Natural history and resources.....	64
CHAPTER 5: STUDY AREA	70
5.1 Regional case study.....	70
5.1.1 Ngamiland WMAs 22/23	70
5.1.2 The communities allocated NG 22/23	72
5.1.2.1 Demographics of NG 11/12	74
5.1.2.2 Microeconomy and livelihoods of NG 11/12.....	77
5.1.3 The NG 22/23 JVA	78
5.1.3.1 Tourism infrastructure in NG 22/23.....	81
CHAPTER 6: RESEARCH METHODOLOGY	82
6.1 Observation period.....	82
6.2 Qualitative data collection.....	82
6.3 Quantitative data collection.....	84
6.4 Data analysis	84
6.4.1 Demographic information	84
6.4.2 Socio-economic information.....	90
6.4.2.1 Okavango Community Trust.....	98
6.4.2.2 Okavango Wilderness Safaris	99
CHAPTER 7: DATA CONCLUSION	103
REFERENCES.....	105
COMPONENT B	1
ABSTRACT.....	2
1. INTRODUCTION	2
2. DEVELOPMENT, CONSERVATION AND CBNRM	4
2.1 The context and measures of relevant development and conservation objectives.....	4
2.1.1 Poverty measurements	5
2.1.2 Livelihood diversification strategies	7
2.2 The emergence of CBNRM in Botswana	9
3. BOTSWANA’S CBNRM PROGRAMME	10
3.1 Botswana’s land classification system and framework.....	10
3.2 The establishment of a Community-Based Organisation (CBO).....	11
3.3 The participation of the private sector	12
4. TOURISM AS A CBNRM PROGRAM IN BOTSWANA.....	15
4.1 Botswana’s tourism statistics and contribution.....	15

4.2 Botswana’s tourists and tourism product	18
5. METHODOLOGY	19
5.1 Identification and background of the regional case study.....	19
5.1.1 The land.....	19
5.1.2 The communities.....	20
5.1.3 The CBO	21
5.1.4 The joint venture agreement and partner	22
5.2 Qualitative and quantitative data collection.....	24
6. RESULTS AND DISCUSSION	25
6.1 Economic contribution of employment.....	25
6.1.1 Employment	25
6.1.1 Wages.....	28
6.1.2 Economic distribution	31
6.2 Livelihood	32
6.3 CBO fee revenue and distribution.....	32
7. CONCLUSION	37
REFERENCES.....	40
APPENDICES	114
Appendix 1 <i>Development Southern Africa</i> submission requirements	114
Appendix 2 CBD Ecosystems Approach.....	119
Appendix 3 RAMSAR criteria	120
Appendix 4 NG 22/23 staff member interview questions	122
Appendix 5 OCT 2001 and 2002 financial audits	123

LIST OF FIGURES, BOXES, TABLES AND PLATES

Figure 1. Sustainable Livelihoods framework	20
Figure 2. Model of tourism linkages into the local economy	35
Figure 3. Continuum of CBNRM joint venture enterprises	46
Figure 4. Land rent triangle for different land uses in Botswana	63
Figure 5. Age distribution among staff members in NG 22/23	85
Figure 6. Education level among staff members in NG 22/23	87
Figure 7. Gender distribution among staff members in NG 22/23.	88
Figure 8. Community and ethnic distribution of staff members in NG 22/23	89
Figure 9. Employment retention among staff members in NG 22/23	92
Figure 10. Breakdown of OWS' 2001 Public Relation expenses	102
Figure 11. Breakdown of OWS' 2002 Public Relation expenses	102
Figure 12. Breakdown of OWS' 2003 Public Relations expenses	102
Box 1. The institution of poverty: the San and 'destitutes' in Botswana	11
Box 2. The four values of Total Economic Value (TEV)	32
Box 3. CBNRM Model in Botswana	44
Plate 1. WMAs and CHAs in Botswana	49
Plate 2. Map of Botswana	65
Plate 3. Satellite photo of the Okavango Delta	67
Plate 4. Satellite photo of Okavango Delta at peak flood season, July.	67
Plate 6. Satellite image of the 2000 Okavango Delta flood with location of NG 22/23	71
Plate 7. Location of the NG 11/12 communities in relation to NG 22/23	73
Plate 8. The Bukakhwe (Bushmen) of Botswana	75
Plate 9. Bayei mokoro peler of Botswana	76
Plate 10. Staff of the OWS camps	83
Table 1. Household livelihood diversification strategies in Caprivi Region, Namibia	25
Table 2. Examples of different wildlife prices by species	40
Table 3. Economic returns of livestock and wildlife systems in NG	41
Table 4. Advantages and disadvantages of two methods of commercial utilisation of community natural resources	45
Table 5. Revenue to CBOs from JVAs and auctions in BWP	51

Table 6. Comparative results from financial and economic cost-benefit models for typical wildlife/rangeland use enterprises in Botswana	62
Table 7. Comparison of all wildlife use and/or livestock production activities	62
Table 8. Extent of Protected Areas, Botswana	66
Table 9. Biodiversity statistics, Botswana	68
Table 10. Estimated population of NG 22/23 recipient communities of NG 11/12	74
Table 11. Quantification coding for education level	86
Table 12. Family composition among staff members in NG 22/23	90
Table 13. Employment tenure among staff members in NG 22/23	92
Table 14. Wage and gratuities among staff members in NG 22/23	93
Table 15. Gross wage distribution to communities by staff extrapolated by fiscal year	95
Table 16. Economic distribution of wages to communities of NG 22/23	96
Table 17. Revenue earned by the OCT due to JVA	100
Table 18. OWS categorized expenses associated with NG 22/23 partnership	101

LIST OF ACRONYMS

ACORD	Agency for Cooperation and Research in Development
BWP	Botswana Pula (currency)
CBD	Convention on Biological Diversity
CBO	Community Based Organisation
CBNRM	Community Based Natural Resource Management
CHA	Controlled Hunting Area
CI	Conservation International
CITES	Convention on International Trade in Endangered Species
CLD	Cattle Lung Disease
CSO	Central Statistics Office (Gaborone, Botswana)
DFID	UK Department for International Development
DoT	Department of Tourism
DWNP	Department of Wildlife and National Parks
ESS	Ecotourism Support Services
GDP	Gross Domestic Product
GNI	Gross National Income
GoB	Government of Botswana
HIES	Household Income and Expenditure Survey
IMF	International Monetary Fund
IRR	Internal Rate of Return
IUCN	The World Conservation Union
JVA	Joint Venture Agreement
JVP	Joint Venture Partner
N	Namibian dollar (currency)
NBSAP	National Biodiversity Strategy and Action Plan
NCS	National Conservation Strategy
NCSCA	National Conservation Strategy Coordination Agency
NDP	National Development Plan
NG	Ngamiland
NPV	Net Present Value
NRMP	Natural Resource Management Programme
NWDC	North West District Council

OCC	Okavango Community Consultants
OCT	Okavango Community Trust
OWS	Okavango Wilderness Safaris
PDL	Poverty Datum Line
PRA	Participatory Rural Appraisal
SADC	South African Development Community
SAP	Structural Adjustment Programme
TEV	Total Economic Value
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
VDC	Village Development Committee
VDF	Village Development Fund
VTC	Village Trust Committee
WB	World Bank
WCED	World Commission on Environment and Development
WCNP	Wildlife Conservation National Parks Act (of 1997)
WDR	World Development Report
WMA	Wildlife Management Area
WTO	World Tourism Organisation
WWF	World Wildlife Fund for Nature

COMPONENT A

CHAPTER 1: GENERAL OVERVIEW OF THE STUDY

1.1 Introduction

Botswana is located in sub-Saharan Africa and positioned between the four countries of Namibia, South Africa, Zambia and Zimbabwe. This land-locked and primarily arid country is defined by the Kalahari Desert, its main ecosystem. Due to ecological conditions created by tectonic activity, northern Botswana hosts the world's largest inland wetland, the Okavango Delta. The Okavango Delta fans out in the country's north-western corner in the district of Ngamiland (NG) and is the main feature of Botswana's growing tourism industry. The natural alluvial fan spreads water across a vast area and fragments the landscape into a mosaic of diverse ecosystems resulting in considerable biodiversity and natural resources. The 18,000 square kilometre system has been at the heart of Botswana's burgeoning tourism industry. Until Botswana's independence in 1966, the country's tourism industry was virtually non-existent; however, by 2000 tourism's contribution to the Gross Domestic Product (GDP) usurped that of livestock and placed it second only to diamond mining, the main GDP earner, with an average annual growth rate of 13 percent (Mbaiwa 2005). 22.1 percent of the arrivals in 2000 visited the Okavango Delta and/or Maun (the Delta's gateway town). It is calculated that the tourism industry contributed between US \$181 to US \$200 million per annum to the 1997 GDP, and over 17 percent of the country's land is set aside in national parks and game reserves and 22 percent in Wildlife Management Areas (WMAs) where wildlife conservation is the primary land use (Hachileka 2003; Mbaiwa 2003; Mbaiwa 2005). These statistics exemplify the importance of the tourism industry to Botswana, and specifically the Ngamiland regional economy, home to as estimated 122,000 people (CSO 2003).

In 1991, the Government of Botswana (GoB) embarked on an ambitious and progressive natural resource management plan called Community-based Natural Resource Management (CBNRM) in order to diversify the linear relationships present in conservation and development, and bolster community support of and benefit from the country's wildlife resources. The main objective for CBNRM in Botswana was foremost natural resource conservation and only secondly, after acknowledging that communities must have a vested interest in the primary objective in order to contribute to its success, to give communities opportunities to benefit from natural resource conservation as an

avenue for rural development (Rozemeijer 2003). The plan was based on the allocation of wildlife-rich natural areas to local communities for natural resource management and business development in hopes of a way of simultaneously conserving wildlife resources and addressing human development issues such as poverty alleviation and livelihood diversification. Among the strategies undertaken to meet CBNRM's objectives is the creation of tripartite relationships between the government, private sector and communities for consumptive (i.e. trophy hunting) or non-consumptive (i.e. wildlife viewing) tourism enterprises for commercial wildlife utilisation. The final commercial wildlife utilisation is determined based on the government's categorisation (e.g. community multipurpose, community hunting, community photographic) of the land. These potentially lucrative agreements are referred to as joint ventures and usually consist of employment and revenue-sharing between the private sector and the communities which are intended to replace the loss of livelihood strategies due to the new land use as well as give immediate economic benefit thereby encouraging conservation both nationally and locally. The development and expansion of the tourism industry as a CBNRM initiative within national conservation and development objectives remains poorly understood and researched (Rozemeijer 2003). A case study from a CBNRM-based tourism initiative in northern Botswana attempts to evaluate its contribution to the development of poverty alleviation and livelihood diversification.

1.2 Background and rationale of study

CBNRM is not new. It is a reworking of the concept of 'community conservation' which advocates the involvement of local communities in "decision-making about natural resources" (Jones and Mupfree 2001: 63). It is in contrast to 'fortress conservation' which advocated the "setting aside of places for nature, and separate humans and other species" (Jones and Mupfree 2001: 63). CBNRM's popularity and applicability became more widespread and pervasive with the introduction of the ideology of 'sustainable development' – the popularized and heavily coined term stemming from the collective agendas of global conservation and development think-tanks on conservation and development. These agendas suggest that it is not simply land use alone but rather poor land use on the part of land holders/users which causes environmental degradation. Further, it was agreed that land use encompasses social, environmental and economic issues which collectively determine and influence global land-use trends, patterns and decisions. Therefore, what was needed was appropriate frameworks and incentives which

respect and support sustainable use on the part of landholders and users (Adams and Hulme 2001). With particular reference to Africa, Jones and Muphree (2001) explain CBNRM's popularity over the last two decades as due primarily to "dominant development discourse [i.e. sustainable development] and limited state capacities for environmental management" (63). Because of the challenges of field work in Africa, and competition for funding in conservation overall, there is a dearth of information, especially at a local household level, with regard to CBNRM (Gujadhur 2001; Arntzen 2003; Ashley and Mitchell 2006; Swatuk 2005). This thesis intends to contribute to the existing literature and research on the potential value of CBNRM-based employment at a household level as a livelihood and poverty alleviation strategy. A case study of a CBNRM initiative in northern Botswana presents a compilation of household data, via field research combined with a comprehensive literature review. The study aims to ascertain the potential value of CBNRM-based employment at a household level as a livelihood diversification and poverty alleviation strategy.

1.3 Problem statement

Are employment and fee revenue from a CBNRM-based joint venture agreement (JVA) a significant livelihood diversification and poverty alleviation strategy of the households of the Okavango Community Trust (OCT) communities of Seronga, Beetsha, Eretsha, Gudigwa and Gunotsoga, Ngamiland, Botswana?

1.4 Research aim and objectives

The aim of this thesis is to evaluate the micro-economic contribution of wage and fee revenue from a CBNRM non-consumptive tourism JVA to rural livelihood strategies and poverty alleviation in northern Botswana. The evaluation is based on the JVA between the communities represented by a Community-based Organisation (CBO), the Okavango Community Trust (OCT), and a private sector company, Okavango Wilderness Safaris (OWS) in Ngamiland (NG) Wildlife Management Areas (WMA) 22/23. The agreement is steeped in the concept of CBNRM as it purports to marry the agendas of sustainable rural development and natural resource management. This evaluation specifically considers the degree, with primary emphasis on economics, to which aspects of these agendas (e.g. livelihood diversification and poverty alleviation) are met in this particular case study. It is executed with reference to a variety of fundamentally complementary

development ideologies and concepts such as CBNRM, poverty, livelihoods and sustainable development.

The objectives of this thesis are to:

- Discuss the theoretical and practical ideologies which led to CBNRM and its implementation in Botswana.
- Identify livelihood strategies and poverty measurements which pertain to the communities allocated user-rights to NG 22/23.
- Link CBNRM and local development objectives to determine the degree to which the NG 22/23 JVA as part of the greater CBNRM strategy might contribute to livelihood diversification and poverty alleviation strategies at a household level in the OCT communities, Ngamiland, Botswana.

1.5 Assumptions and limitations of the study

The study is limited most by practical and operational support and resources. Without funding it was nearly impossible to spend as much time in the field as hoped and therefore the scope of field research is limited. However, support of the objectives is attained through an extensive literature review with specific regional focus in order to draw from the applicable field research of others. Assumptions made will be duly noted in context throughout the thesis; and will be substantiated by similar studies or commonly accepted norms and standards of the field of environment and development. This does not mean the assumptions should not be challenged, but are unavoidable due to limitations of time and resources of the present study.

1.6 Structure of the dissertation

The structure of this dissertation is unique to the Masters of Environment and Development (MEnvDev) program at the University of Kwa-Zulu/Natal, Pietermaritzburg, South Africa. This thesis is part of a coursework Masters and is officially categorised as a mini-dissertation subject to a four-month research and production timeline. Therefore, it is narrower in scope and shorter in length than a 'research only' Masters.

It consists of two components, A and B. Component A identifies aims and objectives, contains a comprehensive literature review, determines the study area and presents the methodology. This component is not intended to include results or discussion; however, some presentation of results is made to enhance the value and cohesion of the thesis. Component B is written according to the guidelines of a peer-reviewed journal. For purposes of this component, *Development Southern Africa* has been selected for its relevant audience and goal of disseminating and evaluating current issues in development in a regional context. It is within Component B that results are presented through discussion of data and relevant conclusions/recommendations are presented. It is assumed that there will be overlapping information between the two components since Component B is intended to be an independent and viable journal article; therefore, it requires the addition of ample background information before dissemination of results and conclusions.

1.7 The literature review

The literature review considers published and unpublished sources. The relevance of unpublished reports is particularly necessary and unavoidable when researching a relatively under-studied region where the majority of research is executed under the sponsorship of non-government organisations (NGOs), government and/or agencies which do not necessarily have the resources or intention to publish the material. This is particularly true of the CBNRM community in Botswana.

Collectively, Chapters 2 through 4 constitute the literature review. Chapter 2 presents global development and conservation discourses with specific reference to the concepts of poverty and livelihoods in the context to Botswana. Chapter 3 attempts to link the concepts, ideologies and objectives of tourism, conservation and development by presenting the CBNRM model and programme with specific application to tourism in Botswana. Chapter 4 provides a brief background and profile of the social, economic, political and natural history of Botswana.

CHAPTER 2: DEVELOPMENT AND CONSERVATION DISCOURSES RELEVANT TO BOTSWANA'S CBNRM PROGRAMME

This section will present a brief theoretical history of development and conservation necessary to contextualise the study.

2.1 Development discourses

The history of rural development theory shifts in response to the evolution of modern political, social and environmental discourses. Predictability, rural development is maturing. According to the United Nations Development Programme (UNDP 2005), the concept of development has shifted from a strictly economic analysis to a more inclusive human-centred approach in the last two decades. Further, it is not that these are two mutually exclusive and incompatible approaches, but rather that when managed properly they are mutually inclusive (UNDP 2005). “Human development is, in part, about translating economic development – growth, etc. – more efficiently, into broad-based improvements in human welfare (UNDP 2005: 6).

The context of development affects its analysis. In Africa, development has a rich and tumultuous history. Prior to independence, colonialism was rife in most Africa countries. The 1960s and 70s were a period of nationalism following on the coattails of independence. Countries sought to redefine themselves literally and figuratively in order to defy the delineations set forth by colonial governments. The new governments faced contempt and suspicion by foreign governments who feared the rise of communism and loss of their natural resources to its expansion. Meanwhile, communities were becoming increasingly disjointed and detached from their pre-colonial roots due to imposed colonial socio-economic and political restructuring. But simultaneously African countries were anxious to enter the global economy and do so expeditiously. Modernisation was the objective and seen most expeditious mode, but almost always at the expense of the traditional economy or society. This alienation of local economic and social structures marginalised communities that could not comply or compete with the highly competitive capitalist market economy and institutions. This simultaneous juxtaposition of modernisation versus traditionalism and western versus non-western values, institutions and structures began to develop internal conflicts and hindered development progress and resource allocation.

Development through the 1970s was disappointing. Aid agencies and governments were not meeting development goals such as economic growth and social welfare, poverty levels continued to rise and environmental degradation expanded. Mainstream concerns increased. Development strategies were being heavily scrutinised. New approaches began to evolve and to challenge commonly accepted practices. The result was bottom-up

or grassroots planning in development. These new practices emphasised community participation and instead of alienating rural and local populations they considered their contribution to establishing programs and objectives for more effective development practices and strategies (Twyman 1998; Adams and Hulme 2001).

However, poverty levels continued to escalate throughout the 1980s and indicators of development such as education, mortality, health, empowerment and economy slumped while environmental conditions deteriorated. In assertive response, the global aid organisations and donor governments embarked on aggressive structural adjustment programmes (SAPs) intended to reign in the apparently corrupt workings of African governments. The debate over the impacts and benefits of SAPs is a lively one. For purposes of this study, it will only be summarised. This period is often referred to as the 'lost decade' due to the subjugation of African countries to various SAPs of the International Monetary Fund (IMF) and World Bank (WB) whereby standardised aid programs and requirements were mandated by global economic leaders in return for waived debt, decreased inflation and trade subsidies; or countries were required to follow strict economic and debt repayment schedules often at the expense of allocating funds to development and basic human needs. SAPs' goals were to externally manage the African-based markets, unleash their products and boost their economies with efforts to increase revenue and decrease poverty. However, the secondary implication was the suggestion that African governments were not capable of self-management and needed significant support and influence from the more dominant world governments. The approach is criticised as dictatorial and it is argued that the policies it created were more advantageous to developed countries' economy than developing countries'. Though Botswana did not have a SAP, the consequences of the programme influenced modern approaches to development.

By the 1990s, with few strides in poverty reduction, great disparities in wealth and massive debts, the global community and intellectuals challenged the standardised and quite dictatorial (from North to South) approach of SAPs. This resulted in a somewhat more holistic view and a renewed effort to meet development goals with regard to long-term environmental, social and economic health (Shivji 2005).

Arguably, the most influential event of the modern (post-1990s) response to the perceived crisis of environment, development and global insecurity was the United Nations Conference on Environment and Development (UNCED) in 1992 (Kirkby et al. 1995). Among the main themes at UNCED was the linkage between natural resource management and development. UNCED promoted that local participation and context must be considered in the application of new development strategies, and that this local participation will also promote conservation of natural resources at a basal level while still advancing development objectives (Twyman 1998). The 'new' concept of sustainable development, according to the World Commission on Environment and Development (WCED), who first formalised it in the 1987 Brundtland Report was "[development that] meets the needs of the present without compromising the ability of future generations to meet their own needs" (in Kirkby et al. 1995: 1). The ubiquitous term was to be realised in the UNCED resultant document, Agenda 21. Agenda 21 is a global initiative and timeline for the implementation of the concept of sustainable development. The concept has three concerns which aim to cover the scope of all aspects of development: social, environmental and economic. Economic sustainability aims to attain a high standard of living within the capital and natural resource base of a country. Social sustainability promotes equitable distribution of and access to resources, coupled with empowerment toward resource use. Lastly, environmental sustainability suggests the use of natural resources or ecological services only at the rate at which they can be replaced and/or renewed naturally (Mbaiwa 2003). These basic tenets of sustainable development are the underpinnings of the development of CBNRM programmes, especially those in which conservation objectives are in partnership with human development objectives. It should be acknowledged, however, that many development agendas still come with similar strings attached – political, social and economic hidden agendas. Swatuk (2005) and Twyman (1998) explain that while much of modern development discourse (and aid) advocates the concept of "participation" at a local level, the ways in which the policies or programmes are conveyed and received at a local level does not take head of local context, institutions, and stakeholders. Twyman (1998) asks:

...if such directional or dictatorial approaches are being undertaken by the governments and donor aid agencies, does this mean the underlying motivations for such policies are concerned with enabling people to manage and control their own resources or are they concerned with the management of people and resources? (767)

With specific reference to Botswana, development aid was readily offered and administered due to the country's strong economic growth, liberal Western-oriented government and well-planned national development objectives. When comparing Botswana's development statistics to the rest of the continent, it shines. It has made significant investment in physical (i.e. roads, manufacturing) and human capacity (i.e. health, education) to achieve these accolades; however, when considering the statistics on a smaller geographic scale there is serious concern over uneven development and poverty (Wikan 2004). Good (1999) would argue that despite the country's positive economic growth and strides in human capabilities, Botswana remains excessively entrenched in hierarchical land tenure issues and extreme levels of economic and social inequalities. Wikan (2004) notes the contradiction between the country's uneven development and poverty in spite of its high economic growth and good governance. Botswana is a relatively rich country but as recognised by the WB (1997 *as cited in Good 1999*), "high aggregate growth, in itself, will not reduce poverty. The pattern of growth must also benefit the poor, either directly through increased employment and incomes or indirectly through improved social services" (186). The Central Statistic Office (CSO) (1995 *as cited in Wikan 2004*) census positioned Botswana as the country with the third highest degree of income inequality in the world for countries with statistical data (GINI coefficient of .630), followed closely by Lesotho and Namibia (WB 2005). The uneven poverty and development in Botswana mirrors rural-urban trends – the urban areas have fewer impoverished than the rural (Wikan 2004). However, there is some dissension over whether Botswana's proportion of people living in poverty is in fact on the rise or decline (Wikan 2004).

The notion of a capitalist market economy is relatively unfamiliar and new to rural Africa. Historically (i.e. prior to the macroeconomic reforms of the 1980s and 1990s), Africa relied more heavily on markets "...as social institutions reflecting a complex blend of politics, culture, and ideologies...[where] land, labour, and money are fictitious commodities"... "[which] rely on a mix of impersonal markets and communitarian institutions" (Hoon 2004: 4-5). Hoon (2004) contrasts this to modern societies which rely heavily on "universalistic norms and formal institutions...[which] as modern state matures and develops representative forms of governance with a clear hierarchical structure and a system of laws, rules and regulations, it replaces 'community' as the guardian of social business, and personal contract" (5). Capital institutions and markets

may thus not work as effectively or efficiently as needed to improve livelihoods or advance development. This is due to infrastructure, capacity and/or operational constraints as well as the absence of social institutions which are familiar and contextually relevant to rural Africans (Hoon 2004). Hoon 2004 (*cited as Barry (1993) and Moore and Vaughn (1994)*) suggests that “the only constant in this process [social and institutional] is change – where ‘no condition is permanent’-apart from maybe poverty” (5). This condition perpetuates constant instability and flux by inhibiting the establishment of any formal rural economy. Therefore, rural communities are trapped between the traditional and modern; lack the resources, support and assistance both within their own homes and communities or government to extricate themselves from this condition. In the case of Ngamiland, one of Botswana’s most rural districts, the low population creates a weak market due to low supply and demand. Consequently, the absence of capital and capacity to kick-start a healthy local economy causes economic stagnation and poor contribution to livelihoods or poverty alleviation (Hoon 2004).

2.1.1 Measuring development

According to Cleaver (1997 *in Sammy and Opio 2005*), rural community development “is defined as a set of activities aimed at improving the economic and social well-being of a rural community as well as improving community participation in political decisions. This improvement has both short and long-term dimensions, with the long-term dimension being influenced by environmental considerations” (68). The concept of rural development and its changing character impact how it pertains to the establishment, implementation and evolution of CBNRM with relation to livelihood strategies and poverty alleviation. The range of measurements of development which assess the issues of poverty and livelihood diversification is vast. The measurements are heavily criticised for their foundations in western ideas of what is right and wrong, desirable and undesirable and sensible and non. In that regard, their applicability to indigenous and rural development is challenged; however, these measures do allow universal applicability and are valuable for identifying patterns, comparisons and commonalities for analyses and objectives. The following sub-sections, titled “Poverty” and “Livelihoods” offer a review these measurements, applied specifically to Botswana.

2.1.2 Poverty

The concept of poverty is relative and its true character is constrained by local conditions, culture and power (Wikan 2004). The WB acknowledges this complexity and states that economic growth in and of itself is not a recipe for poverty reduction, but rather the pattern of growth must benefit the poor either directly through income or employment, or indirectly through social services (WB 1997 *as cited in Good 1999*). According to the *World Development Report* (WDR) (WB 2001 *as cited in Jones 2004*), there are five assets that people need in order to extricate themselves from the shackles of poverty:

- Human assets such as skills, good health and the capacity to work
- Natural assets such as the land and its resources
- Physical capital such as access to infrastructure
- Financial assets, such as savings and access to credit
- Social assets such as networks of relationships with others, reciprocal obligations that can be called on in times of need and political influence (10).

These five elements depend not just on economic vigour but on political and social processes as well as the conduct and operation of state and social institutions. Good's (1999) research on the inequality of resource distribution despite the strong economy in modern Botswana supports these five elements (Box 1).

The rise of wealth and power within the cattle-owning economy of Botswana has been accompanied by the creation of poverty and weakness. The impoverishment of the San and 'destitutes' was a structured, comprehensive, and long-term process, caused less by phenomena such as periodic drought than by an elite of economic and political power, and the exploitation which they practiced. The growth economy of recent decades has not ameliorated the situation, but has strengthened the wealthy while neglecting or worsening the plight of the San. The state possesses the financial resources and developmental capacities to alleviate poverty, but its controllers continue to prioritise other matters (185)...Income, or the lack thereof, is at the core of poverty, but it is associated with the absence of such resources as cattle and land, and of access to political organisation and influence. Concerned with inequalities and exploitation, as both the motor of development and the experience of the poor, the subject is inherently and inescapably ethical (Good 1999: 187).

Box 1. The institution of poverty: the San and 'destitutes' in Botswana (Good 1999)

Poverty is often measured in quantitative terms by the WB in an effort to draw comparisons, rankings and status among and between nations; however, poverty does include qualitative measurements such as hunger, lack of shelter, poor health, lack of education, social exclusion, powerlessness, lack of voice and vulnerability to disease and natural disasters (UNDP) 2005). In this regard, poverty has many facets but income poverty and human capability (i.e. literacy, health and basic skills) are the most common measurements. In order to assess these factors, the WB or other poverty measurement

agencies (even locally) must determine a welfare threshold, both an indicator and a measure. Once established then evaluations can be made which pertain to the particular region or country. WB's most basic quantitative poverty measurements act as a common guideline from which to advance a discussion of poverty within a society. First, consider its definitions; and consider that the minimum level to meet basic needs varies with respect to geographic location, time, value and culture. Therefore, when comparing such data globally, the WB uses measurements called US \$1/day and US \$2/day in order to equalise financial terms and allow a comparison despite variations in currency. The measurement is translated into "international dollars" by conversion factors, which are intended to have the same purchasing power as a dollar spent in the United States' economy. These conversion factors calculate the relative cost of goods and services within a specific economy to provide a better contextual measure of standard of living of residents. Therefore, the US \$1/day line is not literally US \$1, but rather the equivalent in localised financial terms. It does not translate to market exchange rates (WB 2005).

The US \$1/day and US \$2/day lines are supported by similar measurements of the UNDP (2005). According to the UNDP's Human Development Report (UNDP 2005), "Overall Income Poverty" refers to the "lack of sufficient income to satisfy essential needs beyond food, including shelter, clothing and energy" (6), or the US \$2/day line. This is in contrast to "extreme poverty" which "exists when an individual or household does not have sufficient income to meet basic food needs" (6), or the US \$1/day line (WB 2005; UNDP 2005). In addition to the WB and UNDP measurements, another classification of poverty differentiates between *absolute* and *relative* poverty. Absolute poverty refers to the inability to meet basic needs (equivalent to the US \$2/day line), and is often further divided into absolute *food* poverty (i.e. inability to procure food) (equivalent to the US \$1/day line). Relative poverty draws a comparison between an individual's standard of living and those of others in the individual's society (Hesselberg 1996 *as cited in Wikan 2004*). 1.2 billion (i.e. 1 in every 5) of the world's developing countries' population live on less than US \$1/day (UNDP 2005). In sub-Saharan Africa 50 percent of the population live under this threshold; 75 percent of whom live in rural areas of low income countries (UNDP 2005; Okidegbe 2000).

In Botswana, the 1993/4 CSO (1994) census listed 26.4 percent of the rural population living under the US \$1/day margin as compared to 17.1 and 8.2 percent in urban villages

and cities/towns, respectively (*as cited in CSO 2003*). This margin did not improve for rural areas and urban villages but rather declined between the 1993/4 CSO and 2002/3 CSO censuses. The 2001 US \$1/day poverty line was Botswana pula (BWP) 104.10 per person per month in Botswana, or BWP 3.47 (US \$.69) per person per day (CSO 2003). According to the CSO (2003) 2002/3 Household Income and Expenditure Survey (HIES), this translates into 23.4 percent of Botswana's total population living in poverty; of that percentage, the proportion of persons below US \$1/day is 36.1 percent in rural areas, 19.3 percent in urban villages and 5 percent in urban cities/towns. This equates to 258,915 people in rural areas living on less than US \$1/day. In summary, Gaborone, Francistown and other urban areas have a greater population living out of poverty than the more rural areas (Wikan 2004).

Of the national population, the rural population is 717,857 in 163,395 households for an average household size of 4.39 people. This mirrors closely the national average household size of 4.15 people. The 2002/03 average rural nominal household disposable income (includes government and other assistance) is BWP 1,378.94 per month, equivalent to BWP 313.87 per person per month (compared to BWP 2,424.62 and BWP 585.43, respectively for the nation). The average rural nominal household disposable **cash** income (excluding government or other assistance) is BWP 975 per month. A comparison of these two averages demonstrates an average assistance package of BWP 403.94 per household (CSO 2003). The household is therefore only providing for approximately 65 percent of total disposable income and relies on 35 percent assistance.

Of interest is that the CSO (2003) statistics list rural nominal household consumption at an average of BWP 1,365.51 per month or BWP 310.81 per person which equates almost exactly to the nominal household disposable income. However, according to the 2002/3 HIES (CSO 2003) household survey, the household consumption expenditure in rural areas is lower than the household consumption average but this is because the former does not include non-marketed items such as subsistence goods, government or other aid, and/or welfare which are taken into account in the latter. The household consumption expenditure is BWP 868.08 per month (compared to BWP 1,900 nationally) exclusive of assistance. Of this expenditure average, 31.3 percent is spent on food, 17.1 percent on transport and 16.2 percent on alcohol and tobacco (CSO 2003). Collectively, these statistics illustrate that household income and consumption (of both goods and services,

marketed and non-) are virtually equal and/or imbalanced such that income is less than or equal to consumption and rural households. This positions households precariously with regard to economic security and self-sufficiency on a daily basis or in the event of unknown catastrophe.

Arntzen (2003) found similar relationships between income and poverty to be true in a study of household income and commercial wildlife use revenue in Kgalagadi North. The region in his study is similar to that of many rural areas in Botswana. He found the average regional household income to be approximately BWP 289 in 2001, which was one quarter the household Poverty Datum Line (PDL) (BWP 1110.26) for the area at the time. The PDL analysis in 2002/2003 registered 45.1 percent of Botswana's rural households making under BWP 1110.26 per month, as compared to 30.3 percent nationally (CSO 2003). Similar studies by the CSO (1994 *as cited in Good 1999*) and the Presidential Commission on the Review of the Incomes Policy (GoB 1990 *as cited in Good 1999*), noted that the richest 20 percent of the nation received 59.3 percent of all income while the poorest 40 percent received a mere 11.6 percent. A study of 664 households in 26 villages in rural Botswana by the Bank of Botswana (1987 *as cited in Good 1999*) found that less than 20 percent of the population received more than 70 percent of the rural income which translates to about 70 percent of the population receiving a mere 17 percent of the rural income. This data also represents serious income inequality.

Rural Botswana is characterised by severe poverty. When compared to historical data, it was concluded by various sources (Good 1999; Wikan 2004; Arntzen 2003) that rural incomes appear to be declining and poverty is rampant. The rural population is increasingly dependent on charity and government assistance. According to Wikan (2004), poverty levels in households have actually increased in rural areas despite a national effort to alleviate and reduce poverty. He attributes this to national economic development strategies which have favoured the urban, namely towns like Gaborone and Francistown. This emphasis combined with unsuccessful agrarian development schemes has resulted in rural-urban migration such that the population remaining in rural areas is a concentrated group of the most marginalised, disempowered and or incapacitated members of the communities.

Botswana's ecology offers little possibility for crop agriculture and therefore cattle are the most promising agricultural option. However, the role of cattle both in the social and economic context of Botswana is crucial for understanding both the perpetuation and alleviation of poverty. Cattle determine social status and wealth in Botswana culture¹. The political and economic history of Botswana, both pre- and post-independence, enabled the elite socio-political and ethnic groups preferred access to cattle and resources. This disproportionate advantage deepened an already existing polarity between rich and poor not only in livestock production but eventually throughout all aspects of socio-economic context in Botswana.

The eastern hardveld has the most plentiful water and grazing land and is under extreme pressure from ever increasing herds owned by ranchers whose philosophy is, "more borehole development, not fewer head of cattle; if it appears there is a overstocking, then drill another borehole" (Swatuk 2005: 110). However, because of national policy as well as catastrophic disease outbreaks, many poorer households no longer manage their own herd but are rather seasonal labourers for large cattle ranching operations. According to Wikan (2004) and Swatuk (2005) there are fewer households today with substantial herds of cattle than in 1980 and the percentage of households with herds of 0 -10 has steadily increased over the last three decades. Good (1999) recounts the progress of this deepening rift with chronological data on cattle ownership, wealth and accumulation:

...In 1981 about 58 percent of the rural population neither owned nor controlled cattle, but by 1991...74 per cent of rural households were in this parlous condition; between 1979 and 1989 the number of stock holders fell by 57 percent...and since cattle remain the major source of rural wealth, many were impoverished...ownership was increasingly being concentrated in fewer hands. In the mid-1970s, the largest cattle –owners, totaling 15 percent of the population, owned 75 percent of the national herd... (190).

¹ According to Hoon (2004), there are two primary avenues for the exchange and production of cattle in rural Botswana, specifically in the 'panhandle' of Ngamiland. Hoon (2004) explains:

Mahisa: cattle is borrowed or loaned within local communities through this institution such that wealthy farmers give one or two beast to poorer farmers on a long-term basis. Once received the individual is responsible for taking care of the cattle and in return can keep the male and use the offspring for ploughing. He also keeps every third or fourth offspring for building his own herd.

Moraka: a situation where a large number of cattle are transferred to an individual thereby instantly providing the individual with a herd and sufficient draught power. In many cases, cattle circulated on an 'as-needed' basis where those who lack animals approach those with sufficient herds. This is called *Go tsenya mabago* (putting in hands) and was a way in which wealthier farmers supported others in the community (7).

Globalisation of the livestock industry minimised these rural exchanges of cattle.

The outbreak of Cattle Lung Disease (CLD) in late 1995 (after a 45 year absence) resulted in the execution of over 300,000 cattle in the greater Okavango region (including Ngamiland). The effects are still prevalent today (ACORD 2002). The outbreak of CLD further exacerbated an already existing poverty problem in Botswana as well as upturning the social structure of the communities. This created upheaval in the social and economic foundations of the rural Botswana² such that many were left with no assets (both in social stature or production capital). With these assets destroyed, most Botswana took the short-term relief option and received 100 percent cash compensation from the government (BWP 500 per animal) as opposed to the more long-term option of in-kind replacement. These monies were then spent on immediate needs rather than reinvesting in long-term livelihood diversification strategies such as replacing cattle, starting a business or education. In addition, the rural economy, once tied heavily to cattle, was also weakening due to the globalisation and subsequent centralisation and commercialisation of the beef industry thereby alienating rural populations from their traditional pastoral lifestyle and incomes (Darkoh and Mbaiwa 2002).

Consequently, money became the primary exhibit of wealth as it replaced cattle in the ceremonies and as gifts for births, deaths and weddings. The communities were suddenly launched into a cash market economy. Labour became a steadier source of desirable cash income than returning to cattle rearing or agriculture (Hoon 2004). The emphasis on cash and compensation has left most households with little to show for their once-booming cattle assets and yet another lost livelihood strategy (Mbaiwa 2005; ACORD 2002).

According to a village elder in Seronga in the mid-1990s, “money has changed peoples lives...put us in a better stage. There is development because of money...has improved farming through hiring other people to plough...we can now buy fishing nets...and boats to travel to different areas...[money] has helped parents to take their children to school by paying for school fees and buying them clothes (9)” (Maeze 2002 *as cited in Hoon 2004*). Once the compensation monies had expired and the desire for cash had been instilled, the communities further coveted the possible benefits, especially financial, of alternative income-generating activities. This valuation demonstrates the lure and benefit of the cash

² Collectively the citizens of Botswana are known as Batswana (plural) and Motswana (singular).

economy in many rural areas; however, are there any or enough income channels from which to generate cash and thereby create an alternative livelihood strategies.

The North-west District Council (NWDC) agrees that the majority of rural Batswana, with particular reference to the Okavango region live in poverty (2003 *as cited in Mbaiwa 2005*). This is due in large part to the failure of crop and livestock farming, the manner of tourism development and poor employment opportunities. Rural Botswana is susceptible to poverty as large segment of the population receive little or no cash income and most live hand-to-mouth (Good 1999). With specific reference to a study by ACORD (2002), the Okavango region of Ngamiland, including Gunotsoga, Gudigwa and Eretsha, is victim to poverty due to the lack or low level of employment, cash-income, food sources, livelihood diversification and access education. Unemployment statistics reinforce this situation. In 2000, unemployment was nationally listed at 20 percent, and rising (Hoon 2004). By 2003, the national unemployment rate was 23.8 percent with a rural unemployment rate of 23.11 percent for economically active persons aged 12 and over (CSO 2003). Though the rural unemployment rate mirrors the national unemployment rate, it should not be misinterpreted positively. This statistical alignment reflects the dearth of jobs in rural areas and rural-urban migration such that unemployment levels are actually increased in urban villages, to which many rural people migrate in an effort to find employment. This is reflected in an urban village unemployment rate of 29.6 percent (CSO 2003). When considering these statistics, it is important to remember that these statistics are a reflection of those who are actively looking for work. Prominent characteristics of the rural population such as the elderly, youth, marginalised or ill are such that most do not necessarily possess the skills to be economically active. These groups, therefore, are not included in the statistics despite their presence in population. Consequently, the statistic is misleading when compared to the nationwide statistics.

The demographic of Botswana's impoverished population has been heavily categorised. Botswana Institute of Development Policy Analysis (BIDPA) distinguishes between the "poor" and the "destitute". The latter is the "poorest of the poor" or one who "is without assets"; "physically or mentally incapable of working"; a "child without parents or deserted", or who is "rendered helpless due to natural disaster or temporary hardship" (BIDPA n.d. *as cited in Good 1999*). One of the major criticisms of the destitute description is its ambiguity and its assumption that a destitute is an individual, not a

household as well as the negative social status associated with such a classification (Good 1999). As such many who might be part of this constructed classification are not recognised by the government and/or assistance programs and agencies.

Many destitutes are also labelled Remote Area Dwellers (RADs), or those who constitute a segment of the population characterised by inhabiting areas where there is little to no economic activity. There is much debate about the validity, applicability and assumptions of such classifications; Good (1999) notes, "...this inaccuracy despite the fact that some two decades earlier San farm-labourers in [Ghanzi] existed amidst considerable economic activity, to which they were denied access except as dependent labourers" (192). According to Hitchcock (1998 *as cited in Good 1999*), the 1998 estimated populations of each (which do overlap) were 180,000 RADs and 20,000 destitutes. In summary, the destitutes are "female heads of household, uneducated, elderly or RADs" (BIDPA 1997; Wikan 2004). This suggests a significant number of rural households, usually female-headed, with no source of income known to statisticians. For instance, four out of five rural households survive on income of a family member in town or abroad – a situation neglected in the classification despite its highly insecure livelihood strategy. This classification is most often applied to the San or Bushman of the arid and remote regions of Botswana (Good 1999).

Both of these classifications were constructed by the GoB and its cohorts in an effort to identify populations worthy of or requiring assistance and thereby determine the provision of social services. However, it is questionable as to if and how these classifications benefit those in need or rather further alienate and perpetuate income and social inequalities by limiting access to money, land and mobility through policy and strategy which rewards Botswana's wealthiest land owners and companies. For example, the pension program was one-quarter to one-sixth of that offered by neighbours South Africa and Namibia, respectively; and, to exacerbate the dilemma, individuals had to demonstrate his/her age "satisfactorily" in order to receive the assistance. Many, if not most Batswana do not know their age because such concerns and procedures are either not culturally important or require long and arduous journeys to centralised government offices which in order to obtain the required paperwork (Good 1999). Requirements such as these are often cumbersome or unattainable for rural Batswana, and therefore continue to perpetuate rural poverty. The GoB does have programs for the HIV-positive,

destitutes, orphans and an old-age pension of BWP 110/month (or US \$30). The destitute program aims at the infirm and gives BWP 100/month (US \$28) while orphans receive the same amount and HIV-positive persons receive P220/month (US \$60). However, it has been argued that these grants offer only short-term poverty alleviation, and that the development crisis in remote rural areas such as Ngamiland would be better addressed by the government shifting its focus to development activities which could serve poverty reduction, not simply alleviation (Hoon 2004).

In summary, poverty is measured by a range of capabilities, not just income, cost of living and consumption expenditure and is influenced by social and political institutions which can result in inequitable resource distribution and access (Wikan 2004). This thesis acknowledges the complexity of the poverty issue, but does focus most heavily on the role of CBNRM's economic impact (via employment and fees) to household poverty alleviation.

2.1.3 Livelihoods

Poverty and livelihoods are inextricably linked. Livelihoods are not a measurement, but rather a collection of strategies and activities which allow an individual or household to meet at minimum, its basic needs. It is an analytical tool which complements many of the poverty measurements; the quality and diversity of individual or household livelihoods often determines the presence, absence or magnitude of poverty.

Recent analysis of the concept of livelihoods has focused, especially in the context of poverty and natural resource management, on *sustainable* livelihoods (Ashley 2000; Ashley and Mitchell 2006; DFID 1999; Swatuk 2005). The UK Department for International Development (DFID) defines *sustainable livelihoods* as:

A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintains or enhances its capabilities and assets both now and in the future, while not undermining the natural resource base (Section 1.2 :1).

The five assets required to abdiccate an individual from poverty discussed in the previous section ("poverty") are also the basis for the DFID Sustainable Livelihoods framework (Figure 1).

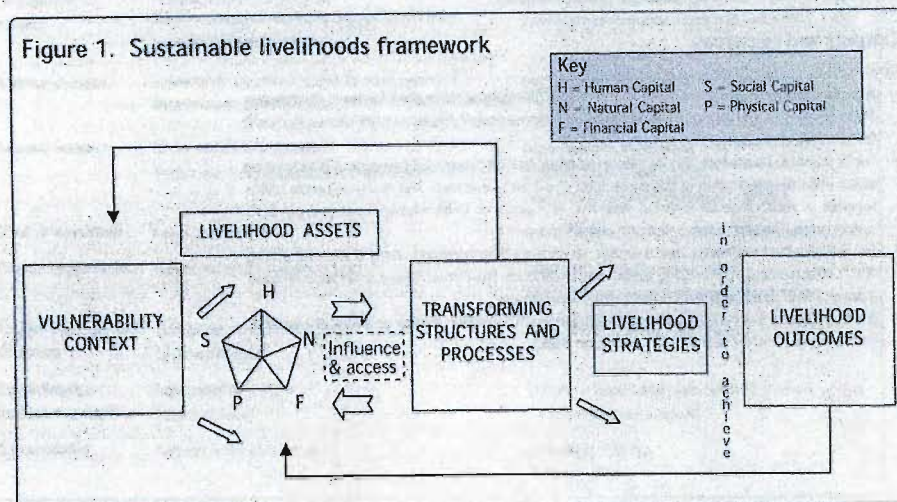


Figure 1. Sustainable Livelihoods framework (Source: DFID 1999: no page).

The objectives of the DFID's (1999) *Sustainable Livelihoods* framework are:

- Improved access to high-quality education, information, technologies and training and better nutrition and health;
- A more supportive and cohesive social environment;
- More secure access to, and better management of, natural resources;
- Better access to basic and facilitating infrastructure;
- More secure access to financial resources; and
- A policy and institutional environment that supports multiple livelihood strategies and promotes equitable access to competitive markets for all (Section 1.2:1).

The DFID *Sustainable Livelihoods* objectives resonate with and intend to complement many of the recent concepts of development theory and natural resource management albeit with a strong bias toward development as opposed to conservation. It is characterised as an anthropocentric concept (DFID 1999; Ashley 2000).

It is important to note that the impact of any activity on livelihood can be direct (e.g. employment and income) as well as indirect (e.g. environmental health and well-being). The concept of direct and indirect benefits will be discussed in greater detail in Section 3.1.1.

Livelihoods do not refer strictly to income. However, due to the quantifiable nature of income, it is often the first consideration of livelihood studies. This is especially true because many authors of livelihood studies come from regions where income is the sole livelihood strategy (i.e. the global North). This gives the misimpression that income alone

signifies livelihood; however, and especially true in rural areas where employment is scarce, livelihood is a set of diverse activities and assets utilised to maximise standard of living. In many societies, especially rural and subsistence societies, it is a concept which contains and receives influence from social, economic and political components such as land rights, gender relations, hierarchy, environment and psychology to determine a range of strategies executable under local institutions (Wikan 2004; Ashley 2000). It is dynamic and complex by definition and in practice.

For example, RADs in Botswana may have economic activity in their region but for socio-cultural reasons may not be able to partake, or do so minimally, such that any income accumulation is little if ever available. Therefore, an analysis of their livelihoods might reveal substantial diversification in the form of subsistence hunting and gathering, medicinal plant use and/or trade of flora and fauna by-products combined with some income or remittances (Good 1999). These strategies are expanded, emphasised and improved according to a rural family's household size and available resources. An abundance or dearth of household labour resources in addition to natural resources, economic activity and social structure can significantly contribute to or deter from the livelihood quality of a given household.

In order to conceptualise and appreciate the concept of livelihood in rural Africa, it is imperative to have a basic understanding of spatial and social structure of rural society. Sammy and Opio (2005) distinguish between villages and communities in important terms. According to their description and supported by those of Yellen (1985) and Thakadu (1997) (*as cited in Sammy and Opio 2005*), "villages are composed of several discrete communities that have unique languages, cultures, race and socio-economic levels and geographical locations within the village. Members of a community share common problems, needs, identity and usually the same geographic location with the village" (69). In fact, and certainly in Botswana, communities are by no means homogenous, spatially-defined and/or static. To the contrary, communities are defined by at least some degree of fluidity both spatially and economically in an effort to diversify livelihoods as well as in response and proximity to the development of state infrastructure (i.e. roads), centralisation of towns by national planning committees and the need to for a multi-income livelihood strategy (Hasler 1999). It is often the downfall of development projects to classify communities as tightly-bound discrete spatial entities with relatively

similar sociological characteristics especially in a narrow geographical space. When considering then the influences of a development or conservation initiative on local populations, it must be recognised that the associated communities may or may not acknowledge the same costs and benefits as one another.

Similarly, consideration of the “household” entity must acknowledge its variation. According to Selolwane (1992 *as cited in Wikan 2004*), a household is not a concise entity where consumption, production and residences necessarily overlap; rather, it is potentially spread over a wide geographical range as its members seek various strategies to meet basic needs. It has been defined as “the unit principally responsible for agricultural production” or the “unit of consumption whose income derives from various sources” (Wikan 2004: 3). For purposes of most studies, including those by Arntzen (2003) and Wikan (2004), a household is defined as those who claim to belong to a single compound and or use a single resource (or arable land area) in common. Wikan (2004) explains that the household in Botswana is defined by land, labour and capital. Land is communal in most cases in Botswana, labour is dependent on the size and capacity of the household and cattle are the most valued household asset. Wikan (2004) identified common characteristics of poor households. These trends illustrate that poor households have fewer educational resources, are smaller (i.e. fewer labour resources), have less productive assets (i.e. cattle), are female-headed and older. In addition, they tend to rely on little income diversification and many times on government charity or family remittances.

Hasler (1999) reiterates the spatial and discontinuous nature of households and communities in his study to explain that the residents of the greater Okavango Delta often have homes in one or more areas, owing to the increase in state infrastructure (i.e. roads) linking the communities and Maun (the region’s commercial hub). This promotes economic activity and eases rural-urban migration, but also complicates the determination of household consumption, production and residence.

Livelihood diversification is also vital to rural communities as it incorporates a range of fundamental hypotheses about the strategies underlying diversification. According to Wikan (2004), these strategies can be summarised as survival, security or accumulation. The accumulation strategy implies that a certain percentage, if not all of a household’s

basic needs are met by a primary strategy and so additional strategies are employed in order to *amass* a surplus of goods. This is in contrast to the survival strategy whereby the need to diversify is required in order to simply *subsist*; whereas, the security strategy is employed to *minimise vulnerability* in the event of uncontrollable environmental or social fluctuations such as drought, disease, etc. whereby livelihood diversification serves to provide household security (Arntzen 2003). The motivation for utilising any particular strategy varies according to household income, consumption and production patterns. For example, Wikan's (2004) study of two medium-sized rural communities in Botswana concluded:

...poor households in rural Botswana are small, with little manpower and poor quality of education. They depend on charity, small-scale crop production or badly paid local work. The better-off households are bigger and better educated and have a variety of income sources. The richest households are those that combine crop production, cattle rearing, and local and external work or enterprises. However, 'multi-income' as a livelihood strategy is found to some degree in all level-of-living groups. The poor households that use this strategy probably do so out of necessity and for them it is a survival strategy. For rich households it represents a strategy for accumulation of wealth (9).

Wikan (2004), in his study of household livelihood strategies specific to income in Botswana, found strategies could be further classified as: crop production, subsistence hunting/gathering, cattle rearing, wage employment, formal businesses, beer brewing, remittances, gifts and social grants. These in turn he classified into four core categories: agriculture only, wage work only, multi-income, and no income. He found that in cases of 'no income' the households relied on government or family charity. In Wikan's (2004) experience he found the poorest households usually have only one single sector livelihood strategy, typically 'agriculture only'; in the event that the household lacks the labour resources to partake in 'agriculture only', then there is often 'no income' and there is reliance on charity. Meanwhile, 'wage-work only' households rely on seasonal and temporary low-paid labour, such as domestic, farm or security work and experience less severe poverty, but poverty nonetheless. In contrast, he found that middle-income households (i.e. the least poor) dabble in both the traditional and modern sectors with the 'multi-income' approach while favouring the combination of crop production and wage income and often are able to accumulate resources and wealth to elevate themselves out of severe poverty. Most likely due to their elevated position and ability to take some risk, rich households are able to diversify the most and incorporate three strategies: crop production, wage income and cattle rearing (Wikan 2004). He concluded that the poorest

households use the 'multi-income' livelihood strategy for *survival*, poor households for *security* and richer households for *accumulation*.

The degree to which one strategy is more heavily employed than another is also determined by geography and available resources. For example, rural households living in Namibia's Caprivi, a region very closely tied economically, geographically and culturally to the Ngamiland-Okavango Delta region, where water is consistently available, can partake in arable agriculture and fishing year-round. In contrast, rural communities in the Kalahari Desert or Namibia's Kunene region, where water is perennial, have limited opportunity to practice arable agriculture or fishing and thereby rely more heavily on livestock (Swatuk 2005; Ashley 2000). Swatuk (2005) explains:

Responding to limited surface water availability, and predominantly arid soils, subsistence-oriented rural [Ba]Tswana societies have and continue to pursue multiple resource use livelihood strategies, combining trade, agriculture and pastoral practices and hunting 'for the pot' with cattle long being the primary measure of wealth. Remittances from migrant labour – within and beyond the borders of Botswana - are also an important supplement to household incomes (111).

Ashley (2000) reiterates that the livelihood strategies in rural areas are a mix of many activities, namely natural resource use, employment and remittances. Her work in Namibia's Caprivi also exhibits the need for diversified livelihood strategies in order to manage the seasonal variations in rainfall and resources (Table 1).

Table 1 Contribution of different activities to household needs in Caprivi Region

ACTIVITIES	CROPS	LIVESTOCK	EMPLOY- MENT	HARVESTING TREES/PLANTS				FISHING	WILDLIFE & TOURISM
				Wood	Veld products	Carving, weaving	Thatching grass		
BASIC NEEDS									
<i>Immediate needs</i>									
Food	***	*	**		**			**	*
Water, energy		*		***			**		
<i>Indirect needs/assets</i>									
Cash	*	*	***		*	**	**	*	***
Goods for barter, exchange	*	*		*	**		*	*	
Reserves & investment		***	**			*	*		
Drought buffer		**	***		**	**	*	**	**
Inputs to production		***	*						*
Cultural and intangible assets	*	***							**
Social capital/ community organisation									**

* indicates a minor or indirect contribution
 *** Indicates that the activity makes a major contribution to a need.
 Source: Adapted from Ashley and LaFranchi (1997)

Table 1. Household livelihood diversification strategies in Caprivi Region, Namibia (Source: Ashley 2000:10).

This brief theoretical history of global development discourse with emphasis on the concepts of poverty and livelihoods using examples from Botswana will be supplemented in the following chapter by an equivalent commentary on conservation ideologies, and CBNRM initiatives.

2.2 Conservation ideologies

The other foundation of sustainable development, the underpinning of CBNRM, is conservation. Sustainable development's ideological evolution refined conservation's traditional human-exclusive agenda to consider human development objectives as well. Historically, conservation focussed on how to protect and preserve nature from the encroaching demands and threats of humans, especially rural and/or indigenous populations. This focus has been called "fortress conservation", the "fences and fines approach" and/or "coercive conservation" (Adams and Hulme 2001). These exclusive approaches proliferated in Africa for a variety of reasons motivated not only by environmental concerns but by dominant socio-political institutions. Those trends in land management favoured exclusivity and complete prohibition of utilisation and human impact in delineated conservation areas. This effectively required that conservation areas

be cordoned off from local communities and/or traditional users who relied on the natural resources for meeting basic needs through hunting and gathering. These restrictions were intended to ensure complete non-consumptive utilisation by any population (of course, exceptions were made for trophy hunting!), especially indigenous.

Africa was particularly impacted by this conservation ideology due to its wealth of highly-coveted species, density of wildlife and urgency of human development. Conservation was about conserving a particular species and/or landscape, usually at the request of European trophy hunters, forestry companies and the occasional determined environmentalist. The welfare of local communities was not among the reasons for conservation. In fact, the two were mutually exclusive, because of the exclusionary principles of the popular ideologies. Throughout this period of conservation, most conservation areas were managed by a central body such as a government department or agency which was led by the most powerful population at the time: white, European males. This translated into a very top-down approach to conservation such that local people had very little, if any, forum in which to discuss their ideas needs or concerns (Adams and Hulme 2001; Child 2004). Botswana mirrored these conservation approaches. Twyman (1998) strongly stated prior to the comments of Adams and Hulme (2001) and Child (2004) that: “the ideology of modern top-down development prevails in Botswana, and across much of Southern Africa, although it is masked by participatory, empowering and community-oriented language and images. Coercive conservation efforts are undermining the rural populations’ individual and collective actions to manage resources” (767). As a result, protected areas became bastions of political, economic and social power by alienating the weak and advancing power of the wealthy or privileged (Adams and Hulme 2001).

This relationship between local users, elite conservationists and governments continued throughout the 19th century and until the mid-20th century, due not only to the prevailing ideology but also the desperate desire by national governments to expedite modernisation and independence from colonial systems. These goals saw Africa zoned and classified into various land-use categories emphasising those development agendas with the estimated greatest and most expeditious economic benefit regardless of the potential costs or benefits to indigenous communities.

In complement to the discursive shifts of the 20th century development theory, conservation ideologies responded to increased levels of poverty, poaching and environmental threats. With increased media attention and support from the radical activism characteristic of the 1970s, and a more collective acceptance that humans might be potentially causing the earth's demise, conservation took on a more global discussion, if not priority. In response, the global community commenced the United Nations Conference on Human Environment (UNCHE) also known as the Stockholm conference of 1973. As the first conference of its kind (i.e. human/environment dimensions), its participants first broached the 'resourcist' idea of sustainable development, which purported to consider the needs of both humans and the environment in development theory and practice (later to be solidified in the Brundtland Report in 1987 and the UNCED conference of 1992) (Barbier et al. 1994). Then, with the discourse of sustainable development in its infancy, conflicting views of natural resource management as it related to social, economic and environmental took on new proportions and implications. On the one hand, the preservationist view remained, suggesting that nature should be fenced and compartmentalised as a management scheme, to guarantee its conservation. However, on the other hand, economists retorted with a utilitarian/resourcist view to suggest that nature is a commodity whose resources are to be used by man (to ensure their survival), and conservation cannot be guaranteed through seed banks, zoos and a holistic approach to management, but only through sustainable use (Van Loon 2003).

These conflicting discourses first resulted in a global strategy of increased legislation and policy rooted in preservationist ideals. The first legislated policy as regards species conservation was The United States of America's Endangered Species Act of 1973, and the related development of an international policy on species trade, Convention on International Trade in Endangered Species (CITES). Both of these policies represented a comprehension of the magnitude and severity of decreased species diversity, and the need to manage its decline (U.S. Fish and Wildlife Service 1996). However, both continued to alienate species conservation as the solitary issue, independent of the possibility of a more dynamic, multi-faceted system (e.g. habitat, ecosystem) requiring holistic adaptive management. In addition, there were many cases of litigation over the rights of single species versus the utilitarian needs of man (e.g. wolves and livestock; spotted owl and logging; California condor and real estate development) (Alagona 2004). But

simultaneously, the discourse of sustainable development was rising to prominence in an effort to blend the polarised approaches to consider the agendas of both development and the environment. Science was becoming increasingly more interdisciplinary in response to the crises facing the earth, and in doing so significantly expanded the field of ecology to consider man and species as co-dependent in nature (Heywood and Iriondo 2003). Formal conservation associations (i.e. The World Conservation Union (IUCN), World Wildlife Fund for Nature (WWF), Conservation International (CI)) popularised these conservation ideologies both in theory and in practice by soliciting and receiving the support of politicians and governments globally and demanding investigation into the sustainability and development components of a project before determining funding packages (Kirkby et al. 1995).

Heywood and Iriondo (2003) present an example of how science coincided with this paradigm shift. They explain the closed system/equilibrium analysis of ecology of the 1980s in contrast to the open system/non-equilibrium analysis of the 1990s. In the former analysis, the system (of nature) is viewed as an entity, which has an ultimate set of characteristics, whereby when disturbed, it will eventually return to its original character; and humans are outside of this system, despite causing much of the disturbance within. In contrast, the latter philosophy emerged (in harmony with progress in science and thought) to suggest that this is not the case, but rather the environment is inclusive of all inputs including those of humans and it changes accordingly, such that there is no absolute set of characteristics, to which it always returns. In that sense, humans are both an impact on and a part of the system, which changes over time. If in fact, conservation begins to consider man as a part of ecosystem processes, then options and aspects of conservation's definition and management change. This notion is in harmony with the global biodiversity agenda, which advocates a shift to a more system-based philosophy, whereby humans and the environment are characters in a dynamic relationship, with both ecological and economic relevance to concerns of biodiversity (Van Loon 2003; Heywood and Iriondo 2003). This evolution of a more holistic approach, incorporating social, economic and environmental issues impacting biodiversity parallels the scientific paradigm shift from a single species-oriented to a more ecosystem-oriented philosophy as well. The dominance philosophy of man over nature has not necessarily seen its last moment in the spotlight; however, it is challenged most strongly by the discourse of sustainable development, which purports to consider the needs of the future in the

management of today's resources within a community-based context and laying the foundation for CBNRM globally.

The expansion of the philosophy of sustainable development began to involve the role, need and rights of local people in decisions regarding natural resource management, including conservation. Its influences were most literally felt by those living on the periphery of protected areas. With specific relevance to Africa, the fundamental belief which lies at the heart of this emerging discourse was that "conservation will either contribute to solving the problems of the rural poor who live day to day with wild animals, or those animals will disappear" (Adams and McShane 1992: xix *as cited in Adams and Hulme 2001: 13*). This discourse can be collectively referred to as "community conservation" or the "parks and people" programmes, and contains within it the similar discourses of community-based conservation, community wildlife management, collaborative management, CBNRM, and integrated conservation and development programmes (Adams and Hulme 2001). According to Adams and Hulme (2001), there are two pillars of "community conservation" narratives: it is required that people associated with a protected area either geographically, spiritually, legally or historically be allowed to participate in its management; and, a protected area's conservation agenda must complement the local development agenda.

At the core of this conservation paradigm shift is consideration of how people interact with their environment as opposed to protecting the environment from people (Twyman 1998). The overarching notion behind this philosophical shift from protecting to partnering with the environment is the recognition that neither agenda is independent, but rather the two are married in the common goal of maximising the sustainable use values of the resource. This idea of a direct linkage between the inseparability of the welfare of people and a protected area was almost revolutionary, and it is possibly the most influential element of modern conservation. With this in mind, such development-conservation schemes actually require more capacity within the state than the more compartmentalised preservationist schemes of the past because cooperation between government departments, ministries, NGOs and other stakeholders is crucial. The holistic programmes require considerable amount of participation at all levels, and must consider a wide range of interests, priorities, objectives and capacities (Twyman 1998). As Adams and Hulme (2001) summarise, "the question is not of whether state action or community

action is better: both are essential, along with private sector support, and the challenge is how to develop effective mixes of state, community and private action in specific contexts” (22).

With respect to Botswana, this holistic, system-based approach to conservation is prominent at a national level in National Development Plan (NDP) 9, the realisation strategy for “Vision 2016: A Long-Term Vision for Botswana: Towards Prosperity for All”. Within the greater objectives of Vision 2016 and NDP 9 is the role of biodiversity and the state of the environment as fundamental pillars of national prosperity. The objectives of NDP 9 reiterate sentiments of a participatory stakeholder approach, rooted in sustainable development and democratic pragmatism in their goal to “conserve and preserve our environment, the nation’s greatest asset, in order to ensure sustainability...current development should meet the needs of the present generation without compromising the capacity of future generations to create adequate wealth. Economic growth is not sustainable without a healthy environment” (GoB 2003: 71). Further, NDP 9 intends to do so by taking into consideration and importance “...issues [which] concern inefficient natural resources utilisation, threats to biodiversity and wetlands conservation, pollution and waste management and unsustainable use of firewood for energy...addressed in conjunction with development opportunities and constraints embedded in natural resources” (71). Botswana is still developing and implementing its National Biodiversity Strategy and Action Plan (NBSAP) and/or National Conservation Strategy (NCS) in order to meet with the requirements of its 1995 ratification of the Convention on Biological Diversity (CBD). It is doing so in conjunction with the UNDP as well as in consultation with the Government of South Africa’s NBSAP which is considered progressive with regard to modern environmental policy. As of May 2005, Botswana’s National Conservation Strategy Coordination Agency (NCSCA) had submitted its third implementation progress report to the CBD to prioritise its biodiversity objectives, goals and policies.

CHAPTER 3: LINKING DEVELOPMENT, CONSERVATION AND CBNRM

3.1 The introduction of CBNRM

As discussed, the evolution of conservation and development agendas over the last 30 years began to incorporate similar objectives – biodiversity and human welfare - albeit with varying levels of priority or emphasis. This emerging overlap demanded that think-

tanks, practitioners, academics, communities and many stakeholders find a balance between use and non-use, or essentially economics and environment (Hoon 2004). The possibility existed to strike a balance whereby wildlife would “pay its way” and policy would advance the economic competitiveness of sustainable wildlife utilisation as a preferred land-use (Jones and Muphree 2001). Specifically in Africa, there was concern over land-use pressures such that rezoning would favour agriculture, livestock or human development at the expense of wildlife conservation (Swatuk 2005). It is in this context that CBNRM emerged as part of that more grassroots development discourse, which emphasises equity, access, conservation, sustainability and participation. This is not to naively suggest that the over-arching economic tenets of modernisation are not present such that governments and their people do not want to “develop”, but rather that they are tempered by at least a consideration of more traditional forms of economic strategies which resonate more concisely with local populations and institutions. The refined goal of CBNRM is to conserve natural resources, yet do so in concert with the advancement of development of human welfare. Arntzen et al. (2003) introduce CBNRM as:

...a typical African approach towards rural development and resource conservation. The approach aims to increase local socio-economic benefits of natural resources, which would then lead to a higher appreciation of resources by the local population and to greater resource conservation efforts by the local population. The increased benefits also offer opportunities to compensate the local community for the costs of living with natural resources such as wildlife. No Family should be worse off because of the presence of natural resources (46).

It is noted that, depending on one’s priority or preference, it can be seen as a development-sided and/or conservation-sided agenda (Swatuk 2005; Gujadhur 2001; Arntzen et al. 2003). Child (n.d. *as cited in Jones and Muphree 2001*) refers to these linkages as the price-proprietorship-subsidiarity paradigm and summarises this interpretation of CBNRM as:

...if the resource [wildlife] is valuable (price), if this value is captured by landholders (proprietorship) and if the principle is followed that no management action, decision or benefit is arrogated to a higher level when it is better and more appropriately conducted at a lower level (subsidiarity), there is a high likelihood of successful resource conservation and management (66).

3.1.1 The concept of Total Economic Value (TEV) and CBNRM

Conventional economic analysis focuses most heavily on a resource’s direct use value, essentially its immediate contribution to livelihoods. But in the case of the assessment of wildlife (and most natural resources for that matter) it is imperative to assess the other

three main valuations, which actually might exceed or at minimum bolster its direct use value. These are indirect use value, option value and existence value. These four values together comprise the Total Economic Value (TEV) of a natural resource (Box 2) (Arntzen 2003).

<p>Indirect use value: Such values do not benefit people directly, but refer to a resource's key ecological functions.</p> <p>Option value: Refers to the potential future resources uses and the perceived value of preserving the resource for these [future uses].</p> <p>Existence value: Refers to the perceived value of the mere existence of a resource irrespective of its use by human beings.</p> <p>Direct use value: Refers to values which benefit people directly, by contributing to livelihoods.</p>

Box 2. The four values of Total Economic Value (TEV) (Arntzen 2003: 11)

The two fundamentals of TEV mirror those of CBNRM and sustainable development:

- It recognizes that natural resources derive value from use as well as from non-use by human beings; and
- It recognizes that the current value should incorporate the options of present as well as future generations (Arntzen 2003: 12).

Of course these values are often difficult to express in monetary terms because they are not always traded in the traditional sense; and therefore, these values are hidden or left out of market pricing such that economic decision-making (i.e. cost/benefit analysis) is incomplete. However, progress in environmental economics attempts to capture TEV comprehensively by applying valuation techniques which assign monetary values (or their approximations) to non-traded aspects of the resource (Pearce 1989). For example, according to Arntzen (2003), the wildlife TEV can be “assessed using market prices, prices of substitutes or by estimating the travel costs associated with using the wildlife resources...the ‘willingness to pay’ method can be used to estimate the TEV of wildlife resources” (12). Market forces appear to have an increasingly significant impact on the establishment of wildlife’s market price as hunting fees, park entrance fees, protected area leases and wildlife auctions are introduced more widely in the southern African region, and Botswana specifically to determine supply and demand in traditional market terms. CBNRM focuses most heavily on direct-use value, like traditional economic analysis, but does recognise the importance of TEV as a sustainable use determinant (Arntzen 2003; Rozemeijer 2003). The goal of CBNRM then is to achieve its objectives of human development and conservation through maximising the amount of the resources’ TEV which accrues to the communities for their benefit. CBNRM promotes this attainment

through the activity and involvement of three primary stakeholders (communities, wildlife users and government) and must be executed in a fair, transparent and accountable procedure (Arntzen 2003).

3.2 Tourism theory and context related to CBNRM

3.2.1 Botswana's tourism statistics

Tourism is not classified into one particular economic sector; therefore, it is difficult to extricate its exact contribution to GDP. Its influence is embedded in most industries within national accounts because its impact is determined more by linkages to other industries as well the demographic characteristics of the buyer rather than the seller (Suich 2006 *pers. comm.*). However, if one looks at a breakdown of national GDP at a macroeconomic level, second to diamond mining is 'trade, hotels & restaurants' at 10.3 percent of the GDP in 2000 and second in foreign exchange earnings. This contribution, if anything, is an underestimate due to tourism's embeddedness. Within tourism, Botswana's wildlife-based tourism is responsible for approximately half of this sector's total. Business tourism contributes the majority of the balance (Mbaiwa 2005; GoB 2003).

Recently, tourism (much of which is dependent on the Okavango Delta) with an average annual growth rate of 13 percent usurped the cattle industry's position as second highest GDP earner (Mbaiwa 2003). Tourism is also seen as Botswana's most viable revenue earner after diamonds. Tourism is among the components (others are manufacturing and trade) which are anticipated to experience GDP growth between seven to 10.5 percent per annum over the NDP 9 period (ending 2016) – the fastest of any component. This compares to a national GDP growth of 5.5 percent over the same period (GoB 2003). According to Hoon (2004), 40 percent of the employment opportunities in northern Botswana are attributable to tourism; private sector investment in tourism has increased from BWP 150 to BWP 400 million over the last ten years.

This is further substantiated by a review of tourism statistics. According to the WTO (2005), Botswana reported 975,000 international tourist arrivals in 2003 (stats not available for 2004). 22.1 percent of the arrivals in 2000 visited the Okavango Delta and/or Maun (the Delta's gateway town). With specific reference to the Okavango Delta, the number of tourists doubled in a five year period (1998-2003) over the previous five

years, and on average approximately 50,000 visited the Okavango Delta (Mbaiwa 2005). According to the Department of Tourism (DoT) international receipts for tourism increased from US \$136 million in 1997 to US \$313 million in 2002 (Michler 2004). International receipts reached an impressive US \$549 million in 2004 or three percent of the market share in Africa (WTO 2005). These receipts are a reflection of not only increases in the number of tourists, but also increases in the number of licensed tourism enterprises to cater to increased arrivals. Licensed tourism enterprises increased from 202 in 1998 to 442 in 2002. Of these 442 enterprises, 178 are citizen-owned, 148 are non-citizen owned and 116 are joint ventures. Tented camps and lodges increased from 77 to 158 and mobile safari operators increased from 54 to 134 over the same period. Finally, the number of available beds in the country more than doubled from approximately 3,000 to 6,300 from 1998 to 2002 (Michler 2004).

3.2.2 Evaluating tourism's potential economic contribution

It is collectively agreed that tourism is the most likely vehicle for achieving both conservation and some level of development (i.e. income and employment) simultaneously and in an effort to meet the objectives of CBNRM (Ceballos-Lascurain 1996; Hoon 2004; Swatuk 2005; Rozemeijer 2003a). It is certainly a strong asset of the potential compromise (Ashley and Mitchell 2006). This is summarised succinctly by Ashley and Mitchell (2006), "tourism researchers have generally failed to position themselves in the void between the development industry – who often do not appreciate the poverty reducing impacts of tourism – and the mainstream tourism industry – which generally does not see reducing poverty as its priority or responsibility" (1).

Mbaiwa's (2003) research notes that developing nations' governments promote tourism investment in hopes of expediting economic development. However, there is much debate and lack of research into whether the actual on-the-ground impacts of tourism result in positive development nationally and specifically on poverty alleviation regionally (Ashley and Mitchell 2006; Mbaiwa 2005). Regardless it is accepted that tourism does offer significant benefits at the macro-level, at minimum. Its expansion includes economic growth, job creation and welfare, improved exports and public finances.

In complement, reviews of relevant literature show trends in tourism to incorporate development not just in an economic sense, but "...should encompass social economic, environmental and ethical considerations such that its measurement may incorporate indicators of poverty, unemployment, inequality and self-reliance" (Binns 1995 *in Mbaiwa 2003: 448*). In summary, it is suggested that in order for tourism to advance the basic principles of sustainable development then it must do so in an "an economically viable, environmentally sensitive and culturally appropriate way" (Mbaiwa 2003: 448).

According to Ceballos-Lascurain (1996), a proper evaluation of tourism's economic impacts on development requires an analysis of backward and forward linkages between tourism and other sectors; understanding of the spatial location and style of the tourism activity and identification of the beneficiaries of its economic and other impacts (Healy 1992b *as cited in Ceballos-Lascurain 1996*). Most studies look at expenditure multipliers to measure the revenue that originates from the tourism industry and then is spent and re-spent in the local economy (e.g. labour, capital, services) or has leaked out of the local economy (e.g. taxes, imports or repatriated profits). Ashley and Mitchell (2006) offer a model of these linkages (Figure 2).

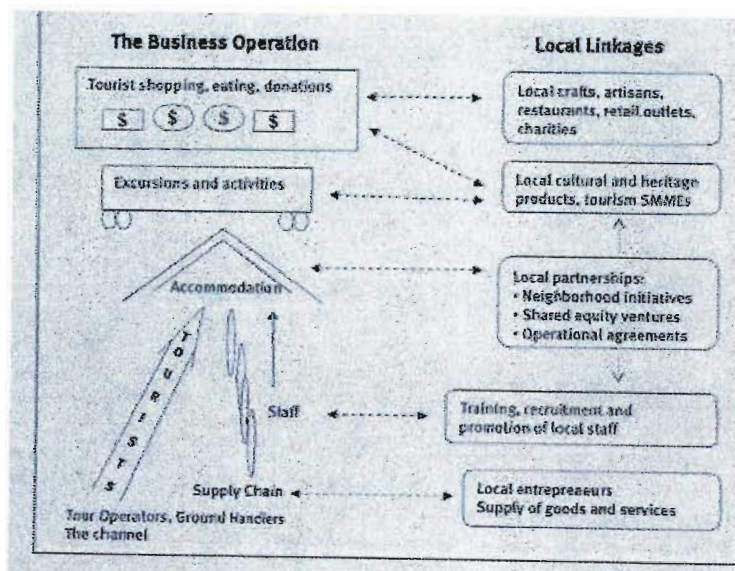


Figure 2. Model of tourism linkages into the local economy (Ashley and Mitchell 2006: 4).

However, the actual economic value of tourism is difficult to assess because the linkages and multipliers are embedded within numerous economic sectors. Consequently, tourism linkages and multipliers have not been extensively researched (Ceballos-Lascurain 1996). In general, the linkages between tourism and other sectors of a nation's economy will be

greater in larger economies than in small due to the ability of larger economies to meet a greater proportion of the industry's requirements (Ceballos-Lascurain 1996). Further, it is likely that multipliers are lower due to the relative lack of diversification of smaller economies. Thus overall economic impact of tourism can be summarised concisely in the following equation:

$$\text{Economic impact of tourism} = \# \text{ of tourists} * \text{average spending per tourist} * \text{multiplier}$$

Source: Stynes 1997: 8

While a multiplier for Ngamiland, Botswana's tourism industry has not been formalised, it is reasonable to assume it mirrors that of the Kavango region, Namibia which has similar socio-economic climate (demographics, geography, government capacity, livelihood strategies) and represents the only comprehensive research undertaken into multipliers in the southern Africa region (Suich 2006 *pers. comm.*). According to Barnes (2006 *pers. comm.*), "In Namibia, currently, economic multipliers can only be calculated at national and not at regional level...value added multipliers for the formal tourism sector (e.g. joint venture lodges) and the traditional sector (e.g. community tourism enterprises) are around 0.9 and 1.4 respectively. Thus, N \$1 of GDP generated directly by the enterprise would generate a further N \$.90 or N \$1.40 in GDP elsewhere in the economy through linkages. The informal sector multiplier is probably higher because more is spent and not saved. One might expect similar national level ratios in Botswana". This is demonstrated further by Barnes' (2006 *pers. comm.*) prediction of a lower multiplier for joint venture lodges, which typically have greater reliance on foreign sources. Mbaiwa (2003) summarizes this situation concisely: "it can also be argued that at the low level of Botswana's economic development, a great deal of capital is needed for tourism development and high levels of management in the tourism sector also contribute to tourism in the Okavango Delta being under control of foreign investors" (459).

In order to further conceptualise and contextualise the economic conditions of tourism in Botswana, and many developing nations, it is important to consider the preferences and style of the consumer, or tourist. Ceballos-Lascurain (1996) and Mbaiwa (2005) discuss the economic impacts of travel preferences in their analysis of 'enclave tourism' in the context of the dependency paradigm. Critics of the dependency paradigm claim enclave

tourism exploits the environment, micro-economy, culture and people of the developing countries in which it operates. This paradigm emerged in tourism studies when tourists began demanding a level of service, capital, infrastructure and skills which had to be imported from foreign sources such that the local (host) economy depended on outside support and/or infrastructure to maintain the product. Consider the origination countries of the majority of Botswana's tourists, such as the developed nations of Europe, North America and Australia. Over the three year period of 1999-2001, only 9,901 Botswana visited the Okavango Delta (DWNP 2000, 2001, 2002 *as cited in Mbaiwa 2005*). But the dependency on international tourists is not a phenomenon restricted to Botswana only, it is a theme common throughout developing nations and is explained as a "redistribution of wealth from north to south" (Ceballos-Lascurain 1996: 9).

From an economic standpoint, enclave tourism exacerbates weak backward and forward linkages, especially when enterprises are foreign-owned. In the case of the Okavango Delta, 53.7 percent of the enterprises are foreign-owned and 23.3 percent are jointly owned between citizens and non-. Of fifteen concessions in the greater Okavango Delta, eleven have some form of foreign involvement (Mbaiwa 2005). This degree of foreign involvement is a challenge for Botswana. It is acknowledged that part of the reason for the foreign domination is a lack of capacity within Botswana itself, specifically in the areas of business knowledge, capital, skills training, industry savvy and contacts; however, the issue perpetuates itself when linkages are weak and thereby inhibit the strengthening of local and national sectors which could support tourism enterprise development at home (Mbaiwa 2005; Gujadhur 2001). This translates to over 70 percent of Botswana's tourism revenue being repatriated to foreign countries (Mbaiwa 2002). It becomes very difficult in this situation for local residents to compete with strong multinational corporations and 'get their foot in the door'. Consequently, the situation undermines local populations and the economy remains dependent on the intellectual and physical capital of foreign partners. This in turn results in considerable leakages and less economic impact and benefit to the host economy. Mbaiwa (2005) summarises the disadvantages of enclave tourism as:

...foreign domination and ownership of tourism facilities has led to the repatriation of tourism revenue, domination of management positions by expatriates, lower salaries for citizen workers, and a general failure by tourism to significantly contribute to rural poverty alleviation in the Okavango region...[tourism] has a minimal economic impact on rural development mainly

because it has weak linkages with the domestic economy, particularly agriculture (Mbaiwa 2005: 157).

Ashley and Mitchell (2006) challenge the argument that mainstream tourism (which in Botswana mirrors tendencies of enclave tourism) is necessarily Africa's nemesis. They argue that it is mainstream tourism that "has the economic muscle to seriously tackle African poverty at scale" (1). They argue that what needs to change is the 'style' or ethics of the travel such that mainstream tourism is not exclusive of small-scale, locally-owned, authentic operations but rather promotes such enterprises through trends such as ecotourism. Ceballos-Lascurain (1996 in *Mbaiwa 2003*) defines eco-tourism as that which "promotes conservation, has low visitor impact, provides for beneficially active socio-economic involvement of local population, and promotes visitor awareness in environmental conservation" (448). Tisdell (2003) summarises it to mean tourism that is "careful to the environment.... help to conserve nature and thereby contribute to the sustainability of tourism reliant on wildlife" (83). Trends in travel as monitored by the World Tourism Organisation (WTO) show that ecotourism tends to favour developing countries, and specifically those with diverse flora, fauna and ecosystems.

The demand for the tourism product largely comes from developed countries whose travellers dictate what they will and will not buy as far as services, activities, and experience. In the case of ecotourism, the characteristics of the market preferences are correlated to the quality of the experience. So the very popularity of the destination can actually be its demise because increased densities of tourists can detract from the remote, exclusive and pristine experience which ecotourists sought at the outset (Mbaiwa 2005; Ceballos-Lascurain 1996). It can in fact destroy its own attributes by overuse or mismanagement with short-term goals such that resources are degraded and/or destroyed (Mbaiwa 2003). With specific reference to the majority of Botswana (especially WMAs), the tourism strategy has developed in an effort to reduce this cannibalism through its low volume/high cost approach. This approach aims to ensure the very exclusive experience which is desirable to the ecotourist. The Bank of Botswana (1999 as cited in *Mbaiwa 2005*) puts forth that the tourism style was adopted when it was realised that 20 percent of the tourists using permanent (i.e. not camping) accommodation were responsible for over 80 percent of the total national tourist expenditure.

The reason for the emphasis on and investment in international tourism is not only economically-driven, but also socially-based. Mbaiwa (2005) purports and it has been observed (Lepper 2004, *pers. obs.*) that the enterprises in Botswana are largely inaccessible, both geographically and financially to most local residents and most of the goods and services are procured outside the regional and even the national market. According to Mordi (1991), perceptions of wildlife in Botswana, while likely expanding with the advent of CBNRM initiatives remain such that "...[poor people] tend to exhibit pronounced utilitarian tendencies toward wildlife which they see as a means to other ends" (31). One asks then to what degree Botswana would choose to holiday in a wildlife area. While it is suggested that the option to enjoy wildlife tourism should still exist on grounds of equity, from an economic argument it may be best to emphasise the demands of the wealthiest market (the overseas ecotourist) to increase revenue. This emphasis often prices out the domestic tourist. Child (2004) asks the simple question: "who are these parks to serve?"; and continues to explain that conservation must return to the indigenous knowledge of the local people and be integrated into emerging socio-economic-environmental agendas. It supports the notion that tourism may in fact be the mechanism to achieve biodiversity conservation and tangible economic benefit (namely employment and revenue) at a local level. However, this is a complicated issue because if in fact local people do not see the benefits of conserving natural resources as opposed to consuming them, then the costs (i.e. forgone use alternatives) of conservation outweigh its benefits. The natural resources (e.g. wildlife) then are at risk from industries that may have short-term high economic returns but lower or even negative returns in the long run. In the latter case, riches may not be realised at the same level or pace as the former, but the longevity and security of the return is likely greater due to more conservative, and presumably sustainable resource use practices. Tourism, with its income-generating potential, is hoped to provide greater net benefits than alternative natural resource use options.

In Botswana, tourism takes two primary forms: consumptive (i.e. trophy hunting) and non-consumptive (i.e. photographic). As discussed in previous sections, Arntzen (2003) suggests that the valuation of the wildlife resource as regards consumptive or non-consumptive tourism is challenging because of the need to do so based on the TEV and the difficulty in assigning market values to the indirect use and non-use values. A data

set by Arntzen (2003) demonstrates the wide variety of consumptive use prices for wildlife throughout southern Africa (Table 2).

	Hunting charges on private farms in Namibia	Hunting charges in private farms in South Africa	Botswana license fees for free range hunting (non-residents)	Auction value in South Africa
Eland	7,200	2,100	2,500	1,084
Gemsbok			2,500	2,241
Hartebeest	2,400	1,800	1,000	2,153
Impala	2,700		500	1,026
Kudu	3,600	2,100	1,000	465
Wildebeest	5,400	1,950	2,500	1,447
Springbok	1,800		400	
Zebra	3,300	1,950	5,000	2,467
Lion			10,000	2,325 (2000 figure)

Table 2. Examples of different wildlife prices by species (in BWP) (Arntzen 2003: 13).

In addition, Ceballos-Lascurain (1996) cites historical studies done when the concept of TEV in tourism and conservation was in its infancy – much of which has not been updated due to the challenges of assessing TEV’s non-market values. These examples are all contributions to GDP from non-consumptive tourism. In the 1980s it was estimated that a male lion in Amboseli, Kenya was worth US \$27,000 in tourist revenue; however, by the mid-1990s it was estimated to be worth US \$500,000 to Kenya’s economy (Butler et al. 1992 as cited in Ceballos-Lascurain 1996). Western (1982 as cited in Ceballos-Lascurain 1996) estimated that an elephant herd in Amboseli was worth US\$ 610,000 per annum to Kenya’s economy and worth a financial value of the park itself to be approximately US \$40 per hectare as opposed to an estimated US \$.80 per hectare under agriculture.

When considering tourism and its possibility as a CBNRM initiative under the dominant discourse of sustainable development, it is espoused as a more sustainable land use alternative to livestock or arable agriculture and/or subsistence hunting and gathering. Governments must evaluate it against these alternatives in order to establish land and development policy which meets socio-economic and environmental agendas aligned with existing and/or long-term development objectives. Economic cost-benefit analysis considers how and if the wildlife utilisation scheme contributes to Botswana’s overall development by meeting needs of the society or not. In contrast, the financial cost-benefit analysis determines how and if the wildlife utilisation scheme is viable or not from the perspective of a user/investor (e.g. individual, community or company) (Arntzen 2003).

The two cost-benefit analyses may be different and are measured by calculations such as Net Present Value (NPV) and Internal Rate of Return (IRR). These are:

- Net Present Value: this is a measure of the discounted benefits minus the costs. If the NPV is positive, the option or project is viable because the benefits exceed the costs. The project is not viable if the NPV is negative;
- The Internal Rate of Return: The IRR indicates the discount rate at which the benefits and costs are equal. The option is viable if the IRR exceeds a percentage of return that is set by the investor (financial) or the government (economic) (Arntzen 2003).

Barnes et al. (2001b *as cited in Arntzen 2003*) offer the most extensive research and analysis of the economics of alternative land-uses in Ngamiland, Botswana. As mentioned earlier, these economic studies focus almost exclusively on direct use value (not TEV), and are therefore if anything underestimating the resource and/or land use. Barnes et al. (2001b *ibid*) provide an economic and financial comparison of livestock production, CBNRM and commercial tourism to illustrate that wildlife in general has a positive economic and financial performance over livestock production (Table 3).

	Small-scale traditional livestock production	Large-scale traditional livestock production	CBNRM in low wildlife quality areas	CBNRM in high wildlife quality areas	Commercial tourism
I. Financial analysis					
IRR	11, 5 %	6, 8%	8, 0%	8, 1%	9, 6%
NPV (Pula)	381	-52,846	3,466	20,302	229,517
NPV/ha (Pula)	52	-8	0	.25	15.94
II. Economic analysis					
IRR	10, 1%	2, 0%	24, 8%	54, 1%	64%
NPV (in Pula)	4,679	-235,621	1.8 million	2.9 million	6.6 million
NPV/ha (in Pula)	26	-37	3	36	457

Table 3. Economic returns of livestock and wildlife systems in NG (in BWP) from Barnes 2001b (*as cited in Arntzen 2003: 17*).

With particular reference to the last three columns of the table, it is determined that wildlife utilisation schemes have a greater economic return than those of livestock. According to Arntzen (2003) and Barnes (1998b) this is likely due to the availability of wildlife resources as well as the access to livestock markets. From a financial perspective, small-scale livestock production is the most advantageous, and according to Arntzen (2003), this is likely due to the diversification of products as well as relatively little reliance on actual sales and greater emphasis on trade and subsistence. Commercial

tourism is particularly favourable in both financial and economic terms but there is a large gap between the two. The immensity of commercial tourism's economic NPV is mostly due to local wages and royalty payments, which suggests that communities interested in the greatest return for their user rights engage in joint venture commercial tourism enterprises where the benefits are highly significant (Arntzen 2003). A discussion of economic and other advantages of non-consumptive versus consumptive commercial tourism is outside the scope of this paper despite its importance in the overall consideration of commercial tourism as a valuable and sustainable land-use alternative. Further evidence of tourism's contribution compared to other components of Botswana's economy will be given in chapter four.

3.3 The introduction and implementation of CBNRM in Botswana

CBNRM developed out of the mix of basic conservation and development principles discussed earlier. The fundamental assumption of CBNRM is that poverty exacerbates environmental degradation due to unsustainable practices; in cases where the benefits of conservation (e.g. sustainable use or non-use of natural resources) outweighs its costs, then a community is more likely to partake in sustainable livelihood strategies which feedback into principles of sustainable development (Mbaiwa 2003; Swatuk 2005; Jones and Muphree 2001). For example, a protected and/or conservation area in many cases can threaten the subsistence livelihoods of a rural population by restricting access to natural resources previously used for subsistence and livelihood diversification. The result can be a reduction in livelihood strategies, an increase in poverty levels and/or resentment towards the protected/conservation area, its residents (wildlife) and its advocates. However, it is proposed that if community involvement in conservation can make conservation more efficient and successful and at the same time result in positive human development then CBNRM's objectives are addressed (Twyman 1998; Ashley 2000; Rozemeijer 2003; Swatuk 2005; Jones and Muphree 2001; Mbaiwa 2005b).

CBNRM in Botswana focussed first on wildlife and second on people. This reflected primarily the concerns of biodiversity conservation and also the extraordinary monetary potential of wildlife. It was only later extended to consider the value of other natural resources such as forests, fish and veld products. The effect of this wildlife-oriented prioritisation left indigenous populations hostile and resentful, but it is actually this result which expanded CBNRM programmes to incorporate local populations and the

sustainable use of natural resources (Rozemeijer 2003b). The Department of Wildlife and National Parks (DWNP) advocated for the wildlife, while the Department of Tourism (among others) advocated strongly for community involvement in commercial wildlife utilisation. Collectively, this advocacy formed the basis for CBNRM in Botswana.

Botswana appears to have the correct underpinnings for successful CBNRM ventures. These landmarks include five successful and peaceful parliamentary and council elections, a rule-governed environment and stable macro-economy and generally a supportive society, which respects its constitution and upholds the rights of its citizens through a democratic framework (Hoon 2004). In addition, CBNRM's objectives attracted international donor agencies who favour the matrix of rural development, public participation, environmental sustainability and private sector involvement (Swatuk 2005).

Investors are attracted by the investment climate in Botswana which includes:

- The security of investment provided by the political stability and economic prosperity of one of the fastest growing free market economies in the world.
- Minimal legislative procedures.
- High foreign exchange reserves
- Liberal exchange control regulations, providing for repatriation of investment capital brought into Botswana, personal remittances and transfer of profits. The Multilateral Investment Guarantee Agency (a World Bank affiliate) provides guarantees in this regard.
- Good and modern national telecommunications network;
- Abundant and low-cost unskilled labour;
- Botswana, South Africa Lesotho, Swaziland, and Namibia are members of the Common Customs Area (Southern African Customs Union). Botswana exports have free access to these markets;
- Botswana has duty-free access to the EC markets under the Lome IV agreement;
- Botswana has a quota free and preferential access to American markets.

Source: safariweb.com (1996)

Such are the fundamental conditions and considerations of CBNRM, not only in Botswana but similar programs throughout southern African, namely ADMADE in Zambia, CAMPFIRE in Zimbabwe and LIFE in Namibia.

3.3.1 Botswana's CBNRM model

The CBNRM strategy in Botswana began in 1989 with the implementation of the United States Agency for International Development (USAID) funded Natural Resource Management Programme (NRMP).

Rozemeijer (2003) summarises Botswana's CBNRM model (Box 3):

The CBNRM Model in Botswana

- Demarcated Controlled Hunting Areas are “units of production” for a community (ies) in or adjacent to the areas;
- Community (ies) are required to establish a legally registered community-based organisation (in most cases a Trust);
- Community-based Organisation constitution and by-laws have to show proof of fair representation and accountability;
- Controlled Hunting Areas Management plans need to be drafted to show intended use and conservation of natural resources;
- 15-year Community Natural Resources Management Lease (‘head lease’) can be obtained from the Government;
- Head lease allows commercial use of resources, sub-leasing and other joint venture arrangements; while
- Head lease requires annual audit of community financial management

Box 3. CBNRM Model in Botswana (adapted from Rozemeijer 2003: 3).

The NRMP, the action plan for CBNRM policy under the DWNP, emphasizes joint ventures as the preferred CBNRM arrangement. The DWNP (1999 *as cited in Gujadhur 2001*) defines a “joint venture” as:

...a business activity undertaken between two or more partners for their mutual benefit. Partners in a community joint venture will be rural people, who have user rights to the natural resources occurring in an area, and established private sector companies that recognise an area's potential for business development (1).

The promotion of CBNRM in Botswana both solicited and required the support of private sector investors. In addition, the private sector needed the communities associated with CBNRM projects in order to gain access to remote and potentially lucrative wildlife concessions (Hoon 2004). This emphasis is due in part to the government's requirement for commercialisation in order to realise the financial benefits of the resources. The commercial element, from the perspective of the government, is vital to ensure a profit-making activity and therefore the interest and potential participation of the private sector (Cassidy 2000).

In order to define a joint venture, it is important to distinguish between a “joint venture agreement” and a “joint venture partnership” as it has far-reaching implications for the analysis of a joint venture as regards the involved stakeholders and impacts, both positive and negative. Gujadhur's (2001) summary of the advantages and disadvantages of each are listed in Table 4 and will be discussed in greater detail in subsequent paragraphs.

Approach	Advantages		disadvantages		Existing Examples in Botswana
	For Community	For Safari Operator	For Community	For Safari Operator	
Joint Venture Agreement (Sub-leases)	<ul style="list-style-type: none"> • Low risk • High community cash earnings • Few demands on time and effort • No investment costs • Employment creation 	<ul style="list-style-type: none"> • Low risk • Fewer demands on time and effort 	<ul style="list-style-type: none"> • Low transfer of skills • No decision-making power • Dependence on private sector and mistrust of private sector • Limited employment creation • No local institutions developed 	<ul style="list-style-type: none"> • Insecure tenure (with 1-1-3-5-5 system) • High investment costs with short-term tenure 	<ul style="list-style-type: none"> • All joint ventures to date between communities and the private sector in Botswana
Joint Venture Partnership	<ul style="list-style-type: none"> • Transfer of skills • Decision-making power • Employment creation • Local institutions developed • Better marketing of community-run enterprises • Combined investment costs from safari operator 	<ul style="list-style-type: none"> • More security of tenure • Accountability of community • Tap into eco-tourism market • Higher contribution and responsibility of community 	<ul style="list-style-type: none"> • High risk • Insecure cash earnings • High demands on time and effort • Requires co-ordinated and skilled management • Possible mistrust issues since community has less experience 	<ul style="list-style-type: none"> • High risk • High demands on time and effort • Requires adaptation to different business and communication skills 	<ul style="list-style-type: none"> • None to date

Table 4. Advantages and disadvantages of two methods of commercial utilisation of community natural resources (Gujadhur 2001: 8).

Within the definition of “agreement”, there are a number of possible variations in practice; however, the most common and the basis of the case study under review is such that the private sector pays a lease and/or quota fee to the communities for access to the WMAs in order to develop a commercial tourism enterprise. In addition to financial benefits, the private sector may opt to include employment, infrastructure and/or leadership benefits. In most JVAs, or “sub-leases”, the capital assets (i.e. product and infrastructure development) belong to the private sector such that it is responsible for the majority of the investment risk, including sales and marketing, and investment and exposure. Meanwhile, the communities are guaranteed a predetermined financial benefit regardless of the profitability (or lack thereof) of the private sector. In this regard, the community has little financial exposure other than possibly selecting an inexperienced private sector company with poor sales, marketing and business savvy. In other words, once the contract is agreed upon then the communities have a guaranteed amount of financial benefit. This arrangement has lower risk (both in investment but also additional earning potential) and good security. Of course, employment, capacity-building and/or environmental impacts of the enterprise remain fluid and dependent based on the private sector company’s best practices. The community is essentially leasing its natural resource base (e.g. land) in exchange for employment and revenue while the private sector invests the capital to develop and market the enterprise (Gujadhur 2001). It is argued that JVAs give communities little decision-making power over their natural resource assets and keeps the control of resources in the hands of foreign investors; however, it also maintains the least risk and greatest level of experience.

In contrast to a JVA, a joint venture partnership requires the merging of both parties' assets such that financial risk of investment rests equally. As such communities will not receive guaranteed returns and are subject to the fickleness of the market. They are partners in the risk, with respect to marketing, competition and exposure. Profits and losses are shared among both communities and the private sector and responsibility and decision-making rests with both (Gujadhur 2001). This arrangement has high variability in earning potential and high levels of investment, with low security.

All of Botswana joint venture enterprises were (at least as of 2004) joint venture agreements (JVA), not joint venture partnerships (Gujadhur 2001; Vincent 2005 *pers. comm.*). The absence of joint venture partnerships in Botswana is largely due to the lack of skills and finances from the communities as well as some scepticism on behalf of CBNRM's implementers regarding community capability (Twyman 1998). It is perhaps premature to expect such strides in the relative youth of CBNRM in Botswana. A 10-15 year implementation period is hardly ample time to initiate, implement and execute a new programme containing concepts of business, such as marketing, finance and service, which are totally unfamiliar to local operators, stakeholders and communities. Gujadhur (2001) developed a visual representation of the development of more community-controlled enterprises over time (Figure 3).

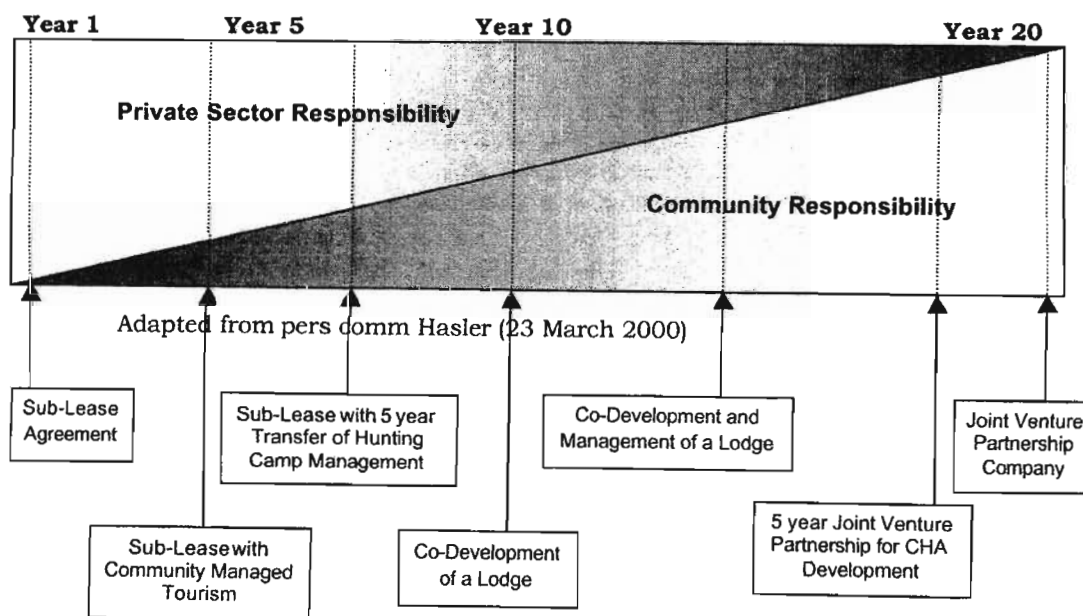


Figure 3. Continuum of CBNRM joint venture enterprises (Gujadhur 2001: 17).

Twyman (1998) challenges this emphasis and purports that joint ventures are a way of continuing to deny rights, control and power to local communities and thereby limiting their ability to manage the land independently. In essence, the joint venture option perpetuates the already existing dominance of elite and powerful groups (i.e. government, multi-nationals, private sector) to undermine and weaken indigenous and rural populations. Twyman (1998) cites an example from the Bere community in western Botswana where a study by the Ghanzi District Council (1989 *as cited in Twyman 1998*) indicated:

...that joint ventures were just one of six potential projects proposed for the area, and further joint ventures were not recommended as the best option. Reliance on external safari companies was not favoured and the report suggested that projects be small-scale and transparent to the communities (756).

Despite this feedback, joint ventures continue to be the government's most supported and explained avenue for CBNRM. Government pamphlets and incentives provide convincing rhetoric on joint ventures' potential. The government discourages and disincentivises CBOs which show a tendency toward other alternative CBNRM programmes (Twyman 1998). JVAs are incredibly important for leveraging community capacity by initially exposing communities to the tourism business, natural resource management and asset formation. It is possible that in time, due to greater experience and capital formation, the communities will be in a position to enter into either a joint venture partnership and/or community-based enterprise, which in their initial stages are typically characterised by low earning potential and high levels of investment.

3.3.2 Botswana's CBNRM programme

An understanding of Botswana's CBNRM programme necessitates a basic comprehension of the country's land classification system. The entire country is divided into 163 CHAs (Plate 1), each with specified natural resource utilisation rights (e.g. commercial photographic area, community multi-purpose in a livestock area and community area in a WMA). The land utilisation rights are then again determined by what can be referred to as a 'secondary zonation', consisting of national parks, national monuments, game reserves and the specially designated zones of WMAs. Tracts of land which were zoned as 'reserved' under the 1975 Tribal Land Policy were re-classified as WMAs under the 1986 Wildlife Conservation Policy. This re-classification delineated the 'reserved' areas strictly for commercial utilisation and conservation of wildlife

(Gujadhur 2001). The classification of WMA overrides all other classification. For example, if a portion of the CHA is zoned as WMA then utilisation must be focused on commercial wildlife use only (i.e. game capture, hunting and/or photographic tourism, commercial harvesting) and/or minimize that which is not designated as a viable commercial conservation option (i.e. subsistence veld harvesting). However, in contrast, if the CHA does not contain any land in the WMA zonation, then it may be retain its designation as multi-purpose CHA to include limited livestock production and crops, grazing and/or veld harvesting (Swatuk 2005). It is a somewhat confusing zonation system because the CHA boundaries and 'secondary zonations' boundaries may or may not match and/or overlap other land-use delineations (i.e. WMAs, game reserves, etc.). Consequently, portions of a CHA may be subject to different management parameters than others, including community leases and CBNRM. It was decided under the CBNRM programme that of those 163 CHAs, 42 would be designated for community management and therefore eligible for CBNRM programmes. WMAs are the foundation of Botswana's CBNRM programme. Therefore, WMAs specifically, are intended for management under CBNRM initiatives, which involve community participation and benefit. The intention is that livelihood activities displaced by the land re-classification are off-set due to CBNRM opportunities (Gujadhur 2001).

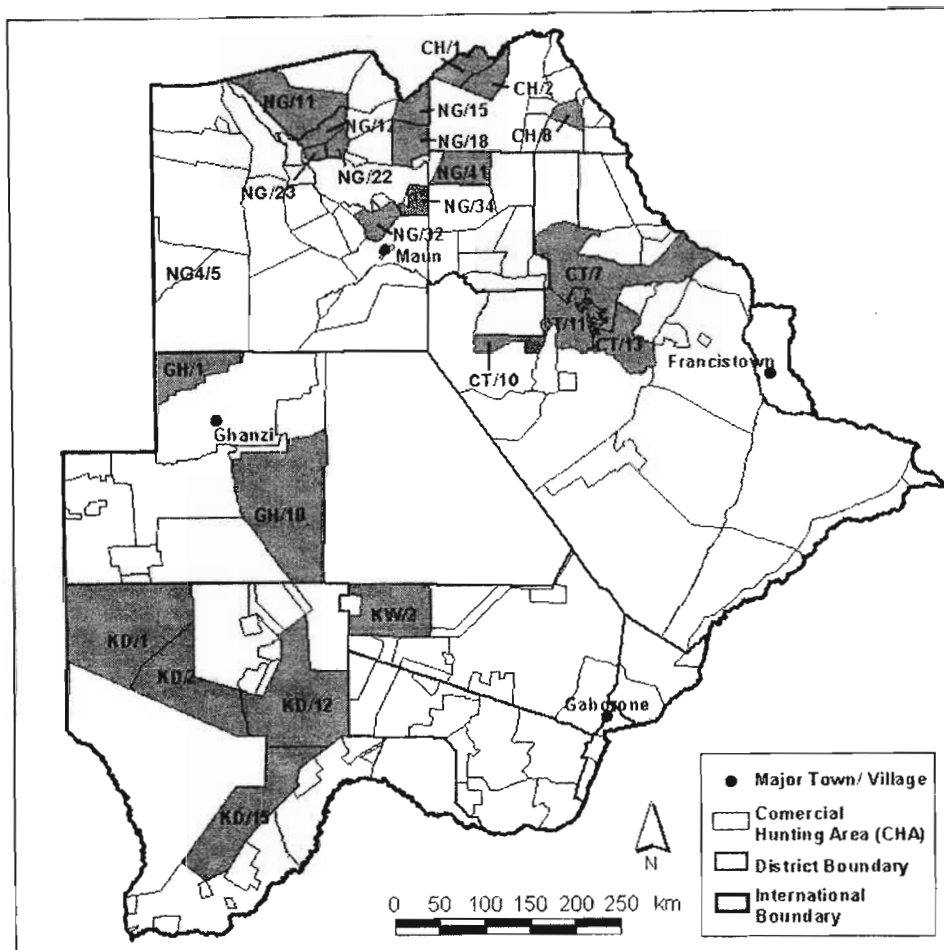


Plate 1. Wildlife Management Areas (WMAs) and Controlled Hunting Areas (CHAs) in Botswana (Swatuk 2005:103).

Once a CHA and/or WMA have been designated for community management, the natural resource management is defined by a 15-year “Community Natural Resources Management Lease” referred to as the “head lease”. In order for the head lease to be attained, the communities must first form a CBO to administer the legal and social aspects of such a tremendous responsibility. A CBO might be a trust, cooperative or association but in all cases it is required to form a legal entity to manage the land and its enterprises on behalf of the community in order to receive full user- rights to the land by the government. In the case of WMAs, it is required that communities use the land for a commercial enterprise, specific to wildlife. It is under the WCNP Act that this is required. In the event that a group of communities and/or CBO want to use WMA land strictly for subsistence purposes then a lease will not be granted and the land will remain under government stewardship and no formal rights will be granted to the communities. Therefore, the land would not be eligible for the CBNRM programmes. The land would remain as a WMA with no utilisation rights at all or limited ‘multi-purpose’ rights at the

discretion of the government with limited community involvement to ensure sustainable land management practices (i.e. limited, if any, subsistence off-take) (Twyman 1998).

Where the CBO/communities agree to undertake commercial wildlife utilisation enterprises, then the head lease is signed between the government and the CBO. It does not confer ownership of the land or its natural resources, but simply (temporary) rights to use the natural resources for 99 years, with a 15-year re-evaluation clause (Rozemeijer 2003b). The commercial wildlife enterprise can be consumptive or non-consumptive, focusing on tourism and/or veld harvesting. Some examples of CBNRM projects in Botswana in both CHAs and WMAs are: campsites and restaurants, cultural villages, safari lodges (consumptive and non), crafts, tannerys, marula harvesting and oil processing, veld products and quota auctioning. CBOs might do one or more of these projects as part of their commercial utilisation portfolio (Arntzen et al. 2003).

As previously mentioned, the aspiration for development and the need for poverty alleviation is pressing in rural Botswana. The possibility of expediting this process via commercial wildlife utilisation is alluring to communities and government. The popularity of this process is visible in the steady increase in registered CBOs in Botswana. The first formal community trust and CBNRM project began in 1993 by the Chobe Enclave Conservation Trust (Rozemeijer 2003b). In 1993, there was one CBO but by 2001 there were 67 registered CBOs covering a total of approximately 120 villages and an estimated population of 103,000 people (using 2001 census records). 20 percent these CBOs are registered in Ngamiland (Rozemeijer 2003). Of the 42 CHAs eligible for CBNRM programmes, 14 are engaged in head leases with registered CBOs (Swatuk 2005; Arntzen 2003; Rozemeijer 2003b).

The CBO is granted a head lease by the district's Land Board (government), and then the CBO initiates a tender process to select a joint venture partner (JVP) with which to engage in a joint venture agreement (JVA). The JVP is awarded an initial 5-year lease, broken into a series of "renewable" leases of 1-1-3 years. Following the successful review after the initial 5-year period, then two more 5-year leases subject to a mid-term review can be granted. The essence of the JVA is that the community supplies the land and the JVP supplies the expertise in marketing, operations and management for mutually beneficial arrangement (Twyman 1998; Swatuk 2005; Arntzen 2003).

The JVA is intended to create avenues through which communities can realise (both directly and indirectly) development and conservation objectives. In most JVAs, direct benefits to the community come from employment, lease fees, development projects and/or quota replacement fees. A summary of community level revenue from JVAs over time is summarized in Table 5.

	1993	1997	1999	2001	2002
# of CBOs in JVA or auction	1	3	5	9	14
JVA and auction income to CBOs	24,000	1.41 million	2.27 million	6.42 million	8.45 million

Table 5. Revenue to CBOs from JVAs and auctions in BWP (adapted from Rozemeijer 2003b: 3)

However, indirect benefits, which are equally if not more important, may come from non-material benefits such as those listed by Rozemeijer (2003b):

- High social status of CBNRM members and villages;
- Establishment of representative village institutions
- Strengthening of the village identity and culture;
- Local empowerment, pride development and self-confidence
- Reduced dependency on government support;
- Technology and product development
- New economic opportunities for projects in tourism and hunting
- Exposure to private sector and business thinking and management;
- Development of skills and increased accountability
- Development of better working relations with government, conservation institutions and support organizations; and
- Retaining educated and productive youth in rural areas (10).

The CBNRM programme assumes careful land management and therefore requires stakeholders to develop management plans at district and community level. Once a head lease is granted and a JVP is selected, each CBO is required to produce a management plan for its lease area (CHA or WMA) in conjunction with the management plan of the district. This management plan contractually establishes responsibility and guidance for those managing and using the land and its resources. In the case of Ngamiland, the head lease, the “Management Plan for Controlled Hunting Area Allocated to Communities in Ngamiland WMAs” (Okavango Community Consultants (OCC) 1995) establishes the Tawana Land Board’s (government) natural resource management requirements under the national CBNRM programme. It was developed with respect to national policies, strategies and objectives.

Chapter four is a brief profile of Botswana's economy, society, political and natural history. This profile gives context to the case study to be introduced in Section 5.1. The case study is the basis for further analysis of Botswana's CBNRM programme as a household poverty alleviation mechanism and livelihood diversification strategy.

CHAPTER 4: BOTSWANA: BRIEF HISTORY AND CURRENT PROFILE

4.1 Social profile

Botswana has been at the crossroads of the migration of southern Africa's peoples due to its central location in the heart of the south. Archaeological evidence of human settlement hails from as far back as c. 17,000 BC where there appears to have been continual occupation by the Bushman people, known locally as the Basarwa or San³ in the north-west Tsodilo Hills area (Michler 2004). It was from AD 190 – AD 450 that the Bantu populations from the north brought the agricultural methods of cultivation and livestock rearing. These peoples displaced many of the nomadic hunter-gatherer Basarwa. Bantu settlements then spread extensively throughout the country -- expanded by additional movements of a non-Setswana speaking Bantu group from present-day Zimbabwe. During the next 1,500 years a number of Bantu-speaking groups settled in Botswana, most notably Sotho-speaking groups from the Limpopo region of present-day South Africa, called the Bakgalagadi and Babirwa. These groups later split to form the beginnings of the three most influential Setswana-speaking groups, the Bakwena, the Bangwaketse and the Bangwato. Between 1750 and 1800, the Bangwato split and one chief moved north to the southern reaches of the Okavango Delta and established a clan. At similar time, a group of non-Setswana speaking peoples descended from the Balozi Kingdom of Zambia were moving southwest through the Chobe and Linyanti systems to reach the northern area of the Okavango Delta. These groups are the Bayei, Hambukushu and Basubiya (Michler 2004).

From 1800 to mid-1900s, Botswana social history is characterized by a jostling for resources and power with the Boers, British and Christian missionaries who continually arrived to annex large areas, establish new institutions or extract natural resources. The

³ "All these names are to varying degrees terms of abuse. Basarwa is the official designation of Bushmen/San people in Botswana and its usage cannot be avoided for that reason. The impoverishment of the people has not only been material but also cultural and political, in their loss of a history and their lack of a self-given name" (Good 1999: 201).

Batswana were resistant to Boer expansionism and managed to petition the British government for protection, which was granted in 1885, forming Botswana's present-day boundaries. Bechuanaland, as it was then called, faced another threat of annexation by Cecil John Rhodes and the British South Africa Company, but was spared in a plea by Botswana's most influential chiefs who sailed to Britain to petition the government. Stability and peace returned to Bechuanaland in 1923 with the ruling of Khama III. From that point forward until 1980, the Botswana government has been ruled by the Khama family, a prominent Bangwato clan. Independence was granted in 1966, following the design of a constitution in 1961 and the formation of the modern-day Botswana Democratic Party in 1962 (Michler 2004).

Botswana means 'the land of the Tswana speakers' (Michler 2004). According to the 2001 government population census (CSO 2001; GoB 2003) and 2002/2003 HIES census (CSO 2003), there were 1.68 million or 1.63 million (respectively) people living in an area of 581,730 square kilometres. The WB reported a population of 1.72 million people in 2004 (WB 2005). That equates to a population density of 2.9 people per square kilometre. According to CSO (2003) census, the rural population consists of 717,857 individuals or 43 percent of the total population in 2001 in 163,395 rural households, or 4.15 individuals per rural household (CSO 2003). These statistics represent an average annual growth rate of 2.4 percent compared to 3.5 percent from 1981-1991 and 4.5 percent from 1971-1981. The decline is due most likely to the prevalence of HIV/AIDS in the population (GoB 2003).

Vision 2016 was finalised in 2003 by the GoB, and established goals the country wished to achieve by the year 2016 (GoB 2003). The nation's population's rights are outlined in the Constitution of 1966 and are supplemented by the National Population Policy of 1997 which recognises that population is both an aspect and beneficiary of integrative development such that population, poverty, production, consumption and environment must be considered collectively (GoB 2003). The policy is guided by a set of principles stating:

...all human beings are born free and equal in dignity and rights; the right to development is a universal and inalienable right and an integral part of fundamental human rights; the human person is the central subject of development; human beings are at the centre of concerns for sustainable development; and that sustainable development as a means to ensure human well-

being, equitable shared by all people, today and in the future, requires that the interrelationships between population, resources, the environment and development should be fully recognised, properly managed and brought into harmonious and dynamic balance (GoB 2003: 14).

This overarching policy provides the framework for additional sectoral policies such as public health, HIV/AIDS, education, settlement and development.

4.2 Political profile, relevant policy and frameworks

Following independence in 1966, Botswana became a multi-party democracy with legislative power residing with the National Assembly comprised of 44 members, 40 of whom are elected by public vote. Botswana is a founding member of the South African Development Community (SADC) as well as a member of the United Nations, the African Union, the Commonwealth and the World Trade Organisation. The 2002/2003 Competitiveness Report by the World Economic Forum ranked Botswana as number one among surveyed African countries. The evaluation considered rule of law, impressions of corruption and the enforcement of contracts in an effort to rank countries based on overall competitiveness and possibilities for economic growth (Michler 2004).

Botswana's most recent elections were in April 2004 when Festus Mogae was re-elected as president for a second term. The country is divided into 28 districts, each administered by a District Council and District Land Board.

The CBNRM programme and emerging policy is dictated by over-arching international and national policy, which will be introduced in brief.

International Policy and Frameworks

Convention on Biological Diversity (CBD)

As a signatory to the CBD, Botswana has implemented a National Conservation Strategy (NCS), which endeavours to prioritise and meet the needs set forth by the Convention. The NCS has just released its third national report on the implementation of the CBD, and has committed to the CBD ecosystem approach as a mechanism to reach the Convention's three primary objectives: biodiversity conservation, sustainable use and equitable distribution of benefits from genetic assets (GoB 2005) (Appendix 2). In conjunction with the NCS filing to the CBD, it is in the process of finalising its National

Biodiversity Strategy and Action Plan as part of its NDP and in doing so strives to find a balance between human development and environmental conservation (Kalikawe 2001).

Okavango River Basin Water Commission (OKACOM)

Among the legislative acts of influence and security to the future of the Delta, is the Okavango River Basin Water Commission (OKACOM) mandate, signed by Angola, Namibia and Botswana in 1994 in an effort to secure research, monitoring and evaluation and an executable management plan to avoid potential impacts from poor regional development (Kalikawe 2001). The mandate is intended, through cooperative and wise management of all three countries, to address sustainable development, coordinate research and investigation, share information, prevent environmental damage and generally provide guidance to decision-making. According to Mendelsohn and el Obeid (2004) the OKACOM needs much strengthening in all capacities in order to meet its mandate.

Ramsar Convention

Arguably the most important and influential in the assessment of the global and regional significance of the Okavango Delta is Botswana's signature to the Ramsar Convention (Convention on Wetlands of International Importance) as of December 1995 (Ramsar 1999). This is the only convention devoted to a specific ecosystem, and its influence on enhancing global knowledge, valuation and protection of wetlands is commendable. The Okavango Delta was given the glory being Ramsar's first Wetland of International Importance and is Ramsar's largest site in the world (Hitchcock n.d.). Ramsar obliges signatories to formulate National Wetland Policies in conjunction with the joint agendas of both CBD and Convention on International Trade of Endangered Species (CITES) (Ramsar 1999). As a signatory, Botswana must adhere to the legal obligations set forth. Appendix 3 summarises the criteria for wetland selection.

Once designated as per the Ramsar criteria the country must: formulate a wise-use management plan, promote conservation of wetland via nature reserves, enhance scientific research, consult with other signatories as regards trans-frontier wetlands, shared water systems and species, and solicit development aid for wetlands projects (Ramsar 1999). This last mandate was among the primary motivations and obligations for the establishment of OKACOM.

In addition to the above-mentioned international policies and/or frameworks there are those which were discussed in Chapter 1 in the context of development discourse and conservation ideologies (e.g. Brundtland Report, Agenda 21).

National Policy and Frameworks

In totality, Botswana's wildlife estate is under the jurisdiction of the Department of Wildlife and National Parks (DWNP) which draws its mandate from the Wildlife Conservation and National Parks (WCNP) Act of 1992. Of the additional 24 laws and numerous policies related to the environment, a number complement the WCNP Act, namely the Wildlife Conservation Policy of 1986, the Tourism Policy of 1990 and the NCS of 1990. Due to wildlife's important role in the economic and cultural development of the country, government development programmes and policies always emphasise the sustainable and rational utilisation of this renewable natural resource. Botswana is, therefore, known for its relatively progressive conservation strategies, which are reflected in its commitment to conservation areas. In addition, the government has made provisions for its citizens when it comes to strategies to ameliorate wildlife/human conflict by initiating and maintaining water allocation schemes, disease control and livestock compensation due to wildlife damage (Twyman 1998; Kalikawe 2001).

WCNP Act of 1992

This Act gives rights to the Director of the DWNP to issue permits for the commercial off-take of wildlife (i.e. consumptive utilisation) and for the revenue from license fees to be paid to local District Councils. It advocates the complete preservation of wildlife in protected areas (i.e. game reserves and national parks) and enables gazettelement of national parks, game reserves and WMAs in which wildlife conservation and use is the primary land use.

Wildlife Conservation Policy of 1986

This is a complementary policy to the WCNP Act and converted previously classified "reserve areas and/or Controlled Hunting Areas (CHA)" to WMAs in order to restrict land uses which were not compatible with wildlife. This is the foundation policy for CBNRM and provides the legal support for the protection of WMAs with respect to the

development of commercial wildlife utilisation for job creation and revenue generation, with reference to rural populations.

Tourism Policy of 1990

This policy's main objectives are to realise the benefits of tourism to local communities via employment (mainly in rural areas), income and capacity development. It does so by advocating the participation of communities in and promoting the greatest social and economic net benefits from wildlife-based industries, namely tourism. The policy does not explicitly state Botswana's tourism strategy as low volume/high cost; however, it does place emphasis not just on wildlife but on wilderness, which implies a low volume of tourists in order to ensure that experience (Mbaiwa 2005).

NCS of 1990

This strategy solidifies Botswana's commitment to the tenets of sustainable development in relation to biodiversity conservation. In partner with the CBD strategies, the NCS endeavours to more effectively manage and utilise the nation's biodiversity through integration of government ministries and parastatal and private stakeholders.

Tribal Land Policy of 1975

This policy is intended to improve environmental conservation of rangelands by regulating, monitoring and managing overgrazing and/or activities which degrade rangeland. This policy aims to address issues of land rights, land tenure, traditional land redistribution and inequality in land allocation. In addition, it was intended to confront the income inequality issues in rural Botswana by limiting cattle ownership and land access (to avoid cattle monopolies) through a process of land categorisation consisting of communal, commercial and reserve land. It is under this Act that land may be leased to "users", including communities and thereby permitting communities to participate in and develop wildlife-based projects (ESS 2002). The Act's amendment in 1993 allowed individuals to lease land anywhere in the country (i.e. outside one's home district) provided it is developed, including water and fencing, within two years.

Community-Based Strategy for Rural Development of 1997

This strategy promotes the decentralisation of decision-making such that rural communities can be involved in initiating, developing and implementing rural

development projects. This is linked to CBNRM through the belief that it (CBNRM) requires community participation and accountable and representative decision-making which is transparent, democratic and sustainable at all societal levels (i.e. community, regional, national) (Twyman 1998).

At present, the most influential and relevant Acts and policies to CBNRM are:

- Joint venture guidelines (under review) (1999)
- Community Natural Resources Management Lease (2001)
- The WMA Regulations (draft) (2002); and
- CBNRM policy (draft) (2003)

Each of these policies and Acts advocates at least to some measure the basis of CBNRM: by conferring user rights to communities, communities receive opportunities for capacity-building, income generation and employment such that the perceived value of wildlife will increase and conservation will improve (Rozemeijer 2003b). Nico Rozemeijer (2003; 2003b), advisor and consultant to the development of CBNRM in Botswana, explains in his 2003 review of the programme's implementation that while remarkable progress has been made, there are still considerable challenges. Many of the policies and legislation are either still in draft form or lacking altogether.

Traditional Frameworks

In addition to modern political structures, Botswana does retain some traditional political institutions in order to assist with the rural populations' incorporation and representation in government. The House of Chiefs advises and supports the National Assembly specifically in rural and traditional issues. It is comprised of 15 members, eight of whom are the chiefs of the primary cultural groups and seven others who are elected by these members (Michler 2004). At a more local level, the process of a *kgotla*, or community-based traditional meeting in which to express community concerns informs national government of the opinions of rural populations. The *kgotla* is chaired by a *kgosi* or community chief. Today, chiefs (or *kgosi*) are employees of the government and receive support from police, judicial bodies and citizen committees (Bock 1998). The chief then reports the information to a Village Development Committee (VDC), a committee of the national government. The VDC is accountable to the District Councils and District Land Board and takes local issues to a national level on behalf of rural populations (Sammy and Opio 2005).

Many practitioners in the field advocate the implementation and practise of grassroots participation and it was among the ideological shifts implemented under the advocacy of sustainable development discourse as discussed in Chapter 1. This exchange and transmission of information between local and national bodies using a blend of traditional and modern institutions aims to enable the access of even the most rural and traditional communities and allow their participation to reach a national level.

4.3 Economic profile

Botswana had an annual total (GDP)⁴ of US \$5.28 billion in 2001 which increased to US \$8.659 billion in 2004, the global rank of 98 (of 184) for total GDP in 2004 (WB 2005). The economic growth rate was seven percent and the Gross National Income (GNI)⁵ per capita in 2001 was US \$3,650 (Michler 2004) and US \$4,340 in 2004 for a global rank of 83 (of 208) in terms of highest GNI globally (WB 2005). Botswana is credited as the fastest growing economy since independence, in the world (Wikan 2004). National labour markets grew at an average of 8 percent per annum during the period of NDP 8 (1996 to 2006) while the labour force grew at 5.5 percent over the same period. Consequently, overall unemployment fell approximately 6 percent as well. Trade, manufacturing and tourism are credited with the most significant contributions to the labour market (GoB 2003). A brief discussion of the most important components of the economy will give perspective to tourism's role, but the discussion is not intended to compare the benefits (or lack thereof) between the components. Of note in the relationship between the economy and CBNRM is economic diversification. The main thrust for Botswana as regards CBNRM is unashamedly two-fold: it is as much or more about alternative economic channels than any development and/or conservation objectives per se. Botswana needs to diversify its economy, which is built almost exclusively on ever-decreasing diamond reserves. Much investment and research is

⁴ "GDP is the sum of gross value added, at purchaser prices converted at market exchange rates to current U.S. Dollars, by all resident producers in the economy plus any product taxes (less subsidies) not included in the valuation of output...GDP measured in constant, local currency units provides the basis for estimates of overall economic growth" (WB 2005: 1).

⁵ "This measures GNI converted to U.S. Dollars using purchasing power parity (PPP). An international dollar has the same purchasing power over GNI as a U.S. Dollar in the U.S. The World Bank favors this measure for accurate measurement of poverty and well-being [see Section 2.2.1]; in effect, it substitutes global prices for local measured prices, thereby more accurately reflecting the real value of the good or service in question. This is especially true for non-tradable services (haircuts are the example) which are assumed to produce the same level of welfare from one country to another, but which vary widely in their measured local price" (World Bank 2005: 1).

taking place so as to advance industries which support the long-term objectives of NDP 9. Furthermore, NDP 9 advocates economic diversification and investment in sectors which have the potential to reach rural areas (GoB 2003; Mbaiwa 2003).

Botswana's primary economic components, in addition to tourism as discussed in Section 3.2, are:

Diamonds

In 1967, diamonds were discovered in Orapa (south-central Botswana) and the economy and financial stability of the nation was secured for the foreseeable future. The Orapa mine was soon supplemented by mines at Jwaneng and Lethlakane, as well as the nickel-copper mine at Selebi-Phikwe in 1974 (Michler 2004). Today, diamond mining contributes 70 percent of the foreign exchange earnings and 32 percent of the GDP. All three diamond mines are owned by DEBSWANA, which is a joint venture enterprise of the GoB and DeBeers (South Africa). This industry is credited with catapulting Botswana's economy into the global market. Botswana produces 22 percent of the world's diamonds, and this has seen its economy much success and status globally, especially in comparison to other developing nations. Present diamond reserves are estimated to exist for another 35 years only. The country's dependency on a single natural resource for the majority of its GDP and foreign exchange earnings is highly risky. In order to secure financial stability in the long-term, Botswana is increasingly exploring alternative economic components regardless of the present performance of its mining sector (Mbaiwa 2003).

Agriculture (livestock and arable)

Cattle, as in many Africa countries, are not only a commercial industry, but also a cultural underpinning. The latter carries much weight with regard to land-use decisions and means livestock agriculture will still be considered a possible land-use regardless of its GDP contribution. Until 2001, the cattle industry was the country's largest GDP earner, second only to diamonds (Kalikawe 2001). The sector contributed 45 percent to GDP at independence in 1966, but this fell to a mere 2.6 percent of GDP in 2001. In that year, it had the lowest annual growth rate of any sector. It is also had the lowest compensation per employee of any economic sector (GoB 2003). The main beef exports go to the European Union, which is the primary market and responsible for many of Botswana's land management decisions, including two veterinary cordon fences, which ring the

southern and northern Delta, limiting the transmission of disease between cattle and buffalo, but also partially restricting wildlife migrations (OCC 1995). This preferential treatment of the sector is seen in lavish spending on veterinary cordon fences, modern science in veterinary medicine and extensive borehole drilling schemes in an effort to source water in otherwise arid regions. Despite these investments, the sector has not contributed as hoped to national revenues (Darkoh and Mbaiwa 2002).

Globalisation of Botswana's cattle industry has further skewed livestock holdings. As mentioned previously, cattle ownership is heavily concentrated in the hands of urban elite. In 1980, 32 percent of the traditional sector did not have cattle, but by 1995 49 percent of the rural population lacked a cattle herd. The absence of cattle herds in the rural sector was exacerbated in 1996 by the outbreak of CLD such that 300,000 head of cattle were destroyed, representing 12 percent of the national herd (Darkoh and Mbaiwa 2002). Relatively few rural households benefit from cattle sales; almost half of them have no cattle, and less than 10 per cent of them own about half of the cattle (averaging 100 head each).

The GoB considered restocking Ngamiland with cattle; however, this was in direct conflict with its simultaneous promotion of commercial wildlife utilisation, specifically in the areas of consumptive and non-consumptive tourism. Research and work by Barnes (1995, 1998a, 1998b), Jansen et al. (1992) and Arntzen (1998) among others attempt to assess the value of this decision: livestock agriculture versus, or in complement to, wildlife-based industry. This valuation is intended to assist with land-use decisions with respect to conservation and development in Botswana, and the southern Africa region in general.

Table 6 shows the comparative values of wildlife use options in Botswana. It should be noted that this table refers to 1991 prices and it is presumed, based on the growth of the tourism industry in Botswana, that both the financial and economic IRR and NPV have increased considerably for conservation land uses (e.g. wildlife viewing and safari hunting) since 1991, in parallel with the obvious growth in Botswana's tourism economy. Barnes (1998b) illustrates that among the most valuable (in economic and financial terms) wildlife use options is non-consumptive (e.g. wildlife viewing) tourism.

Wildlife/rangeland use	Measure of financial or economic worth			
	Internal rate of return (over ten years)		Economic net present value (pula, @ 6% over ten yrs)	
	Financial (percent)	Economic (percent)	per square kilometre of land	per P'000 initial capital
Wildlife viewing	18	28	10,177	1,551
Safari hunting	16	38	694	2,230
Community use, high-value area*	26	67	589	5,225
Community use, low-value area*	15	17	22	931
Game ranching	6	7	600	44
Cattle ranching	9	2	<0**	<0
Ostrich farming	18	19	2,301,548	950
Crocodile farming	18	11	2,565,398	525

* Community-based wildlife use projects in high-value area (Chobe enclave) and low-value area (Ngwaketse)
** Net present value negative

Table 6. Comparative results from financial and economic cost-benefit models for typical wildlife/rangeland use enterprises in Botswana (1991 prices) (Barnes 1998b: 7).

Wildlife/rangeland use	Measure of allocation between activities			
	Number of enterprises	Gross value added* (pula'000,000)	Net value added* (pula'000,000)	Land required** (ha'000,000)
Wildlife viewing	182	118.27	92.52	3,891
Safari hunting	22	6.22	5.38	3,908
Community use, high***	4	1.44	1.33	1,200
Community use, low***	19	1.33	1.00	13,256
Game ranching	6	1.17	0.82	0,062
Cattle ranching	69	5.02	3.18	0,693
Ostrich farming	18	11.79	10.90	0,002
Crocodile farming	3	2.77	2.51	0,000
Elephant cropping	1	0.59	0.36	3,996
Product processing****	6	0.27	0.18	0,000
Total wildlife only	261	143.85	115.02	26,314
Total wildlife and livestock	330	148.87	118.20	27,008

* Gross value added to the national income per annum, net value added is gross value added less depreciation
** Includes 300 hectares for crocodile farming and 100 hectares for product processing
*** Community-based wildlife use projects in high-value area (Chobe enclave) and low-value area (Ngwaketse)
**** Medium-scale tanning enterprise

Table 7. Comparison of all wildlife use and/or livestock production activities (Barnes 1998b: 12).

To supplement this evidence, Barnes (1998b) compares the allocation of land uses to various activities assuming maximised investment and capacity (Table 7).

The conclusion of this study (Barnes 1998b) shows that commercial wildlife utilisation generates 78 percent of the economic value but on a mere 17 percent of the land currently allocated for that use; therefore, it is suggested that much (i.e. apx. 83 percent) of Botswana's land zoned for commercial wildlife utilisation does not make significant economic or financial contribution. Moreover, much of the land that does is concentrated in extremely wildlife-dense areas. However, if that land were to be converted to commercial livestock ranching, Barnes (1998b) finds that only 2.3 percent of that land would be a viable economic and financial option due to distance from markets and infrastructure. In other words, commercial livestock does not threaten the wildlife land-use option currently employed nor does land allocated to wildlife use detract significantly from land which could be given to livestock. Both commercial and traditional livestock production have positive economic contributions, but only in the moderate to less remote regions where wildlife resources are limited. In addition, and according to Barnes (1998b), the full economic analysis of each industry's TEV has not been measured and therefore the economic and financial tradeoffs between wildlife and livestock require further study.

Barnes (1998b) developed a hypothetical gradient from which to envisage how these interwoven land-use alternatives blend in a spatial context. The visual representation of the characteristics of the wildlife and rangeland uses provides a concise comparison (Figure 4).

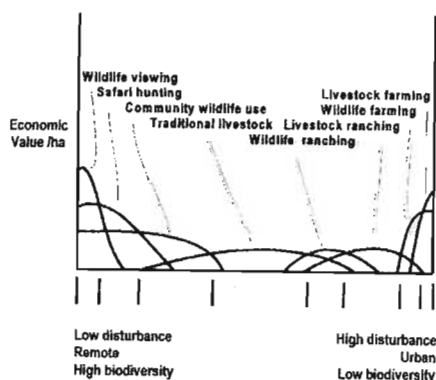


Figure 4. Land rent triangle for different land uses in Botswana (Barnes 1998b: 15).

The figure is intended to create zones where particular land uses appear as having the highest economic value. For example, wildlife viewing is most valuable in highly remote

areas where as livestock farming (ostrich and crocodile) are most valuable in highly urban and disturbed area. Barnes' (1998b) suggestion is that the series of zones will represent those land uses which are most feasible, both technically and economically in any particular set of conditions. A similar set of activities could be graphed against other variables such as negative impact on biodiversity, option or existence values. In such cases, Barnes (1998b) found that the result was a similar spatial allocation of activities, which suggested that, "there is an allocation of land, which, while maximising the combined contribution of national income, also minimises damage to non-use economic values" (13).

Ultimately, the cattle versus wildlife issue remains quite debated, even at present. Many communities are quite interested in the development of wildlife-based enterprises as a diversification strategy largely out of fear for losing all their livestock assets in another disease outbreak while other communities are reluctant to abandon a culturally significant industry (Sammy and Opio 2005). Like the GoB, Botswana are often contradictory in their desire (mostly cultural) to have large herds of disease-free cattle while also obtaining benefits from extensive and healthy wildlife populations.

Botswana has given priority to livestock cultivation over arable agriculture (Darkoh and Mbaiwa 2002). A mere five percent of Botswana's land is suitable for cultivation and only 1,300 hectares of arable land is cultivated (UNDP 2006). Therefore, commercial arable agriculture is a not significant sector in Botswana, but subsistence agriculture does play a role in the economy, especially in rural communities. It is the primary activity of the majority of the Delta's communities and its impacts both economically and environmentally are relatively minimal due for the most part to low regional population and access to lucrative markets (South African Regional Poverty Network 2005). Crops include mixed sorghum, millet and maize. Fertilisers, compost and manure are used minimally (Mendelsohn and el Obeid 2004).

4.4 Natural history and resources

Botswana is located in sub-Saharan/southern Africa, north of South Africa, east of Namibia, west of Zimbabwe and south of Angola and Zambia (Plate 2). Its boundaries encompass 581,730 square kilometres of land-locked country of which most is arid to semi-arid. At present, 18 percent of the country is in national parks and game reserves,

and an additional 22 percent is set-aside in WMAs (Kalikawe 2001). These ‘secondary zonations’ constitute the majority, if not all, of Botswana’s protected areas network and commercial wildlife industry (specifically tourism).



Plate 2. Map of Botswana (Source: www.worldatlas.com/webimage/countrys/africa/lgcolor/bwcolor)

Its crown jewels are the greater Chobe National Park and Moremi Game Reserve, the latter of which has a rich and proud history to the Batawana. Due to indiscriminate hunting and concerns over preserving traditional hunting grounds hailing from over the last few hundred years, the Batawana ethnic group voluntarily proclaimed the reserve in 1963 to honour their late leader Moremi III. The Game Reserve has been enlarged on numerous occasions over the last 40+ years to cover approximately 5,000 square kilometres and 30 percent of the Okavango Delta proper, the largest inland delta in the world and Ramsar’s global flagship wetland⁶ (Michler 2004). The Kalahari Desert makes up 77 percent of the land area and the Okavango Delta is between 10,000 and 18,000 square kilometres. Botswana does not have its own comprehensive classification system for categorising protected areas, and thereby relies on that accorded by IUCN (Table 8).

⁶ The Ramsar Convention is an international treaty for the conservation and sustainable utilization of wetlands, which aims to stem the progressive encroachment on and loss of wetlands now and in the future, recognizing the fundamental ecological functions of wetlands and their economic, cultural, scientific, and recreational value (Ramsar 1999).

2003 Protected Area (PA) Information	Botswana
Total Land Area	58,173,000 hectares
IUCN Category I and II	4,551,000 hectares
IUCN Category III, IV, V	5,947,000 hectares
IUCN Category VI (includes WMAs)	6,993,000 hectares
PAs as a percent of total land area	30.2%
Number of PAs	71
Number of Areas >100,0000 hectares	31
Number of Areas >1 million hectares	3
Wetlands of International Importance (Ramsar Sites)	1 (of 6,864,000 hectares)

Table 8. Extent of Protected Areas, Botswana (World Resources Institute 2003).

A brief discussion of Botswana's natural history will focus on this geographic feature for purposes of this study. The Okavango Delta is the result of a unique set of environmental conditions and processes, which occur in the countries of Angola, Namibia and Botswana, and have resulted in the largest inland delta in the world and the fourth largest international river basin (Hitchcock n.d.). The high elevation and high rainfall area of Angola's highlands provide the catchments for the Delta ecosystem. The catchment starts at an elevation of approximately 1,550 metres and descends 300 metres over a course of 350 kilometres. Rain is received in the highlands in the months of November to March, and then percolate south channelled by a network of rivers, crossing the Caprivi Strip in Namibia and eventually entering the Okavango Delta of Botswana through the 'panhandle' (located just south of the Caprivi Strip in Namibia and to the north of the Okavango Delta proper (i.e. the topographical feature itself)) in the months of April to September. While this descent can be steep at times, it is its most gradual in the Delta proper with a drop of a mere 61 metres over 250 kilometres (Plate 3). Upon entering Botswana where the slope of the land slowly decreases the result is a natural alluvial fan spreading water across a vast area and fragmenting the landscape into a mosaic of diverse ecosystems (Plate 4). This literal oasis in the Kalahari Desert is the sink for an annual average of 9.4 cubic kilometres of water from the depths of Angola's highlands (Mendelsohn and el Obeid 2004). In addition to in-flows of water, an average of 3.2 cubic kilometres enters via precipitation; due to its location in the heart of a desert, over 96 percent of all water is lost to evapotranspiration (Ross 1987).



Plate 3. Satellite photo of the Okavango Delta in relation to the neighbour countries: Angola, Namibia, Zambia and Zimbabwe.



Plate 4. Satellite photo of Okavango Delta at peak flood season, July.

The 18,000 square kilometre Delta includes all wetland categories (perennial swamp, seasonal swamp, seasonally inundated grassland, intermittently inundated grassland and rainwater seepage pans) and all dryland categories (woodland, savannah, grassland, forbland) (OCC 1995). Much of the ecological dynamism is based on the variable disturbance and land formation process, which results from the constant movement, magnitude and changing course of water. Each year, depending on precipitation levels in Angola, the flood can be vast or narrow, but its annual impact is not due strictly to this factor. The irregular and unpredictable variation and breadth of in the flood supplemented by four environmental factors as well: wildlife perturbations, local rainfall, magnitude of flooding the previous year, and evaporation.

As a function of high primary productivity associated with consistent water supply, sunlight and climate conditions, coupled with intermediate disturbance, and despite the oligotrophic nature of the soils, the Okavango Delta represents a significant contribution to biodiversity (Hannah et al. 1988). In the May 2005 report to the CBD the National Conservation Strategy Coordination Agency (NCSCA) summarises Botswana’s contribution succinctly:

These [Zambeziian Flooded Grasslands, Miombo Woodlands and the wetland habitats] eco-regions are globally important because they support a rich diversity of birds as well as large populations of elephants, buffalo and lechwe...vast wilderness areas support high densities of mammals making Botswana one of the last refuges for species requiring large areas e.g. elephant and wild dog (GoB 2005: 4).

According to the NCSCA report (GoB 2005), the biodiversity can be assessed with the following statistics highlighted in Table 9:

Classification	Species totals
Higher plants	2151 – 3000
Endemism (as per Red Data Book)	15
Red Data Book	43
Endemism to southern Africa (per Red Data)	17
Number of threatened species	21
Mammals	147
Red Data Book	111
Birds	570
Fish	99
Reptiles	131
Endemic	3
Amphibians	34
Invertebrates	“Extraordinary, but undescribed” (4)

Table 9. Biodiversity statistics, Botswana (GoB 2005).

To date, there has been very little human disturbance or management of the Okavango Delta, and therefore it is among the world’s most pristine and valuable natural resources. However, as the pressure on natural resources mounts from livestock, agriculture and water development, the Delta is in no way exempt from pressures of land-use and development (Hitchcock n.d.).

Threats to the water resource of the Okavango Delta

The Okavango Delta is the final stop on a water system that crosses through three countries: Angola, Namibia and Botswana. Consequently, there are considerable concerns over land and water use decisions taken outside of Botswana's borders, which may ultimately have a negative effect on the Delta downstream.

Angola does not have a water shortage nor does it divert significant amounts of water from the highlands; however, with the increase in Angola's political stability and the likelihood of international and domestic investment in commercial agriculture, as well as trade agreements with surrounding countries, the diversion of water is a likely possibility. Angola may engage in water trade with Namibia, or develop significant irrigation schemes. In addition, the increase in pesticide use related to agricultural development could potentially change the chemical composition of the water and ultimately result in eutrophication downstream (Hitchcock n.d.; Mendelsohn and el Obeid 2004; South African Regional Poverty Network 2005).

Similarly, Namibia, with very little fresh water in its boundaries, is considering the construction of a hydroelectric dam at Popa Falls, in the Caprivi Strip (near Rundu). This development will harness water as it departs Angola, but before reaching Botswana, whereby there would be reduced sediment and water load as well as a change in water velocity. These three manipulations of the water cycle may seriously alter the variability and attributes of the water as it enters the Delta by changing deposition, increasing erosion and/or inundation levels (Hitchcock n.d.). At present, none of these developments is imminent (however, the Popa Falls weir is under serious consideration), and is somewhat restricted by an agreement between the three countries (OKACOM) to recognise and manage decisions with respect to the Okavango as a system, not strictly in isolated parts (Kalikawe 2001).

As discussed, Botswana has a very low population; however, it is estimated to increase at 2.4 percent per annum. Like many developing nations, it is therefore necessary to improve human development while simultaneously protecting the environment (CSO 2003). Rural to urban migration is on the rise as formal market economies emerge. In response, Botswana, a country that is effectively a desert, may have to turn to its greatest water resource in hopes of meeting the needs of its own people. The development of a

number of boreholes, which capitalise on flush ground water sources, has offset a water crisis for the time being and relieved pressure on the Delta. However, if Botswana wishes to develop a more prominent and extensive agriculture sector (unlikely due to ecological conditions) or if ground water becomes scarce, then it is possible that the Delta will be the next likely source of clean and ample water. Of greater concern is the threat to the Delta from the livestock industry. It is more than likely, should the government elect to heavily promote the cattle industry, that it will turn to the Delta as the primary source of sustenance for the industry. However, with the increasing significance of tourism to Botswana's economy and its dependence on the Delta as its foremost attraction, the Delta's future is becoming more secure. Prioritisation of tourism is minimising the likelihood of a re-emphasis on the cattle industry.

Given that development (i.e. improvement of basic needs, education, health care, empowerment, access) is necessary, then tourism is considered among the least environmentally damaging development strategies for its progress. However, development requires careful planning. At present, Botswana's tourism industry is bound to minimal legal constraints as regards size, scope, and type of facility. While there are existing quotas for consumptive tourism, there appears to be little if any scientific basis for the quota; and therefore, questions of sustainability arise (Joubert 2005 *pers. comm.*). Similarly, the non-consumptive tourism industry is subject to little regulation such as obligatory Environmental Impact Assessment (EIA) procedures. If the industry continues to grow unabated and without control mechanisms, then Botswana risks the health of the resource upon which the industry is built - pristine wilderness areas like the Okavango Delta. The GoB must responsibly oversee, limit and provide support for tourism development which ensures the maintenance of its resource.

CHAPTER 5: STUDY AREA

5.1 Regional case study

5.1.1 Ngamiland WMAs 22/23

The focus of this study is a CBO and its member communities which were selected by the GoB as the recipients of a 'head lease' for commercial wildlife utilisation under CBNRM in Ngamiland (NG) WMAs 22/23. NG WMAs 22/23 are located in the northern reaches of the Okavango Delta. More specifically, they are located due east of the point where the 'panhandle' terminates and begins to spread into the expanding delta (Plates 5 and 6).

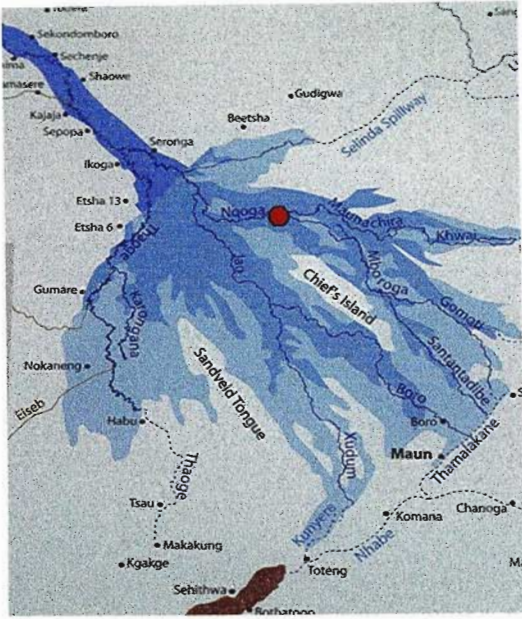


Plate 5. Okavango Delta: the panhandle ends at apx. Seronga and Delta's alluvial fans ends at apx. Maun. The location of NG 22/23 (red dot) (Mendelsohn and el Obeid 2004).

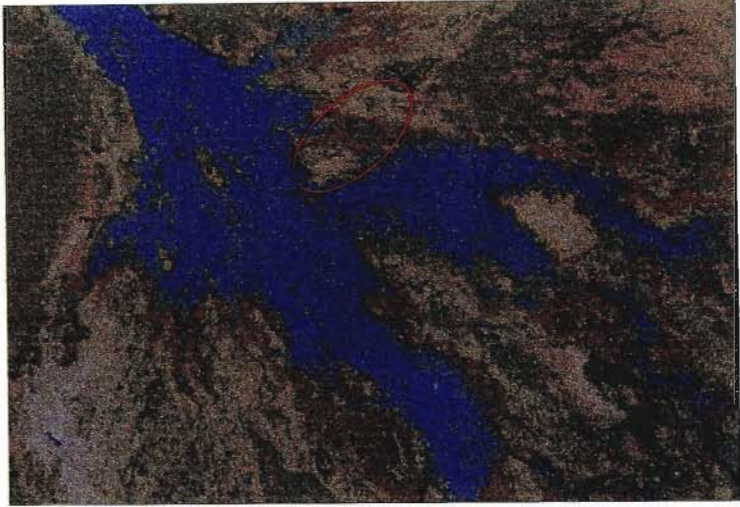


Plate 6. Satellite image of the Okavango Delta in flood of 2000. General location of NG 22/23 (ESS 2002).

There is some disparity in the location of NG 22/23's exact boundaries due to the northern buffalo fence and shifting permanent channels of the Delta; however, it is generally agreed that NG 22 is approximately 573 square kilometres and NG 23 is approximately 358 square kilometres in extent (ESS 2002; OCC 1995). Each WMA is characterised by its remoteness and inaccessibility. They are reputed to be the "most pristine and least developed in Ngamiland" (OCC 1995: 125). They are bordered on the south by the esteemed Moremi Game Reserve; on the south-east by NG 21 (a non-consumptive utilisation WMA); on the north boundary by NG 12 (a communal livestock CHA); on the eastern and north-eastern sides by NG 16 and 20, respectively (both multi-purpose CHAs). Road access is limited and very treacherous from all directions. There are two airstrips, one in each WMA and there are traditional mokoro (dugout canoe) routes from the panhandle to the WMAs via the Nqoga and Manuchira channels. This area is considered one of the most unstable hydrological areas due to the variations in annual flood levels, channel switching and wildlife disturbance. Both areas are Batawana tribal territory and are administered by the Tawana Land Board of the NWDC in the district of Ngamiland, Botswana.

5.1.2 The communities allocated NG 22/23

In the early 1990s when the GoB implemented its CBNRM programme, it identified communities to whom it could offer head leases due to traditional or ancestral land rights. The basic principle in the selection process instructed that WMAs and CHAs would be offered to those communities located in that particular area; however, in the case of NG 22/23, there were no resident communities within their boundaries; and therefore, the selection process was particularly complicated and ambiguous. Records indicate that there have been no human settlements in these WMAs for at least the last 30 years, with the exception of transient swamp dwellers (mostly Bayei people) en route to trading posts along the Delta's channels and islands. A map from 1922 when there were no, or limited tsetse flies in the area indicates a proliferation of villages on the mainland near Seronga with some arable agriculture and cattle rearing in NG 22/23; however, with the serious proliferation of tsetse flies, settlements fled the Delta and the only land use between the late 1920s and mid-1960s has been subsistence hunting and gathering on a nomadic basis (OCC 1995). Further, activities and settlements in NG 22/23 were always limited due to distance from major population centres and markets -- exacerbated by accessing and traversing the land via the network of seasonal and shifting channels. From the 1960s, after the two WMAs were ear-marked for conservation-based activities only, they were used primarily for consumptive tourism, managed by a private sector company. By the 1990s, when Botswana embarked on its controversial tsetse fly eradication program, conservation policy was already in place such that NG 22/23 were no longer eligible for re-settlement. As a result of minimal to no human impact, their pristine nature is exemplary and has been guaranteed to the present day, but it in turn complicated the determination of their allocation to local communities.

The selection of the communities to which the NG 22/23 land would be allocated under the CBNRM policy was a lengthy one – consultation included, but was not limited to: OCC, District Officer of Lands, District Commissioner's Office, Ngamiland District Land Use Planning Unit, Northwest District Council, Tawana Land Board, Batawana Tribal Administration, and local communities. Opinions of the private sector, safari operators and general public were solicited as well. Through a number of *kgotlas*, consultations, workshops and policy meetings with these stakeholders, it was determined that the five communities which would receive the rights to the NG 22/23 WMAs would be Seronga, Gunotsoga, Eretsha, Beetsha and Gudigwa. These communities, recipients of the head

lease, are located in NG 11/12 on the northeast finger of the Okavango Delta; and are approximately 700 kilometres or 45 minutes by air from Maun (the tourism and commercial hub of Ngamiland). This arrangement whereby the selected communities do not reside within the boundaries of their partner WMAs is unique such that the revenue generated from NG 22/23 is used to support rural development in adjacent CHAs and their communities. Plate 7 illustrates the locations of the communities in relation to their respective WMAs, NG 22/23.

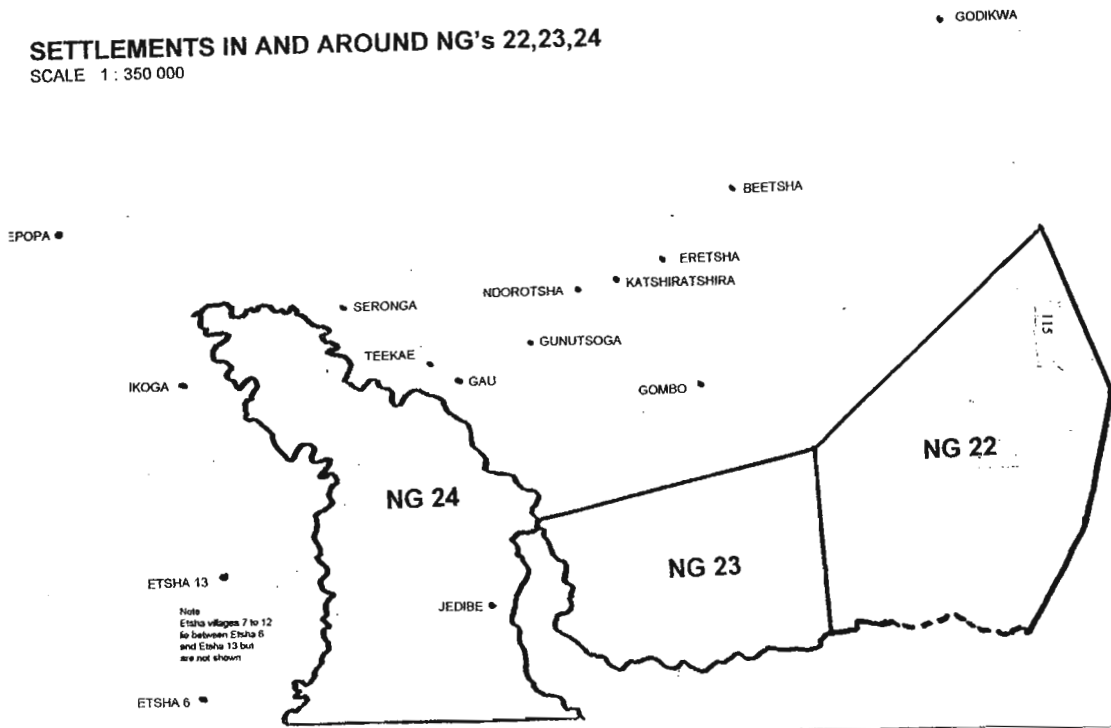


Plate 7. Location of the NG 11/12 communities in relation to WMAs NG 22/23. (OCC 2002:115)

The NG 11/12 communities are part of the NG West District 71 as per the spatial delineations of the CSO (2001) 2001 population census. The population of the district, a region considered primarily rural is 49,642; 53 percent of whom are female and 47 percent are male (CSO 2001). There are approximately 10,184 households which translates to a mean of 4.87 people per household compared to the CSO (2003) survey which indicates a mean of 4.39 people per household in rural areas. This is only slightly higher than the national mean of 4.15 people per household (CSO 2003). The population of the five specific NG 11/12 communities is estimated at approximately 7,779 spread along the north-eastern finger of the panhandle (CSO 2001) (Table 10).

Community	Male	Female	Plus Localities	Total Population
CSO CENSUS (2001)				
Seronga	683	958	1402	3043
Beetsha	350	410	2072	2832
Gunotsoga	221	285	50	556
CSO TOTAL				6 431
ESS (2002)				
Gudigwa				732
Eretsha				616
GRAND TOTAL				7 779

Table 10. Estimated population of NG 22/23 recipient communities located in NG 11/12 (CSO 2001; ESS 2002).

The PDL statistics provided by the CSO (2003) study indicate that 22,339 of District 71's population is under the household PDL and 17,871 live on less than US \$1/day. With particular reference to the NG 11/12 communities, the conservative total population is estimated to be approximately 6,431 in the communities of Seronga, Gunotsoga, Beetsha and localities (CSO 2001). If extrapolated using the PDL figures for rural areas supplied by the CSO (2003) HIES survey then it can be deduced that at least 2,894 individuals live in households below the PDL and at least 2,315 are under the US \$1/day line.

Due to the communities' location upstream from the Delta's alluvial fan, the area is a critical point of evaluation as regards land-use planning and conservation. Localised activities such as agriculture, subsistence hunting, migration and water utilisation undertaken in these communities "trickle-down" and potentially impact environmental health of the greater Delta ecosystem. In addition, most of the communities border on thriving wildlife areas within the tracks of traditional wildlife migration routes. Animal populations move fluidly north to south (and return) between the heart of the Delta and the Caprivi and Chobe ecosystems in response to resource availability (Hoon 2004). The presence of settlements, veterinary cordon fences and/or hostility toward wildlife on the part of indigenous people can influence wildlife movements and resource access thereby affecting ecosystem processes and health. Consequently, community investment in conservation is particularly crucial to ensure success.

5.1.2.1 Demographics of NG 11/12

While the records indicate the presence of Bushmen peoples as far back as BC 20,000 and Bantu-speaking settlers as far back as AD 190, the ethnic groups presently populating the northern Okavango Delta region of Ngamiland are representative of the region's ethnic

composition of the last 150 years (Michler 2004; Bock 1998). The groups hail from Angola, the Caprivi Strip of Namibia, and Zambia (Bock 1998).

The NG 11/12 communities consist of three main ethnic groups: the Hambukushu, Bayei and Bukakhwe (also referred to as Basarwa or San). Seronga and Gunotsoga are predominately Bayei and Eretsha and Beetsha are predominately Hambukushu while Gudigwa is primarily Bukakhwe (Bock 1998; ESS 2002; ACORD 2002). Each of these groups has their own language and cultural identity (Bock 1998). The Hambukushu are of Bantu descent and are traditionally pastoralists, focused on the cultivation of millet and sorghum mixed with fishing and subsistence hunting. They are well-known rainmakers who were often deferred to for counsel and wisdom; and from that position exerted great influence on other ethnic groups, especially the Bukakhwe. Hambukushu received payment in cows, ivory and oxen, which made them extremely wealthy and prominent in the northern Okavango Delta (Mendelsohn and el Obeid 2004).

The Bukakhwe are of Bushmen descent and traditionally led a semi-nomadic lifestyle subsisted by forest and riverine resources for hunting and gathering (Plate 8). Nationally, they have been subject to much persecution starting with their servitude to wealthy cattlemen in the 19th century and continuing with the displacement of traditional populations in the Central Kalahari due to diamond mining (Good 1999). This culture of persecution penetrated their ethnic history in Ngamiland as well.



Plate 8. The Bukakhwe (Bushmen) of Botswana (Source: http://www.tribes.co.uk/countries/botswana/the_kalahari_of_the_san_bushmen.html)

The Bayei, also of Bantu descent, were the first to settle the Delta and are famous for their basket weaving and mokoro poling of the Delta's extensive network of channels (Plate 9). They are considered a peace-loving people who traditionally took part in basic

subsistence livestock rearing as well as elaborate fishing schemes along the Delta's waterways.

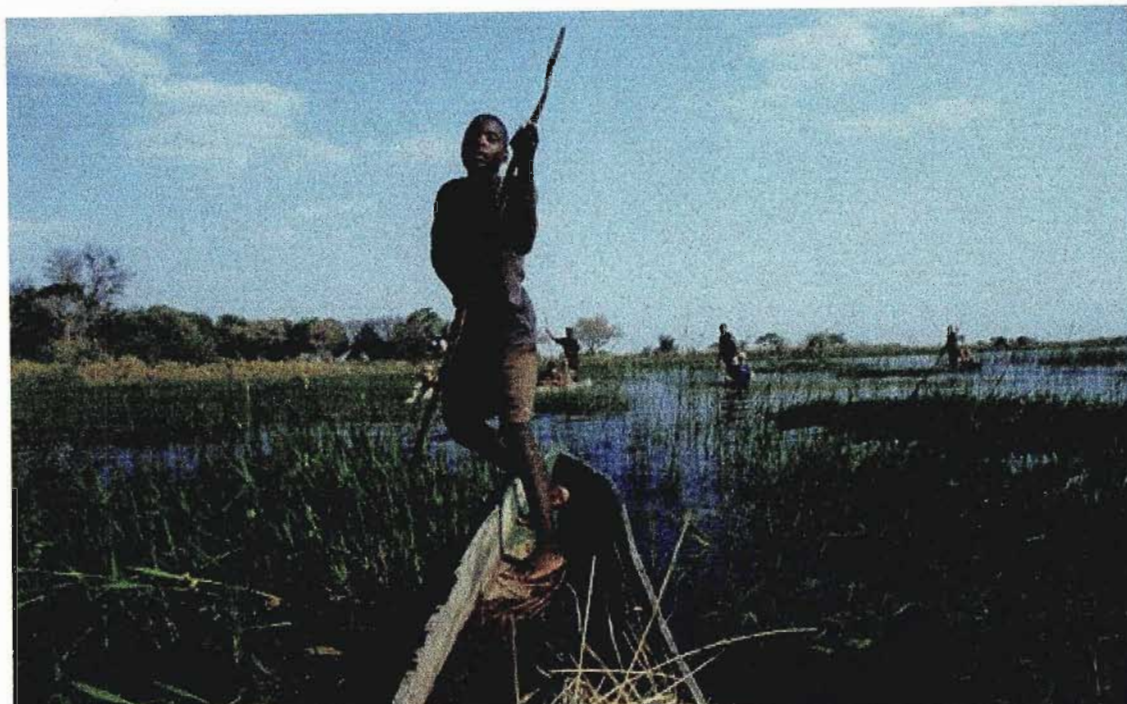


Plate 9. Bayei mokoro peler of Botswana

A study by Bock and Johnson (2002) is perhaps the most comprehensive on these otherwise understudied ethnic groups. The authors found that all of these ethnic groups live in patriarchal extended family homesteads despite significant matrilineal influence. Polygamy is common among the Bantu groups and rare among the Bukakhwe, but for all groups it is common for a man to marry and have children by his thirties. However, due to the heavy Batawana influence over the last 200 years, most of the panhandle's ethnic groups' traditional ways are being influenced by the Batawana's tradition of patrilineal preference. This is also reflected in Botswana Customary Law which is increasingly overriding traditional values with regard to marriage and family.

The five communities of NG 11/12 are intended to provide coverage for the representation and advocacy of smaller surrounding cattle posts and settlements. However, it should be noted that there are differences among the settlements with regard to ethnicity, culture, social, economic and religious aspects and these variations can make working together challenging. It is noted that the CBNRM programme may not be addressing these variations adequately by assuming homogenous communities with similar interpretations and needs (ACORD 2002; Rozemeijer 2003b; Hoon 2004).

5.1.2.2 Microeconomy and livelihoods of NG 11/12

The people of NG 11/12 make their living according to the common strategies the majority rural Batswana as presented in previous sections (section 2.2.1.1.: Livelihoods). Primary livelihood strategies are livestock rearing (although this has grown less prevalent following CLD outbreak), subsistence agriculture, hunting and gathering, fishing, collection and sale of veld products such as thatch, grass, marula and reeds. In some cases, diversification includes small shops (bakeries), labour migration (remittances) and curios (ACORD 2002).

Bock and Johnson (2002) in a study of the Delta peoples, specifically in communities between Mohebo and Seronga (the panhandle), found there to be virtually no cash economy. Cash that was received via remittances or cattle sales is used to purchase goods in Seronga or Shakawe, the nearest trade centres. The authors found that the majority of this (mostly male) migratory labour occurred in the mining and tourism industries or as labourers in Maun, the Delta's main economic hub. The remittances which were received at a household level formed a significant component of the economy as the only steady source of cash. According to Bock (1998) and Bock and Johnson (2002), the women and children remaining in the villages utilised a diverse set of livelihood strategies such as grain processing for flour, fishing and subsistence food gathering.

The characteristics of the Ngamiland agricultural sector are summarised by Barnes (1998b) as: "low-input, low-yielding, small-scale, crop production drawing on draft power from the livestock. Livestock are mostly cattle with some goats, and crops are mostly millet, sorghum, and/or maize...most of the values produced are consumed by the household, so that these activities tend to be cash consuming rather than cash earning" (5). Two studies (Bailey 1982 and Fling 1986 *as cited in Barnes 1998b*) in Botswana indicate that herd sizes between 30 and 50 were the minimum from which the household maximised its efficiency in relation to inputs. Traditional livestock was concluded to be a positive land use at a household level but low to moderate per unit of land as an economic use value (Barnes 1998b). Therefore, the impact of CLD on households in Ngamiland was high, and households demanded some sort of alternative strategy for meeting basic needs. The alternative activities exist to supplement what is considered a low yield agriculture region (about 200kg/hectare) -- this is not a sufficient yield for complete subsistence living. Consequently, livestock has become relatively minor cash revenue

source for households since the mid-1990s. Barnes (1998b) further explains that it has been difficult to value the traditional agriculture sector because of its characteristics as small-scale, non-market and subsistence. Valuation has effectively only occurred in relation to its contribution to a household's basic needs.

CBNRM intends to respond to the need for livelihood diversification in rural areas. CBNRM, specifically in the form of tourism as commercial wildlife utilisation, is intended to be an additional livelihood strategy at minimum and potentially an alternative strategy in areas where CBNRM programmes may have displaced access or rights to a previous livelihood strategy (Twyman 1998; Ashley 2000). It is among the strategies intended to have both immediate poverty alleviation attributes and long-term reduction potential. It is concluded by Barnes (1998b) that in fact CBNRM (as tourism) does contribute valuable cash and is complementary to livelihood strategies already employed such as livestock agriculture and subsistence crop production (Barnes 1998b).

5.1.3 The NG 22/23 JVA

Once the recipient communities from NG 11/12 were selected, the formation of the CBO, the Okavango Community Trust (OCT) began in 1993 as required to procure a head lease from the DWNP. The process consisted of consultation meetings with the communities by the NRMP and the DWNP whereby the concept of CBNRM was introduced. The concepts were explained in a series of seminars attended and presented by Tawana Land Board, DWNP, OCC, regional members of Parliament and an attorney representing the OCT. But the OCT's formation was not harmonious – it neglected community participation and left community members mis-informed and without a voice. This set the CBNRM programme off poorly and introduced feelings of reticence, mismanagement, confusion and alienation (ACORD 2002; Gujadhur 2001; Lepper 2004 *pers. obs.*). Twyman (1998) offers extensive commentary on this very issue – the lack of community participation and objective presentation to the NG 11/12 communities. In her research, she argues:

...the main speeches in the consultation meetings are used to introduce the key components of the community-based projects as well as the legislation behind these changes. Though the emphasis is towards empowerment and community control, there are strong undertones of subordination and manipulation...such speeches confuse the aims of the project, juxtaposing the agency of communities to the superior agency of the safari companies as wildlife managers (750).

Twyman (1998) criticises the style and execution, or even the absence of, Participatory Rural Appraisal (PRA) exercises meant to facilitate the linkages between formal agencies and local communities. She concludes that, “the core elements of joint analysis and control over decision-making are withheld under the mask of participation...by affirming the people’s subordinate position, the DWNP assert their own superior status” (752).

Despite the poor process, the OCT was formally registered in 1995. Its constitution was later written by the OCT’s attorney and lacked community input at a grassroots level. The OCT is intended to manage and utilise the land on behalf of its representative communities as well as maintain sustainable benefits to its citizens, specifically in the areas of vocational training and employment. In addition, it states its objectives as:

- To utilise the assets of the Trust to assist in the general upliftment of the community.
- To educate the community on the importance of wildlife resource conservation.
- To assist the DWNP in supervising the leased areas and ensure that the game in these areas are protected and properly managed (ACORD 2002: 9).

In order to carry out its duties, the OCT relies on a complex organisational structure consisting of a Board of Trustees (11) made up of two people from each of the five communities’ Village Trust Committees (VTCs), a group of 12 elected members in each community (for a term of three years). The 11th person on the Board is from the private sector JVP (Modiakgotla and Sainsbury 2003). The office term of Board members is one year. There is a minimum of four scheduled meetings per year and members are paid a sitting allowance for their participation. GoB supports the OCT and VTCs in the form of the Village Development Committees (VDCs). VDCs assist the VTCs with decisions regarding allocation of Trust revenue and resources for local rural development within NDP 9 objectives (ESS 2002).

The OCT’s first formal JVA started in 1996 with Micheletti Bates Safaris (MBS) as the JVP for consumptive tourism and followed the CBNRM 1-1-3 lease tenure system with a renewed 5-year contract granted in 2001. Between 1996 and 2001, despite the requirements of the NRMP and relevant national policy, the OCT did not have a management plan in place for NG 22/23. However, ACORD (2002) notes that it may be unrealistic to expect communities/CBOs with little formal wildlife management experience to develop a technically and operationally extensive document. Regardless,

this step was skipped and it resulted in less accountability and stewardship for NG 22/23 than was intended as well as poor objectives and goals. This possibly has long-term consequences for the viability, acceptance and sustainability of this CBNRM programme both at a regional and national level. In addition, it further exacerbated feeling of disconnectedness between the communities and the OCT while giving the OCT no formalised guiding principles, objectives or understanding upon which to build its agreement with the JVP. The absence of a management plan has caused substantial confusion among stakeholders, and is credited with creating animosity, time delays and friction (ACORD 2002).

Perhaps partially as a result of the absence of a management plan, MBS subcontracted to Okavango Wilderness Safaris (OWS) for the introduction and operation of non-consumptive tourism. The lack of the formal management plan allowed MBS to hand-pick a subcontractor with little, if any, consultation with the OCT. Between 2001 and 2004, NG 22/23 and its operations transitioned from primarily consumptive to non-consumptive tourism; and by 2004, OWS was the primary (if only) operator in the WMAs and non-consumptive tourism was the only commercial wildlife utilisation in practice. This is to say that consumptive tourism was no longer taking place and the relationship between MBS and OCT had been dissolved such that the relationship was continued strictly between OCT and OWS. How, why or if this took place within the requirements of CBNRM policy regarding required management plans and re-tenders is a point of ambiguity (Vincent 2005 *pers. comm.*). A draft management plan executed by ESS (2002) on behalf of the OCT called the "Management Plan for Community CHAs 22 and 23" (ESS 2002) acts as the contract and management plan for the JVA between the JVP and the CBO within the Ngamiland district's overarching management plan. It has been used loosely as an ad-hoc management plan by all stakeholders since mid-2002.

In response to poor leadership and lack of clarity due to the absence of a management plan, ACORD (2002) launched a capacity building project in the communities in an effort to address the areas of weakness which within the JVA. The major areas of capacity identified by ACORD (2002) are:

- CBO leadership and organisational development
- Review and revision of OCT constitution to include more community empowerment, voice and involvement
- Assist the VTCs in identifying and undertaking relevant local projects to enhance community development.

Mistrust among stakeholders remains an obstacle in all directions as well. In this tripartite arrangement, each stakeholder has a defensive stance as regards the other. Communities feel the private sector is cheating them and the government is manipulating them; the private sector feels the government is controlling the communities and blackmailing the private sector; and finally, the government feels both parties are simply interested in the money. While this may all be extreme, they are sentiments which permeate the cooperation of the stakeholders (Gujadhur 2001). In addition, sensitivity toward enclave tourism, marginalisation of local communities and institutionalised forms of exclusive and/or inequitable decision-making remain a requirement and should not be side-lined with excuses of inexperience of local stakeholders.

These areas continue to be the focus in an effort to improve stakeholder relations and enhance positive impacts on the CBNRM programme (Arntzen et al. 2004; Rozemeijer 2003).

5.1.3.1 Tourism infrastructure in NG 22/23

At the time of this study (2004), there were five operational camps in NG 22/23 catering to a total of 52 beds, the maximum allowed by the draft management plan (ESS 2002). These camps were Vumbura, Little Vumbura, Kaparota, Vundumtiki and Duba Plains. All are located in NG 22, with the exception of Duba which is located in NG 23. They are accessible for tourist purposes by air only. Activities are conducted by foot, 4x4 vehicle, mekoro and boat. At the time, the camps were all canvas/wood semi-permanent structures with wood and thatch dining areas and the full complement of utilities (i.e. hot/cold tapped water, flush toilets, electricity). All these camps were developed wholly by OWS and all assets, including vehicles and support services are owned in totality by the JVP. In 2004, the average market price per person per night in high season was BWP 18,000 and BWP 17,000 in low season. The average occupancy rates were 77 and 51 percent, respectively (Vincent 2005 *pers. comm.*). Extrapolated this is a total gross sales of approximately US \$50 million and US \$30 million, respectively.

CHAPTER 6: RESEARCH METHODOLOGY

6.1 Observation period

The study focused on the individuals from the OCT communities who are employed at the OWS camps in NG 22/23. A total of 27 weeks was spent living and working in the camps between March and December 2004, and six weeks were spent in 2005. The first two months were spent simply getting to know the employees, their day-to-day lives, their culture, developing some basic relationship and vice versa. This intangible element of research is seen in numerous socio-economic studies which rely on the trust and support of people for execution (Sammy and Opio 2005). The opportunity to coordinate qualitative, quantitative and personal experience strengthened the ability to conduct this study because the subtleties of context, culture and personality were observable (Archabald and Naughton-Treves 2001). The value of this element must not be underestimated – many indigenous peoples are protective and defensive toward probing questions and observation, which bring back feelings of disempowerment and oppression – and the ability to create security and mutual respect between the author and the subject is the only way in which data of this nature could be collected. The remainder of the author's time was spent interviewing the employees and observing the culture of Botswana's wildlife tourism industry – social, economic and environmental.

6.2 Qualitative data collection

Following the initial observation and relationship-building period, more formal data collection began in June 2004, and completed in April and August 2005. The format, approach and objectives of the research were shared candidly and pro-actively with all stakeholders – OCT, the staff, the camp managers and OWS. Much of the rural population of NG 11/12 is illiterate; therefore conducting one-on-one interviews with a translator (where necessary) was the best method (Sammy and Opio 2005). There were no prerequisites for interviews other than being a resident of one of the five OCT communities and camp staff members. A simple interview procedure took place at all the camps, and as many employees as available at the time of the visit were interviewed (Appendix 4). Interview questions focused on socio-economics of the individual, staff member, the district and the JVA. Interviews were conducted to evaluate the significance of the JVA employment to the individual employee as well as his/her greater household. Basic demographic data was also collected and basic questions regarding perception of the JVA were asked. Interviews took place in the staff villages of each of the five camps

and in a private setting usually at the employee's house. The questions were intended to guide the interviewee without influence or bias. The interview was recorded as notes taken by hand. Of the 111 permanent staff members in the NG22/23 camps, 86 were from one of the five OCT communities (Plate 10). In addition to these permanent employees, there were a number of casuals on temporary employment contracts. Because of the nature of the temporary contracts, these employees are not included in the calculations. Attempts were made to get a complete set of data (86/86), but due to leave cycles as well as work schedules, it was not possible. Therefore, 62 staff members (72 percent) of the total staff from the OCT communities were interviewed and represent a significant sample size referred to as the "interview population". However, in some cases, such as basic demographics, data from all the staff members from the OCT communities (86/86) was obtainable. In such cases, the sample size referred to as "total staff population".



Plate 10. Staff of the OWS camps (all pictured are from NG 11/12 communities).

Interviews were also conducted with members of the JVP, namely Sam Kavindama, OWS representative to the OCT; Keith Vincent, Managing Director of OWS; and Mike Wassung, OWS NG 22/23 WMA Manager.

A site visit to the OCT plot in Seronga as well as attendance of one of the OCT *kgotlas* gave perspective and relevance to the procedural and cultural context of the JVA.

Due to a lack of resources, the methodology did not allow more additional time or consultation on-site in the NG 11/12 communities. This would have provided additional

first-hand knowledge to the study, and without it the study has relied more heavily on literature review as a supplement.

6.3 Quantitative data collection

Financial data was supplied by OWS and OCT accounting, where attainable from the source.

6.4 Data analysis

This process included a synthesis of both qualitative and quantitative data procured during the research period as well as an extensive literature review. The data from the research period is divided into two groups pertaining to the OCT communities: “total staff population” and “interview population”. The latter refers to data acquired as a result of interviews and is a sub-set of the total staff population. The data analysis section⁷ is divided into two primary parts and discussion of the potential significance of the NG 22/23 employment to local livelihoods and poverty alleviation to the OCT communities is made therein:

- Basic demographic information on the staff members from the OCT communities, employed in the NG 22/23 camps.
- Socio-economic information on the NG 22/23 JVA, including OWS and OCT contributions.

6.4.1 Demographic information

Age (interview population). The average age of the staff members is 29 years and the median is 27 years. Those who are ‘older’ (i.e. approximately over 40) often do not know their birthdate, but do know their birth year. Therefore, the age calculation is based on the assumption that the respondent’s birthday for 2004 had passed (Figure 5).

Taking the CSO (2003) census data into consideration, the demographic represented in the interview population represents the age group (25-29) with the lowest unemployment rate overall, both nationally and regionally. This is likely due to the age group (25-29) representing the most able-bodied members of the population as well as those who likely have a higher education level, possibly speak English and are eager to enter a monetary-

⁷ The data will be presented and discussed in the Section 6.4.1 of Component A, but also synthesised in the form of a journal article to constitute Component B as per the CEAD dissertation parameters. See Section 1.6.

based industry. The issue of HIV is topic for its own research, but it is important to mention its relevance in the context of age-based labour statistics. Of great concern is the fact that staff members' core demographic is nearly the same as the HIV-positive demographic within OWS' total staff population. Research done by Dr. Evian (2004 *pers. comm.*) (HIV researcher to OWS) indicates an OWS staff infection rate of approximately 33 percent. According to Dr. Evian (2004 *pers. comm.*), the age group of 30-39 is the group with the highest infection rate (38 percent) in the company. The Ngamiland HIV infection rate in 2002 is estimated to be close to 40 percent (Mendelsohn and el Obeid 2004). Therefore, the interview staff population also represents a high likelihood of positive HIV status and both the OCT and OWS should anticipate the possible implications this may have on capacity-building, skills transfer and entrepreneurship within and to the JVA (and CBNRM) (Evian 2004 *pers. comm.*).

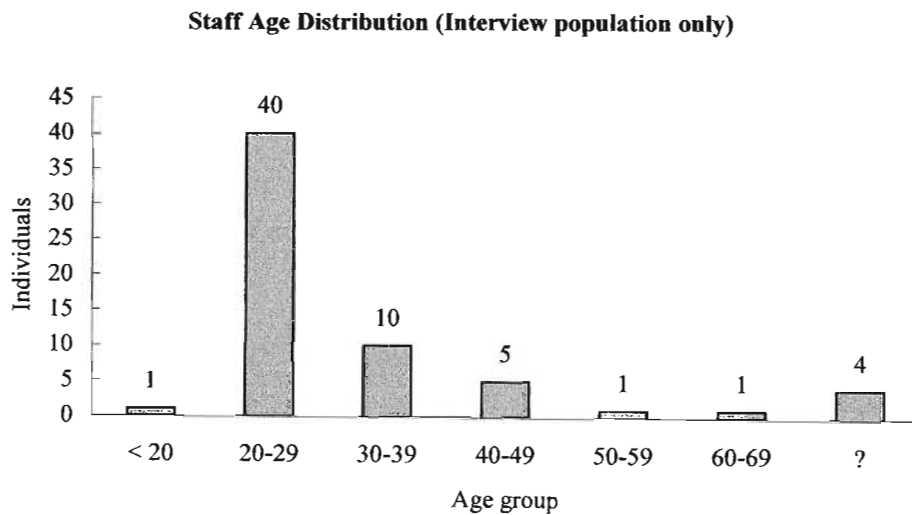


Figure 5. Age distribution among staff members in NG 22/23

According to the CSO (2003) 2002/3 census, the national average age is 24.8 years and the median is 20.1 years. However, this is also the demographic group (ages 20-24) with the highest unemployment rate both at national and regional (e.g. rural) level.

Education (interview population). In order to quantify the level of education the author applied a coding and weighting process to the data. Each year of school was given a numerical value (Table 11):

Education	Assigned Value
No education	0.00
Standard 7 or below	1.00
Form 2	2.00
Form 3	3.00
Form 4	4.00
Form 5	5.00

Table 11. Quantification coding for education level

Women completed more education than the men, with an average completion of Form 2 (an assigned value of 1.91) which equates to a Junior Certificate. In the case of men, the average is an assigned value of 1.50, which makes it questionable as to whether rounding up in this case is statistically sound; however, it could be skewed by the fact that of the ten who did not attend school at all, six were men. If those who received a value of zero are omitted then the male average is an assigned value of 1.91 thereby equalising the education levels across genders. For women the omission of a value of zero is less significant (increased to an assigned value of 2.17) because of the low number of those who did not attend school (Figure 6).

The level of education is higher among the younger staff members. Of the interview population, only two of those over 40 have attended any school. In contrast, all of the interview population under 40 have attended school and 55 percent have attained at least a Junior Certificate (Form 2 or higher). The group which did not complete any or minimal (i.e. Std 7 or below) schooling is also the most aged population within the staff, most of whom are men doing manual labour. This increase in education level is attributable to improved access to education in rural areas as well as changes in community socio-economic institutions. In the latter case, as a monetary-based economy became increasingly important after independence so the children of subsequent generations put greater emphasis on schooling versus traditional subsistence skills such as fishing, farming, etc. (Bock and Johnson 2002).

The CSO (2003) statistics suggest that a positive relationship between decreased unemployment and increased education level does not improve chances of employment until a very advanced educational level is attained. The CSO (2003) census found that the unemployment rate among the age group 25-29 is only lowered at a national level once Cambridge A-levels are attained. That level of education lowers the unemployment rate to 20 percent from 30 percent prior to the attainment of A-levels. In addition, the relative

wealth of Botswana, coupled with a stable government, which emphasised social services, has made schools increasingly accessible; however, in rural areas an advanced level of education is still extremely difficult to attain. Therefore, for members of the OCT community, the opportunity to receive employment as a result of the JVA is even more significant given the unlikely prospect of attaining an advanced education. Most men alluded to family and farm obligations as reason not to complete school. Women alluded to falling pregnant as reasons for not continuing school.

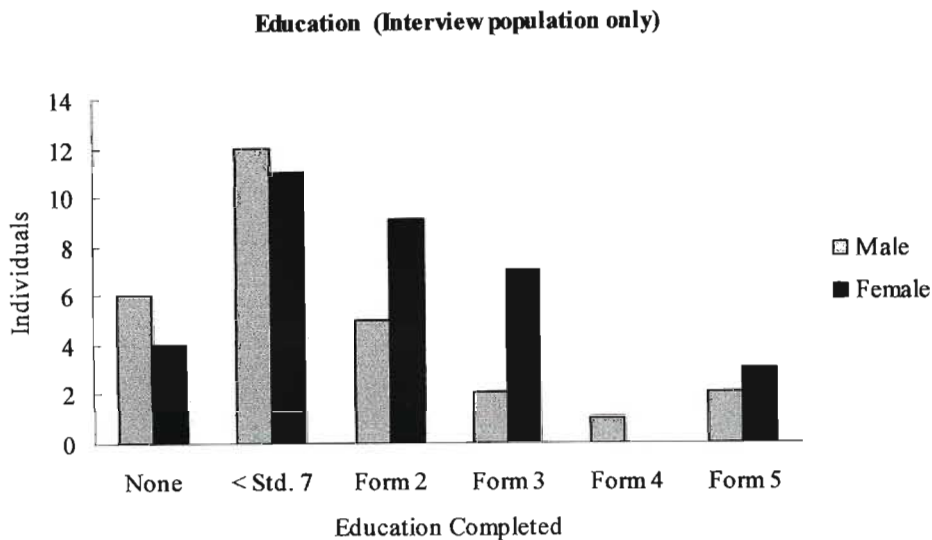


Figure 6. Education level among staff members in NG 22/23

Gender (total staff population). The extended family structure traditional to African communities throughout the continent is true in Ngamiland as well. Work and responsibilities are shared by both sexes. In the Okavango region, both men and women share the farming and food gathering; however, there are some gender specific jobs. Women are responsible for child-rearing and most household chores as well as harvesting of crops and vegetable gardens. Men are responsible for building homes, and overseeing farming and livestock operations, specifically ploughing. Men are also more likely to migrate to urban areas for employment and work outside the home (Mendelsohn and Obeid 2004). However, in the interview population, there is a slightly greater number of women than men employed (Figure 7). This could be because it is perceived that there are more jobs for women than men. However, that is more a social perception than a fact. In other words, the camps do not adhere to a gender-specific job allocation, but it is

perceived that men's jobs are guiding, mokoro poling and manual labour while women's jobs are housekeeping, cooking and waitressing.

It is also possible that women feel more pressure to earn cash income since there are a significant number of single mothers who do not receive significant or any spousal financial support and who also have little land for subsistence farming. These conditions are exacerbated by rural to urban migration, CLD and the prevalence of HIV. Therefore, the woman's extended family provides childcare while the woman leaves the home to acquire wage work. This is out of preference also. The prevalence of a cash economy has increased desires for material goods and the 'urban' life, even if residing in a remote rural area (ACORD 2002). Combined out of need and desire, it's the strong motivation to seek employment even in cases where one must leave children with extended family for prolonged periods. The region has little to offer by way of cash employment and staff members all said that they regarded the JVA as an opportunity for cash income while still enabling three months per year at home.

Gender Distribution (Total staff population)

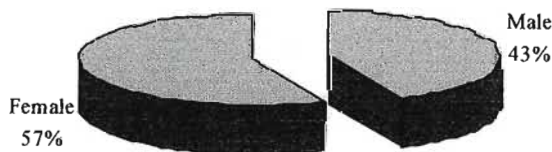


Figure 7. Gender distribution among staff members in NG 22/23.

Communities (total staff population). Each of the five OCT communities is represented among the staff members. The employment strategy/requirements of the OCT aims to share the JVA opportunity evenly among communities. This data suggests that OCT's employment policy is representing each of the five communities effectively. In the case of Gudigwa, the total is quite low; however, the data does not account for the opening of Gudigwa Camp, not associated with the JVA, but developed exclusively by and for the benefit of the Bukakhwe people, the primary residents of Gudigwa and primary employees of that particular camp. Therefore, the OCT does not allocate as

many positions within NG 22/23 to this community, because of its residents' alternative employment opportunities outside the NG 22/23 JVA.

Ethnic groups (total staff population). The ethnic groups represented are Hambukushu, Bayei and Bukakhwe. Representation among the interview population is fairly predictable given a greater percentage of the region's total population is Hambukushu (Bock 1998) (Figure 8). There is only minor animosity between the ethnic groups of the Okavango Delta and it rarely debilitates their cooperation (Bock 2002). After personal experience with staff members from all the ethnic groups, similar observations were made. There were only ever minor ethnic encounters between staff members during the author's 27 weeks in the NG 22/23 camps and usually between Bukakhwe and other ethnic groups. Ethnic groups are able to communicate by the common tongue of Setswana.

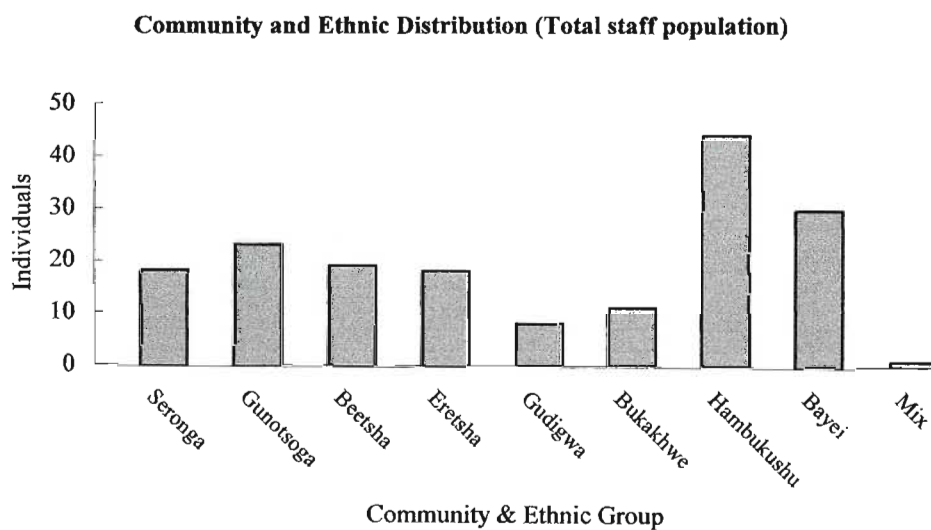


Figure 8. Community and ethnic distribution of staff members in NG 22/23.

Family Composition (interview population). The average number of children per staff member is 2.24 (max 16; min 0) and the median is 4 (Table 12). This average is only slightly lower than anticipated when compared to the WB (2005) data. The WB (2005) lists Botswana's total fertility rate (births per woman) to be 3.1 and an infant mortality rate of .084 per woman (or 84/1000 births) in 2004. This lower than average fertility rate could be due to a variety of reasons which are outside the scope of this study, but presented in brief. Though merely speculation, it could be the more effective and widespread use of birth control. Or, sadly, it could be a result of the high-incidence of

HIV in the younger population (even prior to reproduction) and the death of children born with the virus. Interestingly, the average number of siblings per person is higher (3.92) which suggests the reproduction rate is decreasing and/or family planning education levels are increasing. This further supports the two potential explanations with regard to births as explained above: improved and more extensive family planning education and the increasing magnitude of the HIV epidemic.

CHILDREN	
Average children per person	2.24
Maximum children per person	16
Minimum children per person	0
SIBLINGS (alive)	
Average siblings per person	3.92
Maximum siblings per person	7
Minimum siblings per person	0

Table 12. Family composition among staff members in NG 22/23

6.4.2 Socio-economic information

Employment. In the case of the NG 22/23 agreement, there are a total of 111 employees for an average of 22 employees per camp. This does not include any support staff at the OWS (Maun) or OCT (Seronga) headquarters, temporary employees and/or expatriate staff (an average of three per camp). Of this total staff population (111), 86 or an average of 17 employees per camp, are from one of the OCT communities. This translates to 77 percent of the staff members hailing from the greater OCT community in any given camp. If one adds the OCT (Seronga) headquarters average annual employment of 59 persons, then it increases the employees per camp to 29. The number of staff employed on a full-time basis is somewhat low in terms of wildlife-based tourism. This is especially important given that the advent of CBNRM, specifically in the form of tourism, was slated to become one of the main revenue and employment avenues in rural Botswana (Mbaiwa 2003; Gujadhur 2001).

Many (Gujadhur 2001, Mbaiwa 2003 and 2005; Rozemeijer and van der Hagt 2000; Jones 2004) argue it could and should offer even greater employment; however, the reasons for its growth limitations are rooted in capacity constraints, expatriate ownership and investment and access to basic needs. However, one must also take this in the context of the region. As discussed in previous sections, in Ngamiland the unemployment rate and poverty are high. With respect to these conditions, this employment, regardless of whether it could or should be more extensive is quite significant. For example, given

the estimated total population of 7,779 in the OCT communities the average household size of 4.39 in rural areas, then there are approximately 1,772 households in the OCT community (CSO 2001; CSO 2003; ESS 2002). With 86 employees this translates to six percent of all households associated with direct-use benefits in the form of JVA employment. If one were to add the OCT (Seronga) headquarters' employment of 59 (the median of the range employed in 2004) then eight percent of households receive employment associated with the JVA. These statistics are likely under-estimates because only a portion of the population is of economically-active age or ample health to even be eligible for employment. Given the dearth of employment opportunities in these rural areas, this influence is significant at minimum (Arntzen 2003). Good (1999) reiterates that there is a significant contextual element to an analysis of impacts and benefits to rural communities from direct use benefits. He states, "poverty as income below 'a dollar a day', for example, has international utility, but that sum would represent riches for San [Bukakhwe] farm labourers or official destitutes in Botswana today" (185). With respect to context, the employment offered by the JVA is a vital source of income and in-kind welfare (i.e. rations, uniform, basic medical care and on-the-job training).

The employment tenure in the most of the camps is quite impressive (Figure 9; Table 13). The average tenure in the concession is 42 months, representing a start date in January 2001. This date corresponds with the beginning of the OWS/OCT JVA; however, this should not be taken as coincidence. Shorter employee tenure would indicate high staff turnover and possibly dissatisfaction; however, to the contrary, the average tenure indicates low staff turn-over and relative satisfaction, as well as possibly necessity. The standard deviation (28 months) is significant and should be considered in analysing the retention rate of the camps collectively versus individually. This is due in part to camp opening date thus creating a wide spread in data; however, it can also indicate variations among camps. Vumbura Camp has had the most dissension (Vincent and Wassung 2004 *pers. comm.*) and also exhibits the lowest retention rate among the camps. Vundumtiki Camp has a retention rate of over 100 percent because many of the staff members started approximately two months before the camp opened and some came from other NG 22/23 camps where they had worked previously therefore increasing their JVA employment tenure.

The JVA should strive to maintain these retention rates since it exhibits excellent commitment on the part of employees and a worthwhile investment in training on the part of OWS. Of course, it is acknowledged that employees stay with the JVA because there are very few alternative jobs available in the region. However, it is the author's experience that most individuals would simply return to a subsistence lifestyle rather than work with discontent and poor treatment out of desperation (Lepper 2004 *pers. obs.*).

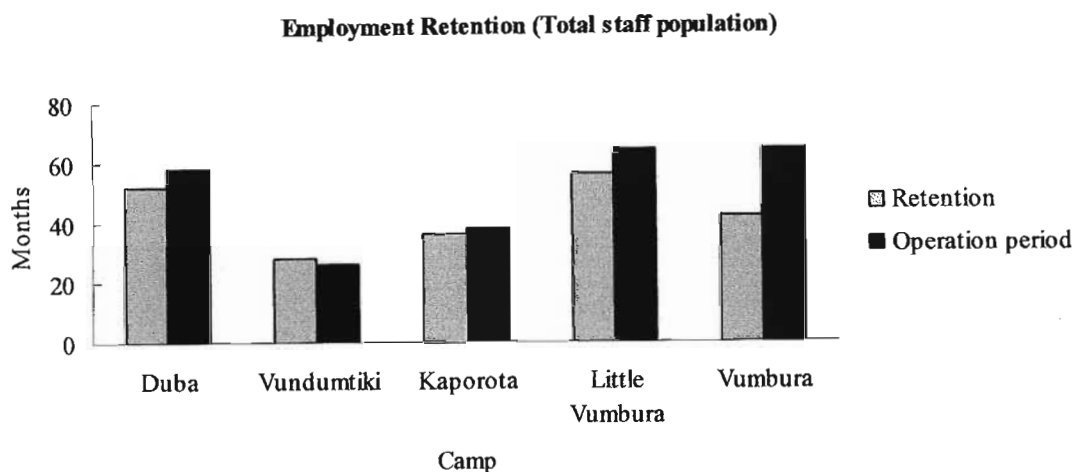


Figure 9. Employment retention among staff members in NG 22/23

Camp	Average Start Month	Camp Opening Date	Retention Rate
NG 22/23	January 2001	March 1999	67.7%
Vumbura	January 2001	March 1999	67.7%
Little Vumbura	November 1999	March 1999	90.3%
Duba Plains	March 2000	September 1999	89.6%
Kaporota	July 2001	May 2001	94.7%
Vundumtiki	March 2002	May 2002	107.6%

Table 13. Employment tenure among staff members in NG 22/23

Wages. Due to the capacity constraints present in the rural population, employment of local people is mainly restricted to unskilled positions such as camp hands, wait staff, laundry, housekeeping, cooks and drivers; this condition leaves little if any opportunities for advancement of local peoples. Studies mentioned previously from 2001 (Mbaiwa 2005; 2005b) reiterate that local staff are not receiving high paid positions. Based on OWS payroll wages, the total wages paid to permanent junior staff members (86) from the communities is BWP 60,519 per month. Based on the payroll records from OWS, on average each employee earns BWP 703.41 (US \$135)⁸ per month (max BWP 2,800; min BWP 540) (Table 14). The wage income is supplemented by an average monthly gratuity

⁸ Based on exchange rate of 2004, BWP 5.2 = US \$1.

of BWP 142.43 (max BWP 600; min BWP 0). However, gratuities lack the security which alleviates poverty and should therefore not be weighted heavily. The range of wages and gratuities is due, for most part, to calibre of job and skill set.

WAGES	
Average wage per employee	BWP 703.71
Minimum wage per employee	BWP 540
Maximum wage per employee	BWP 2,800
Median wage per employee	BWP 600
GRATUITIES (interview population only)	
Average gratuities per employee	BWP 142.43
Minimum gratuities per employee	BWP 0
Maximum gratuities per employee	BWP 600
Median gratuities per employee	BWP 122.50

Table 14. Wage and gratuities among staff members in NG 22/23

Other in-kind welfare of the agreement should be, at minimum, mentioned. Medical support, social support and moral support are either intangible or non-quantifiable elements of the agreement which enhance its viability and value to staff members. In addition to wages, OWS pays for uniform and rations, which should be considered part of the value-added of working for the company. OWS spends a total of BWP 500 and BWP 3,600 per person per annum on uniform and rations, respectively. The costs of wages, rations and uniform are combined as 'gross staff costs'. Others (e.g. housing, medical support, flights, etc.) are to some degree costs of doing business. However, all possess non-quantifiable elements which are usually of higher quality and/or capacity than that which individuals can receive or provide for in their own villages. These elements are not included in 'gross staff costs' but should be acknowledged assets of the JVA in the consideration of poverty alleviation and/or livelihood strategies. Therefore, the total distribution of wages, rations and uniforms to staff members from the NG 22/23 JVA is BWP 1,078,828 in 2004, an increase of BWP 219, 474 from 2003 to 2004.

Predictably, many of those interviewed expressed the desire to earn more money; however, when asked how they might endeavour to do so they were at a loss. As an aside, OWS does promote a certain amount of on-the-job training and has a localisation programme for staff members who exhibit extraordinary potential for senior positions (i.e. camp management, guides).

For the years prior to 2004, the number of staff from the communities is unknown and/or deeply embedded in company financial data. However, it is possible to extrapolate the data from overall data (Table 15)⁹. The years 1999 and 2000 include the cost of Kwedi (the on-site OWS NG 22/23 management team), which had high expatriate employment and wages and few community staff members. This positively skews the data for those two years. Beginning in 2001, Kwedi became an independent financial entity not associated with any individual camp. Its accounts were no longer included in 2001 financial records, hence the overall decrease in both categories. This was partially off-set by the 2001 opening of Kaporota Camp. The annual increase in costs associated with staff is a positive attribute of the agreement from the standpoint of communities. It translates to more employment, which as the data represents, translates into increased cash flow to the household and greater community. Such cash supports livelihood diversification and the ability to partake in outside activities such as school and/or entrepreneurship for more long-term poverty solutions. Mbaiwa (2005) purports that poverty levels in the Okavango Delta are on the increase and notes that there is a bitter irony in this since tourism has grown significantly in the last 10-15 years to be the second GDP earner to diamonds, and yet does not appear to have made an impact on alleviating poverty in the greater Okavango region, the location of its greatest tourism asset. Mbaiwa (2005) has a point, but one must emphasise the capacity and pace of growth of new policy such as CBNRM. It is limited by implementation period and skills capacity and its magnitude may yet be realised. It is not an overnight fix to poverty, and governments, NGOs and communities should not use it as such. It is simply one ingredient in the recipe.

⁹ For each year between 1999-2003, it is possible to use the 'gross staff costs' figure minus the average cost of expatriate management salaries (+/- P4 500 per manager) to get the 'net junior staff costs'. This figure is then multiplied by the 'net junior staff costs' figure by the proportion of the staff members from the communities based on the 2004 rates and adjusted for camp operations in any given year. To crosscheck the calculation, the same process can be done on a camp-to-camp basis and that summation compared to the concession total. The variance is negligible, and therefore the calculations are consistent based on the application of the 2004 ratio.

	1999 (Vumbura, Little Vumbura, Duba Plains, & Kwedi)	2000 (Vumbura, Little Vumbura, Duba Plains, & Kwedi)	2001 (Vumbura, Little Vumbura, Duba Plains, & Kaporota)	2002 (ALL 5 Camps)	2003 (ALL 5 camps)
Gross staff costs	1,100,028.88	1,507,984.93	1,442,098.72	1,734,222.28	1,919,165.31
Number of managers	10	10	12	15	15
Avg. mgr. salary/annum (4,500 per mgr/mo)	459,000.00	540,000.00	630,000.00	783,000.00	810,000.00
Net staff costs	641,028.88	967,984.93	812,098.72	951,222.28	1,109,165.31
% of staff from communities	56/73	56/73	64/85	86/111	86/111
Total distribution to communities	491,748.18	742,563.78	611,462.57	736,983.03	859,353.30

Table 15. Gross wage distribution to communities by staff extrapolated by fiscal year (in BWP)

Economic Distribution (interview population). Based on the study's 2004 data collection and analysis, the annual cash flow to the OCT villages in the form of wages is BWP 726,228 (which does not account for annual bonuses or gratuities received). Therefore, average annual cash flow, in the form of wages, is a minimum of BWP 8,440 per employee. Staff members generally work on a 3-month on/1 month off cycle and return to their communities on the off-cycle. There they tend to their households, visit children and maintain other livelihood strategies, including providing remittance. Of that cash flow, the interview population indicated an average remittance of BWP 663.47 per leave to an average of 5.69 individuals, not including dependents (children under 18). This is equal to an average remittance of BWP 116.53 per recipient (Table 16). The recipients are usually extended family, such as grandparents, aunts, uncles, siblings, nieces, nephews, etc. According to those interviewed, the majority of this money goes toward school fees, clothing and food. In the case of employment in NG 22/23, the interviewees expressed a general appreciation for the JVA in terms of employment while still providing the ability to spend three months per annum in their communities. There are very few if any other jobs in the region that would allow this kind of arrangement, while still providing cash remittance. This is further supported in the retention rate figures as discussed. While there is the potential that some of the staff members, if not working in the NG 22/23 camps might have jobs elsewhere, it is unlikely for reasons discussed in earlier chapters: lack of education, access to markets and personal capital. For rural populations, the concept of moving to a major urban centre of the country such as Maun, Gaborone and/or Francistown is daunting. There is a growing rural to urban

migration, but that does not necessarily imply that it is a preference so much as a requirement of the increasingly cash-driven economy. Jobs are still difficult to obtain for those with minimal skill or education.

RECIPIENTS	
Average number of recipients per employee	5.69
Minimum number of recipients per employee	1.0
Maximum number of recipients per employee	12.0
AMOUNT	
Average amount of give per employee per leave	BWP 663.47
Minimum amount of give per employee per employee per leave	BWP 200
Maximum amount of give per employee per employee per leave	BWP 1,900
Average give per recipient per leave	BWP 116.53
Total give to communities per leave	BWP 57,058

Table 16. Household wage distribution by NG 22/23 JVA staff members to their communities.

Lifestyle (interview population). In addition to quantifiable benefits of the JVA, there are additional quality of life benefits. In similarity with the traditional African community structure, the five communities in the panhandle are made up of extended families. Each single compound consists of many individual traditional huts constructed of mud and stick walls with a thatch roof, clustered together and surrounded by a low fence. All of the interview population use either the Delta itself or a common water tap for water. The distance to the water varies between a one-minute walk to a 15-minute walk. All of the staff members use the bush as a toilet. Electricity is not available. Most share beds with at least one other person. This is in great contrast to the living situation in the OWS camps where hot and cold tapped water are available all day and flush toilets are provided. In some camps, electricity is available, but where it is not then candles are provided. The staff housing in the camps is permanent with cement foundation, canvas walls and a corrugated metal or canvas roof. All are waterproof.

In the communities, the bulk of the traditional diet consists of millet, sorghum, maize, ground nuts and, depending on the season, watermelon or pumpkin. Of those interviewed 33 percent eat meat less than once per week or simply on a subsistence basis (as slaughtered and/or available for ceremonies), 33 percent eat it once a week and 33 percent eat it between 2-6 times per week while at home. Only one percent eats it everyday. This is due both to the high cost of meat and access to a convenient supply (available almost exclusively in Seronga, barring the occasional sale by a neighbour in the community).

Meat is a particularly indicative element of rural Botswana lifestyle. Wikan (2004) discusses the use of meat as a material indicator to create a level of living index in two communities in Botswana over time. The use of indicators is useful for grouping households and assessing level of living. Indicators usually come in four types: cheap and necessary objects; middle-priced and necessary objects; expensive and necessary objects; and expensive but not necessary objects. The selected indicators are based on a society's general demand for the item as well as the social and economic circumstances of the society. In Wikan's (2004) Botswana study, he also tested the level of living index against two additional indicators: meat and quality of living compound. He found a high degree of correlation between the level of living index and both indicators. In summary, poor households eat meat very seldom (i.e. < once a month) and the compounds were in poor condition. In contrast, wealthier households eat meat every day and their compounds were well-maintained and expensive, with fencing and brickwork. Oddly enough, he neglects the area in between those who eat meat less than once a month and those who eat it everyday, which is where the majority (99 percent) of the JVA employees reside; however, the correlation is still valuable as regards an indicator of standard of living. While in camp, the daily menu consists of a combination of meat, starch, eggs, vegetables, fruits and milk at an average annual cost of BWP 3,600 per person.

Livelihood (interview population). The interview population indicated numerous livelihood strategies. They were asked in what ways they meet their family's basic needs of food, shelter, and water, predictably there were a range of strategies; however, in concert with Wikan's (2004) study the poorest households rely almost exclusively on agriculture only. All of the interviewee's households partake in subsistence agriculture to meet basic needs. In addition to this livelihood strategy, 8 percent are in retail (examples: baking, sewing); 12 percent are in tourism sector; 17 percent are teachers; 8 percent are in government and 5 percent are mechanics. This indicates that 62 percent of the households have some form of income other than subsistence agriculture and wage work from NG 22/23 employment. For the remaining 38 percent of households, the NG 22/23 employment as the only source of cash income. The interviewees only spoke of receiving government grants during the CLD outbreak.

Those who are employed are considered leaders in his/her community. OWS camps are considered 'urban' to many rural residents, who perceive them to have many of the benefits of city life – cash wages, clothing, consistent and hearty meals, electricity, permanent housing, education (on-the-job) and exposure to western culture. This is a coveted lifestyle by many, especially younger members of the rural communities. As the rural to urban migration in the Ngamiland region increases, it is sure to be the younger generation that leads this trend because of their education levels, capacity and aspirations. Employment, like that from the NG 22/23 JVA via CBNRM is among the first and most attainable options for diversifying livelihoods and possibly alleviating some amount of poverty.

6.4.2.1 Okavango Community Trust

In addition to the Board, the staff of the OCT ranged from a total of 42 to 76 in 2004 with the difference attributable to seasonal and/or temporary employment (ESS 2002; Modiakgotla and Sainsbury 2003; Arntzen 2003). The OCT has a permanent office in Seronga where it has formal communications, computers and a central location. The plot consists of an office block, store rooms, roofed shed, and house and fuel storage.

In addition to its office assets, the OCT has a number of potential and existing income generating projects. Seronga Trading (Pty) Ltd. is solely owned by the OCT and operates a bottle store in Seronga (on the OCT plot) and a general dealer in Beetsha. Interviewed community members say that the Beetsha shop has no provisions and is therefore not operational; however, Modiakgotla and Sainsbury (2003) say it employs five staff members. There are plans for general dealer shops in all five villages as branches of Seronga Trading (Pty) Ltd. but due to financial constraints their development has been delayed; however, the management of an average of a 20 percent gross profit at the Seronga location means the development should continue soon (ESS 2002; Modiakgotla and Sainsbury 2003). A mortuary was under construction in 2004 with funds from the OCT and the refrigerator unit as a donation from OWS with the goal of offering profitable funeral services. A passenger ferry between Seronga and Sepopa operates daily and all income goes to the OCT account. The OCT owns a number of vehicles under numerous finance agreements which are used for complimentary transport for funerals, emergency or JVA staff movements. They are also available for hire. Any income from these operations goes to the OCT account. The villages of Gudigwa and

Eretsha have their own vehicles purchased with VDF money. A VHF radio communications network operates between the communities and the camps in NG 22/23 as part of the general dealer shops where present, or in huts elsewhere.

A basic review of OCT's 2001 and 2002 audits raises some pertinent questions as regards financial management (Appendix 5). The most significant expense is salaries (both within the OCT and hired professionals) and sitting fees, which together account for approximately 45 percent of the expenses in both years. Interestingly, according to the 2001 and 2002 audits, there should have been a positive remainder of BWP 383,410 and BWP 160,000, respectively; however, according to conversations with OCT and OWS, this money has never been realised (Kavindama 2005 *pers. comm.*; Vincent and Wassung 2004 *pers. comm.*). Fixed assets are valued at BWP 750,000 (depreciated) (ESS 2002).

A full analysis of OCT's expenditures is outside the scope of this study, but the generally disappointed and cautious sentiment of the interviewed NG 22/23 JVA staff members suggests that there is much more which the CBO could be doing to affect positive change and benefit its people. The OCT has been labelled as a somewhat greedy CBO by its community, NGOs and the JVA (ACORD 2002). This is largely because of poor dispersal of benefits. Arntzen et. al (2003) and Rozemeijer (2003b) also attribute much of the lukewarm response of local communities to CBNRM to respective CBOs' inability to distribute revenue at a household level. This lack of professionalism exists in many CBOs and is reputed to be a major barrier to the progress to transition from JVA to joint venture partnerships whereupon true business institutions can be developed at a local level (Modiakgotla and Sainsbury 2003; Vincent and Wassung 2004 *pers. comm.*). Consequently, many if not all of the direct benefits of CBNRM at a household level might come strictly from employment (Rozemeijer 2003b; Gujadhur 2001; Child 2004).

6.4.2.2 Okavango Wilderness Safaris

As discussed previously, the NG 22/23 JVA is a "sub-lease" whereby a JVP pays fees to the communities for land use rights. In the case of NG 22/23, it is a tripartite lease between the Tawana Land Board, the OCT and OWS. The draft management plan (ESS 2002) consists of three main revenue channels for the OCT, from OWS: the land rental, the quota replacement fee and the Village Development Fund (VDF) (Table 17). Collectively, these constitute the CBO fee revenue. According to Modiakgotla and

Sainsbury (2003), the land rental is to increase by six percent per annum, while other revenue channels remain constant. Unfortunately, neither the OCT nor OWS responded to queries regarding this increase; and therefore, it could not be confirmed nor is it clear why, in 2002, the wildlife quota amount increased by BWP 35,000 while the VDF decreased by BWP 100,000. The quota fee is meant to replace lost revenue which would be generated by consumptive tourism per trophy. The VDF generates BWP 100,000 per community so that dispersal can be more equitable, in theory, and not rely on discretionary distribution per community by the OCT. These fees are reputed to be the most expensive in southern Africa, potentially all of Africa, as regards JVAs between a CBO and a JVP (Vincent and Wassung 2004 *pers. comm.*).

Year	Land rental	Quota	Other Income (e.g. VDF)	Total OCT fee revenue
2004	676,000	400,000	500,000	1.57 million
2003	675,410	434,500	500,000	1.6 million
2002	636,000	435,000	400,000	1.47 million
2001	600,000	400,000	500,000	1.5 million
2000	350,000	340,000	260,000	950,000
1999	600,000	?	?	
1998	400,000	?	?	
1997	400,000	?	?	

Table 17. OCT fee revenue from the NG 22/23 JVA (in BWP) (ESS 2002; Modiakgotla and Sainsbury 2003; Kavindama 2005 *pers. comm.*)

In addition to the three primary financial channels of the JVA, there are numerous other incidental fees and contributions which demonstrate the colossal commitment by individual stakeholders in JVAs. A JVA in Africa is not simply a case of strictly paying the JVA fees – OWS and the OCT have a much greater undertaking when partaking in a JVA, and thus CBNRM. There are hidden costs of the agreement that so often make CBNRM initiatives cumbersome and labour-intensive. In the NG 22/23 example, the OCT administers the funds received from OWS' payments of lease and quota fees but also demands additional incidental fees and contributions (e.g. radio operators, soccer tournament, vegetable garden) as listed in Table 18. Although not listed in the draft management plan (ESS 2002), OWS must honour these requests in order to avoid dissension from the OCT. In this regard, these additional revenue sources and philanthropies are effectively obligatory, albeit discretionary.

Fiscal Year	Salaries	Transport	Rations	Public Relations	Soccer Tournament	Garden	Borehole
2001	21,080.00	10,482.85	20,441.96	89,709.27	5,290.00	8,987.15	0.00
percent change	100.49%	119.17%	-78.24%	151.56%	51.23%	-13.15%	
2002	42,262.66	22,975.42	4,449.04	225,673.69	8,000.00	7,805.33	0.00
percent change	-50.25%	11.38%	100.58%	43.46%	87.50%	415.75%	
2003	21,025.00	25,590.80	8,923.78	323,758.25	15,000.00	40,255.91	5,000.00

Table 18. OWS categorised expenses associated with NG 22/23 partnership (in BWP).

Information in Table 18 has been grouped according to OWS' expense type for the years 2001 through 2003. JVAs such as that in NG 22/23 require a considerable amount of meeting time, time-consuming cross-cultural communication, product knowledge, philanthropy and amendments to operating procedure. OWS has employed two individuals whose primary role is to tend to the public relations of this JVA. These two OWS staff members travel regularly to and from the villages, offer transport assistance and generally oversee the JVA ('Salaries' Table 18). In addition to these amounts, OWS spends an enormous sum of money on fostering and managing the JVA ('Public Relations' Table 18 and Figures 10, 11 & 12). OWS also embarked on three philanthropies in association with the JVA, which are not part of the draft management plan ('Vegetable Garden' and 'Soccer Tournament' and 'Borehole' Table 18). In addition, OWS assists with staff transport to and from the villages, as well as the cost of regular flights to and from Maun for OWS and OCT members for consultations. In some years, OWS provided food for OCT staff members, including radio operators and labour associated with the philanthropies ('Rations' Table 18).

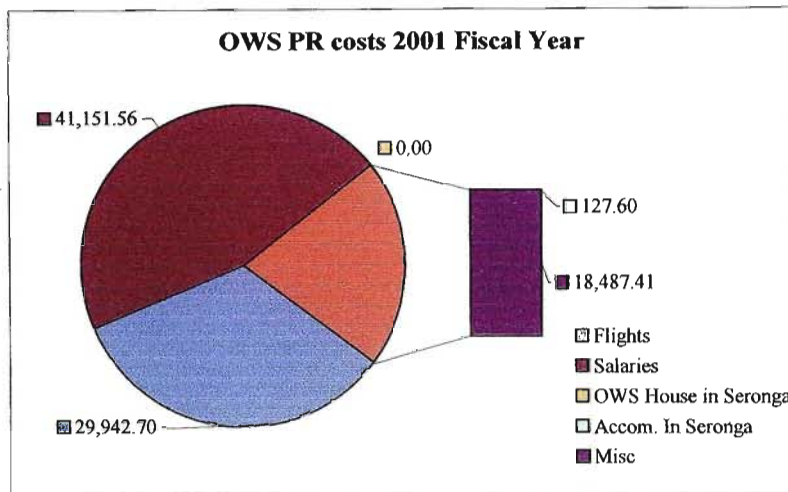


Figure 10. Breakdown of OWS' Public Relation expenses per 2001 fiscal year (in BWP)

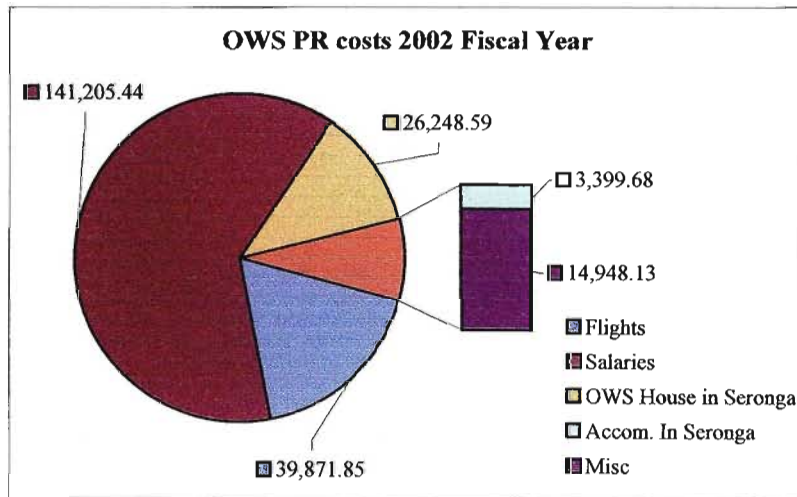


Figure 11. Breakdown of OWS' Public Relation expenses per 2002 fiscal year (in BWP)

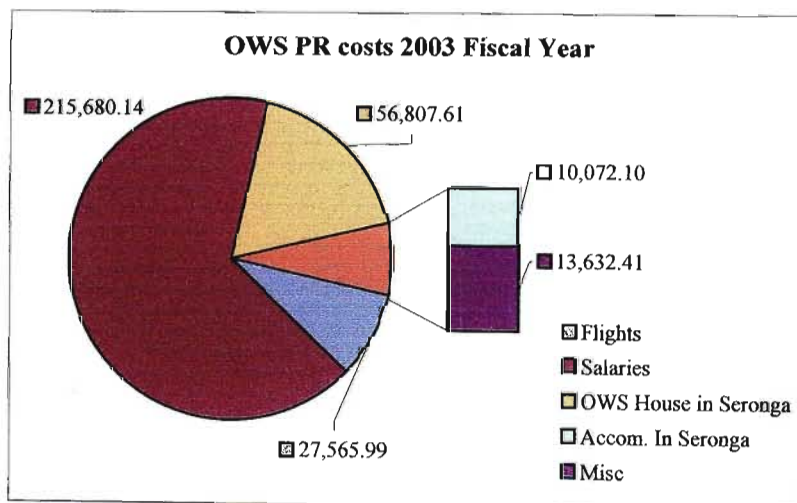


Figure 12. Breakdown of OWS' Public Relations expenses per 2003 fiscal year (in BWP)

These OWS expenses are an example of the immense cost that a private company must front in order to maintain a viable JVA under CBNRM. It is complicated by a high-end product and exclusive clientele. These supposed 'costs of doing business' can be debilitating in an industry (wildlife tourism) which is already capital and labour-intensive and does not in fact have extremely high margins (Vincent 2005 *pers. comm.*). These expenses would be reduced by a formal management plan supported by economic and business institutions that are more familiar to the OCT. This situation is neither exclusively the fault of OWS nor the OCT, but more so by the challenges faced by a merging of traditional and modern socio-economic systems within CBNRM. In essence, a considerable financial burden rests with the JVP. There are very few companies in the Botswana tourism that could sustain such tremendous overhead; in fact these camps are in part supported by revenue generated at other OWS properties and are not viable independently (Vincent and Wassung 2004 *pers. comm.*). In that sense, the JVA (and CBNRM programme) could become non-viable, simply because of simple economics. It also demonstrates the incredibly high overhead of tourism enterprises and challenges the likelihood of success in cases where communities embark prematurely on owning, operating and managing enterprises independently. If that were to come to pass, it would be a full failure of the CBNRM program.

The CBO fee revenue is a tremendous source of revenue in a region with few opportunities for revenue-earning enterprises. However, as mentioned earlier what is in question is not only the revenue amount and its significance, but also its distribution. According to work by Mbaiwa (2003) in the Delta communities, CBO board members (in general) indicated that revenue to the local communities from CBNRM is "insignificant" compared to that accrued to the JVP and/or the government. While this may be true, it is important to put such a comparison in context and relative terms. Given that the communities carry little of the risk, as is certainly the case in the NG 22/23 agreement, then it is significant to receive guaranteed revenue of as much as BWP 1.6 million per annum with no risk. In contrast, OWS carries all the risk and has carried an annual loss for the last three years on the NG 22/23 JVA (Vincent and Wassung 2004 *pers. comm.*).

CHAPTER 7: DATA CONCLUSION

The merits and shortcomings of CBNRM are a source of serious debate within development circles, especially with relation to tourism. Mbaiwa (2005; 2005b) make a

strong suggestion, and substantiate it with work by others (Rozemeijer and Van der Jagt 2000; Twyman 1998), that CBNRM (in the form of tourism enterprises) does not make a significant contribution to poverty alleviation. However, the programme receives little leeway as regards implementation and transition time to accommodate skill transfer from experienced tourism managers and enterprises to local level participants (Arntzen 2003; Rozemeijer 2003; Ashley and Mitchell 2006). Moreover, CBNRM analysis has focused almost exclusively on cash income, and only to some degree on other livelihoods benefits (Ashley 2000). Studies in Botswana indicate that prior to CBNRM most rural communities received little if any cash income from the natural resources (Arntzen et al. 2003; ACORD 2002). The real question then is not only if the cash income is significant, but whether the cash income trickles down whereby it alleviates some degree of poverty at a household level and/or whether involvement in CBNRM acts as a livelihood diversification strategy within the socio-economic fabric of the recipient community to advance development. In addition, the significance of the cash in a rural context is neglected. In other words, cash income may not be significant in comparison to that which is retained by JVPs and/or foreign-owners; however, its significance should be evaluated in relation to the standard of living of the recipient and/or in comparison to the level of living prior to the initiation of the CBNRM programme. It is reasonable to compare it to the PDL and/or US \$1 or \$2/day lines in an effort to meet more contextual and universalised measures. In fact, this is exactly what the PDL and US \$1 or US \$2/day lines are intended to do. If the cash elevates a household to or above one of these lines then the cash is significant simply on grounds of poverty alleviation, regardless of the actual monetary amount. The latter comparison would gauge development level with or without CBNRM programme contribution.

Arntzen et al. (2003) note that even a relatively small amount of income from a CBNRM project makes a significant impact at the household level and serves to reinforce the positive impressions of such projects. They concluded that “[this small amount of revenue] is highly significant in proportion to local incomes and needs” (Arntzen et al. 2003:26). The distribution of benefits is the next tier in identifying its significance at a local level. Arntzen et al. (2003) determined that the impact of CBNRM is minimal due to poor benefit distribution such that the revenue is not realised at the household level. They categorise CBNRM as a contributor to livelihood security by offering another livelihood source, or diversification. However, most CBOs have opted to keep income in

a collective bank account rather than distribute the revenue at a household level perhaps due to greed and control or to support extremely high overheads (ACORD 2002). This distribution method, or lack thereof, is a major concern. If there is a significant disconnect between and/or cost to communities from conservation then the relationship between conservation and sustainable development will not be achieved as efficiently, if at all. One might recall that CBNRM confidently promotes the linkage between people's wise use and conservation of natural resources and the derivation of socio-economic benefits, especially at a household level and equitably (Mbaiwa 2005b; ACORD 2002). As summarised by Gujadhur (2001) and Van der Jagt et al. 2000 (*as cited in Gujadhur 2001*):

...passively earned benefits which do not directly improve the lives of community residents (e.g. cash that is banked) do not provide a concrete link to wildlife conservation. Active natural resource utilisation and management and intangible benefits (decision-making power, food security, and employment) are the necessary complements to financial benefits that will ensure the long-term sustainability of CBNRM. (6)

Thus, employment revenue from the NG 22/23 JVA, as part of Botswana's CBNRM programme, does make a significant contribution to livelihood diversification and poverty alleviation; however, in contrast, the contribution of CBO fee revenue is insignificant due to poor financial management on the part of its CBO, the OCT.

REFERENCES

- Adams, W. and D. Hulme. 2001. Conservation & Community: Changing Narratives, Policies & Practices in African Conservation. *In: Hulme, D. and M. Mupftee (eds). African Wildlife & Livelihoods: The Promise and Performance of Community Conservation.* Oxford: James Currey Ltd.
- Agency for Cooperation and Research in Development (ACORD). 2002. *Through our Eyes: ACORD's Experiences in CBNRM - Okavango Community Trust.* Unpublished.
- Alagona, P. 2004. The Ghosts of Endangered Species Past: Recent lessons at the Intersection of History and Biology. *BioScience* 54: 984-985.
- Archabald, K. and L. Naughton-Treves. 2001. Tourism revenue-sharing around national parks in Western Uganda: early efforts to identify and reward local communities. *Environmental Conservation.* 28.2: 135-149.

- Arntzen, J. 1998. *Economic Valuation of Communal Rangelands In Botswana: A Case Study*. Amsterdam: International Institute for Environment and Development; Institute for Environmental Studies. 17.
- Arntzen, J. 2003. *An Economic View on Wildlife Management Areas in Botswana*. Gaborone: IUCN/SNV CBNRM Support Programme. 10.
- Ashley, C. 2000. *The Impacts of Tourism on Rural Livelihoods: Namibia's Experience*, London: Overseas Development Institute. 128.
- Ashley, C. and J. Mitchell. 2006. *Can Tourism Help Reduce Poverty in Africa?* London: Overseas Development Institute Briefing Paper.
- Barbier, Edward B., J. Burgess and C. Folke. 1994. *Paradise Lost? The Ecological Economics of Biodiversity*. London: Earthscan.
- Barnes, J. I. (jibarnes@iafrica.com.na). 2 February 2006. Multiplier for Ngamiland Region. Personal email to C. Lepper (caitlinml@hotmail.com).
- Barnes, J. I. 1995. Economic Analysis of Community-based Wildlife Utilisation Initiatives in Botswana. *Development Southern Africa*. 12.6: 783-803.
- Barnes, J. I. 1998. *Wildlife Economics: A Study of Direct use Values in Botswana's Wildlife Sector*. Published PhD dissertation. Department of Economics, University College London.
- Barnes, J. I. 1998b. *Wildlife Conservation and Utilisation as Complements to Agriculture in Southern African Development*. Windhoek: Department of Environmental Affairs. 27.
- BIDPA. 1997. *A Study of Poverty and Poverty Alleviation in Botswana*. Gaborone: Botswana Institute for Development Policy, Government of Botswana.
- Bock, J. 1998. Economic Development and Cultural Change among the Okavango Delta Peoples of Botswana. *Botswana Notes and Records*. 30: 27-44.
- Bock, J. and S.E. Johnson. 2002. Male Migration, remittances, and child outcome among the Okavango Delta Peoples of Botswana. In Tamis-LeMonda, C.S. and N. Cabrera

- (eds). *Handbook of Father Involvement: Multidisciplinary Perspectives*. New Jersey: Lawrence Earlbaum Associates.
- Cassidy, L. 2000. *CBNRM and Legal Rights to Resources in Botswana*. Gaborone: IUCN/SNV CBNRM Support Programme. 4.
- Ceballos-Lascurain, H. 1996. *Tourism, Ecotourism and Protected areas: The State of Nature-based Tourism Around the World and Guidelines for its Development*. Gland, Switzerland: IUCN.
- Central Statistics Office. 2001. *Distribution of population by sex, by village and their associated localities: 2001 Population and Housing Census*. Gaborone: Central Statistics Office, Government of Botswana.
- Central Statistics Office. 2003. *2001/2002 Household Income and Expenditure Survey (HIES) Statistics Brief*. Gaborone: Central Statistics Office, Government of Botswana.
- Child B. (ed). 2004. *Parks in Transition: Biodiversity, Rural Development and the Bottom Line*. London: Earthscan.
- Convention on Biological Diversity. 2004. *CBD Guidelines: Ecosystem Approach*. Montreal: Convention on Biological Diversity.
- Department of Environmental Affairs and Tourism. 2004. *National Biodiversity Strategy and Action Plan: Newsletter*. [online]. Available at: www.environment.gov.za. [Accessed 20 February 2006].
- Darkoh, M. and J.E. Mbaiwa. 2002. Globalisation and the Livestock Industry in Botswana. *Singapore Journal of Tropical Geography*. 23. 2: 149-166.
- Eco-tourism Support Services. 2002. *Management Plan for Community CHAs NG 22 and 23*. Maun: Unpublished.
- Evian, Dr. 2004. Personal Communication. 17 July 2004. Botswana: Vundumtiki Camp.
- Good, K. 1999. The State and Extreme Poverty in Botswana: the San and Destitutes. *The Journal of Modern African Studies*. 37.2: 185-205.

- Government of Botswana. 2003. *National Development Plan 9*. Gaborone: Government of Botswana.
- Government of Botswana. 2005. *Botswana Third National Report on the Implementation of the Convention on Biological Diversity*. Gaborone: Ministry on Environment, Wildlife and Tourism, Government of Botswana.
- Gujadhur, T. 2001. Joint Venture Options for Communities and Safari Operators in Botswana, Gaborone: IUCN/SNV CBRNM Support Programme. 6.
- Hachileka, E. 2003. Sustainability of Wildlife Utilization in the Chobe District, Botswana. *South African Geographical Journal*. 85.1: 50-57.
- Hannah, L., G. Wetterberg and L. Duvall. 1988. *Botswana Biological Diversity Assessment*. Washington D.C.: U.S. Agency for International Development, Bureau for Africa.
- Hasler, R. 1999. The Okavango Delta and the 'End of Progress': Global Transformation and Community-based Wildlife Management. *Botswana Notes and Records*. 31: 93-100.
- Heywood, V.H., and J. Iriondo. 2003. Plant Conservation: Old Problems, New Perspectives. *Biological Conservation* 113: 321-335.
- Hitchcock, R.K. Undated. *The Kavango Basin: A Case Study*. [online]. The Water Page. Available at: www.thewaterpage.com/okavango_case_study.html. [Accessed 10 January 2006].
- Hoon, P. 2004. Personal Markets and impersonal communities? Prospects for community conservation in Botswana. Berkeley: University of California, Center for African Studies.
- Jansen, D., I. Bond and B. Child. 1992. Cattle, Wildlife, Both or Neither? Results of a financial and economic survey of commercial ranches in southern Zimbabwe., Harare WWF Multispecies Project. 27: 1.
- Jones, B. and M. Murphree. 2001. The Evolution of Policy on Community Conservation in Namibia & Zimbabwe. In: Hulme, D. and M. Muphree. (eds). *African Wildlife &*

- Livelihoods: the promise and performance of community conservation*. Oxford: James Currey Ltd.
- Jones, B. 2004. Developing criteria for the contribution of CBNRM to poverty reduction and sustainable livelihoods in southern Africa. Occasional Paper 7. Harare: University of Western Cape and University of Zimbabwe.
- Joubert, D. Personal Communication. 8 April 2005.
- Kalikawe, M. C. 2001. *Botswana: Integrating Biodiversity into the Tourism Sector*, Presentation paper for the UNEP International Workshop on Best Practices and Country Case Studies, Mexico City.
- Kavindama, Sam. July 2005. Personal Communication. Maun, Botswana.
- Kirkby, J., P. O'Keefe and J. Timberlake. 1996, *The Earthscan Reader in Sustainable Development*. London: Earthscan Publications, Ltd.
- Mbaiwa, J. E. 2003. The Socio-economic and Environmental Impacts of Tourism Development on the Okavango Delta, north-western Botswana. *Journal of Arid Environments*. 54.2: 447-467.
- Mbaiwa, J. E. 2003b. Basket Production and Marketing in the Villages of Shakawe, Nxamasere and Xhaoga in West Ngamiland District, Botswana: A Baseline Study. Conservation International: Unpublished.
- Mbaiwa, J. E. 2005. Enclave tourism and its socio-economic impacts in the Okavango Delta, Botswana. *Tourism Management*. 26: 157-172.
- Mbaiwa, J. E. 2005b. The Problems and Prospects of Sustainable Tourism Development in the Okavango Delta, Botswana. *Journal of Sustainable Tourism*. 13.3: 203-227.
- Mendelsohn, J. and S. el Obeid. 2004. *Okavango River: Flow of a Lifeline*. Cape Town: Struik.
- Michler, I. 2004. *Botswana: The Insider's Guide*. Cape Town: Struik.
- Modiakgotla, K. and Sainsbury, S. 2003. *Labour Laws and Community-Based Organisations in Botswana*. Gaborone: IUCN/SNV CBNRM Support Programme. 13.

- Mordi, R. A. 1991. *Attitudes Toward Wildlife in Botswana*. New York: Garland.
- Okavango Community Consultants. 1995. Management Plans for Controlled Hunting Areas Allocated to Communities in Ngamiland WMAs. Maun: Unpublished.
- Okidegbe, N. 2000 Attacking Rural Poverty: Strategy and Public Actions. *Rural Development Note*. 6: 1-4.
- Pearce, D., E. B. Barbier and A. Markandya. 1989. *Blueprint for a Green Economy*. London: Earthscan.
- Ramsar. 1999. The Criteria for Identifying Wetlands of International Importance. Ramsar Information Paper no. 5. [online]. Gland: Ramsar Convention. Available at: www.ramsar.org/key_criteria.html. [Accessed 12 January 2006].
- Ross, Karen. 1987. *Jewel of the Kalahari: Okavango*. London: BBC Books.
- Rozemeijer, N. 2003. CBNRM in Botswana: Revisiting the assumptions after 10 years of implementation. Unpublished.
- Rozemeijer, N. 2003b. An overview of the current status and progress made in CBNRM in Botswana. Unpublished.
- Rozemeijer, N. and C. van der Jagt. 2000. Community Based Natural Resource Management in Botswana: How Community -based is CBNRM in Botswana?. Unpublished.
- Safariweb. 1996. Botswana: A Country Profile. [online]. Available at: www.safariweb.com/botswana/country.htm#economy. [Accessed 10 May 2006].
- Sammy, J. and C. Opio. 2005. Problems and prospects for conservation and indigenous community development in rural Botswana. *Development Southern Africa*. 22.1: 67-85.
- Shivji, I. G. 2005. The Changing Development Discourse in Africa. [online]. Global Policy Forum. Available at: www.globalpolicy.org/soecon/develop/africa/2005/1007discourse.htm. [Accessed 3 April 2006].

- South African Regional Poverty Network. Undated. Botswana Civil Society Assessment on Implementation of Agenda 21. [online]. Available at: www.sarpn.org.za/wssd/protagonists/botswana/page1.php. [Accessed 7 June 2006].
- Stynes, D. 1997. Economic Impacts of Tourism. [online]. Michigan State University: Available at: www.msu.edu/course/prr/840/econimpact/pdf/ecimpvol1.pdf. [Accessed 3 April 2006].
- Suich, H. (helensuich@yahoo.co.uk). 15 June 2006. Component A. Personal email to C. Lepper (caitlinml@hotmail.com).
- Swatuk, L. 2005. From "Project" to "Context": Community Based Natural Resource Management in Botswana. *Global Environmental Politics*. 5.3: 95-124.
- Tisdell, J. 2003. Economic Aspects of Ecotourism: Wildlife-based tourism and its Contribution to Nature. *Sri Lankan Journal of Agricultural Economics*. 5.1: 83-95.
- Twyman, C. 1998. Rethinking Community Resource Management: Managing Resources or Managing People in western Botswana?, *Third World Quarterly*. 19.4: 745-770.
- Twyman, C. 2000. Livelihood Diversity and opportunity in Kalahari Wildlife Management Areas, Botswana: Rethinking Community Resource Management, *Journal of Southern African Studies*. 26.4: 783-806.
- UK Department for International Development (DFID). 1999. Sustainable Livelihoods Guidance Sheets. [online]. DFID. Available at: www.livelihoods.org/info/info_guidancesheets.html#6. [Accessed 17 July 2006].
- U.S. Fish and Wildlife Service. 1996. History and Evolution of the Endangered Species Act of 1973, including its relationship to CITES. [online]. U.S. Fish and Wildlife: Endangered Species Program. Available at: www.endangered.fws.gov/esasum.html. [Accessed 20 February 2005].
- United Nations Development Programme. 2005. *Botswana Human Development Report 2005*. Gaborone: Printing and Publishing Company of Botswana.

- United Nations Development Programme. 2006. Botswana Environmental Programme. [online]. UNDP. Available at: <http://www.unbotswana.org.bw/undp/environment.html>. [Accessed 3 August 2006].
- Van Loon, A.J. 2003. The Dubious Role of Man in a Questionable Mass Extinction. *Earth-Science Reviews*. 62: 177-186.
- Vincent, K. Personal Communication. 15 August 2005.
- Vincent, K. and M. Wassung. Personal Communication. 25 March 2004.
- Wikan, G. 2004. The level of living in rural Botswana re-studied. *Norwegian Journal of Geography*. 58: 1-10.
- World Bank. 2005. World Development Indicators Data Query. [online]. World Bank. Available at: www.devdata.worldbank.org/data-query/. [Accessed 3 August 2006].
- World Resources Institute. 2003. Biodiversity and Protected Areas – Botswana. [online]. EarthTrends – Environmental Information Portal Country Profiles. Available at: www.earthtrends.wri.org/. [Accessed 7 June 2006].
- World Tourism Organisation. 2005. Tourism Market Trends, 2005 Edition - Annex. [online]. World Tourism Organisation. Available at: www.world-tourism.org/facts/eng/pdf/highlights/2005_eng_low.pdf. [Accessed 10 March 2006]

COMPONENT B

LEPPER, C.M. Community-based Natural Resource Management, Livelihood Diversification & Poverty Alleviation: a case study of NG 22/23 and associated communities, Okavango Delta, northern Botswana.

Development Southern Africa

Appendix 1

ABSTRACT

This paper presents a case study from Ngamiland, northern Botswana where community-based natural resource management (CBNRM), through a joint venture agreement (JVA) between a Community-based Organisation (CBO) and the private sector for non-consumptive tourism has been implemented with the objective of contributing to localised poverty alleviation and livelihood diversification through employment and CBO fee revenue. The economic contribution of these benefits is considered with respect to commonly accepted norms and standards within the development ideology of sustainable development and its global measurements; therefore, a brief background of the concepts of poverty, livelihood and ecotourism is presented to provide context for the evaluation of CBNRM as a preferred land-use in Botswana. An evaluation of the significance of wage employment revenue and consequent remittances in the specific case study is intended to contribute to existing studies which have primarily emphasised the contribution of CBO fee revenue only to households. It is concluded that wage employment revenue makes a significant contribution at a household level to localised poverty alleviation and livelihood diversification compared to the insignificant contribution of CBO fee revenue.

1. INTRODUCTION

CBNRM, often promulgated through tourism, is intended to diversify the linear relationships present in conservation and development. The main objective for CBNRM in Botswana is foremost natural resource conservation and only secondly, after acknowledging that communities must have a vested interest in the primary objective in order to contribute to its success, to give communities opportunities to benefit from natural resource conservation as an avenue for rural development (Rozemeijer 2003). It is proposed that if community involvement in conservation can make conservation more efficient and successful and, at the same time result in positive human development, then

CBNRM's objectives are addressed (Twyman 1998; Ashley 2000; Rozemeijer 2003; Swatuk 2005; Jones and Muphree 2001; Mbaiwa 2005b). It is noted that, depending on one's priority or preference, it can be seen as a development-sided and/or conservation-sided agenda (Swatuk 2005; Gujadhur 2001; Arntzen et al. 2003). The plan is based on the allocation of wildlife-rich natural areas to local communities via the creation of tripartite relationships among government, private sector and communities. These potentially lucrative agreements are intended to create revenue channels which replace the loss of livelihood strategies due to the new land use and as well as give immediate economic benefit thereby encouraging conservation both locally and nationally (Hitchcock n.d.).

It is collectively agreed that tourism is the most likely vehicle for achieving both conservation and some level of development (i.e. income and employment) simultaneously as well as meeting the objectives of CBNRM. Tourism's expansion includes economic growth, job creation and welfare, improved exports and public finances. According to Mbaiwa (2003), developing nations' governments promote tourism in hopes of expediting economic development, including poverty alleviation. It is debateable whether the benefits reach the local level; however, it is accepted that tourism does offer significant benefits at least at the macro-level (Ashley and Mitchell 2006; Mbaiwa 2005). More specifically, ecotourism is considered the one of the fastest growing segments of the tourism market and the type of tourism most likely to increase direct financial support for nature conservation while also supporting the communities where the tourism occurs (Tisdell 2003; Ceballos-Lascurain 1996; Hoon 2004; Swatuk 2005).

However, each CBNRM-based tourism venture should be evaluated to determine its socio-economic significance not only to national accounts but to local development measures and objectives such as poverty alleviation and livelihood diversification.

2. DEVELOPMENT, CONSERVATION AND CBNRM

2.1 The context and measures of relevant development and conservation objectives

Arguably, the most influential event of the modern (post-1990s) response to the perceived crisis of environment, development and global insecurity was the United Nations Conference on Environment and Development (UNCED) in 1992 (Kirkby et al. 1995). Among the main themes at UNCED was the linkage between natural resource management and development which advocated local participation and context as considerations in the application of new development strategies, and that this local participation should bolster conservation of natural resources at a local level while still advancing development objectives (Twyman 1998; Barbier et al. 1994). Among the ideological outputs of UNCED was the ‘new’ concept of sustainable development, according to the World Commission on Environment and Development (WCED), which first formalised it in the 1987 Brundtland Report as ‘[development that] meets the needs of the present without compromising the ability of future generations to meet their own needs’ (*in Kirkby et al. 1995: 1*).

The expansion of the philosophy of sustainable development began to involve the roles, needs and rights of local people in decisions regarding natural resource management, including conservation, as their influences have most impact on those living on the periphery of protected areas. With specific relevance to Africa, the fundamental belief which lies at the heart of this emerging discourse is that ‘conservation will either contribute to solving the problems of the rural poor who live day to day with wild animals, or those animals will disappear’ (Adams and McShane 1992: xix *as cited in*

Adams and Hulme 2001: 13). It is in this context that the concept of CBNRM emerged as part of that more grassroots development discourse which emphasises equity, access, conservation, sustainability and participation.

2.1.1 Poverty measurements

Poverty is often measured in quantitative terms by the World Bank in an effort to draw economic comparisons, rankings and status among nations; however, poverty does include qualitative measurements such as hunger, lack of shelter, poor health, lack of education, social exclusion, powerlessness, lack of voice and vulnerability to disease and natural disasters (United Nations Development Programme (UNDP) 2005). In this regard, poverty has many facets but income poverty and human capability (i.e. literacy, health and basic skills) are the most common measurements. Further, poverty is influenced by social and political institutions which can result in inequitable resource distribution and access (Wikan 2004). This paper acknowledges the complexity of the poverty issue, but focuses most heavily on the economic contribution of CBNRM programmes to household poverty alleviation.

The World Bank's most basic quantitative measurements of poverty act as common guidelines from which to evaluate the scope of poverty within a society. First, consider its definition and consider that the minimum level to meet basic needs varies with respect to geographic location, time, value and culture. Therefore, when comparing such data globally, the World Bank uses measurements called US \$1/day and US \$2/day in order to equalise financial terms and allow a comparison despite variations in currency. The measurement is converted into 'international dollars' which are intended to have the same purchasing power as a dollar spent in the United States' economy. These conversion factors calculate the relative costs of goods and services within a specific economy to provide a better contextual measure of standard of living of residents. Therefore, the US

\$1/day line is not literally US \$1, but rather the equivalent in localised financial terms. It does not translate to market exchange rates (World Bank 2005).

The US \$1/day and US \$2/day lines are bolstered by similar measurements of the UNDP (2005). According to the UNDP (2005), 'Overall Income Poverty' refers to the 'lack of sufficient income to satisfy essential needs beyond food, including shelter, clothing and energy' (6), or the US \$2/day line. This is in contrast to 'extreme poverty' which 'exists when an individual or household does not have sufficient income to meet basic food needs' (6), or the US \$1/day line (World Bank 2005; UNDP 2005).

In Botswana, the 1993/4 CSO (1994 *as cited in CSO 2003*) census listed 26.4 per cent of the rural population living under the US \$1/day margin as compared to 17.1 and 8.2 per cent in urban villages and cities/towns, respectively. This margin did not improve for rural areas and urban villages but rather declined between the 1993/4 CSO and 2002/3 CSO censuses. The 2001 US \$1/day poverty line was Botswana Pula (BWP) 104.10 per person per month in Botswana, or BWP 3.47 (US \$.69) per person per day (CSO 2003).

The North-west District Council (NWDC) states that the majority of Botswana's rural population, with particular reference to the Okavango region, live in poverty (2003 *as cited in Mbaiwa 2005*). A study by ACORD (2002), the Okavango region of Ngamiland, including the communities of Gunotsoga, Gudigwa and Eretsha, is impoverished due to the lack or low level of employment, cash-income, food sources, livelihood diversification and access education. In addition, this is due in large part to the failure of crop and livestock farming and the influence of foreign-owned tourism enterprises.

Moreover, rural Botswana is susceptible to poverty as large segment of the population receives little or no cash income and most live hand-to-mouth (Good 1999).

2.1.2 Livelihood diversification strategies

Poverty and livelihood are inextricably linked. Livelihood is not a measurement but rather a collection of strategies and activities which allow an individual or household to meet, at minimum, its basic needs. It is an analytical tool which complements many of the poverty measurements; the quality and diversity of individual or household livelihood often determines the presence, absence or magnitude of poverty. Similar to poverty, livelihood does not refer strictly to income. This is especially true in rural areas where employment is scarce; rather, livelihood is a set of diverse activities and assets utilised to maximise standard of living. In many societies, especially rural and subsistence societies, livelihood is a concept, like poverty, which is dynamic and complex by definition and in practice due to influences from many components of society (Wikan 2004).

Livelihood diversification in rural communities incorporates a range of fundamental hypotheses about the strategies underlying diversification. According to Wikan (2004), these strategies can be summarised as survival, security or accumulation. The accumulation strategy implies that a certain percentage, but not all of a household's basic needs (US \$1/day), are met by a primary strategy and so additional strategies are employed in order to *amass* a surplus of goods (US \$2/day). This is in contrast to the survival strategy whereby the need to diversify is required in order to simply subsist; whereas, the security strategy is employed to minimise vulnerability in the event of uncontrollable environmental or social fluctuations such as drought, disease, etc. such that livelihood diversification serves to provide household security (Arntzen 2003). The motivation for utilising any particular strategy varies according to household income,

consumption and production patterns. For example, Wikan's (2004) study of two medium-sized rural communities in Botswana concluded:

...poor households in rural Botswana are small, with little manpower and poor quality of education. They depend on charity, small-scale crop production or badly paid local work. The better-off households are bigger and better educated and have a variety of income sources. The richest households are those that combine crop production, cattle rearing, and local and external work or enterprises. However, 'multi-income' as a livelihood strategy is found to some degree in all level-of-living groups. The poor households that use this strategy probably do so out of necessity and for them it is a survival strategy. For rich households it represents a strategy for accumulation of wealth (9).

The degree to which one strategy is more heavily employed than another is also determined by geography and available resources. Ashley (2000) reiterates that the livelihood strategies in rural areas are a mix of many activities, namely natural resource use, employment and remittances. For example, for rural households living in Namibia's Caprivi, a region very closely tied economically, geographically and culturally to the Ngamiland-Okavango Delta region, water is consistently available and arable agriculture and fishing are year-round options. In contrast, rural communities in the Kalahari Desert or Namibia's Kunene region, where water is perennial, will not have as much opportunity to practice arable agriculture or fishing and thereby rely more heavily on livestock (Swatuk 2005; Ashley 2000). Therefore, households exhibit the need for diversified livelihood strategies in order to manage the seasonal variations in rainfall and resources.

2.2 The emergence of CBNRM in Botswana

The fundamental assumption of CBNRM is that poverty exacerbates environmental degradation due to unsustainable practices. In cases where the benefits of conservation (e.g. sustainable use or non-use of natural resources) outweigh their costs, then a community is more likely to partake in sustainable livelihood strategies which feed back into principles of sustainable development (Mbaiwa 2003; Swatuk 2005; Jones and Muphree 2001).

The refined goal of CBNRM, then, is to conserve natural resources, yet do so in concert with the advancement of human welfare. Arntzen et al. (2003) introduce CBNRM as:

...a typical African approach towards rural development and resource conservation. The approach aims to increase local socio-economic benefits of natural resources, which would then lead to a higher appreciation of resources by the local population and to greater resource conservation efforts by the local population. The increased benefits also offer opportunities to compensate the local community for the costs of living with natural resources such as wildlife. No family should be worse off because of the presence of natural resources (46).

Development and conservation practitioners and think-tanks conceived that the possibility existed to strike a balance whereby wildlife would 'pay its way' and policy would advance the economic competitiveness of sustainable wildlife utilisation as a preferred land-use (Hoon 2004; Jones and Muphree 2001). Specifically in Africa, there was concern over land-use pressures such that rezoning would favour agriculture or livestock or human development at the expense of the conservation of wildlife (Swatuk 2005).

Child (n.d. *as cited in Jones and Muphree 2001*) refers to these linkages and summarises this interpretation of CBNRM as:

...if the resource [wildlife] is valuable (price), if this value is captured by landholders (proprietorship) and if the principle is followed that no management action, decision or benefit is arrogated to a higher level when it is better and more appropriately conducted at a lower level (subsidiarity), there is a high likelihood of successful resource conservation and management (66).

In summary, CBNRM endeavours to accrue the benefits of wildlife utilisation to local communities. CBNRM in Botswana reflected primarily the concerns of biodiversity conservation and then secondly the extraordinary monetary potential of wildlife. The effect of this wildlife-oriented prioritisation often left local communities hostile and resentful, but it is actually this result which expanded CBNRM programmes to incorporate local populations and the sustainable use of natural resources (Rozemeijer 2003b). The Department of Wildlife and National Parks (DWNP) advocated for the wildlife, the Department of Tourism ((DoT) (among others) advocated strongly for community involvement in commercial wildlife utilisation. Collectively, this advocacy has formed the basis for CBNRM in Botswana. The CBNRM strategy in Botswana began in 1989 with the implementation of the United States Agency for International Development (USAID) funded Natural Resource Management Programme (NRMP).

3. BOTSWANA'S CBNRM PROGRAMME

3.1 Botswana's land classification system and framework

An understanding of Botswana's CBNRM programme necessitates a basic comprehension of the country's land classification system. The entire country is divided into 163 Community Hunting Areas (CHAs) (Plate 1), each with specified natural resource utilisation rights.

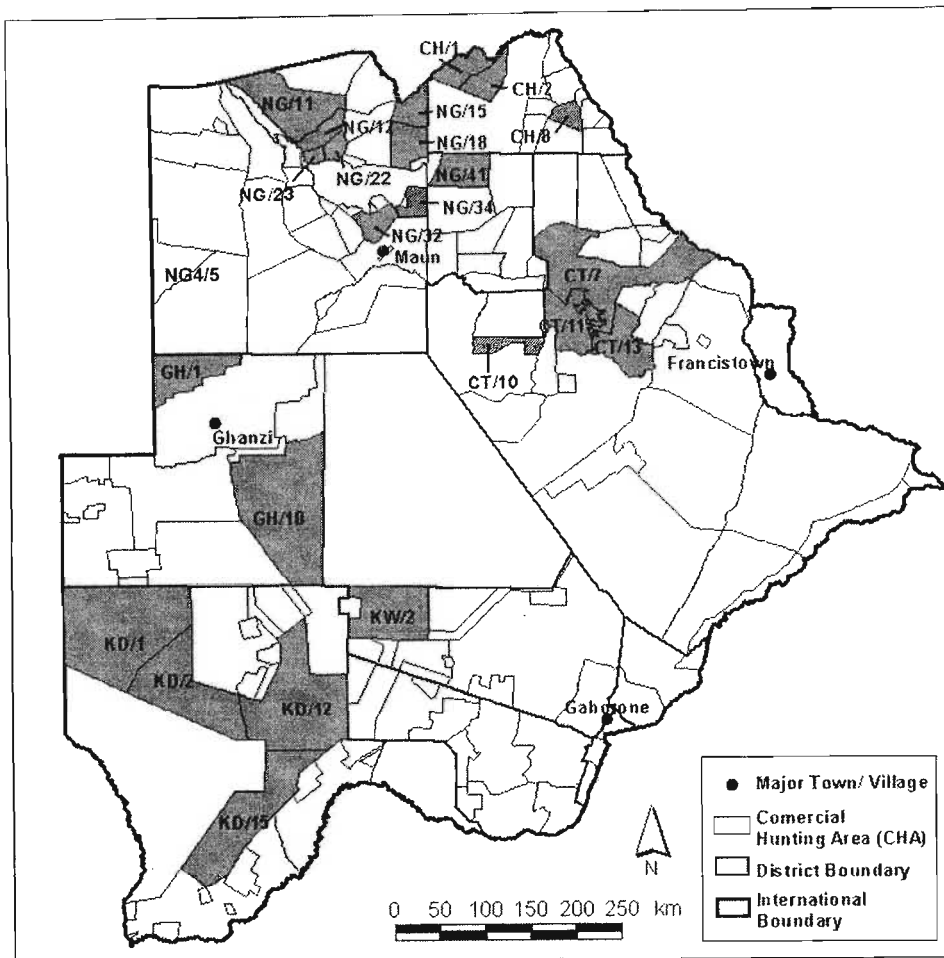


Plate 11. Wildlife Management Areas (WMAs) and Controlled Hunting Areas (CHAs) in Botswana (Swatuk 2005:103).

The land utilisation rights are then again determined by what can be referred to as a ‘secondary zonation’, consisting of national parks, national monuments, game reserves and the specially designated zones of Wildlife Management Areas (WMAs). Of those 163 CHAs, 42 are designated for community management and user rights and therefore eligible and intended for CBNRM programmes. The intention is that livelihood activities displaced by the land re-classification are off-set due to CBNRM opportunities (Gujadhur 2001).

3.2 The establishment of a Community-Based Organisation (CBO)

Once a CHA and/or WMA has been designated for the CBNRM programme and allocated to communities, then the communities must next form a Community-Based

Organisation (CBO) in order to continue the CBNRM programme. A CBO might be a trust, cooperative or association to serve as the legal entity responsible for land management and commercial enterprise development on behalf of the community in order to receive full user-rights to the land from the government (Twyman 1998). The parameters of the CBO's obligation are defined by a 15-year 'Community Natural Resources Management Lease' referred to as the 'head lease' between the Government of Botswana (GoB) and the CBO. It does not confer ownership of the land or its natural resources, but simply temporary rights to use the natural resources for 99 years, with a 15-year re-evaluation clause (Rozemeijer 2003b).

It is required by the 'head lease' that CBOs agree to undertake commercial wildlife utilisation enterprises only. The commercial wildlife enterprise can be consumptive or non-consumptive, focusing on tourism and/or veld harvesting. Some examples of CBNRM projects in Botswana in both CHAs and WMAs are: campsites and restaurants, cultural villages, safari lodges (consumptive and non), crafts, tanneries, marula harvesting and oil processing, veld products and quota auctioning. CBOs might do one or more of these projects as part of their commercial utilisation portfolio (Arntzen et al. 2003).

The popularity of this process and its potential economic benefits are visible in the steady increase in registered CBOs in Botswana from one in 1993 to 67 in 2001 (Rozemeijer 2003).

3.3 The participation of the private sector

The promotion of CBNRM in Botswana both solicited and required the support of private sector investors (Twyman 2000). This emphasis is due in part to the government's requirement for commercialisation in order to realise the financial benefits of the

resources. The commercial element, from the perspective of the government, is vital to ensure a profit-making activity and therefore the interest and potential participation of the private sector (Cassidy 2000). Likewise, the private sector needs the communities which received head leases in order to gain access to remote and potentially lucrative wildlife concessions (Hoon 2004).

To facilitate the pairing of CBOs and the private sector, the NRMP emphasises joint ventures as the preferred commercialisation avenue. The DWNP (1999 *as cited in Gujadhur 2001*) defines a 'joint venture' as:

...a business activity undertaken between two or more partners for their mutual benefit. Partners in a community joint venture will be rural people, who have user rights to the natural resources occurring in an area, and established private sector companies that recognise an area's potential for business development (1).

However, further definition of joint venture requires distinction between a 'joint venture agreement' and a 'joint venture partnership'.

The essence of the joint venture agreement (JVA) is that the community supplies strictly the land and the joint venture partner supplies capital investment and expertise in marketing, operations and management. Therefore, the capital assets belong to solely to the private sector which is subsequently responsible for the majority of the investment risk. Meanwhile, the communities are guaranteed a predetermined financial benefit regardless of the profitability of the private sector enterprise. This arrangement has lower risk (both in investment but also in earning potential) and good security (Twyman 1998; Swatuk 2005; Arntzen 2003). The JVA is intended to create channels through which

CBOs and its communities can realise (both directly and indirectly) development and conservation objectives. In most joint venture agreements, direct benefits to the CBO and its community come from employment, lease fees, development projects and/or quota replacement fees. Joint venture agreements are incredibly important for leveraging community capacity by initially exposing communities to the tourism business, natural resource management and asset formation. These elements are the most trackable, and Tisdell (2003) summarises the costs and benefits of ecotourism as an example of CBNRM-based joint venture, listed in Box 1.

Possible Economic Benefits and Economic Costs to Local Communities of Development of Ecotourism.	
Economic Benefits Possible	
<ul style="list-style-type: none"> • Increased local employment and income • More regular employment and income throughout the year • Greater diversification of economic activities, thereby reducing economic risks • Opportunities for locally controlled ecotourist-related businesses 	
Economic Costs Possible	
<ul style="list-style-type: none"> • Exclusion of locals from ecotourist areas with reduction in income, employment and resource availability to locals • Loss of control of ecotourism businesses and resources to outsiders • Consequent disruption of the social fabric of the local community (85). 	

Box 1: Potential Economic Costs and Benefits of Ecotourism (Tisdell 2003:85).

In Botswana, after the CBO is granted the head lease by the government, then the CBO initiates a tender process to select a joint venture partner with which to engage in a JVA.

In contrast to a JVA, a joint venture partnership requires the merging of both parties' assets such that financial risk from investment rests equally. As such, CBOs and its communities will not receive guaranteed returns and are subject to the vagaries of the market. They are partners in the risk with respect to marketing, competition and exposure. Profits and losses are shared among both CBOs and its communities and the private sector, and responsibility and decision-making rests with both parties (Gujadhur 2001). This arrangement has high variability in earning potential and high levels of investment,

with low security. All of Botswana joint venture enterprises were (at least as of 2004) JVAs, not joint venture partnerships (Gujadhur 2001; Vincent 2005 *pers. comm.*). The absence of joint venture partnerships in Botswana is largely due to the lack of skills and finances in the communities as well as some scepticism on behalf of CBNRM with regard to community capability in this regard (Twyman 1998). A 10-15 year period is hardly ample time to initiate, implement and execute a new programme encompassing concepts of business, such as marketing, finance and service, which are relatively unfamiliar to local operators, stakeholders and communities. It is possible that in time, after greater experience and capital formation, communities will be in a position to enter into either joint venture partnerships and/or community-based enterprises.

Arntzen et al. (2003) concluded, and it is supported by the case study of the NG 22/23 JVA, that there are a 'wide-range of impacts...including material and non-material, short and long-term and direct and indirect' (46); however, it is accepted that the most direct, short-term benefits to local communities engaged in CBNRM are financial revenues and employment creation.

4. TOURISM AS A CBNRM PROGRAM IN BOTSWANA

4.1 Botswana's tourism statistics and contribution

Tourism is not assigned to one economic particular sector and therefore it is difficult to extricate its exact contribution to Gross Domestic Product (GDP). Its influence is embedded in most industries within national accounts because its impact is determined primarily by linkages to other industries (Suich 2006 *pers. comm.*). However, if one looks at a breakdown of national GDP at a macroeconomic level, tourism with an average annual growth rate of 13 per cent usurped the cattle industry's position as second highest GDP earner after diamond mining (Mbaiwa 2003). Tourism is among the components (others are manufacturing and trade) which are anticipated to experience a GDP growth

between seven to 10.5 per cent per annum over the National Development Plan (NDP) 9 period (ending 2016) – the fastest of any component. This compares to a national GDP growth of 5.5 per cent over the same period (GoB 2003). According to Hoon (2004), 40 per cent of the employment opportunities in northern Botswana are attributable to tourism, and private sector investment in tourism has increased from BWP 150 to BWP 400 million over the last ten years. Within tourism, Botswana's wildlife-based tourism is responsible for approximately half of total tourism. Business tourism contributes the majority of the balance (Mbaiwa 2005; GoB 2003).

This growth is further substantiated by a review of tourism statistics. According to the WTO (2005), Botswana reported 975 000 international tourist arrivals in 2003 (stats not available for 2004). 22.1 per cent of the arrivals in 2000 visited the Okavango Delta and/or Maun (the Delta's gateway town). With specific reference to the Okavango Delta, the number of tourists doubled in a five year period (1998-2003) and, on average, approximately 50 000 visited the Okavango Delta (Mbaiwa 2005). According to the DoT, international receipts for tourism increased from US \$136 million in 1997 to US \$313 million in 2002 (Michler 2004). International receipts reached an impressive US \$549 million in 2004 or three per cent of the market share in Africa (WTO 2005). These receipts are a reflection not only of not only increases in the number of tourists, but also increases in the number of licensed tourism enterprises catering to visitors. Licensed tourism enterprises increased from 202 in 1998 to 442 in 2002. Of these 442 enterprises, 178 are citizen-owned, 148 are non-citizen owned and 116 are joint ventures. Tented camps and lodges increased from 77 to 158, and mobile safari operators increased from 54 to 134 over the same period. Finally, the number of available beds in the country more than doubled from approximately 3 000 to 6 300 from 1998 to 2002 (Michler 2004).

According to Ceballos-Lascurain (1996), a proper evaluation of tourism's economic impact on development requires an analysis of backward and forward linkages between tourism and other sectors, understanding of the spatial location and style of the tourism activity and identification of the beneficiaries of its economic and other effects (Healy 1992b *as cited in Ceballos-Lascurain 1996*). Most studies look at expenditure multipliers to measure the revenue that originates from the tourism industry that is spent and re-spent in the local economy (e.g. labour, capital, services) or leaks out of the local economy (e.g. taxes, imports or repatriated profits).

While a multiplier for Ngamiland, Botswana's tourism industry has not been formalised, it is reasonable to assume it mirrors that of the Kavango region, Namibia, which has similar socio-economic climate (demographics, geography, government capacity, livelihood strategies) and represents the only comprehensive research undertaken into multipliers in the southern Africa region (Suich 2006 *pers. comm.*). According to Barnes (2006 *pers. comm.*), 'In Namibia, currently, economic multipliers can only be calculated at national and not at regional level...value added multipliers for the formal tourism sector (e.g.. joint venture lodges) and the traditional sector (e.g.. community tourism enterprises) are around 0.9 and 1.4 respectively. Thus, N \$1 of GDP generated directly by the enterprise would generate a further N \$.90 or N \$1.40 in GDP elsewhere in the economy through linkages. The informal sector multiplier is probably higher because more is spent and not saved. One might expect similar national level ratios in Botswana'. This is demonstrated further by Barnes (2006 *pers. comm.*) who found a lower multiplier for joint venture lodges, which typically have greater reliance on foreign sources.

4.2 Botswana's tourists and tourism product

Ashley and Mitchell (2006) challenge the argument that mainstream tourism (which in the case of Botswana mirrors tendencies of enclave tourism) is necessarily Africa's nemesis. They argue that it is mainstream tourism that 'has the economic muscle to seriously tackle African poverty at scale' (1). In agreement with Mbaiwa (2005) and Ceballos-Lascurain (1996)), Ashley and Mitchell (2006) argue that what needs to change is the 'style' or ethics of the travel such that mainstream tourism is not exclusive of small-scale, locally-owned, authentic operations but rather promotes such enterprises through trends such as ecotourism. This market was generated by the tourism phenomenon of 'eco-tourism', a type of tourism as opposed to a type of development. Ceballos-Lascurain (1996 *in Mbaiwa 2003*) defines eco-tourism as that which 'promotes conservation, has low visitor impact, provides for beneficially active socio-economic involvement of local population, and promotes visitor awareness in environmental conservation' (448). Tisdell (2003) summarises it to tourism that are 'careful to the environment.... help to conserve nature and thereby contribute to the sustainability of tourism reliant on wildlife' (83).

With specific reference to the majority of Botswana (especially WMAs), the tourism strategy has developed in an effort to expand ecotourism through its low volume/high cost approach. This approach ensures the very exclusive experience which is desirable to the ecotourist. The Bank of Botswana (1999 *as cited in Mbaiwa 2005*) puts forth that this tourism approach was adopted when it was realised that 20 per cent of the tourists favoured permanent (as opposed to self-guided camping) accommodation and were responsible for over 80 per cent of the total national tourist expenditure. Trends in travel as monitored by the World Tourism Organisation (WTO) show that ecotourism tends to favour developing countries, and specifically those with diverse flora, fauna and

ecosystems (Ceballos-Lascurain 1996). CBNRM has focused on capitalising on Botswana's ecotourism attributes.

5. METHODOLOGY

5.1 Identification and background of the regional case study

The focus of this study is a CBO and its member communities which were selected by the GoB as the recipients of a 'head lease' for commercial wildlife utilisation under CBNRM in Ngamiland (NG) WMAs 22/23. The case study evaluates the significance of employment revenue and CBO fee revenue from a CBNRM-based joint venture agreement to localised poverty alleviation and livelihood diversification.

5.1.1 The land

NG WMAs 22/23 are located in the northern reaches of the Okavango Delta. More specifically, they are located due east of the point where the 'panhandle' terminates and begins to spread into the expanding delta (Plate 2). NG 22 is approximately 573 square kilometres and NG 23 is approximately 358 square kilometres in extent (Ecotourism Support Services (ESS) 2002; Okavango Community Consultants (OCC) 1995). Each WMA is characterised by its remoteness and inaccessibility. They are reputed to be the



Plate 2. Okavango Delta: the panhandle ends at apx. Seronga and Delta's alluvial fans ends at apx. Maun. The location of NG 22/23 (red area) (Mendelsohn and el Obeid 2004).

‘most pristine and least developed in Ngamiland’ (OCC 1995: 125). Road access is limited and very treacherous from all directions. There are two airstrips, one in each WMA, and there are traditional mokoro (dugout canoe) routes from the panhandle to the WMAs via the Nqoga and Manuchira channels. From the 1960s, after the two CHAs were re-classified as WMAs for conservation-based activities only, they were used primarily for consumptive tourism managed by a private sector company. As a result of minimal human impact, their pristine nature is exemplary and has been guaranteed to the present day, but this, in turn complicated the determination of their allocation to local communities under CBNRM’s introduction in the 1990s.

5.1.2 The communities

Both areas are Batawana tribal territory and are administered by the Tawana Land Board of the Northwest District Council in the district of Ngamiland, Botswana. The basic principle in the selection process instructed that WMAs and CHAs would be offered to those communities located in those areas; however, in the case of NG 22/23, there were no resident communities within its boundaries. Therefore, the selection process was particularly complicated and ambiguous. Records indicate that there have been no human settlements in these WMAs for at least the last 30 years, with the exception of transient swamp dwellers (mostly Bayei people) en route to trading posts along the Delta’s channels and islands. Furthermore, activities and settlements in NG 22/23 have always been limited due to distance from major population centres and markets. This is exacerbated by accessing and traversing the land via the network of seasonal and shifting channels.

In the early 1990s, when the GoB implemented its CBNRM programme, it identified communities to whom it could offer head leases due to traditional or ancestral land rights. Through a number of *kgotlas* (traditional meetings), consultations, workshops and policy

meetings with these stakeholders, it was determined that the five communities which would receive the rights to the NG 22/23 WMAs would be Seronga, Gunotsoga, Eretsha, Beetsha and Gudigwa. These communities are located in CHAs NG 11/12 on the northeast finger of the Okavango Delta and are approximately 700 kilometres or 45 minutes by air from Maun (the tourism and commercial hub of Ngamiland). This selection of communities which do not reside within the boundaries of their partner WMAs is unique. In this case, revenue generated from NG 22/23 is used to support rural development in adjacent CHAs and their communities.

The population of the five NG 11/12 communities, estimated at approximately 7 779, spreads along the north-eastern finger of the panhandle (CSO 2001). The area is considered primarily rural. The total population of NG district 71, of which the five communities are a part, is 49 642 (CSO 2001). There are approximately 10,184 households which translates to a mean of 4.87 people per household compared to the CSO (2003) survey which indicates a mean of 4.39 people per household in rural areas. This is only slightly higher than the national mean of 4.15 people per household (CSO 2003).

5.1.3 The CBO

Once the recipient communities from NG 11/12 were selected, the formation of the CBO began in 1993 as required to procure a head lease from the DWNP. The CBO, the Okavango Community Trust (OCT), was formally registered in 1995. The OCT is intended to manage and utilise the land on behalf of its representative communities as well as maintain sustainable benefits to its citizens, specifically in the areas of vocational training and employment (ACORD 2002). In order to carry out its duties, the OCT relies on a complex organisational structure consisting of a Board of Trustees (11) made up of

two people from each of the five communities' Village Trust Committees (VTCs), groups of 12 elected members in each community. The 11th person on the Board is from the joint venture partner (Modiakgotla and Sainsbury 2003). The office term of Board members is one year. There is a minimum of four scheduled meetings per year and members are paid a sitting allowance for their participation. GoB supports the OCT and VTCs in the form of the Village Development Committees (VDCs). VDCs assist the VTCs with decisions regarding allocation of Trust revenue and resources for local rural development within NDP 9 objectives (ESS 2002).

5.1.4 The joint venture agreement and partner

The OCT's first formal JVA started in 1996 with Micheletti Bates Safaris (MBS) as the joint venture partner for consumptive tourism and followed the CBNRM 1-1-3 year lease tenure system with a renewed 5-year contract granted in 2001. By 2001, MBS elected to subcontract to Okavango Wilderness Safaris (OWS) for the introduction and operation of non-consumptive tourism. MBS hand-picked a subcontractor with little consultation with the OCT. Between 2001 and 2004, NG 22/23 and its operations transitioned from primarily consumptive to non-consumptive tourism and by 2004, OWS was the primary (if only) operator in the WMAs and non-consumptive tourism was the only commercial wildlife utilisation in practice. This is to say that consumptive tourism was no longer taking place and the relationship between MBS and OCT had been dissolved such that the relationship was continued strictly between OCT and OWS.

A draft management plan executed by Ecotourism Support Services (ESS) (2002) on behalf of the OCT called the 'Management Plan for Community CHAs 22 and 23' acts as the contract and management plan for the joint venture agreement between the joint venture partner and the CBO within the Ngamiland district's overarching management

plan. It has been used loosely as an ad-hoc management plan by all stakeholders since mid-2002. Between 1996 and 2001, despite the requirements of the NRMP and relevant national policy, the OCT did not have a management plan in place for NG 22/23.

At the time of the author's study (2004), there were five operational camps in NG 22/23 catering to a total of 52 beds, the maximum allowed by the draft management plan (ESS 2002). These camps were Vumbura, Little Vumbura, Kaparota, Vundumtiki and Duba Plains. All are located in NG 22, with the exception of Duba which is located in NG 23. They are accessible for tourist purposes by air only. Activities are conducted by foot, 4x4 vehicles, mekoro and boats. All of these camps were developed wholly by OWS and all assets, including vehicles and support services, are owned in totality by the joint venture partner. In 2004, the average market price per person per night in high season was BWP 18 000 and BWP 17 000 in low season. The average occupancy rates were 77 and 51 percent, respectively (Vincent 2005 *pers. comm.*).

The study focused on the individuals from the OCT communities who are employed at the OWS camps in NG 22/23. The author spent a total of 27 weeks living and working in the camps between March and December 2004, and six weeks on site in 2005. The first two months were spent simply getting to know the employees, their day-to-day lives, their culture, and most importantly, developing basic relationships. The significance of this intangible element of research is noted in numerous socio-economic studies which rely on the trust and support of people for execution (Sammy and Opio 2005). This effort to coordinate qualitative, quantitative and personal experience contributed to this study because the nuances of context, culture and personality were observable (Archabald and Naughton-Treves 2001). The value of this element must not be underestimated – many

indigenous peoples are protective and defensive toward probing questions and observation, which can elicit feelings of disempowerment and oppression. Reliable qualitative data of this nature could only be collected in an atmosphere of security and mutual respect.

5.2 Qualitative and quantitative data collection

Following the initial observation and relationship-building period, more formal data collection began in June 2004, and was completed in April and August 2005. The format, approach and objectives of the research were shared candidly and pro-actively with all stakeholders – OCT, the staff, the camp managers and OWS.

Much of the rural population of NG 11/12 is illiterate; therefore conducting one-on-one interviews with a translator (where necessary) was the best method (Sammy and Opio 2005). There were no prerequisites for interviewees other than being residents of one of the five OCT communities and a member of staff. A simple interview procedure took place at all the camps, and the staff members present at the time of the visit were interviewed. Additional interviews took place in the staff villages of each of the five camps in a private setting, usually at the employees' houses. The questions were intended to guide the interviewees without influence or bias. Each interview was recorded in notes taken by hand.

Interviews were also conducted with members of the joint venture partner: Sam Kavindama, OWS representative to the OCT; Keith Vincent, Managing Director of OWS; Mike Wassung, OWS NG 22/23 WMA Manager. A site visit to the OCT plot in Seronga as well as attendance of one of the OCT *kgotlas* gave perspective and relevance to the procedural and cultural context of the JVA.

Attempts were made to get a complete set of data, but due to leave cycles as well as work schedules, it was not possible. Therefore, 72 per cent of the total staff from the OCT communities was interviewed and represents a significant sample size referred to as the 'interview population'. However, in some cases, such as basic demographics, data from all the staff members from the OCT communities was obtainable. In such cases, the sample size is referred to as 'total staff population'. In addition to permanent employees, there were a number of casuals on temporary employment contracts. Because of the nature of the temporary contracts, these employees are not included in the calculations; therefore the economic data is, if anything, an underestimate.

6. RESULTS AND DISCUSSION

The analysis of data of the case study will focus on those economic benefits presented by Tisdell (2003). The economic contribution channels have been divided into the categories of Employment, Livelihood and CBO revenue. The calculations are based on the average exchange rate of 2004 to be BWP 5.2 = US \$1.

6.1 Economic contribution of employment

6.1.1 Employment (total population)

Each of the five OCT communities is represented among the staff members. The employment strategy/requirements of the OCT aim to share the JVA opportunity evenly among communities, with the exception of Gudigwa which is quite small. However, the data does not account for the opening of Gudigwa Camp, not associated with the JVA, but developed exclusively by and for the benefit of the Bukakhwe people, the primary residents of Gudigwa and primary employees of that particular camp. Therefore, the OCT does not allocate as many positions within NG 22/23 to this community, because of its residents' alternative employment opportunities outside the NG 22/23 JVA.

In total, the NG 22/23 camps employ 111 employees for an average of 22 employees per camp. Of this total staff population (111), 86, or an average of 17 employees per camp, are from one of the OCT communities. This translates to 77 per cent of the staff members hailing from the greater OCT community in any given camp. This does not include any support staff at the OWS (Maun) or OCT (Seronga) headquarters, temporary employees and/or expatriate staff (an average of three per camp). If one does add the OCT (Seronga) headquarters average annual employment of 59 (the median range employed in 2004), then it increases the employees per camp from OCT communities to 29; however, this is a figure which is unreliable due to constant staffing changes and is too variable for data analysis.

A combination of two studies conducted in 2001 (Mbaiwa 2003) determined that in a sample of 50 camps and lodges throughout the Delta, there were 1 658 employees. That equates to an average of 50 employees per enterprise. A further example from six CBOs in the Okavango Delta shows 832 employees in total, or an average of 138 employees per conservation area (Mbaiwa 2005). Gujadhur (2001) estimates 40–50 jobs per enterprise in her Ngamiland-based research. It is unclear whether these figures include expatriate and headquarter support staff employment, which have been deducted from the NG 22/23 JVA figures. In contrast, the NG 22/23 JVA employment of 111 is high compared to four case studies presented by Arntzen et al. (2003) of other JVAs throughout Botswana, which list anywhere between a total of 0 to 95 employees inclusive of both CBO and JVA employment.

The reason for this significant difference between 2004 NG 22/23 employment data and that from 2001 studies could be two-fold. OWS' camps are based heavily on the low-

volume/high-cost model which may allow for more efficient and centralised staffing and result in fewer employees despite high product price overall. Or the data from the 2001 studies includes substantial support staff which in the case of OWS is heavily centralised (in Maun). It is not feasible to distribute the employment at OWS (Maun) headquarters to any one camp and/or conservation area.

Many (Gujadhur 2001, Mbaiwa 2003 and 2005; Rozemeijer and van der Hagt 2000; Jones 2004) argue that CBNRM JVAs could and should offer even greater employment; however, their growth limitations are rooted in capacity constraints, expatriate ownership and investment and access to basic needs. This is especially important given that, the advent of CBNRM, specifically in the form of tourism, was slated to become one of the main revenue and employment avenues in rural Botswana (Mbaiwa 2003; Gujadhur 2001). However, one must apply contextual reference to analysis. As previously discussed, in rural Ngamiland the unemployment rate (approximately 23 per cent) and poverty are high. With respect to these conditions, any employment, regardless of whether it could or should be more extensive is quite significant (Arntzen 2003; Rozemeijer 2003b).

There are approximately 1 772 households in the OCT community (CSO 2001; CSO 2003; ESS 2002). The employment of 86 individuals translates to six per cent of all households associated with direct-use benefits in the form of JVA employment, assuming no two employees are from the same household. If one were to add the OCT (Seronga) headquarters' employment of 59 then eight per cent of households receive direct use benefits from employment associated with the JVA employment. These statistics are likely under-estimates because only a portion of the population is of economically-active

age or ample health to even be eligible for employment and temporary employees are not included. Given the dearth of employment opportunities in these rural areas, this influence is significant (Arntzen 2003).

For rural populations, the concept of moving to a major urban centre of the country such as Maun, Gaborone and/or Francistown is daunting. There is a growing rural to urban migration, but that does not necessarily imply that it is a preference so much as a requirement of the increasingly cash-driven economy. Jobs are still difficult to obtain for those with minimal skill or education. While there is the potential that some of the staff members, if not working in the NG 22/23 camps, might have jobs elsewhere, it is unlikely for reasons discussed: lack of education, access to markets and personal capital. The CSO (2003) statistics suggest that a positive relationship between decreased unemployment and increased education level does not improve chances of employment until a very advanced educational level is attained. The CSO (2003) census found that the unemployment rate among the age group 25-29 is only lowered at a national level once the acquisition of Cambridge A-levels is achieved. That level of education lowers the unemployment rate to 20 per cent from 30 per cent prior to the attainment of A-levels.

6.1.1 Wages (total population)

Based on OWS payroll wages, the total wages paid to permanent staff members from the OCT communities is BWP 60 519 per month, or a total wage bill of 726 228 per annum (not including annual bonuses or gratuities received). On average each employee earns BWP 703.41 (US \$135) per month (max BWP 2 800; min BWP 540), or BWP 8 440 per person per annum. The wage income is supplemented by an average monthly gratuity of BWP 142.43 (max BWP 600; min BWP 0), or BWP 1 710 per person per annum (Table 1). In total, each staff member earns an average of BWP 845 per month, BWP 142 of

which is variable and therefore not to be heavily considered because it lacks income security necessary to assist in long-term poverty reduction.

WAGES	
Average monthly wage per employee	BWP 703.71
Average annual wage per employee	BWP 8 440
TOTAL monthly wage bill	BWP 60 519
TOTAL annual wage bill	BWP 726 228
GRATUITIES (interview population only)	
Average monthly gratuities per employee	BWP 142.43
Average annual gratuities per employee	BWP 1 710

Table 1. NG 22/23 staff wage and gratuity summary.

Studies mentioned previously from 2001 (Mbaiwa 2005; 2005b) suggest that local staff are also not receiving high paid positions. Due to the capacity constraints present in the rural population, employment of local people is mainly restricted to unskilled positions such as camp hands, wait staff, laundry staff, housekeepers, cooks and drivers.

Average salaries of local staff in the greater Okavango Delta range from BWP 350 to BWP 1 000 per month (Mbaiwa 2005). The Botswana Tourism Development Programme (1999 *as cited in Mbaiwa 2005*) found the range of salaries to be from BWP 500 to BWP 5 000 per month with expatriate workers occupying at least 81 per cent of the positions paying above BWP 3 000 per month. In complement, Ndubano (2000 *as cited in Mbaiwa 2005*) lists 62 per cent of local staff earning under BWP 955 per month, or US \$184 (the Poverty Datum Line (PDL) per household in 2000). Arntzen (2003) found the average household income to be approximately BWP 289 in 2001 in the region, which was one-quarter the household PDL (BWP 1110.26) for the area at the time. Arntzen (2003) lists the 2001 household PDL at US \$202 per month for rural Ngamiland, specifically. However, Arntzen (2003) lists the average household income for rural Ngamiland at US \$52 per month or BWP 270. All of these figures are higher than Botswana's US \$1/day line in Botswana (CSO 2003).

The 2002/03 average rural nominal household disposable income (including government and other assistance) is BWP 1 378.94 per month, equivalent to BWP 313.87 per person per month (compared to BWP 2 424.62 and BWP 585.43, respectively for the nation). The average rural nominal household disposable cash income (excluding government or other assistance) is BWP 975 per month. A comparison of these two averages demonstrates an average assistance package of BWP 403.94 per household (CSO 2003). The household is therefore only providing for approximately 65 per cent of total disposable income and relies on 35 per cent assistance.

A salary per person of even the lowest brackets suggested by Mbaiwa (2005) and Arntzen (2003) (BWP 350 or BWP 500) would be higher than all aforementioned standardised poverty measurements and local average household income. These salaries appear to be substantial given the US \$1/day, US \$2/day and PDL thresholds (per household). These statistics also support the likelihood that the wages paid to local staff in NG 22/23 are more than just meeting the basic needs of the household. While the wages are competitive compared to these standardised measurements, most of the NG 22/23 staff members are the only employed member of their household in which case sole cash income positions 94 per cent of the NG 22/23 employees' households under the PDL for 2000 in 2004. But, in socio-geographic context, the employees of NG 22/23 are comparatively and contextually well-off in relative local terms with an average monthly wage total of BWP 703.41. Good (1999) reiterates that there is a significant contextual element to an analysis of impacts and benefits to rural communities from direct use benefits. He states, 'poverty as income below 'a dollar a day', for example, has international utility, but that sum would represent riches for San [Bukakhwe] farm labourers or official destitutes in

Botswana today' (185). This simply means they are meeting more basic needs but not necessarily achieving any level of accumulation or security.

6.1.2 Economic distribution (interview population)

OWS staff members generally work on a 3-month on/1 month off cycle and return to their communities on the off-cycle. There they tend to their households, visit children and maintain other livelihood strategies, including providing remittances.

While the wage bill and employment statistics are extremely important, the scope of the significance of employment revenue to poverty alleviation and livelihood diversification is only realised by considering the 'trickle down' effect of cash income to members of the household and greater community. The recipients are usually extended family, such as grandparents, aunts, uncles, siblings, nieces, nephews, etc. According to those interviewed, the majority of costs are basic needs and then clothing and school fees. If one considers the actual distribution of cash via remittances, then its significance takes on new proportions and scope. The interview population indicated an average remittance of BWP 663.47 per leave to an average of 5.69 individuals, not including dependents (children under 18). This equals to an average cash remittance of BWP 116.53 per recipient (Table 2). Thus, the annual cash remittance to communities can be extrapolated as BWP 171 175 or 23.5 per cent of the joint venture partner's total wage bill. This collective remittance can be extrapolated to equal a distribution of an average of approximately BWP 57 058 in cash to communities each three months to approximately 489 individuals. The government census (CSO 2003) lists an average of 4.39 people per rural household indicating that the distribution of cash remittance is contributing to at least one more household than the staff member's own and also elevation an average of five other individuals to at least the US \$1/day line.

RECIPIENTS	
Average number of recipients per employee	5.69
Minimum number of recipients per employee	1.0
Maximum number of recipients per employee	12.0
AMOUNT	
Average amount of give per employee per leave	BWP 663.47
Minimum amount of give per employee per employee per leave	BWP 200
Maximum amount of give per employee per employee per leave	BWP 1 900
Average give per recipient per leave	BWP 116.53
Total give to communities per leave	BWP 57 058

Table 2. Household wage distribution by NG 22/23 JVA staff members to their communities.

6.2 Livelihood (interview population)

The interview population indicated numerous livelihood strategies. They were asked in what ways they meet their family's basic needs of food, shelter, and water. Predictably, there were a range of strategies; however, in concert with Wikan's (2004) study, the poorest households rely almost exclusively on agriculture only. All of the interviewees' households partake in subsistence agriculture to meet basic needs. In addition to this livelihood strategy, 8 per cent are in retail (examples: baking, sewing), 12 per cent are in tourism sector, 17 per cent are teachers, 8 per cent are in government and 5 per cent are mechanics. This indicates that 62 per cent of the households have some form of income other than subsistence agriculture and wage work from NG 22/23 employment. For the remaining 38 per cent of households, the NG 22/23 JVA employment is the only source of cash income, other than potential government grants. The interviewees indicated receiving government grants only during the Cattle Lung Disease outbreak of 1993-4.

6.3 CBO fee revenue and distribution

As discussed previously, the NG 22/23 JVA is a 'sub-lease' whereby the joint venture partner pays fees to the CBO for land use rights. The draft management plan (ESS 2002) consists of three main revenue channels for the OCT from the joint venture partner: the land rental, the quota replacement fee and the Village Development Fund (VDF) (Table 3). According to Modiakgotla and Sainsbury (2003), the land rental is to increase by six per cent per annum, while other revenue channels remain constant. Unfortunately, neither

the OCT nor OWS responded to queries regarding this increase; therefore, it could not be confirmed nor is it clear why, in 2002, the wildlife quota amount increased by BWP 35 000 while the VDF decreased by BWP 100 000. The quota fee is meant to replace lost revenue which would be generated by consumptive tourism per trophy. The VDF generates BWP 100 000 per community so that dispersal can be more equitable, in theory, and not rely on discretionary distribution per community by the OCT. These fees, as much as 1.6 million in 2003, are reputed to be the most expensive in southern Africa as regards JVAs between a CBO and a joint venture partner (Vincent and Wassung 2004 *pers. comm.*).

Year	Land rental	Quota	Other Income (e.g. VDF)	Total OCT fee revenue
2004	676,000	400,000	500,000	1.57 million
2003	675,410	434,500	500,000	1.6 million
2002	636,000	435,000	400,000	1.47 million
2001	600,000	400,000	500,000	1.5 million
2000	350,000	340,000	260,000	950,000
1999	600,000	?	?	
1998	400,000	?	?	
1997	400,000	?	?	

Table 3. OCT fee revenue from the NG 22/23 JVA (in BWP) (ESS 2002; Modiakgotla and Sainsbury 2003; Kavindama 2005 *pers. comm.*)

In addition to the three primary financial channels of the JVA, there are numerous other incidental fees and contributions which demonstrate the colossal commitment by individual stakeholders in JVAs. In the NG 22/23 example, the OCT administers the funds received from OWS' payments of lease and quota fees but also demands additional incidental fees and contributions (e.g.. radio operators, soccer tournament, vegetable garden). Of the BWP 2 million spent on these CBO fees and contributions, OWS spends over 75 per cent CBO fees (e.g. land rental, VDF and quota fees) while the remaining 25 per cent is spent on all other incidental fees and contributions.

The NG 22/23 JVA also yields significantly more impact in comparison to the CBOs from a range of studies. The financial data presented in this paper positions the JVA above all four of Arntzen et al. (2003) CBOs not only in employment and CBO fee revenue. The NG 22/23 JVA is either equal to or greater than the other four CBOs in scope, potential, financial sustainability and asset formation. Similarly, a study of non-consumptive tourism by Rozemeijer (2003b) found a total of BWP 2.84 million fee revenue attributable to seven CBOs. This averages to revenue of BWP 405 714 and 25 jobs per CBO. Another study by Wynter et al. (1999 *as cited in Gujadhur* 2001) notes that 13 CBOs in the Okavango Delta received combined total of BWP 2.29 million in fee revenue, or BWP 224 000 per CBO. A similar example from 2001 indicates total revenue of BWP 4.8 million total or 800 000 to each of six CBOs in the Okavango Delta (Mbaiwa 2005).

According to Arntzen et al. (2003):

...the financial revenues [of CBOs] have risen substantially during the 1990s, particularly wildlife-based CBOs involved in joint venture agreements. Joint venture agreements are by far the largest source of revenues of CBOs. The average revenue from the joint venture agreement per resident is around BWP 850 per annum (2001). Assuming that CBOs generate another 25 per cent extra, the total average financial benefit would be around BWP 1 050 per annum per person. This is significant in view of the extremely low incomes in most of the CBNRM villages (50).

In contrast to Arntzen et al. (2003) data, the 2003 Botswana review of CBNRM (Rozemeijer (2003b)) cites that, 'community members involved in CBNRM earn an

average of BWP 250 per person per annum' (10). Therefore, on the one hand, Arntzen et al. (2003) present data showing CBO benefits of BWP 850 to BWP 1 050 per annum per person, but Rozemeijer (2003b) shows BWP 250 per person per annum.

Despite the magnitude of this NG 22/23 JVA CBO revenue, its allocation per person per annum to each community resident would be a mere BWP 202 (less CBO contribution) or BWP 455 including an estimated addition of 25 per cent extra from CBOs (assuming the OCT distributes 100 per cent of its revenue). This is low in comparison to Arntzen et al. (2003) figures but on par with those of Rozemeijer (2003b). The range in data is likely due in part to population variability such that the per capita return is not representative of the magnitude of total CBO fee revenue. This suggests that perhaps CBO fees should be determined not only by the quality of the resource eligible for lease, but also the size of the recipient population such that there is a minimum per capita return on the lease.

Arntzen et al. (2003) and Rozemeijer (2003) found that most of the JVA revenue accrues to the CBO and little of it is ever distributed to community members. The poor distribution has been justified by the belief that the small amount of disbursement would make no significant impact on community members and would be better spent on CBO investment schemes (Arntzen et al. 2003). Arntzen et al. (2003) determined that the impact of CBNRM in Botswana is minimal due to poor benefit distribution such that the revenue is not realised at the household level. Arntzen et al. (2003) reiterate concisely:

...it is not sufficient to generate benefit, but it is essential to distribute them fairly and wisely from an economic, social and environmental perspective. The distribution of benefits is important as it determines the CBNRM impact on livelihoods, the appreciation of the CBNRM projects and the degree to which

CBNRM projects offer an incentive for members and communities to conserve natural resources (54).

The authors note that even a relatively small amount of income from a CBNRM project [in the form of CBO fee revenue distribution] makes a significant impact at the household level (due to the lack of alternatives for income generation) and serves to reinforce the positive impressions of such projects; regardless of its amount, would be significant more on principle if not in utility (Ashley 2000; Swatuk 2005).

Arntzen et al. (2003) and Rozemeijer (2003b) also attribute much of the lukewarm response of local communities to CBNRM to respective CBOs' inability to distribute revenue at a household level. Consequently, many if not all of the direct benefits of CBNRM at a household level might come strictly from employment (Rozemeijer 2003b; Gujadhur 2001; Child 2004). The NG 22/23 JVA supports this conclusion as well. It is the employment revenue as opposed to the (potential) CBO fee revenue which would make a greater impact on household income. However, a distinction must be made regarding each revenue's scope. The employment revenue impacts potentially 10 per cent of the households, where as the distribution of CBO revenue would impact every household an average of 4.39 times for a total of BWP 886 per household. In conclusion, direct employment revenue impacts the least number of people at a greatest amount per person; remittance revenue impacts a slightly greater number of people at a slightly lesser amount per person; while CBO revenue impacts the greatest number of people at least amount per person.

In general, the JVA staff members exhibited disappointment and caution when queried about their perceptions of the JVA. This suggests that there is much more which the CBO could be doing to effect positive change and benefit its people either through distribution of revenue (either at a household or community level) through transparency and efficient and visible development contributions (ACORD 2002). This lack of accountability and influence exists in many CBOs and is reputed to be a major barrier to the progress to transition from JVA to joint venture partnerships whereupon true business institutions can be developed at a local level (Modiakgotla and Sainsbury 2003; Vincent and Wassung 2004 *pers. comm.*).

7. CONCLUSION

Studies in Botswana indicate that prior to CBNRM most rural communities received little cash income from the natural resources (Arntzen et al. 2003; Rozemeijer 2003; Mbaiwa 2003; ACORD 2002). Two questions emerge: 1) whether cash income from employment and CBO fee revenue alleviates some degree of poverty at the household level and, 2) whether involvement in CBRNM acts as a livelihood diversification strategy within the socio-economic fabric of the recipient community to advance development. The case study considers both the actual amount of revenue, and, most importantly, its distribution. Rozemeijer (2003b) states that revenue is at best a supplement to household income; however, it is extremely important when compared to the scarcity of alternative economic opportunities available in these remote areas. The distribution of benefits is the next tier in identifying revenue significance at a local level.

The impact of the NG 22/23 JVA employment revenue to some measure alleviates poverty and acts as a livelihood diversification strategy in the staff member's household and at least one other household. This is demonstrated by the distribution of remittances to 5.69 individuals (18 years or older) and suggests that the impact of cash remittances

reaches approximately double that of direct JVA employment. The significance of this cash income (either indirectly through remittances or directly through employment) is significant in a region where there are few employment and cash-earning opportunities.

In contrast, the CBO fee revenue makes virtually no contribution to household poverty alleviation or livelihood diversification, under the present distribution strategy. Arntzen et al. (2003) categorise CBNRM as a contributor to livelihood security by offering another livelihood source, or diversification. However, most CBOs, including the OCT, have opted to keep income in a collective bank account rather than distribute the revenue at a household level either out of greed and control, or to support extremely high overheads (ACORD 2002).

This case study suggests that, though employment revenue and CBO fee revenue may not be significant in comparison to that which is retained by joint venture partners and/or foreign-owners, its significance should be evaluated in relation to the standard of living of the recipient and/or in comparison to the level of living prior to the initiation of the CBNRM programme. If the cash elevates a household to or above one of the standardised poverty measures, at minimum, then the cash is significant simply on grounds of poverty alleviation, regardless of the actual monetary amount. The latter comparison would gauge development level with or without CBNRM programme contribution.

Consequently, the objectives of Botswana's CBNRM programme are only partially addressed. CBNRM confidently promotes the linkage between people's wise use and conservation of natural resources and the derivation of socio-economic benefits, especially at a household level and equitably (Mbaiwa 2005b; ACORD 2002). As

summarised by Gujadhur (2001) and Van der Jagt et al. 2000 (*as cited in Gujadhur 2001*):

...passively earned benefits which do not directly improve the lives of community residents (e.g. cash that is banked) do not provide a concrete link to wildlife conservation. Active natural resource utilisation and management and intangible benefits (decision-making power, food security, and employment) are the necessary complements to financial benefits that will ensure the long-term sustainability of CBNRM. (6)

The merits and shortcomings of CBNRM are a source of serious debate within development circles, especially with relation to tourism. Mbaiwa (2005; 2005b) makes a strong suggestion, and substantiate it with work by others (Rozemeijer and Van der Jagt 2000; Twyman 1998), that CBNRM (in the form of tourism enterprises) does not make a significant contribution to poverty alleviation. However, the programme receives little leeway as regards implementation and transition time to accommodate skill transfer from experienced tourism managers and enterprises to local level participants (Arntzen 2003; Rozemeijer 2003; Ashley and Mitchell 2006). Moreover, CBNRM analysis has focused almost exclusively on cash income, and only to some degree on other livelihood benefits (Ashley 2000). The assessment of CBNRM impact is difficult largely due to the absence of baseline data (prior to the implementation of the CBNRM programme) and monitoring. Most assessment requires heavy reliance on largely qualitative research based on fieldwork, literature and key informants (Ashley 2000; Rozemeijer 2003b; Arntzen et al. 2003). This is reflected in the disparity between data sets.

The impacts of employment are limited by capacity constraints within the local labour market and the lack of demand for additional labour. Conversely, the CBO fee revenue is limited not only by poor household benefit distribution but a lack of capacity from which to establish and operate successful development or entrepreneurial projects which re-invest CBO fee revenue in more long-term endeavours. As a consequence, CBO revenue is neither received in short-term direct benefits or long-term indirect (or direct) benefits to community members for either poverty alleviation or livelihood diversification. In conclusion, the NG 22/23 case study as part of Botswana's CBNRM programme demonstrates the positive contribution of employment revenue and the negative and/or absent contribution of CBO fee revenue to household poverty alleviation and livelihood diversification.

REFERENCES

- Adams, W. and D. Hulme. 2001. Conservation & Community: Changing Narratives, Policies & Practices in African Conservation. *In: Hulme, D. and M. Mupftee (eds). African Wildlife & Livelihoods: The Promise and Performance of Community Conservation.* Oxford: James Currey Ltd.
- Agency for Cooperation and Research in Development (ACORD). 2002. *Through our Eyes: ACORD's Experiences in CBNRM - Okavango Community Trust.* Unpublished.
- Archabald, K. and L. Naughton-Treves. 2001. Tourism revenue-sharing around national parks in Western Uganda: early efforts to identify and reward local communities. *Environmental Conservation.* 28.2: 135-149.

- Arntzen, J. 1998. *Economic Valuation of Communal Rangelands In Botswana: A Case Study*. Amsterdam: International Institute for Environment and Development; Institute for Environmental Studies. 17.
- Arntzen, J. 2003. *An Economic View on Wildlife Management Areas in Botswana*. Gaborone: IUCN/SNV CBNRM Support Programme. 10.
- Arntzen, J., D.L. Molokomme, E.M. Terry, N. Moleele, O.Tshosa and D. Mazambani. 2003. Final Report of the Review of Community Based Natural Resource Management in Botswana. Gaborone: National CBNRM Forum.
- Ashley, C. 2000. *The Impacts of Tourism on Rural Livelihoods: Namibia's Experience*, London: Overseas Development Institute. 128.
- Ashley, C. and J. Mitchell. 2006. *Can Tourism Help Reduce Poverty in Africa?* London: Overseas Development Institute Briefing Paper.
- Barbier, Edward B., J. Burgess and C. Folke. 1994. *Paradise Lost? The Ecological Economics of Biodiversity*. London: Earthscan.
- Barnes, J. I. (jibarnes@iafrica.com.na). 2 February 2006. Multiplier for Ngamiland Region. Personal email to Caitlin Lepper (caitlinml@hotmail.com).
- BIDPA. 1997. *A Study of Poverty and Poverty Alleviation in Botswana*. Gaborone: Botswana Institute for Development Policy, Government of Botswana.
- Cassidy, L. 2000. *CBNRM and Legal Rights to Resources in Botswana*. Gaborone: IUCN/SNV CBNRM Support Programme. 4.

- Ceballos-Lascurain, H. 1996. *Tourism, Ecotourism and Protected areas: The State of Nature-based Tourism Around the World and Guidelines for its Development*. Gland, Switzerland: IUCN.
- Central Statistics Office. 2001. *Distribution of population by sex, by village and their associated localities: 2001 Population and Housing Census*. Gaborone: Central Statistics Office, Government of Botswana.
- Central Statistics Office. 2003. *2001/2002 Household Income and Expenditure Survey (HIES) Statistics Brief*. Gaborone: Central Statistics Office, Government of Botswana.
- Child B. (ed). 2004. *Parks in Transition: Biodiversity, Rural Development and the Bottom Line*. London: Earthscan.
- Eco-tourism Support Services. 2002. *Management Plan for Community CHAs NG 22 and 23*. Maun: Unpublished.
- Good, K. 1999. The State and Extreme Poverty in Botswana: the San and Destitutes. *The Journal of Modern African Studies*. 37.2: 185-205.
- Government of Botswana. 2003. *National Development Plan 9*. Gaborone: Government of Botswana.
- Gujadhur, T. 2001. *Joint Venture Options for Communities and Safari Operators in Botswana*, Gaborone: IUCN/SNV CBRNM Support Programme. 6.
- Hitchcock, R.K. Undated. *The Kavango Basin: A Case Study*. [online]. The Water Page. Available at: www.thewaterpage.com/okavango_case_study.html. [Accessed 10 January 2006].

- Hoon, P. 2004. Personal Markets and impersonal communities? Prospects for community conservation in Botswana. Berkeley: University of California, Center for African Studies.
- Jones, B. and M. Murphree. 2001. The Evolution of Policy on Community Conservation in Namibia & Zimbabwe. In: Hulme, D. and M. Muphree. (eds). *African wildlife & livelihoods: the promise and performance of community conservation*. Oxford: James Currey Ltd.
- Jones, B. 2004. Developing criteria for the contribution of CBNRM to poverty reduction and sustainable livelihoods in southern Africa. Occasional Paper 7. Harare: University of Western Cape and University of Zimbabwe.
- Kalikawe, M. C. 2001. *Botswana: Integrating Biodiversity into the Tourism Sector*, Presentation paper for the UNEP International Workshop on Best Practices and Country Case Studies, Mexico City.
- Kavindama, Sam. July 2005. Personal Communication. Maun, Botswana.
- Kirkby, J., P. O'Keefe and J. Timberlake. 1996, *The Earthscan Reader in Sustainable Development*. London: Earthscan Publications, Ltd.
- Mbaiwa, J. E. 2003. The Socio-economic and Environmental Impacts of Tourism Development on the Okavango Delta, north-western Botswana. *Journal of Arid Environments*. 54.2: 447-467.
- Mbaiwa, J. E. 2005. Enclave tourism and its socio-economic impacts in the Okavango Delta, Botswana. *Tourism Management*. 26: 157-172.

- Mbaiwa, J. E. 2005b. The Problems and Prospects of Sustainable Tourism Development in the Okavango Delta, Botswana. *Journal of Sustainable Tourism*. 13.3: 203-227.
- Mendelsohn, J. and S. el Obeid. 2004. *Okavango River: Flow of a Lifeline*. Cape Town: Struik.
- Michler, I. 2004. *Botswana: The Insider's Guide*. Cape Town: Struik.
- Modiakgotla, K. and Sainsbury, S. 2003. *Labour Laws and Community-Based Organisations in Botswana*. Gaborone: IUCN/SNV CBNRM Support Programme. 13.
- Rozemeijer, N. 2003. CBNRM in Botswana: Revisiting the assumptions after 10 years of implementation. Unpublished.
- Rozemeijer, N. 2003b. An overview of the current status and progress made in CBNRM in Botswana. Unpublished.
- Rozemeijer, N. and C. van der Jagt. 2000. Community Based Natural Resource Management in Botswana: How Community -based is CBNRM in Botswana? Unpublished.
- Sammy, J. and C. Opio. 2005. Problems and prospects for conservation and indigenous community development in rural Botswana. *Development Southern Africa*. 22.1: 67-85.
- Suich, H. (helensuich@yahoo.co.uk). 15 June 2006 Component A. Personal email to C. Lepper (caitlinml@hotmail.com).
- Swatuk, L. 2005. From "Project" to "Context": Community Based Natural Resource Management in Botswana. *Global Environmental Politics*. 5.3: 95-124.

- Tisdell, J. 2003. Economic Aspects of Ecotourism: Wildlife-based tourism and its Contribution to Nature. *Sri Lankan Journal of Agricultural Economics*. 5.1: 83-95.
- Twyman, C. 1998. Rethinking Community Resource Management: Managing Resources or Managing People in western Botswana?, *Third World Quarterly*. 19.4: 745-770.
- Twyman, C. 2000. Livelihood Diversity and opportunity in Kalahari Wildlife Management Areas, Botswana: Rethinking Community Resource Management, *Journal of Southern African Studies*. 26.4: 783-806.
- United Nations Development Programme. 2005. *Botswana Human Development*
- Vincent, K. Personal Communication. 15 August 2005.
- Vincent, K. and M. Wassung. Personal Communication. 25 March 2004.
- Wikan, G. 2004. The level of living in rural Botswana re-studied. *Norwegian Journal of Geography*. 58: 1-10.
- World Bank. 2005. World Development Indicators Data Query. [online]. World Bank. Available at: www.devdata.worldbank.org/data-query/. [Accessed 3 August 2006].
- World Tourism Organisation. 2005. Tourism Market Trends, 2005 Edition - Annex. [online]. World Tourism Organisation. Available at: www.world-tourism.org/facts/eng/pdf/highlights/2005_eng_low.pdf. [Accessed 10 March 2006]

source for households since the mid-1990s. Barnes (1998b) further explains that it has been difficult to value the traditional agriculture sector because of its characteristics as small-scale, non-market and subsistence. Valuation has effectively only occurred in relation to its contribution to a household's basic needs.

CBNRM intends to respond to the need for livelihood diversification in rural areas. CBNRM, specifically in the form of tourism as commercial wildlife utilisation, is intended to be an additional livelihood strategy at minimum and potentially an alternative strategy in areas where CBNRM programmes may have displaced access or rights to a previous livelihood strategy (Twyman 1998; Ashley 2000). It is among the strategies intended to have both immediate poverty alleviation attributes and long-term reduction potential. It is concluded by Barnes (1998b) that in fact CBNRM (as tourism) does contribute valuable cash and is complementary to livelihood strategies already employed such as livestock agriculture and subsistence crop production (Barnes 1998b).

5.1.3 The NG 22/23 JVA

Once the recipient communities from NG 11/12 were selected, the formation of the CBO, the Okavango Community Trust (OCT) began in 1993 as required to procure a head lease from the DWNP. The process consisted of consultation meetings with the communities by the NRMP and the DWNP whereby the concept of CBNRM was introduced. The concepts were explained in a series of seminars attended and presented by Tawana Land Board, DWNP, OCC, regional members of Parliament and an attorney representing the OCT. But the OCT's formation was not harmonious – it neglected community participation and left community members mis-informed and without a voice. This set the CBNRM programme off poorly and introduced feelings of reticence, mismanagement, confusion and alienation (ACORD 2002; Gujadhur 2001; Lepper 2004 *pers. obs.*). Twyman (1998) offers extensive commentary on this very issue – the lack of community participation and objective presentation to the NG 11/12 communities. In her research, she argues:

...the main speeches in the consultation meetings are used to introduce the key components of the community-based projects as well as the legislation behind these changes. Though the emphasis is towards empowerment and community control, there are strong undertones of subordination and manipulation...such speeches confuse the aims of the project, juxtaposing the agency of communities to the superior agency of the safari companies as wildlife managers (750).

Twyman (1998) criticises the style and execution, or even the absence of, Participatory Rural Appraisal (PRA) exercises meant to facilitate the linkages between formal agencies and local communities. She concludes that, “the core elements of joint analysis and control over decision-making are withheld under the mask of participation...by affirming the people’s subordinate position, the DWNP assert their own superior status” (752).

Despite the poor process, the OCT was formally registered in 1995. Its constitution was later written by the OCT’s attorney and lacked community input at a grassroots level. The OCT is intended to manage and utilise the land on behalf of its representative communities as well as maintain sustainable benefits to its citizens, specifically in the areas of vocational training and employment. In addition, it states its objectives as:

- To utilise the assets of the Trust to assist in the general upliftment of the community.
- To educate the community on the importance of wildlife resource conservation.
- To assist the DWNP in supervising the leased areas and ensure that the game in these areas are protected and properly managed (ACORD 2002: 9).

In order to carry out its duties, the OCT relies on a complex organisational structure consisting of a Board of Trustees (11) made up of two people from each of the five communities’ Village Trust Committees (VTCs), a group of 12 elected members in each community (for a term of three years). The 11th person on the Board is from the private sector JVP (Modiakgotla and Sainsbury 2003). The office term of Board members is one year. There is a minimum of four scheduled meetings per year and members are paid a sitting allowance for their participation. GoB supports the OCT and VTCs in the form of the Village Development Committees (VDCs). VDCs assist the VTCs with decisions regarding allocation of Trust revenue and resources for local rural development within NDP 9 objectives (ESS 2002).

The OCT’s first formal JVA started in 1996 with Micheletti Bates Safaris (MBS) as the JVP for consumptive tourism and followed the CBNRM 1-1-3 lease tenure system with a renewed 5-year contract granted in 2001. Between 1996 and 2001, despite the requirements of the NRMP and relevant national policy, the OCT did not have a management plan in place for NG 22/23. However, ACORD (2002) notes that it may be unrealistic to expect communities/CBOs with little formal wildlife management experience to develop a technically and operationally extensive document. Regardless,

this step was skipped and it resulted in less accountability and stewardship for NG 22/23 than was intended as well as poor objectives and goals. This possibly has long-term consequences for the viability, acceptance and sustainability of this CBNRM programme both at a regional and national level. In addition, it further exacerbated feeling of disconnectedness between the communities and the OCT while giving the OCT no formalised guiding principles, objectives or understanding upon which to build its agreement with the JVP. The absence of a management plan has caused substantial confusion among stakeholders, and is credited with creating animosity, time delays and friction (ACORD 2002).

Perhaps partially as a result of the absence of a management plan, MBS subcontracted to Okavango Wilderness Safaris (OWS) for the introduction and operation of non-consumptive tourism. The lack of the formal management plan allowed MBS to hand-pick a subcontractor with little, if any, consultation with the OCT. Between 2001 and 2004, NG 22/23 and its operations transitioned from primarily consumptive to non-consumptive tourism; and by 2004, OWS was the primary (if only) operator in the WMAs and non-consumptive tourism was the only commercial wildlife utilisation in practice. This is to say that consumptive tourism was no longer taking place and the relationship between MBS and OCT had been dissolved such that the relationship was continued strictly between OCT and OWS. How, why or if this took place within the requirements of CBNRM policy regarding required management plans and re-tenders is a point of ambiguity (Vincent 2005 *pers. comm.*). A draft management plan executed by ESS (2002) on behalf of the OCT called the "Management Plan for Community CHAs 22 and 23" (ESS 2002) acts as the contract and management plan for the JVA between the JVP and the CBO within the Ngamiland district's overarching management plan. It has been used loosely as an ad-hoc management plan by all stakeholders since mid-2002.

In response to poor leadership and lack of clarity due to the absence of a management plan, ACORD (2002) launched a capacity building project in the communities in an effort to address the areas of weakness which within the JVA. The major areas of capacity identified by ACORD (2002) are:

- CBO leadership and organisational development
- Review and revision of OCT constitution to include more community empowerment, voice and involvement
- Assist the VTCs in identifying and undertaking relevant local projects to enhance community development.

Mistrust among stakeholders remains an obstacle in all directions as well. In this tripartite arrangement, each stakeholder has a defensive stance as regards the other. Communities feel the private sector is cheating them and the government is manipulating them; the private sector feels the government is controlling the communities and blackmailing the private sector; and finally, the government feels both parties are simply interested in the money. While this may all be extreme, they are sentiments which permeate the cooperation of the stakeholders (Gujadhur 2001). In addition, sensitivity toward enclave tourism, marginalisation of local communities and institutionalised forms of exclusive and/or inequitable decision-making remain a requirement and should not be side-lined with excuses of inexperience of local stakeholders.

These areas continue to be the focus in an effort to improve stakeholder relations and enhance positive impacts on the CBNRM programme (Arntzen et al. 2004; Rozemeijer 2003).

5.1.3.1 Tourism infrastructure in NG 22/23

At the time of this study (2004), there were five operational camps in NG 22/23 catering to a total of 52 beds, the maximum allowed by the draft management plan (ESS 2002). These camps were Vumbura, Little Vumbura, Kaparota, Vundumtiki and Duba Plains. All are located in NG 22, with the exception of Duba which is located in NG 23. They are accessible for tourist purposes by air only. Activities are conducted by foot, 4x4 vehicle, mekoro and boat. At the time, the camps were all canvas/wood semi-permanent structures with wood and thatch dining areas and the full complement of utilities (i.e. hot/cold tapped water, flush toilets, electricity). All these camps were developed wholly by OWS and all assets, including vehicles and support services are owned in totality by the JVP. In 2004, the average market price per person per night in high season was BWP 18,000 and BWP 17,000 in low season. The average occupancy rates were 77 and 51 percent, respectively (Vincent 2005 *pers. comm.*). Extrapolated this is a total gross sales of approximately US \$50 million and US \$30 million, respectively.

CHAPTER 6: RESEARCH METHODOLOGY

6.1 Observation period

The study focused on the individuals from the OCT communities who are employed at the OWS camps in NG 22/23. A total of 27 weeks was spent living and working in the camps between March and December 2004, and six weeks were spent in 2005. The first two months were spent simply getting to know the employees, their day-to-day lives, their culture, developing some basic relationship and vice versa. This intangible element of research is seen in numerous socio-economic studies which rely on the trust and support of people for execution (Sammy and Opio 2005). The opportunity to coordinate qualitative, quantitative and personal experience strengthened the ability to conduct this study because the subtleties of context, culture and personality were observable (Archabald and Naughton-Treves 2001). The value of this element must not be underestimated – many indigenous peoples are protective and defensive toward probing questions and observation, which bring back feelings of disempowerment and oppression – and the ability to create security and mutual respect between the author and the subject is the only way in which data of this nature could be collected. The remainder of the author's time was spent interviewing the employees and observing the culture of Botswana's wildlife tourism industry – social, economic and environmental.

6.2 Qualitative data collection

Following the initial observation and relationship-building period, more formal data collection began in June 2004, and completed in April and August 2005. The format, approach and objectives of the research were shared candidly and pro-actively with all stakeholders – OCT, the staff, the camp managers and OWS. Much of the rural population of NG 11/12 is illiterate; therefore conducting one-on-one interviews with a translator (where necessary) was the best method (Sammy and Opio 2005). There were no prerequisites for interviews other than being a resident of one of the five OCT communities and camp staff members. A simple interview procedure took place at all the camps, and as many employees as available at the time of the visit were interviewed (Appendix 4). Interview questions focused on socio-economics of the individual, staff member, the district and the JVA. Interviews were conducted to evaluate the significance of the JVA employment to the individual employee as well as his/her greater household. Basic demographic data was also collected and basic questions regarding perception of the JVA were asked. Interviews took place in the staff villages of each of the five camps

and in a private setting usually at the employee's house. The questions were intended to guide the interviewee without influence or bias. The interview was recorded as notes taken by hand. Of the 111 permanent staff members in the NG22/23 camps, 86 were from one of the five OCT communities (Plate 10). In addition to these permanent employees, there were a number of casuals on temporary employment contracts. Because of the nature of the temporary contracts, these employees are not included in the calculations. Attempts were made to get a complete set of data (86/86), but due to leave cycles as well as work schedules, it was not possible. Therefore, 62 staff members (72 percent) of the total staff from the OCT communities were interviewed and represent a significant sample size referred to as the "interview population". However, in some cases, such as basic demographics, data from all the staff members from the OCT communities (86/86) was obtainable. In such cases, the sample size referred to as "total staff population".



Plate 10. Staff of the OWS camps (all pictured are from NG 11/12 communities).

Interviews were also conducted with members of the JVP, namely Sam Kavindama, OWS representative to the OCT; Keith Vincent, Managing Director of OWS; and Mike Wassung, OWS NG 22/23 WMA Manager.

A site visit to the OCT plot in Seronga as well as attendance of one of the OCT *kgotlas* gave perspective and relevance to the procedural and cultural context of the JVA.

Due to a lack of resources, the methodology did not allow more additional time or consultation on-site in the NG 11/12 communities. This would have provided additional

first-hand knowledge to the study, and without it the study has relied more heavily on literature review as a supplement.

6.3 Quantitative data collection

Financial data was supplied by OWS and OCT accounting, where attainable from the source.

6.4 Data analysis

This process included a synthesis of both qualitative and quantitative data procured during the research period as well as an extensive literature review. The data from the research period is divided into two groups pertaining to the OCT communities: “total staff population” and “interview population”. The latter refers to data acquired as a result of interviews and is a sub-set of the total staff population. The data analysis section⁷ is divided into two primary parts and discussion of the potential significance of the NG 22/23 employment to local livelihoods and poverty alleviation to the OCT communities is made therein:

- Basic demographic information on the staff members from the OCT communities, employed in the NG 22/23 camps.
- Socio-economic information on the NG 22/23 JVA, including OWS and OCT contributions.

6.4.1 Demographic information

Age (interview population). The average age of the staff members is 29 years and the median is 27 years. Those who are ‘older’ (i.e. approximately over 40) often do not know their birthdate, but do know their birth year. Therefore, the age calculation is based on the assumption that the respondent’s birthday for 2004 had passed (Figure 5).

Taking the CSO (2003) census data into consideration, the demographic represented in the interview population represents the age group (25-29) with the lowest unemployment rate overall, both nationally and regionally. This is likely due to the age group (25-29) representing the most able-bodied members of the population as well as those who likely have a higher education level, possibly speak English and are eager to enter a monetary-

⁷ The data will be presented and discussed in the Section 6.4.1 of Component A, but also synthesised in the form of a journal article to constitute Component B as per the CEAD dissertation parameters. See Section 1.6.

based industry. The issue of HIV is topic for its own research, but it is important to mention its relevance in the context of age-based labour statistics. Of great concern is the fact that staff members' core demographic is nearly the same as the HIV-positive demographic within OWS' total staff population. Research done by Dr. Evian (2004 *pers. comm.*) (HIV researcher to OWS) indicates an OWS staff infection rate of approximately 33 percent. According to Dr. Evian (2004 *pers. comm.*), the age group of 30-39 is the group with the highest infection rate (38 percent) in the company. The Ngamiland HIV infection rate in 2002 is estimated to be close to 40 percent (Mendelsohn and el Obeid 2004). Therefore, the interview staff population also represents a high likelihood of positive HIV status and both the OCT and OWS should anticipate the possible implications this may have on capacity-building, skills transfer and entrepreneurship within and to the JVA (and CBNRM) (Evian 2004 *pers. comm.*).

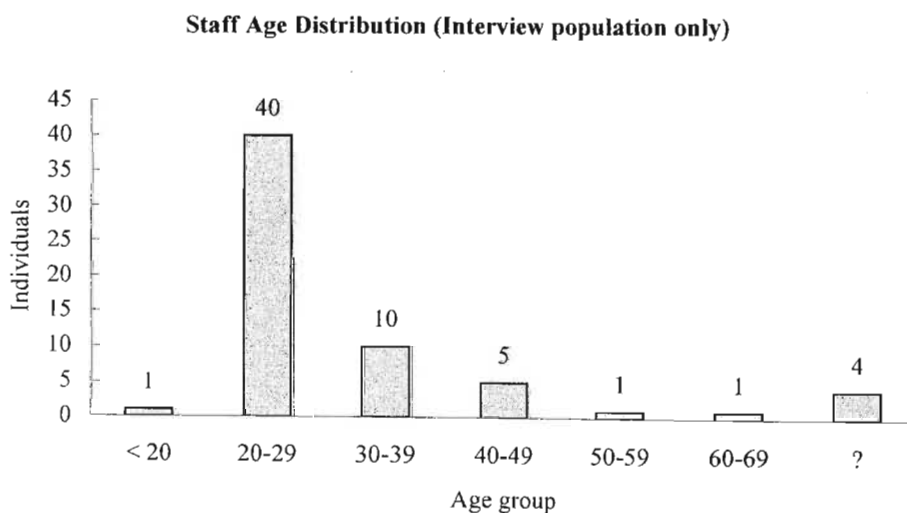


Figure 5. Age distribution among staff members in NG 22/23

According to the CSO (2003) 2002/3 census, the national average age is 24.8 years and the median is 20.1 years. However, this is also the demographic group (ages 20-24) with the highest unemployment rate both at national and regional (e.g. rural) level.

Education (interview population). In order to quantify the level of education the author applied a coding and weighting process to the data. Each year of school was given a numerical value (Table 11):

Education	Assigned Value
No education	0.00
Standard 7 or below	1.00
Form 2	2.00
Form 3	3.00
Form 4	4.00
Form 5	5.00

Table 11. Quantification coding for education level

Women completed more education than the men, with an average completion of Form 2 (an assigned value of 1.91) which equates to a Junior Certificate. In the case of men, the average is an assigned value of 1.50, which makes it questionable as to whether rounding up in this case is statistically sound; however, it could be skewed by the fact that of the ten who did not attend school at all, six were men. If those who received a value of zero are omitted then the male average is an assigned value of 1.91 thereby equalising the education levels across genders. For women the omission of a value of zero is less significant (increased to an assigned value of 2.17) because of the low number of those who did not attend school (Figure 6).

The level of education is higher among the younger staff members. Of the interview population, only two of those over 40 have attended any school. In contrast, all of the interview population under 40 have attended school and 55 percent have attained at least a Junior Certificate (Form 2 or higher). The group which did not complete any or minimal (i.e. Std 7 or below) schooling is also the most aged population within the staff, most of whom are men doing manual labour. This increase in education level is attributable to improved access to education in rural areas as well as changes in community socio-economic institutions. In the latter case, as a monetary-based economy became increasingly important after independence so the children of subsequent generations put greater emphasis on schooling versus traditional subsistence skills such as fishing, farming, etc. (Bock and Johnson 2002).

The CSO (2003) statistics suggest that a positive relationship between decreased unemployment and increased education level does not improve chances of employment until a very advanced educational level is attained. The CSO (2003) census found that the unemployment rate among the age group 25-29 is only lowered at a national level once Cambridge A-levels are attained. That level of education lowers the unemployment rate to 20 percent from 30 percent prior to the attainment of A-levels. In addition, the relative

wealth of Botswana, coupled with a stable government, which emphasised social services, has made schools increasingly accessible; however, in rural areas an advanced level of education is still extremely difficult to attain. Therefore, for members of the OCT community, the opportunity to receive employment as a result of the JVA is even more significant given the unlikely prospect of attaining an advanced education. Most men alluded to family and farm obligations as reason not to complete school. Women alluded to falling pregnant as reasons for not continuing school.

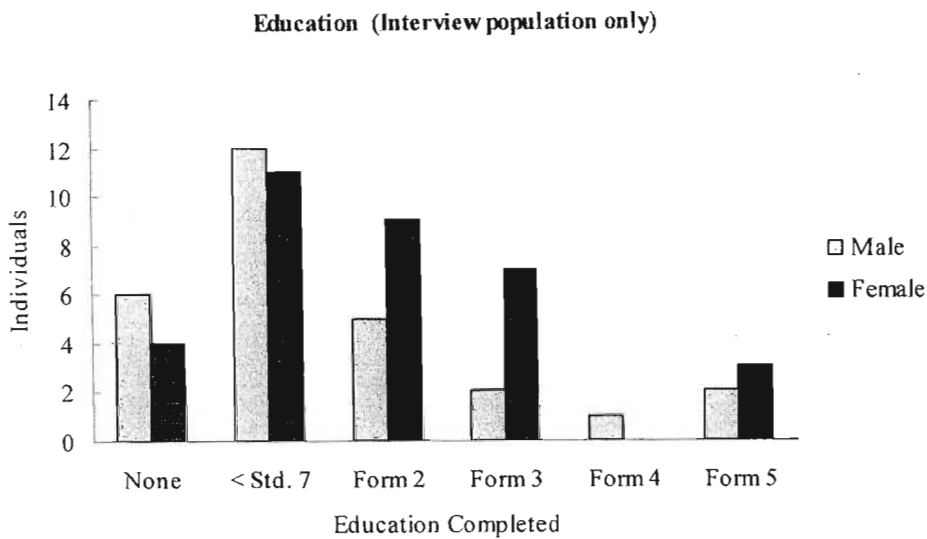


Figure 6. Education level among staff members in NG 22/23

Gender (total staff population). The extended family structure traditional to African communities throughout the continent is true in Ngamiland as well. Work and responsibilities are shared by both sexes. In the Okavango region, both men and women share the farming and food gathering; however, there are some gender specific jobs. Women are responsible for child-rearing and most household chores as well as harvesting of crops and vegetable gardens. Men are responsible for building homes, and overseeing farming and livestock operations, specifically ploughing. Men are also more likely to migrate to urban areas for employment and work outside the home (Mendelsohn and Obeid 2004). However, in the interview population, there is a slightly greater number of women than men employed (Figure 7). This could be because it is perceived that there are more jobs for women than men. However, that is more a social perception than a fact. In other words, the camps do not adhere to a gender-specific job allocation, but it is

perceived that men's jobs are guiding, mokoro poling and manual labour while women's jobs are housekeeping, cooking and waitressing.

It is also possible that women feel more pressure to earn cash income since there are a significant number of single mothers who do not receive significant or any spousal financial support and who also have little land for subsistence farming. These conditions are exacerbated by rural to urban migration, CLD and the prevalence of HIV. Therefore, the woman's extended family provides childcare while the woman leaves the home to acquire wage work. This is out of preference also. The prevalence of a cash economy has increased desires for material goods and the 'urban' life, even if residing in a remote rural area (ACORD 2002). Combined out of need and desire, it's the strong motivation to seek employment even in cases where one must leave children with extended family for prolonged periods. The region has little to offer by way of cash employment and staff members all said that they regarded the JVA as an opportunity for cash income while still enabling three months per year at home.

Gender Distribution (Total staff population)

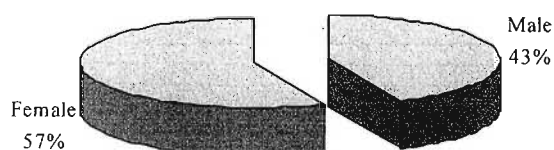


Figure 7. Gender distribution among staff members in NG 22/23.

Communities (total staff population). Each of the five OCT communities is represented among the staff members. The employment strategy/requirements of the OCT aims to share the JVA opportunity evenly among communities. This data suggests that OCT's employment policy is representing each of the five communities effectively. In the case of Gudigwa, the total is quite low; however, the data does not account for the opening of Gudigwa Camp, not associated with the JVA, but developed exclusively by and for the benefit of the Bukakhwe people, the primary residents of Gudigwa and primary employees of that particular camp. Therefore, the OCT does not allocate as

many positions within NG 22/23 to this community, because of its residents' alternative employment opportunities outside the NG 22/23 JVA.

Ethnic groups (total staff population). The ethnic groups represented are Hambukushu, Bayei and Bukakhwe. Representation among the interview population is fairly predictable given a greater percentage of the region's total population is Hambukushu (Bock 1998) (Figure 8). There is only minor animosity between the ethnic groups of the Okavango Delta and it rarely debilitates their cooperation (Bock 2002). After personal experience with staff members from all the ethnic groups, similar observations were made. There were only ever minor ethnic encounters between staff members during the author's 27 weeks in the NG 22/23 camps and usually between Bukakhwe and other ethnic groups. Ethnic groups are able to communicate by the common tongue of Setswana.

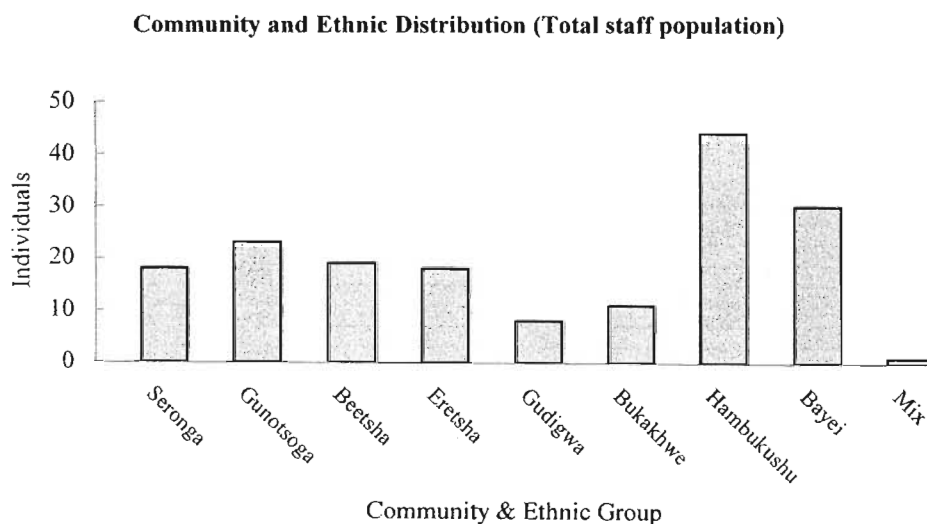


Figure 8. Community and ethnic distribution of staff members in NG 22/23.

Family Composition (interview population). The average number of children per staff member is 2.24 (max 16; min 0) and the median is 4 (Table 12). This average is only slightly lower than anticipated when compared to the WB (2005) data. The WB (2005) lists Botswana's total fertility rate (births per woman) to be 3.1 and an infant mortality rate of .084 per woman (or 84/1000 births) in 2004. This lower than average fertility rate could be due to a variety of reasons which are outside the scope of this study, but presented in brief. Though merely speculation, it could be the more effective and widespread use of birth control. Or, sadly, it could be a result of the high-incidence of

HIV in the younger population (even prior to reproduction) and the death of children born with the virus. Interestingly, the average number of siblings per person is higher (3.92) which suggests the reproduction rate is decreasing and/or family planning education levels are increasing. This further supports the two potential explanations with regard to births as explained above: improved and more extensive family planning education and the increasing magnitude of the HIV epidemic.

CHILDREN	
Average children per person	2.24
Maximum children per person	16
Minimum children per person	0
SIBLINGS (alive)	
Average siblings per person	3.92
Maximum siblings per person	7
Minimum siblings per person	0

Table 12. Family composition among staff members in NG 22/23

6.4.2 Socio-economic information

Employment. In the case of the NG 22/23 agreement, there are a total of 111 employees for an average of 22 employees per camp. This does not include any support staff at the OWS (Maun) or OCT (Seronga) headquarters, temporary employees and/or expatriate staff (an average of three per camp). Of this total staff population (111), 86 or an average of 17 employees per camp, are from one of the OCT communities. This translates to 77 percent of the staff members hailing from the greater OCT community in any given camp. If one adds the OCT (Seronga) headquarters average annual employment of 59 persons, then it increases the employees per camp to 29. The number of staff employed on a full-time basis is somewhat low in terms of wildlife-based tourism. This is especially important given that the advent of CBNRM, specifically in the form of tourism, was slated to become one of the main revenue and employment avenues in rural Botswana (Mbaiwa 2003; Gujadhur 2001).

Many (Gujadhur 2001, Mbaiwa 2003 and 2005; Rozemeijer and van der Hagt 2000; Jones 2004) argue it could and should offer even greater employment; however, the reasons for its growth limitations are rooted in capacity constraints, expatriate ownership and investment and access to basic needs. However, one must also take this in the context of the region. As discussed in previous sections, in Ngamiland the unemployment rate and poverty are high. With respect to these conditions, this employment, regardless of whether it could or should be more extensive is quite significant. For example, given

the estimated total population of 7,779 in the OCT communities the average household size of 4.39 in rural areas, then there are approximately 1,772 households in the OCT community (CSO 2001; CSO 2003; ESS 2002). With 86 employees this translates to six percent of all households associated with direct-use benefits in the form of JVA employment. If one were to add the OCT (Seronga) headquarters' employment of 59 (the median of the range employed in 2004) then eight percent of households receive employment associated with the JVA. These statistics are likely under-estimates because only a portion of the population is of economically-active age or ample health to even be eligible for employment. Given the dearth of employment opportunities in these rural areas, this influence is significant at minimum (Arntzen 2003). Good (1999) reiterates that there is a significant contextual element to an analysis of impacts and benefits to rural communities from direct use benefits. He states, "poverty as income below 'a dollar a day', for example, has international utility, but that sum would represent riches for San [Bukakhwe] farm labourers or official destitutes in Botswana today" (185). With respect to context, the employment offered by the JVA is a vital source of income and in-kind welfare (i.e. rations, uniform, basic medical care and on-the-job training).

The employment tenure in the most of the camps is quite impressive (Figure 9; Table 13). The average tenure in the concession is 42 months, representing a start date in January 2001. This date corresponds with the beginning of the OWS/OCT JVA; however, this should not be taken as coincidence. Shorter employee tenure would indicate high staff turnover and possibly dissatisfaction; however, to the contrary, the average tenure indicates low staff turn-over and relative satisfaction, as well as possibly necessity. The standard deviation (28 months) is significant and should be considered in analysing the retention rate of the camps collectively versus individually. This is due in part to camp opening date thus creating a wide spread in data; however, it can also indicate variations among camps. Vumbura Camp has had the most dissension (Vincent and Wassung 2004 *pers. comm.*) and also exhibits the lowest retention rate among the camps. Vundumtiki Camp has a retention rate of over 100 percent because many of the staff members started approximately two months before the camp opened and some came from other NG 22/23 camps where they had worked previously therefore increasing their JVA employment tenure.

The JVA should strive to maintain these retention rates since it exhibits excellent commitment on the part of employees and a worthwhile investment in training on the part of OWS. Of course, it is acknowledged that employees stay with the JVA because there are very few alternative jobs available in the region. However, it is the author's experience that most individuals would simply return to a subsistence lifestyle rather than work with discontent and poor treatment out of desperation (Lepper 2004 *pers. obs.*).

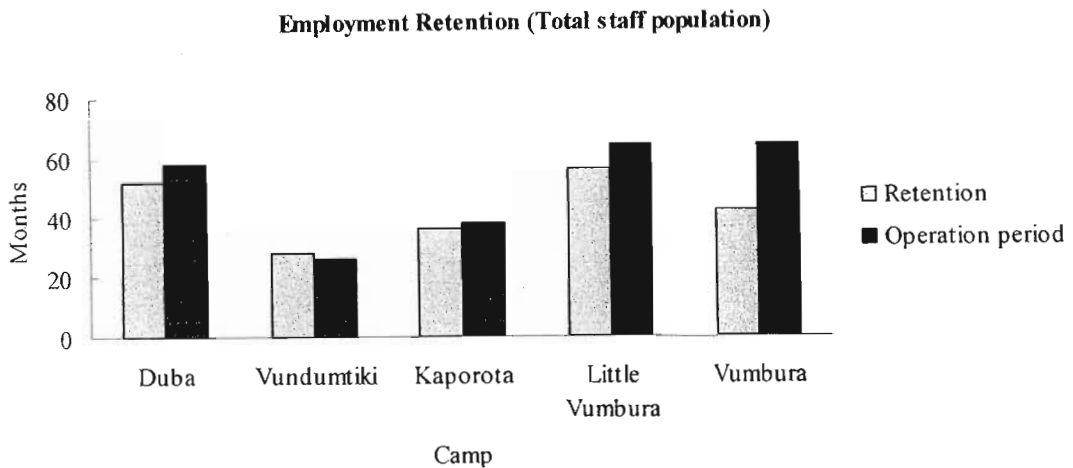


Figure 9. Employment retention among staff members in NG 22/23

Camp	Average Start Month	Camp Opening Date	Retention Rate
NG 22/23	January 2001	March 1999	67.7%
Vumbura	January 2001	March 1999	67.7%
Little Vumbura	November 1999	March 1999	90.3%
Duba Plains	March 2000	September 1999	89.6%
Kaporota	July 2001	May 2001	94.7%
Vundumtiki	March 2002	May 2002	107.6%

Table 13. Employment tenure among staff members in NG 22/23

Wages. Due to the capacity constraints present in the rural population, employment of local people is mainly restricted to unskilled positions such as camp hands, wait staff, laundry, housekeeping, cooks and drivers; this condition leaves little if any opportunities for advancement of local peoples. Studies mentioned previously from 2001 (Mbaiwa 2005; 2005b) reiterate that local staff are not receiving high paid positions. Based on OWS payroll wages, the total wages paid to permanent junior staff members (86) from the communities is BWP 60,519 per month. Based on the payroll records from OWS, on average each employee earns BWP 703.41 (US \$135)⁸ per month (max BWP 2,800; min BWP 540) (Table 14). The wage income is supplemented by an average monthly gratuity

⁸ Based on exchange rate of 2004, BWP 5.2 = US \$1.

of BWP 142.43 (max BWP 600; min BWP 0). However, gratuities lack the security which alleviates poverty and should therefore not be weighted heavily. The range of wages and gratuities is due, for most part, to calibre of job and skill set.

WAGES	
Average wage per employee	BWP 703.71
Minimum wage per employee	BWP 540
Maximum wage per employee	BWP 2,800
Median wage per employee	BWP 600
GRATUITIES (interview population only)	
Average gratuities per employee	BWP 142.43
Minimum gratuities per employee	BWP 0
Maximum gratuities per employee	BWP 600
Median gratuities per employee	BWP 122.50

Table 14. Wage and gratuities among staff members in NG 22/23

Other in-kind welfare of the agreement should be, at minimum, mentioned. Medical support, social support and moral support are either intangible or non-quantifiable elements of the agreement which enhance its viability and value to staff members. In addition to wages, OWS pays for uniform and rations, which should be considered part of the value-added of working for the company. OWS spends a total of BWP 500 and BWP 3,600 per person per annum on uniform and rations, respectively. The costs of wages, rations and uniform are combined as 'gross staff costs'. Others (e.g. housing, medical support, flights, etc.) are to some degree costs of doing business. However, all possess non-quantifiable elements which are usually of higher quality and/or capacity than that which individuals can receive or provide for in their own villages. These elements are not included in 'gross staff costs' but should be acknowledged assets of the JVA in the consideration of poverty alleviation and/or livelihood strategies. Therefore, the total distribution of wages, rations and uniforms to staff members from the NG 22/23 JVA is BWP 1,078,828 in 2004, an increase of BWP 219,474 from 2003 to 2004.

Predictably, many of those interviewed expressed the desire to earn more money; however, when asked how they might endeavour to do so they were at a loss. As an aside, OWS does promote a certain amount of on-the-job training and has a localisation programme for staff members who exhibit extraordinary potential for senior positions (i.e. camp management, guides).

For the years prior to 2004, the number of staff from the communities is unknown and/or deeply embedded in company financial data. However, it is possible to extrapolate the data from overall data (Table 15)⁹. The years 1999 and 2000 include the cost of Kwedi (the on-site OWS NG 22/23 management team), which had high expatriate employment and wages and few community staff members. This positively skews the data for those two years. Beginning in 2001, Kwedi became an independent financial entity not associated with any individual camp. Its accounts were no longer included in 2001 financial records, hence the overall decrease in both categories. This was partially off-set by the 2001 opening of Kaporota Camp. The annual increase in costs associated with staff is a positive attribute of the agreement from the standpoint of communities. It translates to more employment, which as the data represents, translates into increased cash flow to the household and greater community. Such cash supports livelihood diversification and the ability to partake in outside activities such as school and/or entrepreneurship for more long-term poverty solutions. Mbaiwa (2005) purports that poverty levels in the Okavango Delta are on the increase and notes that there is a bitter irony in this since tourism has grown significantly in the last 10-15 years to be the second GDP earner to diamonds, and yet does not appear to have made an impact on alleviating poverty in the greater Okavango region, the location of its greatest tourism asset. Mbaiwa (2005) has a point, but one must emphasise the capacity and pace of growth of new policy such as CBNRM. It is limited by implementation period and skills capacity and its magnitude may yet be realised. It is not an overnight fix to poverty, and governments, NGOs and communities should not use it as such. It is simply one ingredient in the recipe.

⁹ For each year between 1999-2003, it is possible to use the 'gross staff costs' figure minus the average cost of expatriate management salaries (+/- P4 500 per manager) to get the 'net junior staff costs'. This figure is then multiplied by the 'net junior staff costs' figure by the proportion of the staff members from the communities based on the 2004 rates and adjusted for camp operations in any given year. To crosscheck the calculation, the same process can be done on a camp-to-camp basis and that summation compared to the concession total. The variance is negligible, and therefore the calculations are consistent based on the application of the 2004 ratio.

	1999 (Vumbura, Little Vumbura, Duba Plains, & Kwedi)	2000 (Vumbura, Little Vumbura, Duba Plains, & Kwedi)	2001 (Vumbura, Little Vumbura, Duba Plains, & Kaporota)	2002 (ALL 5 Camps)	2003 (ALL 5 camps)
Gross staff costs	1,100,028.88	1,507,984.93	1,442,098.72	1,734,222.28	1,919,165.31
Number of managers	10	10	12	15	15
Avg. mgr. salary/annum (4,500 per mgr/mo)	459,000.00	540,000.00	630,000.00	783,000.00	810,000.00
Net staff costs	641,028.88	967,984.93	812,098.72	951,222.28	1,109,165.31
% of staff from communities	56/73	56/73	64/85	86/111	86/111
Total distribution to communities	491,748.18	742,563.78	611,462.57	736,983.03	859,353.30

Table 15. Gross wage distribution to communities by staff extrapolated by fiscal year (in BWP)

Economic Distribution (interview population). Based on the study's 2004 data collection and analysis, the annual cash flow to the OCT villages in the form of wages is BWP 726,228 (which does not account for annual bonuses or gratuities received). Therefore, average annual cash flow, in the form of wages, is a minimum of BWP 8,440 per employee. Staff members generally work on a 3-month on/1 month off cycle and return to their communities on the off-cycle. There they tend to their households, visit children and maintain other livelihood strategies, including providing remittance. Of that cash flow, the interview population indicated an average remittance of BWP 663.47 per leave to an average of 5.69 individuals, not including dependents (children under 18). This is equal to an average remittance of BWP 116.53 per recipient (Table 16). The recipients are usually extended family, such as grandparents, aunts, uncles, siblings, nieces, nephews, etc. According to those interviewed, the majority of this money goes toward school fees, clothing and food. In the case of employment in NG 22/23, the interviewees expressed a general appreciation for the JVA in terms of employment while still providing the ability to spend three months per annum in their communities. There are very few if any other jobs in the region that would allow this kind of arrangement, while still providing cash remittance. This is further supported in the retention rate figures as discussed. While there is the potential that some of the staff members, if not working in the NG 22/23 camps might have jobs elsewhere, it is unlikely for reasons discussed in earlier chapters: lack of education, access to markets and personal capital. For rural populations, the concept of moving to a major urban centre of the country such as Maun, Gaborone and/or Francistown is daunting. There is a growing rural to urban

migration, but that does not necessarily imply that it is a preference so much as a requirement of the increasingly cash-driven economy. Jobs are still difficult to obtain for those with minimal skill or education.

RECIPIENTS	
Average number of recipients per employee	5.69
Minimum number of recipients per employee	1.0
Maximum number of recipients per employee	12.0
AMOUNT	
Average amount of give per employee per leave	BWP 663.47
Minimum amount of give per employee per employee per leave	BWP 200
Maximum amount of give per employee per employee per leave	BWP 1,900
Average give per recipient per leave	BWP 116.53
Total give to communities per leave	BWP 57,058

Table 16. Household wage distribution by NG 22/23 JVA staff members to their communities.

Lifestyle (interview population). In addition to quantifiable benefits of the JVA, there are additional quality of life benefits. In similarity with the traditional African community structure, the five communities in the panhandle are made up of extended families. Each single compound consists of many individual traditional huts constructed of mud and stick walls with a thatch roof, clustered together and surrounded by a low fence. All of the interview population use either the Delta itself or a common water tap for water. The distance to the water varies between a one-minute walk to a 15-minute walk. All of the staff members use the bush as a toilet. Electricity is not available. Most share beds with at least one other person. This is in great contrast to the living situation in the OWS camps where hot and cold tapped water are available all day and flush toilets are provided. In some camps, electricity is available, but where it is not then candles are provided. The staff housing in the camps is permanent with cement foundation, canvas walls and a corrugated metal or canvas roof. All are waterproof.

In the communities, the bulk of the traditional diet consists of millet, sorghum, maize, ground nuts and, depending on the season, watermelon or pumpkin. Of those interviewed 33 percent eat meat less than once per week or simply on a subsistence basis (as slaughtered and/or available for ceremonies), 33 percent eat it once a week and 33 percent eat it between 2-6 times per week while at home. Only one percent eats it everyday. This is due both to the high cost of meat and access to a convenient supply (available almost exclusively in Seronga, barring the occasional sale by a neighbour in the community).

Meat is a particularly indicative element of rural Botswana lifestyle. Wikan (2004) discusses the use of meat as a material indicator to create a level of living index in two communities in Botswana over time. The use of indicators is useful for grouping households and assessing level of living. Indicators usually come in four types: cheap and necessary objects; middle-priced and necessary objects; expensive and necessary objects; and expensive but not necessary objects. The selected indicators are based on a society's general demand for the item as well as the social and economic circumstances of the society. In Wikan's (2004) Botswana study, he also tested the level of living index against two additional indicators: meat and quality of living compound. He found a high degree of correlation between the level of living index and both indicators. In summary, poor households eat meat very seldom (i.e. < once a month) and the compounds were in poor condition. In contrast, wealthier households eat meat every day and their compounds were well-maintained and expansive, with fencing and brickwork. Oddly enough, he neglects the area in between those who eat meat less than once a month and those who eat it everyday, which is where the majority (99 percent) of the JVA employees reside; however, the correlation is still valuable as regards an indicator of standard of living. While in camp, the daily menu consists of a combination of meat, starch, eggs, vegetables, fruits and milk at an average annual cost of BWP 3,600 per person.

Livelihood (interview population). The interview population indicated numerous livelihood strategies. They were asked in what ways they meet their family's basic needs of food, shelter, and water, predictably there were a range of strategies; however, in concert with Wikan's (2004) study the poorest households rely almost exclusively on agriculture only. All of the interviewee's households partake in subsistence agriculture to meet basic needs. In addition to this livelihood strategy, 8 percent are in retail (examples: baking, sewing); 12 percent are in tourism sector; 17 percent are teachers; 8 percent are in government and 5 percent are mechanics. This indicates that 62 percent of the households have some form of income other than subsistence agriculture and wage work from NG 22/23 employment. For the remaining 38 percent of households, the NG 22/23 employment as the only source of cash income. The interviewees only spoke of receiving government grants during the CLD outbreak.

Those who are employed are considered leaders in his/her community. OWS camps are considered 'urban' to many rural residents, who perceive them to have many of the benefits of city life – cash wages, clothing, consistent and hearty meals, electricity, permanent housing, education (on-the-job) and exposure to western culture. This is a coveted lifestyle by many, especially younger members of the rural communities. As the rural to urban migration in the Ngamiland region increases, it is sure to be the younger generation that leads this trend because of their education levels, capacity and aspirations. Employment, like that from the NG 22/23 JVA via CBNRM is among the first and most attainable options for diversifying livelihoods and possibly alleviating some amount of poverty.

6.4.2.1 Okavango Community Trust

In addition to the Board, the staff of the OCT ranged from a total of 42 to 76 in 2004 with the difference attributable to seasonal and/or temporary employment (ESS 2002; Modiakgotla and Sainsbury 2003; Arntzen 2003). The OCT has a permanent office in Seronga where it has formal communications, computers and a central location. The plot consists of an office block, store rooms, roofed shed, and house and fuel storage.

In addition to its office assets, the OCT has a number of potential and existing income generating projects. Seronga Trading (Pty) Ltd. is solely owned by the OCT and operates a bottle store in Seronga (on the OCT plot) and a general dealer in Beetsha. Interviewed community members say that the Beetsha shop has no provisions and is therefore not operational; however, Modiakgotla and Sainsbury (2003) say it employs five staff members. There are plans for general dealer shops in all five villages as branches of Seronga Trading (Pty) Ltd. but due to financial constraints their development has been delayed; however, the management of an average of a 20 percent gross profit at the Seronga location means the development should continue soon (ESS 2002; Modiakgotla and Sainsbury 2003). A mortuary was under construction in 2004 with funds from the OCT and the refrigerator unit as a donation from OWS with the goal of offering profitable funeral services. A passenger ferry between Seronga and Sepopa operates daily and all income goes to the OCT account. The OCT owns a number of vehicles under numerous finance agreements which are used for complimentary transport for funerals, emergency or JVA staff movements. They are also available for hire. Any income from these operations goes to the OCT account. The villages of Gudigwa and

Eretsha have their own vehicles purchased with VDF money. A VHF radio communications network operates between the communities and the camps in NG 22/23 as part of the general dealer shops where present, or in huts elsewhere.

A basic review of OCT's 2001 and 2002 audits raises some pertinent questions as regards financial management (Appendix 5). The most significant expense is salaries (both within the OCT and hired professionals) and sitting fees, which together account for approximately 45 percent of the expenses in both years. Interestingly, according to the 2001 and 2002 audits, there should have been a positive remainder of BWP 383,410 and BWP 160,000, respectively; however, according to conversations with OCT and OWS, this money has never been realised (Kavindama 2005 *pers. comm.*; Vincent and Wassung 2004 *pers. comm.*). Fixed assets are valued at BWP 750,000 (depreciated) (ESS 2002).

A full analysis of OCT's expenditures is outside the scope of this study, but the generally disappointed and cautious sentiment of the interviewed NG 22/23 JVA staff members suggests that there is much more which the CBO could be doing to affect positive change and benefit its people. The OCT has been labelled as a somewhat greedy CBO by its community, NGOs and the JVA (ACORD 2002). This is largely because of poor dispersal of benefits. Arntzen et. al (2003) and Rozemeijer (2003b) also attribute much of the lukewarm response of local communities to CBNRM to respective CBOs' inability to distribute revenue at a household level. This lack of professionalism exists in many CBOs and is reputed to be a major barrier to the progress to transition from JVA to joint venture partnerships whereupon true business institutions can be developed at a local level (Modiakgotla and Sainsbury 2003; Vincent and Wassung 2004 *pers. comm.*). Consequently, many if not all of the direct benefits of CBNRM at a household level might come strictly from employment (Rozemeijer 2003b; Gujadhur 2001; Child 2004).

6.4.2.2 Okavango Wilderness Safaris

As discussed previously, the NG 22/23 JVA is a "sub-lease" whereby a JVP pays fees to the communities for land use rights. In the case of NG 22/23, it is a tripartite lease between the Tawana Land Board, the OCT and OWS. The draft management plan (ESS 2002) consists of three main revenue channels for the OCT, from OWS: the land rental, the quota replacement fee and the Village Development Fund (VDF) (Table 17). Collectively, these constitute the CBO fee revenue. According to Modiakgotla and

Sainsbury (2003), the land rental is to increase by six percent per annum, while other revenue channels remain constant. Unfortunately, neither the OCT nor OWS responded to queries regarding this increase; and therefore, it could not be confirmed nor is it clear why, in 2002, the wildlife quota amount increased by BWP 35,000 while the VDF decreased by BWP 100,000. The quota fee is meant to replace lost revenue which would be generated by consumptive tourism per trophy. The VDF generates BWP 100,000 per community so that dispersal can be more equitable, in theory, and not rely on discretionary distribution per community by the OCT. These fees are reputed to be the most expensive in southern Africa, potentially all of Africa, as regards JVAs between a CBO and a JVP (Vincent and Wassung 2004 *pers. comm.*).

Year	Land rental	Quota	Other Income (e.g. VDF)	Total OCT fee revenue
2004	676,000	400,000	500,000	1.57 million
2003	675,410	434,500	500,000	1.6 million
2002	636,000	435,000	400,000	1.47 million
2001	600,000	400,000	500,000	1.5 million
2000	350,000	340,000	260,000	950,000
1999	600,000	?	?	
1998	400,000	?	?	
1997	400,000	?	?	

Table 17. OCT fee revenue from the NG 22/23 JVA (in BWP) (ESS 2002; Modiakgotla and Sainsbury 2003; Kavindama 2005 *pers. comm.*)

In addition to the three primary financial channels of the JVA, there are numerous other incidental fees and contributions which demonstrate the colossal commitment by individual stakeholders in JVAs. A JVA in Africa is not simply a case of strictly paying the JVA fees – OWS and the OCT have a much greater undertaking when partaking in a JVA, and thus CBNRM. There are hidden costs of the agreement that so often make CBNRM initiatives cumbersome and labour-intensive. In the NG 22/23 example, the OCT administers the funds received from OWS' payments of lease and quota fees but also demands additional incidental fees and contributions (e.g. radio operators, soccer tournament, vegetable garden) as listed in Table 18. Although not listed in the draft management plan (ESS 2002), OWS must honour these requests in order to avoid dissension from the OCT. In this regard, these additional revenue sources and philanthropies are effectively obligatory, albeit discretionary.

Fiscal Year	Salaries	Transport	Rations	Public Relations	Soccer Tournament	Garden	Borehole
2001	21,080.00	10,482.85	20,441.96	89,709.27	5,290.00	8,987.15	0.00
percent change	100.49%	119.17%	-78.24%	151.56%	51.23%	-13.15%	
2002	42,262.66	22,975.42	4,449.04	225,673.69	8,000.00	7,805.33	0.00
percent change	-50.25%	11.38%	100.58%	43.46%	87.50%	415.75%	
2003	21,025.00	25,590.80	8,923.78	323,758.25	15,000.00	40,255.91	5,000.00

Table 18. OWS categorised expenses associated with NG 22/23 partnership (in BWP).

Information in Table 18 has been grouped according to OWS' expense type for the years 2001 through 2003. JVAs such as that in NG 22/23 require a considerable amount of meeting time, time-consuming cross-cultural communication, product knowledge, philanthropy and amendments to operating procedure. OWS has employed two individuals whose primary role is to tend to the public relations of this JVA. These two OWS staff members travel regularly to and from the villages, offer transport assistance and generally oversee the JVA ('Salaries' Table 18). In addition to these amounts, OWS spends an enormous sum of money on fostering and managing the JVA ('Public Relations' Table 18 and Figures 10, 11 & 12). OWS also embarked on three philanthropies in association with the JVA, which are not part of the draft management plan ('Vegetable Garden' and 'Soccer Tournament' and 'Borehole' Table 18). In addition, OWS assists with staff transport to and from the villages, as well as the cost of regular flights to and from Maun for OWS and OCT members for consultations. In some years, OWS provided food for OCT staff members, including radio operators and labour associated with the philanthropies ('Rations' Table 18).

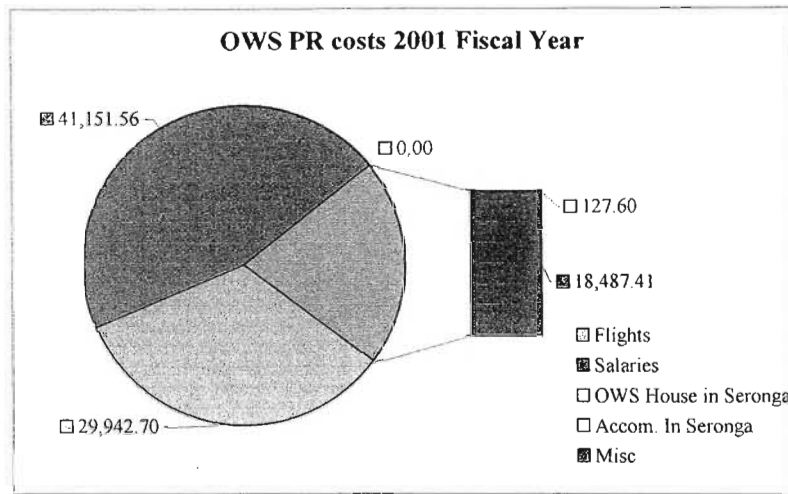


Figure 10. Breakdown of OWS' Public Relation expenses per 2001 fiscal year (in BWP)

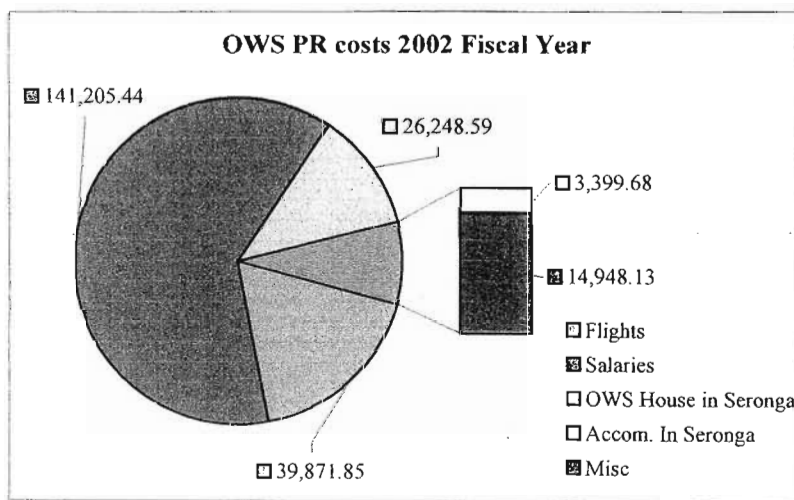


Figure 11. Breakdown of OWS' Public Relation expenses per 2002 fiscal year (in BWP)

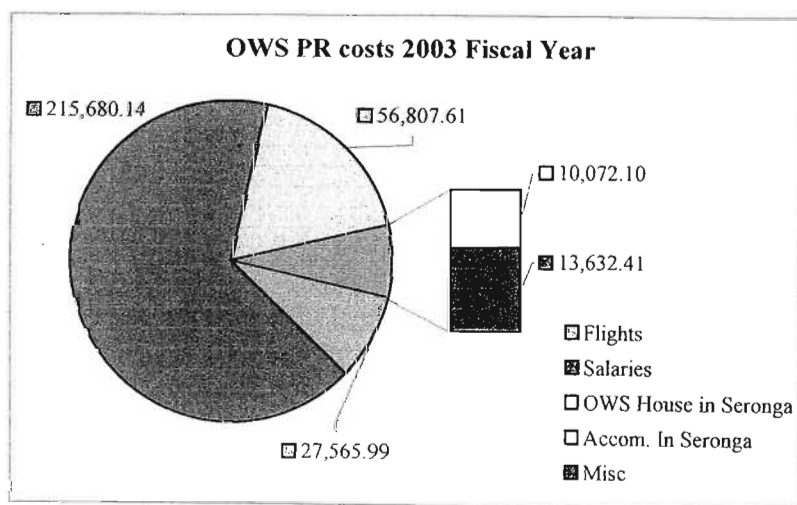


Figure 12. Breakdown of OWS' Public Relations expenses per 2003 fiscal year (in BWP)

These OWS expenses are an example of the immense cost that a private company must front in order to maintain a viable JVA under CBNRM. It is complicated by a high-end product and exclusive clientele. These supposed 'costs of doing business' can be debilitating in an industry (wildlife tourism) which is already capital and labour-intensive and does not in fact have extremely high margins (Vincent 2005 *pers. comm.*). These expenses would be reduced by a formal management plan supported by economic and business institutions that are more familiar to the OCT. This situation is neither exclusively the fault of OWS nor the OCT, but more so by the challenges faced by a merging of traditional and modern socio-economic systems within CBNRM. In essence, a considerable financial burden rests with the JVP. There are very few companies in the Botswana tourism that could sustain such tremendous overhead; in fact these camps are in part supported by revenue generated at other OWS properties and are not viable independently (Vincent and Wassung 2004 *pers. comm.*). In that sense, the JVA (and CBNRM programme) could become non-viable, simply because of simple economics. It also demonstrates the incredibly high overhead of tourism enterprises and challenges the likelihood of success in cases where communities embark prematurely on owning, operating and managing enterprises independently. If that were to come to pass, it would be a full failure of the CBNRM program.

The CBO fee revenue is a tremendous source of revenue in a region with few opportunities for revenue-earning enterprises. However, as mentioned earlier what is in question is not only the revenue amount and its significance, but also its distribution. According to work by Mbaiwa (2003) in the Delta communities, CBO board members (in general) indicated that revenue to the local communities from CBNRM is "insignificant" compared to that accrued to the JVP and/or the government. While this may be true, it is important to put such a comparison in context and relative terms. Given that the communities carry little of the risk, as is certainly the case in the NG 22/23 agreement, then it is significant to receive guaranteed revenue of as much as BWP 1.6 million per annum with no risk. In contrast, OWS carries all the risk and has carried an annual loss for the last three years on the NG 22/23 JVA (Vincent and Wassung 2004 *pers. comm.*).

CHAPTER 7: DATA CONCLUSION

The merits and shortcomings of CBNRM are a source of serious debate within development circles, especially with relation to tourism. Mbaiwa (2005; 2005b) make a

strong suggestion, and substantiate it with work by others (Rozemeijer and Van der Jagt 2000; Twyman 1998), that CBNRM (in the form of tourism enterprises) does not make a significant contribution to poverty alleviation. However, the programme receives little leeway as regards implementation and transition time to accommodate skill transfer from experienced tourism managers and enterprises to local level participants (Arntzen 2003; Rozemeijer 2003; Ashley and Mitchell 2006). Moreover, CBNRM analysis has focused almost exclusively on cash income, and only to some degree on other livelihoods benefits (Ashley 2000). Studies in Botswana indicate that prior to CBNRM most rural communities received little if any cash income from the natural resources (Arntzen et al. 2003; ACORD 2002). The real question then is not only if the cash income is significant, but whether the cash income trickles down whereby it alleviates some degree of poverty at a household level and/or whether involvement in CBNRM acts as a livelihood diversification strategy within the socio-economic fabric of the recipient community to advance development. In addition, the significance of the cash in a rural context is neglected. In other words, cash income may not be significant in comparison to that which is retained by JVPs and/or foreign-owners; however, its significance should be evaluated in relation to the standard of living of the recipient and/or in comparison to the level of living prior to the initiation of the CBNRM programme. It is reasonable to compare it to the PDL and/or US \$1 or \$2/day lines in an effort to meet more contextual and universalised measures. In fact, this is exactly what the PDL and US \$1 or US \$2/day lines are intended to do. If the cash elevates a household to or above one of these lines then the cash is significant simply on grounds of poverty alleviation, regardless of the actual monetary amount. The latter comparison would gauge development level with or without CBNRM programme contribution.

Arntzen et al. (2003) note that even a relatively small amount of income from a CBNRM project makes a significant impact at the household level and serves to reinforce the positive impressions of such projects. They concluded that “[this small amount of revenue] is highly significant in proportion to local incomes and needs” (Arntzen et al. 2003:26). The distribution of benefits is the next tier in identifying its significance at a local level. Arntzen et al. (2003) determined that the impact of CBNRM is minimal due to poor benefit distribution such that the revenue is not realised at the household level. They categorise CBNRM as a contributor to livelihood security by offering another livelihood source, or diversification. However, most CBOs have opted to keep income in

a collective bank account rather than distribute the revenue at a household level perhaps due to greed and control or to support extremely high overheads (ACORD 2002). This distribution method, or lack thereof, is a major concern. If there is a significant disconnect between and/or cost to communities from conservation then the relationship between conservation and sustainable development will not be achieved as efficiently, if at all. One might recall that CBNRM confidently promotes the linkage between people's wise use and conservation of natural resources and the derivation of socio-economic benefits, especially at a household level and equitably (Mbaiwa 2005b; ACORD 2002). As summarised by Gujadhur (2001) and Van der Jagt et al. 2000 (*as cited in Gujadhur 2001*):

...passively earned benefits which do not directly improve the lives of community residents (e.g. cash that is banked) do not provide a concrete link to wildlife conservation. Active natural resource utilisation and management and intangible benefits (decision-making power, food security, and employment) are the necessary complements to financial benefits that will ensure the long-term sustainability of CBNRM. (6)

Thus, employment revenue from the NG 22/23 JVA, as part of Botswana's CBNRM programme, does make a significant contribution to livelihood diversification and poverty alleviation; however, in contrast, the contribution of CBO fee revenue is insignificant due to poor financial management on the part of its CBO, the OCT.

REFERENCES

- Adams, W. and D. Hulme. 2001. Conservation & Community: Changing Narratives, Policies & Practices in African Conservation. *In*: Hulme, D. and M. Mupftee (eds). *African Wildlife & Livelihoods: The Promise and Performance of Community Conservation*. Oxford: James Currey Ltd.
- Agency for Cooperation and Research in Development (ACORD). 2002. *Through our Eyes: ACORD's Experiences in CBNRM - Okavango Community Trust*. Unpublished.
- Alagona, P. 2004. The Ghosts of Endangered Species Past: Recent lessons at the Intersection of History and Biology. *BioScience* 54: 984-985.
- Archabald, K. and L. Naughton-Treves. 2001. Tourism revenue-sharing around national parks in Western Uganda: early efforts to identify and reward local communities. *Environmental Conservation*. 28.2: 135-149.

- Arntzen, J. 1998. *Economic Valuation of Communal Rangelands In Botswana: A Case Study*. Amsterdam: International Institute for Environment and Development; Institute for Environmental Studies. 17.
- Arntzen, J. 2003. *An Economic View on Wildlife Management Areas in Botswana*. Gaborone: IUCN/SNV CBNRM Support Programme. 10.
- Ashley, C. 2000. *The Impacts of Tourism on Rural Livelihoods: Namibia's Experience*, London: Overseas Development Institute. 128.
- Ashley, C. and J. Mitchell. 2006. *Can Tourism Help Reduce Poverty in Africa?* London: Overseas Development Institute Briefing Paper.
- Barbier, Edward B., J. Burgess and C. Folke. 1994. *Paradise Lost? The Ecological Economics of Biodiversity*. London: Earthscan.
- Barnes, J. I. (jibarnes@iafrica.com.na). 2 February 2006. Multiplier for Ngamiland Region. Personal email to C. Lepper (caitlinml@hotmail.com).
- Barnes, J. I. 1995. Economic Analysis of Community-based Wildlife Utilisation Initiatives in Botswana. *Development Southern Africa*. 12.6: 783-803.
- Barnes, J. I. 1998. *Wildlife Economics: A Study of Direct use Values in Botswana's Wildlife Sector*. Published PhD dissertation. Department of Economics, University College London.
- Barnes, J. I. 1998b. *Wildlife Conservation and Utilisation as Complements to Agriculture in Southern African Development*. Windhoek: Department of Environmental Affairs. 27.
- BIDPA. 1997. *A Study of Poverty and Poverty Alleviation in Botswana*. Gaborone: Botswana Institute for Development Policy, Government of Botswana.
- Bock, J. 1998. Economic Development and Cultural Change among the Okavango Delta Peoples of Botswana. *Botswana Notes and Records*. 30: 27-44.
- Bock, J. and S.E. Johnson. 2002. Male Migration, remittances, and child outcome among the Okavango Delta Peoples of Botswana. *In* Tamis-LeMonda, C.S. and N. Cabrera

- (eds). *Handbook of Father Involvement: Multidisciplinary Perspectives*. New Jersey: Lawrence Earlbaum Associates.
- Cassidy, L. 2000. *CBNRM and Legal Rights to Resources in Botswana*. Gaborone: IUCN/SNV CBNRM Support Programme. 4.
- Ceballos-Lascurain, H. 1996. *Tourism, Ecotourism and Protected areas: The State of Nature-based Tourism Around the World and Guidelines for its Development*. Gland, Switzerland: IUCN.
- Central Statistics Office. 2001. *Distribution of population by sex, by village and their associated localities: 2001 Population and Housing Census*. Gaborone: Central Statistics Office, Government of Botswana.
- Central Statistics Office. 2003. *2001/2002 Household Income and Expenditure Survey (HIES) Statistics Brief*. Gaborone: Central Statistics Office, Government of Botswana.
- Child B. (ed). 2004. *Parks in Transition: Biodiversity, Rural Development and the Bottom Line*. London: Earthscan.
- Convention on Biological Diversity. 2004. *CBD Guidelines: Ecosystem Approach*. Montreal: Convention on Biological Diversity.
- Department of Environmental Affairs and Tourism. 2004. *National Biodiversity Strategy and Action Plan: Newsletter*. [online]. Available at: www.environment.gov.za. [Accessed 20 February 2006].
- Darkoh, M. and J.E. Mbaiwa. 2002. Globalisation and the Livestock Industry in Botswana. *Singapore Journal of Tropical Geography*. 23. 2: 149-166.
- Eco-tourism Support Services. 2002. *Management Plan for Community CHAs NG 22 and 23*. Maun: Unpublished.
- Evian, Dr. 2004. Personal Communication. 17 July 2004. Botswana: Vundumtiki Camp.
- Good, K. 1999. The State and Extreme Poverty in Botswana: the San and Destitutes. *The Journal of Modern African Studies*. 37.2: 185-205.

- Government of Botswana. 2003. *National Development Plan 9*. Gaborone: Government of Botswana.
- Government of Botswana. 2005. *Botswana Third National Report on the Implementation of the Convention on Biological Diversity*. Gaborone: Ministry on Environment, Wildlife and Tourism, Government of Botswana.
- Gujadhur, T. 2001. Joint Venture Options for Communities and Safari Operators in Botswana, Gaborone: IUCN/SNV CBRNM Support Programme. 6.
- Hachileka, E. 2003. Sustainability of Wildlife Utilization in the Chobe District, Botswana. *South African Geographical Journal*. 85.1: 50-57.
- Hannah, L., G. Wetterberg and L. Duvall. 1988. *Botswana Biological Diversity Assessment*. Washington D.C.: U.S. Agency for International Development, Bureau for Africa.
- Hasler, R. 1999. The Okavango Delta and the 'End of Progress': Global Transformation and Community-based Wildlife Management. *Botswana Notes and Records*. 31: 93-100.
- Heywood, V.H., and J. Iriondo. 2003. Plant Conservation: Old Problems, New Perspectives. *Biological Conservation* 113: 321-335.
- Hitchcock, R.K. Undated. *The Kavango Basin: A Case Study*. [online]. The Water Page. Available at: www.thewaterpage.com/okavango_case_study.html. [Accessed 10 January 2006].
- Hoon, P. 2004. Personal Markets and impersonal communities? Prospects for community conservation in Botswana. Berkeley: University of California, Center for African Studies.
- Jansen, D., I. Bond and B. Child. 1992. Cattle, Wildlife, Both or Neither? Results of a financial and economic survey of commercial ranches in southern Zimbabwe., Harare WWF Multispecies Project. 27: 1.
- Jones, B. and M. Murphree. 2001. The Evolution of Policy on Community Conservation in Namibia & Zimbabwe. In: Hulme, D. and M. Muphree. (eds). *African Wildlife &*

- Livelihoods: the promise and performance of community conservation*. Oxford: James Currey Ltd.
- Jones, B. 2004. Developing criteria for the contribution of CBNRM to poverty reduction and sustainable livelihoods in southern Africa. Occasional Paper 7. Harare: University of Western Cape and University of Zimbabwe.
- Joubert, D. Personal Communication. 8 April 2005.
- Kalikawe, M. C. 2001. *Botswana: Integrating Biodiversity into the Tourism Sector*, Presentation paper for the UNEP International Workshop on Best Practices and Country Case Studies, Mexico City.
- Kavindama, Sam. July 2005. Personal Communication. Maun, Botswana.
- Kirkby, J., P. O'Keefe and J. Timberlake. 1996, *The Earthscan Reader in Sustainable Development*. London: Earthscan Publications, Ltd.
- Mbaiwa, J. E. 2003. The Socio-economic and Environmental Impacts of Tourism Development on the Okavango Delta, north-western Botswana. *Journal of Arid Environments*. 54.2: 447-467.
- Mbaiwa, J. E. 2003b. Basket Production and Marketing in the Villages of Shakawe, Nxamasere and Xhaoga in West Ngamiland District, Botswana: A Baseline Study. Conservation International: Unpublished.
- Mbaiwa, J. E. 2005. Enclave tourism and its socio-economic impacts in the Okavango Delta, Botswana. *Tourism Management*. 26: 157-172.
- Mbaiwa, J. E. 2005b. The Problems and Prospects of Sustainable Tourism Development in the Okavango Delta, Botswana. *Journal of Sustainable Tourism*. 13.3: 203-227.
- Mendelsohn, J. and S. el Obeid. 2004. *Okavango River: Flow of a Lifeline*. Cape Town: Struik.
- Michler, I. 2004. *Botswana: The Insider's Guide*. Cape Town: Struik.
- Modiakgotla, K. and Sainsbury, S. 2003. *Labour Laws and Community-Based Organisations in Botswana*. Gaborone: IUCN/SNV CBNRM Support Programme. 13.

- Mordi, R. A. 1991. *Attitudes Toward Wildlife in Botswana*. New York: Garland.
- Okavango Community Consultants. 1995. Management Plans for Controlled Hunting Areas Allocated to Communities in Ngamiland WMAs. Maun: Unpublished.
- Okidegbe, N. 2000 Attacking Rural Poverty: Strategy and Public Actions. *Rural Development Note*. 6: 1-4.
- Pearce, D., E. B. Barbier and A. Markandya. 1989. *Blueprint for a Green Economy*. London: Earthscan.
- Ramsar. 1999. The Criteria for Identifying Wetlands of International Importance. Ramsar Information Paper no. 5. [online]. Gland: Ramsar Convention. Available at: www.ramsar.org/key_criteria.html. [Accessed 12 January 2006].
- Ross, Karen. 1987. *Jewel of the Kalahari: Okavango*. London: BBC Books.
- Rozemeijer, N. 2003. CBNRM in Botswana: Revisiting the assumptions after 10 years of implementation. Unpublished.
- Rozemeijer, N. 2003b. An overview of the current status and progress made in CBNRM in Botswana. Unpublished.
- Rozemeijer, N. and C. van der Jagt. 2000. Community Based Natural Resource Management in Botswana: How Community -based is CBNRM in Botswana?. Unpublished.
- Safariweb. 1996. Botswana: A Country Profile. [online]. Available at: www.safariweb.com/botswana/country.htm#economy. [Accessed 10 May 2006].
- Sammy, J. and C. Opio. 2005. Problems and prospects for conservation and indigenous community development in rural Botswana. *Development Southern Africa*. 22.1: 67-85.
- Shivji, I. G. 2005. The Changing Development Discourse in Africa. [online]. Global Policy Forum. Available at: www.globalpolicy.org/socecon/develop/africa/2005/1007discourse.htm. [Accessed 3 April 2006].

- South African Regional Poverty Network. Undated. Botswana Civil Society Assessment on Implementation of Agenda 21. [online]. Available at: www.sarpn.org.za/wssd/protagonists/botswana/page1.php. [Accessed 7 June 2006].
- Stynes, D. 1997. Economic Impacts of Tourism. [online]. Michigan State University: Available at: www.msu.edu/course/prt/840/econimpact/pdf/ecimpvol1.pdf. [Accessed 3 April 2006].
- Suich, H. (helensuich@yahoo.co.uk). 15 June 2006. Component A. Personal email to C. Lepper (caitlinml@hotmail.com).
- Swatuk, L. 2005. From "Project" to "Context": Community Based Natural Resource Management in Botswana. *Global Environmental Politics*. 5.3: 95-124.
- Tisdell, J. 2003. Economic Aspects of Ecotourism: Wildlife-based tourism and its Contribution to Nature. *Sri Lankan Journal of Agricultural Economics*. 5.1: 83-95.
- Twyman, C. 1998. Rethinking Community Resource Management: Managing Resources or Managing People in western Botswana?, *Third World Quarterly*. 19.4: 745-770.
- Twyman, C. 2000. Livelihood Diversity and opportunity in Kalahari Wildlife Management Areas, Botswana: Rethinking Community Resource Management, *Journal of Southern African Studies*. 26.4: 783-806.
- UK Department for International Development (DFID). 1999. Sustainable Livelihoods Guidance Sheets. [online]. DFID. Available at: www.livelihoods.org/info/info_guidancesheets.html#6. [Accessed 17 July 2006].
- U.S. Fish and Wildlife Service. 1996. History and Evolution of the Endangered Species Act of 1973, including its relationship to CITES. [online]. U.S. Fish and Wildlife: Endangered Species Program. Available at: www.endangered.fws.gov/esasum.html. [Accessed 20 February 2005].
- United Nations Development Programme. 2005. *Botswana Human Development Report 2005*. Gaborone: Printing and Publishing Company of Botswana.

- United Nations Development Programme. 2006. Botswana Environmental Programme. [online]. UNDP. Available at: <http://www.unbotswana.org.bw/undp/environment.html>. [Accessed 3 August 2006].
- Van Loon, A.J. 2003. The Dubious Role of Man in a Questionable Mass Extinction. *Earth-Science Reviews*. 62: 177-186.
- Vincent, K. Personal Communication. 15 August 2005.
- Vincent, K. and M. Wassung. Personal Communication. 25 March 2004.
- Wikan, G. 2004. The level of living in rural Botswana re-studied. *Norwegian Journal of Geography*. 58: 1-10.
- World Bank. 2005. World Development Indicators Data Query. [online]. World Bank. Available at: www.devdata.worldbank.org/data-query/. [Accessed 3 August 2006].
- World Resources Institute. 2003. Biodiversity and Protected Areas – Botswana. [online]. EarthTrends – Environmental Information Portal Country Profiles. Available at: www.earthtrends.wri.org/. [Accessed 7 June 2006].
- World Tourism Organisation. 2005. Tourism Market Trends, 2005 Edition - Annex. [online]. World Tourism Organisation. Available at: www.world-tourism.org/facts/eng/pdf/highlights/2005_eng_low.pdf. [Accessed 10 March 2006]

APPENDICES

Appendix 1 Development Southern Africa submission requirements

GUIDE FOR DSA AUTHORS, 2005/6

We ask authors to follow these guidelines on style and format as far possible when preparing papers for submission to *Development Southern Africa*. This will help us to produce the journal more speedily and efficiently.

Articles being considered for publication will be submitted to at least two referees.

Content and style

1 Information

On a separate sheet of paper, please give the following details in full:

Author's/Authors' first name(s), and surname(s), e.g. Jane Mfundisi, James L Smith.

Designation/position, e.g. Senior Lecturer or Professor.

Organisation/institution, e.g. University of the Western Cape, Bellville.

Full postal address, telephone and fax numbers and e-mail address.

2 Abstract

Provide a brief abstract (100–150 words). Type this in italics under the title of the paper.

3 Concepts

Bear in mind that certain concepts are self-evident to people in your field, but *DSA* has many readers from other disciplines, including non-economists. Therefore, consider including a brief description or definition of concepts early on in the paper.

4 Acronyms

Give the names of organisations, institutions, etc. in full the first time you use them, followed by the abbreviated form or acronym in brackets. This applies to the text, tables, figures and the list of references.

Note that acronyms that are usually read as a word have an initial capital letter only (e.g. Cosatu, Nedlac, Unisa), whereas those that are spelt when pronounced are written all in upper case (e.g. ANC, DBSA).

5 Sources

Acknowledge all sources of ideas, statements, tables, graphs, etc. that are not your own. Use only when relevant to your discussion.

6 Style

When referring to yourself, write 'the author'.

Your general style of writing should neither overestimate nor underestimate the comprehension of the readers.

Do not use italics, underlining or bold to emphasise 'keywords'. Rather achieve the required emphasis with an effective style of writing.

7 Footnotes/Endnotes

Note: DSA does not use footnotes or endnotes. Please incorporate all relevant material into the text.

8 Quality control

Please get another person to edit and/or proofread your paper before submitting it.

Length and layout

Maximum length: 30–35 pages (not including tables and graphs), or 11 000 words.

Submit papers on A4 size, in 12 pt Times New Roman or Arial, double line spacing.

Leave wide margins (e.g. a minimum of 2.54 cm on all sides) and print on one side of the paper only.

Remember to number the pages (at the bottom, centred).

Use bullets for lists and not dashes, asterisks or letters of the alphabet.

Submit two printouts and a floppy disk (one each for two referees and the electronic version for our records).

Spelling, punctuation and technical matters

1 Spelling

For purposes of standardisation DSA uses UK English conventions and spelling rules. For these, follow the most recent edition of the *Concise Oxford Dictionary* (currently the tenth edition), but note that we use '-ise/-isation' rather than '-ize/-ization'.

2 Italics

Note that Latin words and some French words are not routinely italicised. For example, words and phrases such as *per capita*, *vis-à-vis*, *et al.*, *ceteris paribus*, *inter alia* and *in situ* are no longer italicised, whereas words and phrases from other languages, e.g. *isiZulu*, German, are.

3 Quotation marks

Use single quote marks. Use double quote marks only for quotations within quotations. For long quotations, indent the text in a separate paragraph and omit the quote marks.

4 Spacing between sentences

Leave a single space after a full stop in the text, not a double space.

5 Full stops

Use full stops after abbreviations such as e.g., i.e., et al., etc.

Do not use a full stop when the abbreviation ends on the same letter as the full word, e.g. Dr, Mr, Mrs, Ms. (Note that Prof. has a full stop).

Do not use a full stop after a person's initials, e.g. D Coetzee, AB Smith

6 Percentages

Use 'per cent' or 'percentage' and not the % sign, except in tables.

7 Capital letters

Use lower case as far as possible (e.g. parliament, government, state, president, director-general, regional council), except in specific, direct references such as 'Mr P Mabena, Deputy Director-General and President of XYZ, said that ...'.

Use lower case for the first letter of a generic ethnic group (e.g. black, white, coloured) but upper case for the first letter of a specific group (e.g. Chinese, Indian, Swedish).

8 Figures and numbers

Express ranges of dates and pages in the smallest number of digits, e.g. 1974–94 and not 1974–1994, and 315–7 and not 315–17 or 315–317.

All figures more than 1 000 must have a space to separate thousands, tens of thousands, etc. Use a space, and not a comma, to indicate this, e.g. 10 000. For fractions we use the decimal point, not comma, e.g. 3.85.

9 Section headings

Please number the sections of your paper, beginning with 1. Introduction, using DSA heading styles:

Main headings in upper case, bold, e.g.

4. AGRICULTURE

Subsections and subsubsections in sentence case, bold, e.g.

4.1 Market for existing crops

4.1.1 Maize and wheat

Number sections manually and not with the auto numbering function.

10 Tables and graphs

Save all tables, figures, diagrams, maps and graphs in a separate file – do NOT include them in the main text file. Indicate where each item will be placed in the text.

Provide a neat printout of all such material. Supply an appropriate heading for each item.

Do not create a table or figure using tabs or the space bar. Use the appropriate table function on your computer program, or even draw the table, diagram or figure by hand to save time and make the structure clear.

Please send diagrams in MSWord or MSDraw, and send graphs in MS Excel.

Maps should contain essential information only and be as clear as possible. Details and features should not be cramped or too small. Use only high resolution jpeg or tif files.

11 References

Use the Harvard system of referencing. Refer to any recent issue of *DSA* for examples.

Include in the reference list **ONLY** the works you refer to in the text.

Please check that all the works cited in the text are in the reference list, and all the works in the reference list are cited in the text.

Give full details for each reference. Remember to give the date and place of publication, the name of the printer or publisher, the volume and issue numbers of journals and the page range of articles, and the dates (day and month) of seminars, workshops, conferences, etc.

If a publication by two authors is referred to, use the ampersand (&) and not the word 'and', e.g. Brown & Jones (1999:267).

If a publication by more than two authors is referred to in the text, write 'et al.' from the start, e.g. Skosana et al. (1997:14), but provide the names of all the authors in the reference list.

References to more than one publication by an author in the same year should be distinguished alphabetically, for example: (Fields, 1984a 1984b 1984c)

Use the following style to reference theses:

LEVINE, D,1993. A parallel genetic algorithm for the set partitioning problem. PhD thesis, Illinois Institute of Technology.

Use the following style to reference electronic text: Note that website references should include the date the site was accessed.

DEPARTMENT OF HEALTH. 2002. National service framework for diabetes: Delivery strategy. London: Department of Health.
<http://www.dh.gov.uk/assetRoot/04/03/28/23/04032823.pdf> Accessed 5 May 2004.

Use the following style to reference newspaper text

BOOTH, J, 2004. Blair plans annual UK-China summit. *Guardian* 11 May, p 6.

Use the following style to reference a journal article:

FRY, B, 1995. Crocodile farming in Natal. *Journal of Biodiversity and Conservation*, 4(8): pp 291-295.

Use the following style to reference a contribution in a book:

SMITH, C, 1980. Problems of information studies in history. In S, STONE, (ed.) *Humanities information research*. Sheffield: CRUS, pp 27-30.

Reference to a conference paper:

SILVER, K, 1989. 'Electronic mail the new way to communicate'. *9th International Information Meeting*, London 3-5 December 1988.

12 Submission of papers

Submission can be done via post or e-mail.

Via post: Submit two printouts and a stiffy disk or CD (using Microsoft Word only). Attach a neat label to the disk stating the title, the author's name and the last revision date.

Use your surname to label your file(s), e.g. 'Anderson.doc' and 'Anderson tables.doc'.

Via e-mail: Submit paper (using Microsoft Word only) to dsa@dbsa.org

Hard copies and disk are not required when the paper is submitted via e-mail.

Use your surname to label your file(s).

13 Copyright

Your paper must be accompanied by a signed statement by the author(s) that publication in *Development Southern Africa* would not contravene any copyright or other contractual relevant to the paper or the research upon which it is based.

14 Editor's queries

Any queries the copy editor may have will be emailed to you. Please reply to these promptly (within days). Be clear and specific in your responses, and eliminate guesswork.

Description of the ecosystem approach¹

1. The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. Thus, the application of the ecosystem approach will help to reach a balance of the three objectives of the Convention: conservation; sustainable use; and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.
2. An ecosystem approach is based on the application of appropriate scientific methodologies focused on levels of biological organization, which encompass the essential structure, processes, functions and interactions among organisms and their environment. It recognizes that humans, with their cultural diversity, are an integral component of many ecosystems.
3. This focus on structure, processes, functions and interactions is consistent with the definition of "ecosystem" provided in Article 2 of the Convention on Biological Diversity: "Ecosystem" means a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit." This definition does not specify any particular spatial unit or scale, in contrast to the Convention definition of "habitat". Thus, the term "ecosystem" does not, necessarily, correspond to the terms "biome" or "ecological zone", but can refer to any functioning unit at any scale. Indeed, the scale of analysis and action should be determined by the problem being addressed. It could, for example, be a grain of soil, a pond, a forest, a biome or the entire biosphere.
4. The ecosystem approach requires adaptive management to deal with the complex and dynamic nature of ecosystems and the absence of complete knowledge or understanding of their functioning. Ecosystem processes are often non-linear, and the outcome of such processes often shows time-lags. The result is discontinuities, leading to surprise and uncertainty. Management must be adaptive in order to be able to respond to such uncertainties and contain elements of "learning-by-doing" or research feedback. Measures may need to be taken even when some cause-and-effect relationships are not yet fully established scientifically.
5. The ecosystem approach does not preclude other management and conservation approaches, such as biosphere reserves, protected areas, and single-species conservation programmes, as well as other approaches carried out under existing national policy and legislative frameworks, but could, rather, integrate all these approaches and other methodologies to deal with complex situations. There is no single way to implement the ecosystem approach, as it depends on local, provincial, national, regional or global conditions. Indeed, there are many ways in which ecosystem approaches may be used as the framework for delivering the objectives of the Convention in practice.

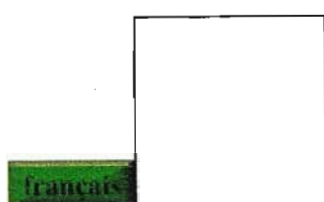
1. Extracted from section A of decision V/6, of the Conference of the Parties to the Convention on Biological Diversity. Paragraph numbering as in the original.

Source: Convention on Biological Diversity. CBD Guidelines: Ecosystem Approach. Montreal: Convention on Biological Diversity, 2004.

The Ramsar Convention on Wetlands

The Criteria for Identifying Wetlands of International Importance

as adopted by the 4th, 6th, and 7th Meetings of the Conference of the Contracting Parties to the Convention on Wetlands (Ramsar, Iran, 1971) to guide implementation of Article 2.1 on designation of Ramsar sites



[Note: This is just a simple list of the Criteria themselves out of their explanatory settings. They should properly be used as part of the Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance adopted by COP7, 1999.]

Group A of the Criteria. Sites containing representative, rare or unique wetland types

Criterion 1: A wetland should be considered internationally important if it contains a representative, rare, or unique example of a natural or near-natural wetland type found within the appropriate biogeographic region.

Group B of the Criteria. Sites of international importance for conserving biological diversity

Criteria based on species and ecological communities

Criterion 2: A wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species or threatened ecological communities.

Criterion 3: A wetland should be considered internationally important if it supports populations of plant and/or animal species important for maintaining the biological diversity of a particular biogeographic region.

Criterion 4: A wetland should be considered internationally important if it supports plant and/or animal species at a critical stage in their life cycles, or provides refuge during adverse conditions.

Specific criteria based on waterbirds

Criterion 5: A wetland should be considered internationally important if it regularly supports 20,000 or more waterbirds.

Criterion 6: A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird.

Specific criteria based on fish

Criterion 7: A wetland should be considered internationally important if it supports a significant proportion of indigenous fish subspecies, species or families, life-history stages, species interactions and/or populations that are representative of wetland benefits and/or values and thereby contributes to global biological diversity.

Criterion 8: A wetland should be considered internationally important if it is an important source of food for fishes, spawning ground, nursery and/or migration path on which fish stocks, either within the wetland or elsewhere, depend.

Source: Ramsar Convention. "The Criteria for Identifying Wetlands of International Importance." Ramsar Information Paper no. 5: Gland, Switzerland, 1999. *Available at:* http://www.ramsar.org/key_criteria.html [June 7, 2005]

Appendix 4 NG 22/23 staff member interview questions

LIFESTYLE

- What village are you from?
- how many brothers and sisters do you have? Do they work for WS? Or want to?
- Do you have children? If so, how many? Are you married?
- Are your parents alive? Where do they live and work?
- How many people live in your house?
- How many rooms is your house and how is it constructed?
- Do you have running water in your house? If not, how and where do you get water?
- Do you have a toilet in your house?
- Do you sleep in a bed? With how many people do you share a bed?
- Do you have a dirt or cement floor?
- What is your daily meal at home? How many times per week do you eat meat, fish or chicken?

WORK

- If not working at WS, where would you work?
- What do you buy with your wages?
- Do you give your wages to your family and relatives? How much to how many?
- If you could have any job at WS, which job would you want?
- Did you used to work at the hunting camp? Was it a good job? Did they treat you well?
- How much do you earn in tips each month?
- How much school have you completed? Would you like to complete more?

ENVIRONMENT

- Do you like wildlife
- Does wildlife come through your village? Has it ever damaged your house or crops?
- Have you ever visited wildlife areas with your family and/or friends?
- Are animals important to you?

OCT

- Are you familiar with the OCT?
- Do you know your village's OCT representative?
- Do you the job of the OCT?
- What project would you like to see the OCT complete in your village?
- Do you think the partnership should continue?

Appendix 5 OCT 2001 and 2002 financial audits

EXPENDITURES	Salaries	Equip	Staff Ass/Devel	Transport	Overhead	Donations	Fees	Misc		
Accountant	20,500									
Auditor										
Bank Fees								4,314		
Boat								2,775		
Capital Equip										
Donations						20,100				
Fuel				96,350						
Gudigwa vehicle										
Hunting Licenses								17,200		
Insurance & Shop Licenses								11,228		
Interest Paid								122		
Land & Building					37,168					
Lease Fees								4,900		
Management Fees	70,550									
Meetings			11,176							
Phone					16,775					
Post					255					
Professional Fees	14,130									
Rations			5,565							
Salaries	309,046									
Shop Construct		131,574								
Sitting allowances	147,100									
Staff Training			11,735							
Staff Welfare			10,594							
Subscriptions								12,257		
Tournament						6,534				
Travel				28,777						
Uniform			7,046							
VDC House Rental			50							
Vehicle Hire				78,561						
Vehicle Parts				147,632						
VTC Equipment										
Waste, elec, etc.						9,842				
TOTAL	561,326	131,574	46,166	351,320	64,040	26,634	52,796	0	TOTAL EXPENDITURES:	1,233,856
Percentage of Total	45.49%	10.66%	3.74%	28.47%	5.19%	2.16%	4.28%	0.00%		

REVENUE	Salaries	Equip	Staff Ass/Devel	Transport	Overhead	Donations	Fees	Misc		
Area Rental					600,000					
Boat Ferry Collections				58,451						
Holiday Donation										
Interest Received								3,295		
Meat Compensation			7,935							
Phone					8,604					
Project Fund						500,000				
Quota Fees								385,000		
OCT Biz revenue									11,441	
Radio Ops salaries	28,884									
Tournament Donation							6,534			
Vehicle Hire				7,122						
TOTAL	28,884	0	7,935	65,573	608,604	506,534	388,295	11,441	TOTAL REVENUE:	1,617,266
Percentage of Total	1.79%	0.00%	0.49%	4.05%	37.63%	31.32%	24.01%	0.71%		

NET BALANCE: 383,410

EXPENDITURES	Salaries	Equip	Staff Ass/Devel	Transport	Overhead	Donations	Fees	Misc		
Accountant	17,057									
Auditor	16,575									
Bank Fees								5,490		
Boat										
Capital Equip		41,739								
Donations						29,000				
Fuel				108,201						
Gudigwa vehicle		90,000								
Hunting Licenses								1,818		
Insurance & Shop Licenses								32,086		
Interest Paid								38		
Land & Building					16,329					
Lease Fees										
Management Fees	93,000									
Meetings			16,671							
Phone					19,548					
Post					7,250					
Professional Fees	26,982									
Rations										
Salaries	523,934									
Shop Construct		112,304								
Sitting allowances	85,599									
Staff Training			5,466							
Staff Welfare			18,985							
Subscriptions								9,363		
Tournament						3,000				
Travel				45,540						
Uniform			3,648							
VDC House Rental			345							
Vehicle Hire				174,440						
Vehicle Parts				149,979						
VTC Equipment		12,709								
Waste, elec, etc.						14,984				
TOTAL	763,147	256,752	45,115	478,160	58,111	32,000	48,795	0	TOTAL EXPENDITURES:	1,682,080
Percentage of Total	45.37%	15.26%	2.68%	28.43%	3.45%	1.90%	2.90%	0.00%		

REVENUE	Salaries	Equip	Staff Ass/Devel	Transport	Overhead	Donations	Fees	Misc		
Area Rental					636,000					
Boat Ferry Collections				56,580						
Holiday Donation										
Interest Received							6,000			
Meat Compensation			30,000					14,329		
Phone					12,038					
Project Fund						500,000				
Quota Fees								435,000		