

Chapter 4

Community-Based Natural Resource Management in Botswana

Joseph E. Mbaiwa

Abstract The community-based natural resource management (CBNRM) program in Botswana has been ongoing for almost two decades. It aims at achieving biodiversity conservation and rural development, especially improved rural livelihoods. The objective of this chapter is to assess whether CBNRM has been successful in achieving its goals of biodiversity conservation and improved rural livelihoods in Botswana. The chapter also investigates the effectiveness of the CBNRM institutional framework in ensuring that CBNRM achieves its goals. Both primary and secondary data sources were collected and analyzed. Results suggest that CBNRM in Botswana largely involves wildlife-based tourism activities such as photographic and safari hunting. CBNRM offers local communities the opportunity to participate in tourism development and natural resource conservation. In the 20 years of its implementation in Botswana, CBNRM has mixed results. That is, some projects have relatively succeeded in achieving either biodiversity conservation or improved rural livelihoods (e.g. employment creation, generation of income, provision of social services) while other projects have collapsed. There are factors that explain the performance of each project (e.g. availability of skilled personnel or lack of capacity building, reinvestment of CBNRM revenue or misappropriation of funds, strong community cohesion or lack of it). Therefore, it is concluded that the success or failure of CBNRM in Botswana depends on several factors which include the effectiveness of the institutional framework of individual CBNRM projects. In this regard, CBNRM should be judged based on the political, social and economic factors of individual projects. However, the success of some CBNRM projects in Botswana demonstrates that CBNRM can be an effective tool to achieve conservation and improved livelihoods.

Keywords Community-based natural resource management • Community-based organization • Community trust • Botswana

J.E. Mbaiwa (✉)

Okavango Research Institute, University of Botswana, Maun, Botswana

School of Tourism & Hospitality, Faculty of Management,
University of Johannesburg, South Africa

e-mail: JMbaiwa@ori.ub.bw

4.1 Introduction

The concept of community-based natural resource management (CBNRM) became one of the leading concepts in African conservation in the late 1980s. CBNRM is a concept used to explain “the way in which communities organise themselves to sustainably manage their natural resources” (DWNP 1999: 7). CBNRM is, therefore, an incentive-based conservation philosophy that links conservation of natural resources with rural development (Swatuk 2005; Twyman 2000; Thakadu 2005; Blaikie 2006; Mbaiwa and Stronza 2010). The basic assumption of CBNRM is that for a community to manage its natural resource base sustainably, it must receive direct benefits arising from its use. These benefits must exceed the perceived costs of managing the resources. The assumption is that when community livelihoods are improved, community members would be incentivized to address conservation ideals (Leach et al. 1999; Tsing et al. 1999). These assumptions are based on three conceptual foundations, namely economic value, devolution and collective ownership. Economic value refers to the value given to wildlife resources that can be realized by the community or land owner. Second, emphasis is put on the need to devolve management decisions from government to the community or local land users in order to create positive conditions for sustainable wildlife management. Third, collective proprietorship refers to collective use-rights over resources by groups of people, which then are able to manage according to their own roles and strategies.

The CBNRM concept is built upon common pool resources theory, which argues that such resources can be utilized sustainably provided that certain principles are met. According to Ostrom (1990) and Bromley (1992), these principles include the autonomy and the recognition of the community as an institution, proprietorship and tenurial rights, rights to make the rules and viable mechanisms to enforce them, and ongoing incentives in the form of benefits that exceed costs. Conservationists and scholars argue that the management of resources, including wildlife, by the central government has experienced frequent and chronic declines in recent decades (Perkins 1996; Perkins and Ringrose 1996; Boggs 2000). Central to the CBNRM concept are the theory and assumptions underlying the political decentralization of natural resources. Decentralization of natural resource management implies a process of redistribution of power and the transfer of responsibilities from the central government to rural communities in resource management (Boggs 2000; Ostrom 1990; Bromley 1992). The CBNRM paradigm is thus a reform of the conventional ‘protectionist conservation philosophy’ and ‘top down’ approaches by developing a bottom-up approach that involves all the affected stakeholders, including local communities. CBNRM is based on common pool resources theory, which discourages open access resource use but rather promotes resource use rights for local communities. The decentralization of natural resources to local communities through CBNRM is assumed to increase local power and control over resources. As such, it has the potential to improve attitudes of local communities towards sustainable natural resource utilization. In this respect, the decentralization of resource

management to local communities has the potential to achieve nature conservation and rural development.

CBNRM is being implemented in most eastern and southern African countries, including Zimbabwe, Namibia, Mozambique, Zambia, Tanzania and Botswana. There are debates amongst conservation scholars (e.g. Brandon 1998; Oates 1999; Terborgh 1999; Orams 2001; Wearing 2001; Fennell 2001; Duffy 2000) on whether CBNRM is achieving its goals of biodiversity conservation and rural livelihoods in developing countries. This debate is triggered by the fact that natural resource degradation is noted to be occurring in developing countries whereby communities living in rich biodiversity areas are blamed for being one of the main causes of degradation. This degradation occurs because communities rely on natural resources in their respective local environments to sustain their livelihoods. While the debate is soaring on, some scholars (e.g. Mbaiwa 2005; Stronza 2000) perceive the CBNRM program as a useful tool for achieving biodiversity conservation and improved livelihoods in developing countries.

Some scholars (e.g. Leach et al. 1999; Tsing et al. 1999; Mbaiwa and Stronza 2010) argue that CBNRM will alleviate poverty and advance conservation by strengthening the rural economy and empowering communities to manage resources for their long-term social, economic and ecological benefits. These scholars argue that local populations living in natural resource areas have a greater interest in the sustainable use of these natural resources than centralized or distant government or private management institutions (Tsing et al. 1999; Twyman 2000). In this case, CBNRM credits local people with having a greater understanding of, as well as vested interest in, their local environment. Hence, they are seen as more capable of effectively managing natural resources through local or traditional practices (Leach et al. 1999; Tsing et al. 1999; Twyman 2000). CBNRM assumes that once rural communities participate in natural resource utilization and derive economic benefits, this will cultivate the spirit of ownership and the development of positive attitudes towards sustainable resource use. This will ultimately lead rural communities to use natural resources around them sustainably (Mbaiwa 2004).

People-centered approaches to conservation, like CBNRM, have their effectiveness questioned by different scholars (Oates 1999; Terborgh 1999; Locke and Dearden 2005). For example, it is argued that a focus on people comes at the expense of 'wild biodiversity' and thus undermines the purpose of strictly protected reserves. CBNRM is criticized for the lack of clear criteria by which to assess whether CBNRM projects are sustainable and successful in meeting conservation and development targets (Western et al. 1994), minimizing the marginalization of minority groups (Taylor 2000), and the use of inappropriate management strategies (Fortman et al. 2001). Critics also note that there is a tendency by 'policy receivers', i.e. the intended beneficiaries, to be treated passively by 'policy givers' (Twyman 2000) and that CBNRM projects heavily rely on expatriate expertise (Pimbert and Pretty 1995; Twyman 2000). Campbell et al. (2001) allege that much of the literature on CBNRM is falsely optimistic, high expectations have not been achieved and, as a result, southern African villages are largely not benefiting from CBNRM. Lowry (1994) argues that the devolution of rights to communities is insufficient without

Table 4.1 Overview historical development of CBNRM in Botswana

Year	Main event
1980s	Wildlife decline recognised in Botswana and the need to address the challenge
Late 1980s	USAID-supported ideas to introduce CBNRM in Botswana
Late 1980s	Adoption of CBNRM in Botswana and housed at DWNP
1993	First pilot CBNRM project in Botswana – Chobe Enclave Conservation Trust
1995	Second CBNRM project in Botswana – Sankoyo Tshwaragano Management Trust
Late 1990s and 2000s	Increase of CBOs and CBNRM projects in Botswana. Other donor agencies arrived in Botswana and funded different projects e.g. SNV-Netherlands
2007	CBNRM Policy adopted in parliament
2014	Hunting ban adopted

equal attention to how rights are distributed. On the other hand, Leach et al. (1999) argue that the devolution of rights is related to the weak understanding of institutional arrangements impeding on CBNRM. Despite all the above criticisms, CBNRM constitutes a widespread institutional model in rural tourism development and conservation.

In Botswana, CBNRM began as a pilot effort to involve rural communities living adjacent to national parks and game reserves in the mid-1990s (Table 4.1). The goal was to achieve the conservation of natural resources, particularly wildlife, and to thereby reduce human-wildlife conflicts. The first CBNRM project in Botswana began in 1993 with the registration of the Chobe Enclave Conservation Trust (see Jones, this volume). The second CBNRM project created the Sankuyo Tshwaragano Management Trust, registered in 1995. CBNRM projects have mushroomed throughout Botswana ever since. The challenge, therefore, is that the effectiveness of CBNRM in achieving improved livelihoods and conservation is not adequately studied. This dilemma comes at a time when CBNRM scholars and practitioners are questioning the effects of the recent hunting ban on rural livelihoods and conservation. The Botswana Government imposed a ban on safari hunting as of January 2014. As a result, all the communities involved in consumptive tourism are expected to convert to non-consumptive forms of tourism development, such as photographic safaris.

The aim of this chapter, therefore, is to analyze how CBNRM has been implemented and what are the effects on rural livelihoods and conservation in Botswana. In so doing, the chapter contributes to the literature on the role of CBNRM in rural poverty alleviation, sustaining livelihoods and conservation in developing countries, using Botswana as a case study. The chapter started by providing an introduction that covers CBNRM definitions, theories underlying the CBNRM, debates on CBNRM, and knowledge gaps within CBNRM development. Secondly, the chapter will provide a description of the study area, which is Botswana, and discusses the methods used in data collection. Thirdly, the chapter discusses the results of the study, including the effectiveness of CBNRM in achieving conservation and livelihood goals. Lastly, the chapter is concluded by relating these insights to debates on

the pro's and con's of CBNRM. The conclusion also reflects on the future direction of CBNRM following the Botswana ban on safari hunting.

4.2 Study Area and Approach

This chapter covers a wide range of CBNRM projects located in different parts of Botswana. CBNRM activities in Botswana are carried out in all of the country's nine districts. The chapter provides information about those CBNRM projects that in essence are based on wildlife, scenic vistas, cultural heritage and all the associated tourism products in Botswana. In total, 45 community-based organizations (CBOs) with CBNRM projects were studied.

This chapter is based on both primary data collected in a period of over two decades and secondary data sources. Primary data were collected over a period of two decades of research in CBNRM development in Botswana. That is, structured and semi-structured questionnaires have been administered with community groups involved in CBNRM development throughout Botswana. These questionnaires addressed various issues, such as revenue collected by each CBO, number of people employed, CBNRM projects implemented by the CBO, governance of the CBO and the state of natural resource conservation. Primary data collection also involved informal interviews with different stakeholders, such as with government officials (e.g. Department of Wildlife & National Parks and Botswana Tourism Organisation). These stakeholders were interviewed to get more clarity on particular issues about CBNRM development in different parts of the country.

Second, a desktop study was carried out of CBNRM documentation. Secondary data sources included reports on CBNRM development in Botswana, policy documents (e.g. CBNRM policy of 2007), past CBNRM status reports, annual reports by CBOs. Issues of livelihoods development, natural resource conservation, CBNRM governance and CBNRM links with other sectors of the economy were examined in these sources. Data obtained through this approach also included the latest and updated data on CBNRM performance in Botswana as per 2011/2012.

Primary and secondary data collected were analyzed both qualitatively and quantitatively. Thematic analysis was used to analyze all the qualitative data. Thematic analysis involves data reduction into themes and patterns to be reported. Leininger (1985: 60) argues that in thematic analysis, themes are identified by "bringing together components or fragments of ideas or experiences, which often are meaningless when viewed alone". In thematic analysis, themes that emerge from the informants stories are pieced together to form a compressive picture of their collective experience (Aronson 1994). In this study, qualitative data from households, key informant interviews and focused group discussions were summarized into specific themes and patterns on the impacts of CBNRM in Botswana. Finally, quantitative analysis of data involved the production and interpretation of frequencies and tables that describe the data.

4.3 Institutional Arrangements of CBNRM in Botswana

4.3.1 Definition and Formation of CBOs and Trusts

Community trust CBOs are institutions created by communities to implement activities within the frame of the CBNRM program (DWNP 1999). Trusts are formed by the groups of people living in the same area (e.g. a village) and sharing common interests in order to benefit from natural resources around them (DWNP 1999), mostly through tourism development. Community trusts might, therefore, be made up of one or more villages whose aims are to utilize natural resources (e.g. wildlife) in their local environment to generate jobs, revenues and meat for the benefit of the members of the community. Community trusts are therefore registered legal entities, and are formed in accordance with the laws of Botswana to represent the interests of the communities and implement their management decisions in natural resource use.

Community trusts (Table 4.2) engage in tourism projects based on natural resources around them. For example, in northern Botswana where there is an abundance of wildlife resources, most trusts are engaged in tourism related activities, such as sub-leasing their concessions to safari companies, managing cultural tourism and photographic wildlife tourism, and marketing baskets and other nature-based handicrafts. Membership of community trusts generally includes all people who have resided in the concerned village(s) for more than 5 years (Rozemeijer and van der Jagt 2000). Community trusts thus include the entire population of a village in terms of membership. Sometimes constitutions of these trusts specify that they should include only adults who have resided in the village for more than 5 years. For instance, the automatic general members of trusts are such that all local people over 18 years of age and living within their respective concession area or village, are members of a trust (Mbaiwa 2002).

4.3.2 Governance and Functions of Trusts and CBOs

The governance of community trusts should, in theory, be in accordance with the laws of Botswana, and at the same time reflect community interests, goals and customs (DWNP 1999). The operations of community trusts are guided by constitutions, which specify, *inter alia*, the membership and duties of the trusts, the power

Table 4.2 Number of CBOs in Botswana, 2003–2012

Year	Number of CBOs registered
2003	83
2006	96
2009	105
2012	105

Source: Mbaiwa (2013)

of the board of trustees (BoT), the way meetings are held, resources are governed and sanctions of the trusts are handled. Community trusts are headed by a BoT. The BoT is considered to be the supreme governing body of each CBO and CBNRM project. In most CBOs, the BoT is composed of ten members. The BoT conducts and manages all the affairs of the trust on behalf of its members, i.e. the local village community. These affairs include the signing of legal documents, such as leases and contracts with safari companies, and maintaining a close contact with the trust's lawyers. It also keeps the records, financial accounts and reports of the trust, and presents them to the general membership at the annual general meetings. As a result of its important role in resource management, the BoT is a key platform for decision-making regarding quotas and benefit distribution, business deals with the private tourism sector, and agreements with support agencies, like donors and non-governmental organizations (NGOs). The BoT acts as intermediary between government agencies, NGOs and the communities they represent on issues of local participation in tourism development and conservation.

The BoT is essentially responsible for identifying and bringing before the general membership, issues that the BoT may deem necessary for the furtherance of the objects of the trust. It is also the BoT's primary responsibility to implement decisions of the trust made by the general membership regarding use of property and funds of the trust. It is the BoT that handles all the business aspects of the trust, by applying for permits and licenses, as may be required from time to time. At the end of each financial year, the BoT is expected to produce and announce to the general membership progress reports and audited financial reports. The financials usually include trust income and expenditure for the previous year, surplus or deficit resulting from those finances and lastly a proposed budget for the coming financial year. The BoT consists of ten persons and their term in office commences from the date of their election and lasts for a period of 2 years. After being known, the BoT then elects from amongst itself some of its members into positions of chairperson, vice-chairperson, treasurer, secretary and vice-secretary. The rest become board members.

4.3.3 CBNRM and Joint Venture Partnerships (JVPs)

Most CBNRM projects in Botswana that are wildlife-based are carried out following the joint venture partnership (JVP) model proposed by the Department of Wildlife & National Parks (DWNP). None of the JVPs in Botswana involve the merging of either partner's assets as is common practice around the world. As such, most CBOs involved in CBNRM sub-lease their concession areas, that are often rich in natural resources, to a company or group of companies. In return, the community or community trust benefits from rental income and employment opportunities. Community trusts prefer these types of JVPs because tourism development is a new economic activity to them and they lack the necessary entrepreneurial skills and experience in managing tourism enterprises. JVPs with safari companies are

preferred under the assumption that companies will in the long run transfer the necessary tourism entrepreneurship and managerial skills from companies to local communities.

Generally, JVPs in Botswana's CBNRM development are in essence lease agreements between operators and CBOs. As already noted, community trusts simply sub-lease their concession areas together with the resources found in the area to private companies. Much of the concession areas in northern Botswana owned by local communities are sub-leased for hunting and photographic tourism activities. In this regard, communities have transferred all the land-use and management rights in their concession areas to private tourism companies. Therefore, CBOs receive annual land rentals from these companies and – before the hunting ban – they sold their annual wildlife quota to safari hunting companies. In return, communities reinvest money generated through sub-leasing of their concession areas to operate campsites, eco-lodges and run community development projects.

The challenge of JVPs is that they have simply not achieved their original and intended goals. It was anticipated that the private sector would build the capacity of CBOs through skill transfer and on-the-job training and facilitate trusts to fully take over the running of tourism enterprises. In this regard, CBNRM has not resulted in communities being at the forefront of running key tourism development projects. Communities own small scale tourism enterprises, like eco-lodges and campsites. This defeats the goal of making CBOs owners of tourism enterprises. Some non-wildlife CBOs own their tourism enterprises and have not formed any JVPs with any tourism company. This includes most of the CBOs in eastern Botswana such as Ketsi-Ya-Tsie which deals with *veld* (field) product collection. Thusano Lefatsheng deals with the collection of Devil's Clal, a plant used for medicinal purposes. Such CBOs tend to perform very poorly since tourists that come to Botswana generally want to visit wildlife areas, as opposed to parts of Botswana where there is no wildlife.

4.3.4 Number of CBNRM Communities

Mbaiwa (2013) shows that in Botswana a total of 45 CBOs, comprising of 123 villages and a total population of 283,123 people, are supported by the development of CBNRM. In their turn, these people support CBNRM under the assumption that it will contribute to poverty alleviation in their villages. The number of people that are supported by CBNRM in 2012 is slightly higher than in previous years (e.g. 2006 and 2009). Table 4.2 shows the number of CBOs registered in Botswana, including the villages and population directly or indirectly involved in CBNRM development in 2006. With 150 villages in ten districts in 2006, more than 135,000 people or 10 % of Botswana's population were involved in CBNRM (Schuster 2007). It becomes clear that the number of villages involved in CBNRM in 2006 was higher than in 2012, but the number of people supported is higher more recently.

Table 4.3 Main features of CBNRM and community trusts

Feature	Description
Main focus	The main objective of CBNRM is to achieve conservation and rural livelihoods through participation and involvement of local communities in natural resource management. As a result, the main objective of CBNRM is to improve livelihood and to conserve biodiversity
Actors involved	Community trusts, communities/villages, government agencies and the private sector. Government leases land, communities have use rights over resources, private sector develops resources for the tourism market after sub-leasing concession areas from communities
Legal entity	Community trusts are legal entities registered according to the laws of Botswana
Ownership	Government owns land but leases it to community trusts who in turn sub-leases it to safari companies
Management	Board of trustees manages community trusts on behalf of the community
Sources of finance	Donor funding, joint venture partnerships and funds obtained from sub-leasing of concession areas
Contribution to conservation	CBNRM contributes to conservation through the setting aside land as a concession area, enhancing wildlife-friendly behaviour of communities, monitoring wildlife populations and enforcing laws against illegal hunting
Contribution to livelihood	Development of community tourism projects such as ecolodges, campsites, payment of fees, employment opportunities

Although the registration of CBOs appears to have remained stagnant between 2009 and 2012, CBNRM remains very popular in rural areas of Botswana. The 105 registered community trusts, presented in Table 4.2, are actively operating as viable entities, generating revenue, receiving benefits, managing their natural resources, and distributing their benefits within the community. This therefore suggests that rural communities in Botswana may be perceiving CBNRM as an alternative livelihood strategy that can improve their lives.

4.3.5 Total Surface Area for CBNRM Development

In Botswana, CBNRM is carried out in demarcated land use zones known as wildlife management areas (WMAs). WMAs are further sub-divided into controlled hunting areas (CHAs). CHAs are then leased to CBOs by government for CBNRM activities. CHAs are used for various types of CBNRM activities, including consumptive and non-consumptive tourism. While CBNRM activities are carried out by various CBOs in CHAs located in different parts of the country, not all of the CHAs are used effectively by local communities. Figure 4.1 shows the distribution of CBNRM projects across Botswana.

According to the Government of Botswana, in 2004, a total of 6,675,000 ha (11.35 %) of Botswana's land surface was set aside for WMAs and CBNRM can be carried out in this areas (Mbaiwa 2012). A further 6,270,000 ha (10.8 %) of Botswana's surface area is proposed for WMAs or community uses for CBNRM. This

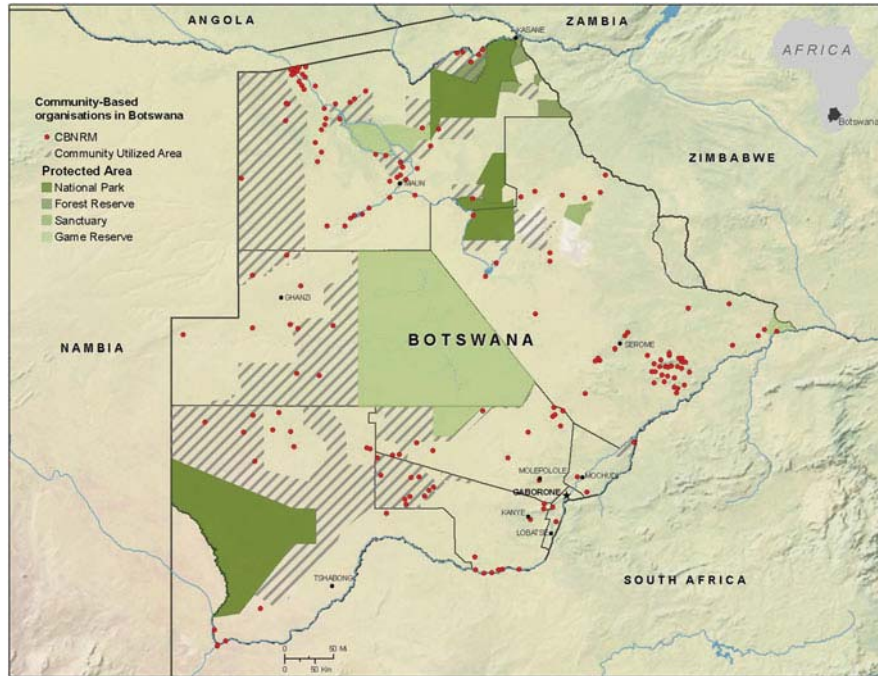


Fig. 4.1 Spatial distribution of CBNRM projects in Botswana (Source: Mbaiwa 2012)

shows that a total of 22 % of the Botswana surface area, or 12,945,000 ha, is set aside for CBNRM for rural communities.

4.4 CBNRM Contributions to Rural Livelihoods

Some CBNRM projects have collapsed while others are more successful. Where CBNRM has better results, there has been a positive contribution to improved livelihoods as discussed in detail below. Some of the livelihood improvements include employment opportunities, financial benefits and social services.

4.4.1 *Employment Opportunities*

Employment is one of the main benefits that have improved livelihoods in some of the CBNRM villages, particularly those in northern Botswana. Employment is provided by both the safari companies that sub-lease community areas and by trusts in the respective villages. In 2011/12, a total of 610 people were employed in 14 CBOs out of a total of 45 CBOs.

For Botswana, an employment estimate of 8,000 people in CBNRM projects represents a substantial contribution. This is because most of the CBNRM projects are carried out in remote parts of Botswana where there is no industrial or manufacturing sectors to create employment opportunities for local people. As a result, CBNRM in Botswana thus improves rural livelihoods through employment. In Ngamiland District, CBNRM has become one of the key sectors that provides employment to local communities (NWDC 2003). Employment in wildlife-based CBOs in both Ngamiland and Chobe Districts is substantial. In these villages, employment is provided by safari companies that sub-lease community areas and by trusts in respective villages. In addition, some of the CBOs in these areas have re-invested their income in other tourism enterprises, such as in Santawani lodge and Kaziikini camp owned by the Sankoyo Community, and Ngoma Lodge owned by the Chobe Enclave Conservation Trust. These enterprises have led to the creation of more employment and income generation opportunities for these communities. Next to income generation and employment opportunities, Chobe Enclave Community Trust members have also invested in agriculture, such as livestock and crop farming (see Jones, this volume). As a result, human-wildlife conflicts are likely to continue hence a challenge to conservation of biodiversity in the area.

The creation of jobs by CBOs and their JVPs contributes to poverty alleviation in rural areas as it brings social security to the people who are typically poor. Every economy aims at full employment for its labor force, and this is also the case for rural economies. Those employed in CBNRM and other tourism enterprises financially support their families, thereby raising the standard of living in the household. In terms of utilization of wages and salaries from tourism, workers of both CBOs and safari operators use the money for various household needs, such as buying food, building houses, buying toiletries and clothes, supporting parents and helping meet expenses associated with the education of children. Some save the income they derive from tourism in the bank for future uses, such as paying dowry, sponsoring themselves to schools and household emergencies. In this regard, CBNRM can be noted for having positive aspects on the livelihoods of local communities involved in community-based tourism (Mbaiwa and Stronza 2010).

4.4.2 Financial Benefits from Tourism Development

CBNRM projects in Botswana generate income from various sources, namely trophy hunting, photographic tourism activities (e.g. game drives, accommodation, food and beverages), mokoro safaris (i.e. dug-out canoe), camping, land rentals, handicraft production, walking safaris, collection of *veld* products, meat sales and other activities (e.g. vehicle hire, donations). At a national level, Johnson (2009) notes that at least USD 35,276,342 has been cumulatively generated through various CBNRM activities between 2006 and 2010 (Table 4.4). In 2011/2012, about USD 4,439,691 was generated by CBNRM projects in Botswana (Mbaiwa 2012).

Over 80 % of the CBNRM revenue shown in Table 4.4 is generated by CBOs located in northern Botswana (i.e. Ngamiland and Chobe Districts) and the Khama

Table 4.4 Revenue from CBNRM Projects, 2006–2012 (Source: Mbaiwa 2013)

Year	Amount in BWP ^a
2006	8,390,606
2007	16,268,289
2008	16,189,183
2009	11,638,464
2010	18,066,213
2011/2012	35,517,534

^a8.90 BWP= 1USD (March 2014)

Rhino Sanctuary, which is located in central Botswana. Generally, results suggest that CBNRM generates huge sums of money for the different CBOs in Botswana. This therefore shows that CBNRM has a significant contribution to the economic development of most rural communities, especially those residing in resource rich areas like in the Okavango Delta and Chobe regions.

Trophy hunting as a tourism activity generates more income than photographic tourism in Botswana. For example, between 2006 and 2009 trophy hunting by CBOs generated USD 413,014 while photographic tourism generated only USD 54,998 (Johnson 2009). This shows that CBOs in the Okavango and Chobe regions have an advantage compared to those in other parts of Botswana as a result of the abundance of wildlife resources in these areas. Trophy hunting is carried out in eight CBOs in the Ngamiland District, two in the Chobe District, and three in the Mmadinare, Ghanzi and Kgalagadi areas. In 2012, trophy hunting was carried out in a total of 13 CBOs in Botswana. As already noted, community trusts only have user rights over resources, all the natural resources in Botswana, including wildlife, are state-owned. Communities can thus only hunt for wildlife species allocated to them by government in that particular year.

Income generation from tourism is important because it is one way in which communities can sustain their livelihoods. Income from tourism subsequently ends up in households in the form of dividends. For example, since 1996, the Sankoyo community has been distributing household dividends to members. In 2012, each household in the village received close to USD 1,500. Studies by Arntzen et al. (2003, 2007) and Mbaiwa (2013) have shown that some communities, such as those of Sankoyo, Khwai and Mababe villages, no longer rely on traditional livelihood activities like subsistence hunting, the collection of *veld* products or agriculture. Instead, they have moved to a cash economy where income from CBNRM has become the main source of livelihood sustenance in their communities. This shows that CBNRM has transformed the traditional economy of these villages to a modern tourism-led economy.

4.4.3 Financing of Social Services from CBNRM Revenue

The different CBNRM communities provide several social services for their people. That is, CBNRM benefits are distributed at individual and household level and at community level (Table 4.5). Some of the material benefits include the provision of destitute housing, community micro-credit schemes, funeral assistance and

Table 4.5 Social services provided by CBNRM revenue (Source: Mbaiwa & Stronza 2010)

Assistance for funeral (BWP 300 to BWP 5,000 per household)
Support for local sport activities (BWP 5,000 to BWP 50,000 per village)
Scholarships (BWP 7,000 to BWP 35,000 per village)
Transport services (average BWP 4,000 per CBO)
Building of water stand pipes
Services and houses for elderly people (BWP 150 to BWP 300 per month per person)
Assistance for orphans (average BWP 40,000 per CBO)
Assistance for disabled people (BWP 15,000 per village)
Provision of communication tools such as televisions and radios
Independence fund (BWP 200 per village)

provision of scholarships. Funeral assistance is provided to all members of the community who experience death of a loved one. As shown in Table 4.5, households who experience deaths of a person are also given funds to enable them to bury them. CBNRM revenue is also used to provide assistance to the needy or poor in the form of monthly allowances. Microfinance scheme benefits were also given to members of the community where there are viable projects. All community members can apply for this loan scheme, and there is a committee set up to review the loan applications and make recommendations to the BoT. In addition, CBNRM provides funds for old age and disabled persons' allowance, paid to elders who are above the age of 60 and to people who are physically or mentally disabled. The amount given to household members may vary from year to year, depending on the number of elderly and disabled people. This payment is made twice a year. At each annual general meeting, members and villages involved in community-based tourism agree on how income to households is to be distributed.

Some of the social services provided by CBOs to their communities include housing for the needy and elderly in their communities. For example, the CBOs paid for the construction of seven houses for the poor at Sankoyo. At Khwai 18 houses were built, while at Mababe 10 houses were built for the elderly and the poor. These results show that CBNRM has taken a social responsibility for community members and provides them with the necessary livelihood needs. CBNRM has therefore transformed some rural communities from living in poverty and relying on handouts from the Botswana Government and donor agencies from Europe and North-America into productive communities that are moving towards achieving sustainable livelihoods.

4.4.4 Modern Equipment Financed by CBNRM Revenue

Most CBOs have accumulated a number of assets over time, including vehicles, computers, printers, access to internet, tractors and vehicles. Vehicles have come to benefit CBNRM villages significantly. Community vehicles, purchased via revenue generated from CBNRM projects, are used to collect firewood to prepare meals for

Table 4.6 Modern equipment owned by CBNRM projects in 2012 (Source: Mbaiwa 2012)

Assets	Total number of assets owned by CBOs	Number of CBOs that own these assets
Computers	54	18
Internet access	7	10
Printers	42	17
Vehicles	36	16
Digital satellite television	3	4
Tractor	1	1

mourners, and to transport them to and from other key centers in their respective areas. Community vehicles were also used to transport the dead and are a form of transportation for members travelling from one village to another. Community members can also hire these vehicles in case they want to transport their goods from one point to the other. The availability of transportation through trust vehicles has, therefore, increased the accessibility of these once remote areas to regional centers in other parts of the country. Vehicles owned by the trust have become an important factor in many communities where, due to their remoteness, they may be the only reliable source of transport into and out of the village on a regular basis. They are also used mainly for CBO business, such as collecting construction material, providing transport services to community members for funerals, and medical emergencies. Many communities have used their CBO funds to purchase television sets, modern computer technology, internet connections and other communication tools as a means of enabling remote villages to become connected to local and national processes (see Table 4.6).

The introduction of television sets, modern computer technology, internet and radios in remote villages of Botswana is an important aspect of rural development, particularly since it keeps people informed on the latest developments in Botswana and other parts of the world. Some of the communities have opened offices in nearby towns, for example in Maun or Kasane for those in northern Botswana, to serve as coordination centers for community processes as well as to serve as marketing outlets for their tourism activities. These centers have become important social institutions that enable the communities to feel a sense of pride and involvement in mainstream commercial activities and as a means of engaging with clients and service providers.

4.5 CBNRM Contribution to Conservation

The role of CBNRM to achieve conservation is not adequately researched in Botswana. However, some studies (e.g. Mbaiwa and Stronza 2010; Arntzen et al. 2003, 2007) have noted positive attitudes of local communities towards wildlife and conservation in CBNRM areas in Botswana. In the following paragraphs we will discuss some of the activities communities do to achieve conservation.

4.5.1 Management Oriented Monitoring System

Monitoring of resources in CBNRM areas is important for successful resource management. In this regard, the management-oriented monitoring system (MOMS) is a key aspect of CBNRM development in Botswana. MOMS is a management tool for the collection of valuable resource data for monitoring purposes. It is based on community participation rather than conventional scientific monitoring approaches that are often more expensive as they depend on the use of hi-tech equipment and highly trained personnel. The DWNP trains communities on how to apply MOMS and collect information on game sightings, rare species, problem animals, village mapping and other aspects. These data are also used to enhance the quality of aerial surveys that provide animal counts – a key data source in animal quota setting.

MOMS involves the collection of data through the use of an events book and various types of registration cards for recording observations of wildlife. Different cards are used to record wildlife sightings on patrol, rare and endangered species, mortalities, meat harvesting and distribution, trophy hunting and problem animals. Information common to all these cards include the date of observation, species, global positioning system (GPS) coordinates of the place of observation and the number of animals. This tool is based on physical patrols in the area and directly obtains on-sight information.

The MOMS program was piloted in some CBNRM sites like Sankoyo, Mababe and Khwai in Ngamiland District around 2007. It has been implemented in several CBOs around the country since 2007. The MOMS and the deployment of community escort guides (CEGs), paid directly by the respective CBOs, is one of the key achievements of conservation in CBNRM areas. The challenge of MOMS, however, is that much of the rich and current data collected by CBOs is not utilized by the DWNP or communities.

MOMS is a monitoring approach that deviates from conventional approaches of external scientists being responsible for monitoring and collecting data by allowing communities to self-monitor resources in their CHAs. However, the DWNP technical support team facilitates workshops for general community members, BoTs and community escort guides in these villages to educate them on the guiding principles of MOMS. In these workshops some key issues and areas that local communities feel should be monitored are identified. While MOMS is still too new to evaluate its effectiveness, its long-term implications on determining the wildlife quota in CHAs is an important aspect of conservation.

4.5.2 Community Policing of Natural Resources

Community policing and the enforcement of conservation practices is one of the main achievements of the CBNRM programme. A total of 14 trusts in Botswana had a total of 111 CEGs to control poaching and ensure compliance with hunting regulations (Mbaiwa 2013). CEGs have proved effective in ensuring that hunting is

controlled in community concession areas. They accompany hunters in their hunting safaris. The effectiveness of escort guides and their desire to conserve resources in community concession areas is further demonstrated by their numerous patrols in their areas. All these efforts indicate the key role that communities have so far played in natural resource. CEGs monitor the activities of the joint venture partner (i.e. the safari operator leasing community concession areas) during hunting and photographic activities and record all animals killed or spotted at specific locations in community concession areas. They are also responsible for reporting and apprehending poachers. Ideally they should record GPS coordinates, numbers and types of animal species. CEGs also accompany thatch grass harvesters, who are mainly women, making it possible for them to reach out to areas they may otherwise not go to. This contributes to enhanced access to resource abundant areas.

CEGs play a significant role in resource monitoring and use by communities. There is evidence suggesting that communities involved in CBNRM have gained a greater awareness of the importance of using natural resources in a sustainable way. For example, there is a general perception in most CBOs that CBNRM contributes to the reduction of poaching (Mbaiwa and Stronza 2010; Arntzen et al. 2003, 2007).

Some of the trusts or villages involved in community-based tourism have a minimum of ten CEGs. CEGs are employed by respective communities to enforce the rules of conservation in their CHAs on behalf of their community members. CEGs are trained by DWNP to escort safari hunting activities and ensure that all hunting in the community CHA is conducted within the laws of Botswana. CEGs record all killed or wounded animals, and report any illegal hunting to the Botswana police and DWNP. CEGs in photographic areas ensure that safaris are conducted within the correct zone and that photographic activities do not harm nature, for example through waste disposal, off-road driving or other environmentally harmful activities. CEGs conduct routine patrols, anti-illegal hunting patrols and wildlife resource monitoring patrols in their concession areas.

In CBNRM villages, CEGs are regarded by residents to be effective in making their communities observe conservation regulations discussed and agreed upon by all the members of the community. Failure to observe the law empowers CEGs to arrest and hand over the culprit to the Botswana police. In addition, those who fail to observe community conservation rules are suspended from deriving benefits from the CBNRM project in their village. The suspension remains until an investigation has been carried out and the community believes that the individual charged is found to have redeemed himself. The community punishment of law offenders through the suspension of CBNRM benefits also shows that local community institutions of conservation are effective and have the potential to restrain those few individuals in society that fail to observe agreed upon community decisions. However, NGOs and other stakeholders have, so far, not raised any concerns about community punishments. On the other hand, government always prefers to try people in a court of law and have them convicted and serve a prison term decided by the court. These measures contribute to lower levels of illegal hunting activities in CBNRM villages as compared to the time before CBNRM began (Mbaiwa and Stronza 2010).

4.5.3 The Wildlife Quota System

Before the hunting ban was affected in Botswana in January 2014, wildlife hunting quotas were allocated by DWNP every year to communities. This wildlife quota system has been one of the pillars behind the success of CBNRM activities in Botswana. Wildlife quotas were decided every year after carrying out aerial surveys of wildlife populations in each CHA. In 2007, communities involved in safari hunting through the CBNRM programme were each allocated 15 elephants to hunt in 2007. However, declining species, such as giraffes and sable antelopes, are not hunted because their numbers are considered to be small. CBNRM villages in the Okavango Delta are reported to have accepted the suspension of hunting endangered species, which provides another indicator for the willingness of communities involved in CBNRM to contribute to conservation.

Communities recognize that hunting methods before CBNRM were detrimental to wildlife resources in their areas. As a result, they accepted the wildlife quota system that promotes regulated and selected hunting in a particular season. Controlled hunting through the quota system is thus not a destructive method as some of the anti-hunting organizations seem to propose. However, informal interviews with DWNP officers indicate that the wildlife quota system has been abused by some hunters. There have been fraudulent practices involving some of the hunters through the wildlife quota system. For example, it has been reported that some hunters hunt more animals than those required to hunt monitoring is not done by DWNP and CEGs. However, it can be concluded that the wildlife quota system promotes both conservation and livelihoods in remote parts of Botswana.

4.5.4 The 2014 Ban on Hunting

The Ministry of Environment, Wildlife and Tourism of Botswana has imposed a ban on safari hunting as of January 2014. All the communities involved in consumptive tourism are expected to convert to non-consumptive tourism development. CBOs involved in safari hunting have in several forums (e.g. CBNRM annual forums) raised concerns about this new development. They note that the ban on hunting will result in a reduction of income generated from CBNRM projects. CBNRM status reports (e.g. 2006 report, 2009 report, 2010 report and the 2011/2012 report) have all shown that consumptive tourism generates more money from CBNRM activities than non-consumptive tourism for communities. When income generated by CBOs goes down, rural livelihoods will be affected (i.e. employment opportunities, income generation etc.). Photographic tourism in most CBOs cannot replace hunting because it is less lucrative in rural community CHAs. Johnson (2009) argues that a possible consequence of a hunting ban will be that communities that have become accustomed to receiving or selling hunting quotas to professional hunting outfitters for large sums of money (most in excess of USD125,000 a year) will now not have any sources of income. Communities are told to develop and begin operating their

own tourism photographic tourism enterprises. The decision to ban hunting in Botswana including in CBNRM areas is a political one and is not supported by any scientific evidence. The DWNP did not conduct annual aerial wildlife population surveys since 2005. As a result, there is no scientific evidence to suggest that hunting in Botswana as carried out in CBNRM areas is detrimental to wildlife conservation. In addition, there is no evidence to suggest that current wildlife numbers are able to sustain safari hunting in the country into the future. CBNRM development in Botswana is thus faced with a challenge in its future development.

4.6 Conclusion

CBNRM in Botswana has mixed results. CBNRM has been successful in some areas, while it has collapsed in others. Where it has succeeded, CBNRM has made a considerable contribution to socio-economic needs of local communities in terms of the creation of employment opportunities, income generation, provision of social services like water reticulation, availability of game meat, scholarship of students in hospitality courses, acquisition of skills in the tourism business, and the establishment of facilities like recreation halls and sponsorship of local sporting activities. Local employment opportunities did not exist before CBNRM and people migrated to Maun or into safari camps in the Okavango Delta for employment opportunities. The impact of CBNRM in improving livelihoods is thus significant when compared to the time before the programme was operational in Botswana. The improvement of livelihoods has indirectly promoted positive attitudes towards conservation.

Conservation has become a key objective to achieve in all CBOs. CBOs carry out community-based policing and monitoring of resources in their areas through CEGs, which indicates the commitment by resident communities to conserve their resources. Communities are now able to link natural resources and tourism, which makes them feel obliged to conserve the available resources. They appreciate tourism development or CBNRM as an effective livelihood option that relies on the availability of natural resources. This confirms the studies of Mwenya et al. (1991) in Zimbabwe who argue that successful wildlife conservation is an issue of 'who owns wildlife' and 'who should manage it'. If people view wildlife resources as 'theirs' because they realize the benefits of 'owning' wildlife resources, and understand that wildlife management needs to be a partnership between them and the government, there is a higher potential for them to conserve wildlife species in their areas. In this regard, CBNRM serves as a tool to achieve both conservation and improved livelihoods in Botswana.

CBNRM has been implemented by different communities through community trusts. Community trusts are created by the communities to implement the activities of the CBNRM projects in their local environment. Community trusts represent the interests of their communities, and as a result their main function is to ensure that their respective communities participate and benefit from wildlife-based tourism activities. In performing their functions, community trusts obtain head leases for giving them tenure of access from government. They, however, sub-lease their

concession areas to joint venture partners, sign contracts with the private sector, and raise funds for the community from donors. As a result of the joint venture agreements, some benefits have accrued to community trusts, such as financial benefits, employment opportunities of their members, meat, and other intangible benefits. However, community trusts are constrained by such factors as lack of training and capacity building, insecurity of tenure, conflicts between stakeholders, management problems and misuse of funds. Despite all these challenges CBNRM in this chapter is viewed as a tool that remote communities living in rich biodiversity areas can use to make a positive contribution to conservation and livelihoods.

The ban on safari hunting will have socio-economic and ecological effects in Botswana. Since the late 1970s, trophy hunting is viable in remote areas, attractive scenery, or high densities of viewable wildlife (Wilkie and Carpenter 1999; Lindsey et al. 2006). That is, safari hunting in Botswana was undertaken in peripheral areas that are not viable for photographic tourism. Converting safari hunting areas not viable for photographic tourism into photographic tourism areas is a challenge. In addition, revenues from trophy hunting have resulted in improved attitudes towards wildlife among local communities, increased involvement of communities in CBNRM programs, requests to have land included in wildlife management projects, and in some cases increasing wildlife populations (Lewis and Alpert 1997; Child 2000, 2005; Weaver and Skyer 2003; Baldus and Cauldwell 2004). As a result, the ban on safari hunting will result in socio-economic and ecological impacts which include the loss of several socio-economic benefits. According to Ecosurv Environmental Consultants (2013), 4,800 livelihoods will be affected, 600 jobs will be lost, and over USD 5 million will be lost annually. Restricting consumptive wildlife utilization would represent a retrogressive step and a top-down imposition that would reduce the probability of wildlife-based land uses in many rural areas, and reduce community earnings and buy-in to natural resource management.

Finally, Botswana is a signatory of the Southern African Development Community (SADC) Protocol on Wildlife Conservation and Law Enforcement, the primary objective of which is to: “establish within the region and within the framework of the respective national laws of each state, common approaches to the conservation and sustainable use of wildlife resources” (SADC 1999: 6). Increased centralization of control over wildlife management, and restrictions to the freedom of communities to derive benefits from wildlife via safari hunting is contrary to both the SADC protocol mentioned, and to harmonized trans-boundary management of wildlife populations.

References

- Arntzen, J., Molokomme, K., Tshosa, O., Moleele, N., Mazambani, D., & Terry, B. (2003). *Review of CBNRM in Botswana*. Gaborone: Applied Research Unit.
- Arntzen, J., Buzwani, B., Setlhogile, T., Kgathi, D. L., & Motsolapheko, M. K. (2007). *Community-based resource management, rural livelihoods and environmental sustainability*. Gaborone: Centre for Applied Research.
- Aronson, J. (1994). A pragmatic view of thematic analysis. *The Qualitative Report*, 2(1), 1–3.

- Baldus, R., & Cauldwell, A. (2004). Introducing a debate on reform in the safari hunting industry. *African Indaba*, 3, 2–3.
- Blaikie, P. (2006). Is small really beautiful? Community-based natural resource management in Malawi and Botswana. *World Development*, 34(11), 1942–1957.
- Boggs, L. P. (2000). *Community power, participation, conflict and development choice: Community wildlife conservation in the Okavango Region of northern Botswana* (Discussion Paper No. 17). Maun: IIED.
- Brandon, K. (1998). Perils to parks: The social context of threats. In K. Redford, K. Brandon, & S. Sanderson (Eds.), *Parks in peril: People, politics and protected areas* (pp. 415–439). Washington, DC: The Nature Conservancy and Island Press.
- Bromley, D. (1992). *Making the commons work*. San Francisco: Institute for Contemporary Studies.
- Campbell, B., Mandondo, A., Nemarundwe, N., Sithole, B., de Jong, W., Luckert, M., et al. (2001). Challenges to the proponents of common property resource systems: Despairing voices from the social forests of Zimbabwe. *World Development*, 29(4), 589–600.
- Child, B. (2000). Application of the southern African wildlife experience to wildlife utilization in Kenya and Tanzania. In H. H. Prins, J. G. Grootenhuis, & T. T. Dolan (Eds.), *Wildlife conservation by sustainable use* (Conservation biology series, pp. 459–468). London: Kluwer.
- Child, B. (2005). Principles, practice and results of CBNRM in southern Africa. In B. Child & L. M. West (Eds.), *Natural resources as community assets*. Washington, DC: Sand County Foundation and the Aspen Institute.
- Department of Wildlife and National Parks (DWNP). (1999). *Joint venture guidelines*. Gaborone: Department of Wildlife and National Parks.
- Duffy, R. (2000). Shadow players: Ecotourism development, corruption and state politics in Belize. *Third World Quarterly*, 21(3), 549–565.
- Ecosurv Environmental Consultants. (2013). *Management plan for controlled hunting area CT/3*. Gaborone: Botswana Tourism Organization.
- Fennell, D. (2001). A content analysis of ecotourism definitions. *Current Issues in Tourism*, 4, 403–421.
- Fortman, L., Roe, E., & Van Eeten, M. (2001). At the threshold between governance and management: Community-based natural resource management in southern Africa. *Public Administration and Development*, 21, 171–185.
- Johnson, S. (2009). *State of CBNRM report 2009*. Gaborone: Botswana National CBNRM Forum.
- Leach, M., Mearns, R., & Scoones, I. (1999). Environmental entitlements: Dynamics and institutions in community-based natural resources management. *Wildlife Development*, 27, 225–247.
- Leininger, M. M. (1985). Ethnography and ethnography: Models and modes of qualitative data analysis. In M. M. Leininger (Ed.), *Qualitative research methods in nursing* (pp. 33–72). Orlando: Grune & Stratton.
- Lewis, D., & Alpert, P. (1997). Trophy hunting and wildlife conservation in Zambia. *Conservation Biology*, 11, 59–68.
- Lindsey, P. A., Alexander, R., Frank, L. G., Mathieson, A., & Románach, S. S. (2006). Potential of trophy hunting to create incentives for wildlife conservation in Africa where alternative wildlife-based land uses may not be viable. *Animal Conservation*, 9, 283–291.
- Locke, H., & Dearden, P. (2005). Rethinking protected area categories and the new paradigm. *Environmental Conservation*, 32(1), 1–10.
- Lowry, S. W. (1994). Structural adjustment and natural resources in sub-Saharan Africa. *Society and Natural Resources*, 7, 383–387.
- Mbaiwa, J. E. (2002). *The socio-economic and environmental impacts of tourism development in the Okavango Delta, Botswana*. Maun: Okavango Research Centre, University of Botswana.

- Mbaiwa, J. E. (2004). Prospects of basket production in promoting sustainable rural livelihoods in the Okavango Delta, Botswana. *International Journal of Tourism Research*, 6, 221–235.
- Mbaiwa, J. E. (2005). Wildlife resource utilisation at Moremi game reserve and Khwai community area in the Okavango Delta, Botswana. *Journal of Environmental Management*, 77(2), 144–156.
- Mbaiwa, J. E. (2012). *Botswana's community based natural resource management status report for 2011/12*. Gaborone: Kalahari Conservation Society.
- Mbaiwa, J. E. (2013). *CBNRM status report of 2012/13*. Gaborone: Kalahari Conservation Society.
- Mbaiwa, J. E., & Stronza, A. L. (2010). The effects of tourism development on rural livelihoods in the Okavango Delta, Botswana. *Journal of Sustainable Tourism*, 18(5), 635–656.
- Mwenya, A. N., Lewis, D. M., & Kaweche, G. B. (1991). *Policy, background and future: National parks and wildlife services, new administrative management design for game management areas*. Lusaka: United States Agency for International Development.
- North West District Council (NWDC). (2003). *District development plan 6–2003/4–2008/9*. Maun: North West District Council.
- Oates, J. F. (1999). *Myth and reality in the rainforest: How conservation strategies are failing in West Africa*. Berkeley: University of California Press.
- Orams, M. B. (2001). From whale hunting to whale watching in Tonga: A sustainable future? *Journal of Sustainable Tourism*, 9(2), 128–146.
- Ostrom, E. (1990). *Governing the commons: The evolution of institutions for collective action*. New York: Cambridge University Press.
- Perkins, J. S. (1996). Botswana: Fencing out of the equity issue, cattleposts and cattle ranches in the Kalahari Desert. *Journal of Arid Environments*, 33, 503–517.
- Perkins, J. S., & Ringrose, S. M. (1996). *Development cooperations objectives and the beef protocol: The case of Botswana, a study of livestock/wildlife/tourism/degradation linkages*. Gaborone: Department of Environmental Science, University of Botswana.
- Pimbert, M., & Pretty, J. (1995). *Parks, people and professionals: Putting participation into protected area management* (Discussion Paper No. 57). Geneva: UNRISD.
- Rozemeijer, N., & Van der Jagt, C. (2000). *Community-based natural resource management in Botswana: How community-based is community-based natural resource management in Botswana* (Occasional paper series). Gaborone: IUCN/SNV CBNRM Support Programme.
- Schuster, B. (2007). Proceedings of the 4th national CBNRM conference in Botswana and the CBNRM Status Report (November 20–23, 2006). Gaborone: IUCN Botswana.
- Southern African Development Community (SADC). (1999). *Protocol on wildlife conservation and law enforcement*. Maputo: Southern African Development Community. Retrieved May 26, 2014, from http://www.sadc.int/files/4813/7042/6186/Wildlife_Conservation.pdf
- Stronza, A. (2000). *Because it is ours: Community-based ecotourism in the Peruvian Amazon*. Dissertation, University of Florida.
- Swatuk, L. A. (2005). From “project” to “context”: Community based natural resource management in Botswana. *Global Environmental Politics*, 5, 95–124.
- Taylor, M. (2000). *Life, land and power: Contesting development in northern Botswana*. Dissertation, University of Edinburgh.
- Terborgh, J. (1999). *Requiem for nature*. Washington, DC: Island/Shearwater.
- Thakadu, O. T. (2005). Success factors in community-based natural resource management projects' mobilization in northern Botswana: Lessons from practice. *Natural Resource Forum*, 29(3), 199–212.
- Tsing, A. L., Brosius, J. P., & Zerner, C. (1999). Assessing community-based natural resource management. *Ambio*, 28, 197–198.
- Twyman, C. (2000). Participatory conservation? Community-based natural resource management in Botswana. *The Geographical Journal*, 166(4), 323–335.

- Wearing, S. L. (2001). Exploring socio-cultural impacts on local communities. In D. Weaver (Ed.), *Ecotourism* (pp. 395–410). New York: Wiley.
- Weaver, C. L., & Skyer, P. (2003, September). *Conservancies: Integrating wildlife land-use options into the livelihood, development and conservation strategies of Namibian communities*. Paper presented at the 5th World Parks Congress, Durban.
- Western, D., Wright, M., & Strum, S. (Eds.). (1994). *Natural connections: Perspectives in community-based conservation*. Washington, DC: Island Press.
- Wilkie, D. S., & Carpenter, J. (1999). The potential role of safari hunting as a source of revenue for protected areas in the Congo Basin. *Oryx*, 33, 340–345.