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CBNRM, poverty reduction and sustainable livelihoods: Developing criteria for evaluating the contribution of CBNRM to poverty reduction and alleviation in southern Africa

by Brian TB Jones

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**CBNRM, poverty reduction and sustainable livelihoods:
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Africa**

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**Centre for Applied Social Sciences
and
Programme for Land and Agrarian Studies**

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Abbreviations and acronyms

Campfire	Communal Areas Management Programme for Indigenous Resources
CAN	CBNRM Association of Namibia
CBNRM	community-based natural resource management
CBO	community-based organisation
CBTE	community-based tourism enterprise
JV	joint venture
LIFE	Living in a Finite Environment project
NACSO	Namibian Association of CBNRM Support Organisations
NGO	non-governmental organisation
NRMP	Natural Resources Management Project
RBA	rights-based approach
RDC	rural district council
SL	sustainable livelihoods
USAID	US Agency for International Development
WDR	World Development Report
WILD	Wildlife Integration for Livelihood Diversification Project
WWF	The Conservation Organization (formerly World Wide Fund for Nature)

1 Introduction

This research paper has been prepared as part of the Centre for Social Studies (CASS), University of Zimbabwe/ Programme for Land and Agrarian Studies, University of the Western Cape (PLAAS) programme 'Breaking New Ground: People-Centred Approaches to Natural Resources Management in Southern Africa'. It explores the relationships between community-based natural resource management (CBNRM), poverty reduction/alleviation and rural livelihoods.

CBNRM is often promoted by governments, non-governmental organisations (NGOs) and donors as a means of addressing poverty issues in rural communities, particularly in terms of generating income from various natural resource-based activities. For example, in Namibia, the goal of the US Agency for International Development (USAID)-funded Living in a Finite Environment (LIFE) Project during Phases I and II was to improve the quality of life for rural Namibians through sustainable natural resource management (LIFE 2002). CBNRM is increasingly being adopted as a means of poverty reduction in the national development strategies of southern African countries (Jones 2004a).

Considerable attention has been focused on activities such as trophy hunting and eco-tourism within the wildlife sector (see for example, the Admade – Administrative Management Design for Game Management Areas – project in Zambia, the Natural Resources Management Project in Botswana, the Communal Areas Management Programme for Indigenous Resources (Campfire) project in Zimbabwe, and the LIFE Project in Namibia). Several studies show that often the income generated from these activities is very small when divided up amongst households and question whether this income has much impact on poverty reduction or improved natural resource management (for example, Bond 2001; DFID 2002; Long 2004a; Turner 2003). Some donors (for example, the UK Department for International Development – DFID) that have supported CBNRM in the past are beginning to question the contribution that CBNRM can make to addressing issues of poverty in rural areas and are withdrawing their support (DFID 2002).

However, there has been little attention focused on some key issues concerning the links between CBNRM and poverty reduction/ alleviation and sustainable rural livelihoods. Firstly, little work has been done on exploring the ways in which CBNRM can realistically contribute to addressing poverty and supporting rural livelihoods. Expectations have been set high by many stakeholders, but have not necessarily been realistic or appropriate. Most work has focused almost entirely on income generation and has not tried to analyse CBNRM impacts against a broader understanding of poverty that also considers other factors. Turner (2004) suggests that the dominant sense in which the concept 'development' is used in CBNRM discourse is in terms of improved material and economic well-being only. Yet there are other dimensions to poverty that need exploring in the context of CBNRM.

There is a clear need to analyse CBNRM against a modern understanding of the symptoms and root causes of poverty and the various factors that have been identified as a means to reduce and/or alleviate poverty. Only with such an analysis can we start to develop some criteria against which to evaluate CBNRM in terms of its ability to reduce or alleviate poverty.

Secondly, CBNRM needs to be placed in the specific context of rural livelihoods in southern Africa and evaluated within this context. Thus much of southern Africa, and particularly the communal areas of the region, falls within areas classified as semi-arid. Typically, these areas are characterised by low and erratic rainfall, frequent droughts and poor soils. Many such areas are unsuitable for rain-fed crop growing and suitable only for extensive livestock farming. In countries such as Namibia and Botswana, people are trying to survive on the desert margins. In order to better understand the contribution that CBNRM can make to poverty reduction/alleviation it needs to be evaluated against an understanding of how people sustain their livelihoods in semi-arid areas or

‘drylands’¹ and an understanding of how their livelihoods are located within broader economic contexts. It then becomes possible to suggest how CBNRM does or does not support sustainable livelihoods in these areas and to identify ways in which it might be able to.

Lastly, in order to understand the relationship between CBNRM and poverty reduction/ alleviation it is useful to identify the goals and objectives that it sets for itself and the goals set for it by various stakeholders such as governments and donors. This can help us understand the potential links that can realistically be made between CBNRM and poverty reduction/alleviation and sustainable livelihoods. From this understanding a set of criteria can be developed that can guide an evaluation of CBNRM’s impact on poverty reduction/alleviation.

The objectives of this paper are as follows:

- to explore the current understanding of the nature and root causes of poverty as well as the actions and activities needed to address poverty
- to explore the nature of the constraints and challenges to developing sustainable livelihoods in southern Africa
- to explore the aims and objectives of CBNRM and the nature of its impacts in southern Africa
- to analyse the impacts of CBNRM in the region from a poverty reduction and/ or alleviation perspective
- to develop a set of realistic expectations of how CBNRM can contribute to poverty reduction and alleviation
- to suggest some criteria that can be used to evaluate the contribution of CBNRM to poverty reduction and alleviation in southern Africa.

2 Methodology

The research was carried out as a desk study using secondary material as provided for in the guidelines for proposals. I have drawn on some of my previous work in which I began to explore realistic expectations of how CBNRM can contribute to poverty reduction (Jones 2004a; Jones 2004b). I have reviewed relevant literature on poverty and its root causes and potential remedies. I have also reviewed relevant literature on sustainable livelihoods in southern Africa. I have used existing data from the literature on CBNRM in three focal southern African countries – Botswana, Namibia and Zimbabwe – in order to examine the aims and objectives of CBNRM in these countries and the impacts that CBNRM is having on rural livelihoods.

3 CBNRM in southern Africa

The conceptualisation of CBNRM

CBNRM is clearly not something new. Rural communities have managed their natural resources in different ways for many centuries either through design or through what MacDonald (undated) calls an ‘embedded’ conservation ‘manifest in the practices and institutions that have contributed to long-standing community sustainability, that has contributed to historical ecological integrity in many areas of the world’. Community management of natural resources continues in modified forms in southern Africa despite the impacts of colonialism, the centralising of state authority over many natural resources, wars and political instability. However, the last 10–15 years has seen the emergence of a specific set of focused policy and field-based interventions that have aimed to create the conditions under which CBNRM can be strengthened and promoted as strategies to promote conservation and combat poverty. This paper focuses primarily on these focused interventions that have been, and in some cases still are, supported by donor organisations and are often implemented by local and international NGOs. Considerable debate has emerged surrounding these interventions and the extent to which they meet their conservation and poverty objectives. This section provides a brief review of the emergence of this form of CBNRM in southern Africa and briefly considers its relationship to other forms of ‘everyday’ community management of natural resources.

In all forms of CBNRM rights to use, benefit from and manage natural resources rest on the notion of ‘collective proprietorship’ where a group of people jointly enjoy sanctioned use rights over land and/ or resources which they are then able to manage according to their own rules and strategies. CBNRM is therefore based largely on the concept of a communal property regime – where a defined group of people collectively manages and uses the common property resources within a defined jurisdiction (Jones & Murphree 2004). This further implies the development of some form of local institutional arrangement that governs decision-making.

Jones (2004a) suggests that CBNRM in the form of focused interventions in southern Africa rests on the central hypothesis that if a resource is valuable and landholders have the exclusive rights to use, benefit from and manage the resource, then sustainable use is likely to ensue. The benefits from management must exceed the perceived costs and must be secure over time (see also Murphree 1991; Steiner & Rihoy 1995; Bond 2001). From this hypothesis has emerged a focus on devolving to local communities rights over natural resources that had been centralised by colonial governments and providing economic incentives for the sustainable use of resources.

This form of CBNRM can be viewed as a sub-set of what Adams and Hulme call ‘community conservation’, which they define as ‘those principles and practices that argue that conservation goals should be pursued by strategies that emphasise the role of local residents in decision-making about natural resources’ (2001:13). This broad definition embraces strategies such as consultation of communities while the state retains decision-making authority, protected area outreach, revenue and resource sharing, co-management and management of resources by communities with little state interference. Within the southern African region, the term CBNRM has been applied to all of these approaches, but it is important to recognise that CBNRM is a specific approach with specific characteristics. It is separated from other approaches by its emphasis on the devolution of authority over natural resources (particularly wildlife and forests) from the state to defined groups of resource users on communal land (Jones 2004a). The term CBNRM, compared to other forms of community conservation, therefore refers to situations where local communities have sufficient authority to take their own decisions regarding natural resource management with a minimum of state regulation.

At its core this form of CBNRM aims to create the right incentives and conditions for groups of resource users within defined jurisdictions to use natural resources sustainably. CBNRM, in terms

of focused policy and field-based interventions, is therefore fundamentally a conservation programme aimed at promoting sustainable use of natural resources (Jones 2004a). This is clear from the founding documents of programmes such as Campfire in Zimbabwe (Martin 1986) and the Namibian CBNRM programme (MET 1995). The primary objective of Campfire was ‘to initiate a programme for the long term development, management and sustainable utilisation of natural resources in Communal Areas’ (Martin 1986:17). The chief mechanisms for achieving this goal included placing the custody over resources and management responsibility with resident communities and allowing communities to benefit directly from the use of resources. Interestingly the original conceptualisation for Campfire was not limited to the management of wildlife only. The founding document identified wildlife as the main focus of the programme because it could provide an immediate financial return and provide the basis for launching the programme. However, the document stated that ‘wildlife cannot be sustained without careful management of the natural vegetation and without assured water supplies. Thus the Campfire programme involves wildlife, forestry, grazing and water’ (Martin 1986:12). Indeed the document suggests that the main communal management institutions to be established under the programme, natural resource co-operatives, would be responsible for some key aspects of rangeland management such as setting carrying capacity and ensuring that the set stocking rate was not exceeded.

A similar conceptual approach was taken in Namibia. A policy on wildlife utilisation, conservation and tourism on communal land (MET 1995) was developed, which proposed that proprietorship over wildlife be given to groups of communal area residents who formed a communal area conservancy. The main aim of this policy was to establish ‘an economically-based system for the management and utilisation of wildlife and other renewable living resources on communal land...’ (MET 1995:2). As in the case of Zimbabwe, the benefits flowing from use of resources were seen as an incentive for sustainable use, combined with giving local communities collective rights over resources. As in Zimbabwe, the original conceptualisation was not confined to wildlife alone but included ‘other renewable living resources’.

Shifts in conceptualisation

The implementation of these two programmes demonstrates considerable shifts away from their original conceptualisation. Jones and Murphree (2001) show how a number of strategic political compromises were made in moving from policy planning to establishing the programmes in practice. As a result, in Zimbabwe the programme was implemented through local government institutions rather than community natural resource co-operatives and the integrated approach to resource management originally envisaged could not be established. In Namibia the content of legislation was shaped by negotiation and compromise between different groups of government officials, resulting in high levels of conditionality regarding the devolution of rights to communities.

Other shifts in conceptualisation were partly driven by the provision of large-scale donor support to these programmes. In Zimbabwe in 1994 the goal of the USAID-funded Natural Resources Management Project (NRMP) Phase II was ‘to use natural resources management to develop economically sustainable communities on lands marginally suitable for agriculture’ (Child et al. 2003:26). The USAID emphasis was on using natural resource management to drive rural development in areas where conventional agriculture was made difficult by low rainfall and climatic variability. Similarly, one of the purposes of the NRMP II was ‘to develop community-based programs to increase incomes while sustaining natural resources’ (Child et al. 2003:26), placing increased incomes as a primary objective rather than as part of an incentive-based approach to sustainable resource management. Also at this time, Campfire implementers and analysts were beginning to articulate the multi-faceted nature of the programme in terms that emphasised the development aspects of the programme. Thus Murphree (1994) described Campfire as firstly a

programme of rural economic development, secondly a programme of community empowerment and democratisation, and thirdly a conservation programme enhancing sustainable use.

In Namibia a USAID-funded \$14 million support programme for CBNRM – known as the LIFE Project – started in 1993. The establishment of the LIFE Project and the relationship with USAID brought a new set of agendas to CBNRM in Namibia. The language of the programme's goal and purpose began to shift the agenda for CBNRM more towards rural development goals than conservation goals (Jones 2004b). The LIFE Project goal and purpose statements from 1993 to 2004 were as follows (LIFE 2002):

- Goal: Improved quality of life for rural Namibians through sustainable natural resource management
- Purpose: Communities derive increased benefits in an equitable manner by gaining control over and sustainably managing natural resources in target areas.

Thus for USAID the improved quality of life of Namibians becomes the primary objective rather than sustainable resource management, and the derivation of benefits by communities becomes an end in itself rather than a means to achieving sustainable resource management. For some time, the stated aims and objectives of Namibian implementers appear to have remained consistent with the original conceptualisation of CBNRM in that country. In 1998, the stated goal of the umbrella body for CBNRM implementers, the Community-Based Natural Resource Management Association of Namibia (CAN), was that 'communities take greater responsibility for managing and benefiting in an equitable manner from sustainably managed natural resources' (Hagen et al. 1998).

This statement demonstrates that the Namibian CBNRM implementers at that stage still viewed the core of the programme as being sustainable community management of natural resources, although they were also echoing Murphree (1994) by emphasising the rural development and democracy aspects in presentations to outsiders. CAN later evolved into the Namibian Association of CBNRM Support Organisations (Nacso), an expanded organisation which included NGOs with rural development as their primary objective rather than conservation. By the time Nacso had been formed in 2001, the national programme goal had undergone some change and refinement:

The aim of NACSO is to promote, support and further the development of community-based approaches to the wise and sustainable management of natural resources, thereby striving to advance rural development and livelihoods, to promote biodiversity conservation and to empower communities through capacity building and good governance, to determine their own long-term destinies
(Jones et al. 2001).

Although the sustainable management of natural resources remains central to the aim of Nacso in this statement, it also very strongly reflects the language and aims of donor and Namibian government development objectives. Indeed, over time, CBNRM in Namibia has gained considerable recognition by government as a strategy for meeting national development goals (Jones 2004b). The role of tourism, community-based tourism and conservancies are recognised in the Poverty Reduction Strategy for Namibia. CBNRM is recognised as a means to diversify off-farm income-generating activities as part of the country's food security strategy and in the National Drought Policy and Strategy.

Thus over time in both Zimbabwe and Namibia the goals and objectives of CBNRM have undergone shifts in emphasis that have introduced rural development and rural democracy as important aspects of the CBNRM agenda. For some stakeholders rural development, particularly through income generation, has been viewed as an end in itself. The shift in emphasis has occurred in part because implementers began to articulate more strongly what they believed to be the

intrinsic value of these programmes for rural development and rural democracy, and in part because of the introduction of donor poverty-reduction agendas into CBNRM in the region. In addition, implementers perhaps over-emphasised the income-generation potential of CBNRM in order to gain or maintain internal political and external donor support. Jones and Murphree (2004) suggest that:

Proponents of CBNRM have sometimes carelessly encouraged the notion of CBNRM polyvalency in rural communal contexts, sometimes in response to donor aspirations for comprehensive solutions to the problems of rural livelihoods and development. This has raised unrealistic expectations and resultant disillusionment, with particularly negative results when the notion has been propounded indiscriminately at local levels.

In Botswana development objectives were incorporated more explicitly in the CBNRM programme from the start. Rozemeijer and van der Jagt (2000) suggest that CBNRM in Botswana emerged as a response to: (a) a lack of resources from government to manage the 39% of the country under wildlife management;² and (b) the fact that financial benefits from these areas were not reaching district or local levels and, as a result, their designation for wildlife was being seriously questioned. The Department of Wildlife and National Parks (DWNP) ‘had to prove that wildlife utilisation is a valuable livelihood strategy in remote Botswana’ (Rozemeijer & van der Jagt 2000:6). Trenchard et al. (1997) note that:

In the 1980s and early 1990s, government agencies and development organisations began suggesting that natural resources could provide a sustainable source of employment opportunities and rural income generation in Botswana.’

In 1989 a USAID-funded NRMP was initiated in Botswana in order to establish CBNRM activities. According to Tropical Research and Development (1993:6) the project and national natural resource policies:

...seek to place direct control of valuable wildlife and natural resource in the hands of the private sector – from communities to game ranchers to tour operators – in an attempt to make sustainable use an economic incentive more attractive to resource users than exploitative use for short-term gain.

The goal of the Botswana NRMP, which ended in 1998, was to ‘increase incomes and enhance capability to meet basic human needs through sustainable utilisation and conservation of natural resources, particularly wildlife’ (Tropical Research and Development 1993:8). CBNRM is recognised by the Government of Botswana as a development strategy and was incorporated in National Development Plan 9 and the government’s Vision 2016 development goals and strategy.

Despite its focus on sustainable natural resource management, a number of stakeholders – including implementers, governments and international donors – have come to view CBNRM as a rural development strategy for increasing incomes, improving livelihoods and meeting national development objectives. Section 6 looks at the performance of CBNRM in terms of meeting these development expectations as well as other aspects of development discussed in Section 4.

High market value and low market value resources

Any consideration of CBNRM as an interventionist strategy to combat poverty needs to distinguish between high-value resources that are managed under CBNRM and those with low/medium market values. In southern Africa ‘CBNRM’ has tended to be applied to activities with a primary focus on the devolution of rights over wildlife to local communities. Although some attention has been given to the management of other resources such as veld products, these programmes have retained a major wildlife focus. However, some countries have begun to devolve rights over forest resources to local community institutions and to enable local communities to retain income from the

sustainable use of these resources (for example, Malawi, Mozambique, Namibia, South Africa and Tanzania). In few cases, however, has access to high-value timber resources suitable for commercial exploitation been afforded to communities. Access to these resources has mostly been retained by the state for the generation of its own income (Jones 2004a). In countries with high-value timber resources, there is thus potential to increase income to local communities through the devolution of rights over these resources.

Although communal area residents rarely have control over high-value timber resources, other forest resources clearly play an important role in local livelihoods. People cut poles for construction purposes, gather wild fruits to supplement their food, cut grass for thatching, gather fuelwood and use grass for grazing. In riverine and wetland areas, fish provide an important source of protein, reeds are used for construction and trees for making dugout canoes. This is not an exhaustive list of natural resource use in rural areas of southern Africa but helps to demonstrate the extent to which communal area residents are dependent upon local natural resource use. While these resources do not generate the same level of income as trophy hunting of wildlife or upmarket tourism lodges, they have important livelihood support impacts and cumulatively they have considerable economic impact (Shackleton et al. 2000) that is often underestimated by policy makers. Analysis suggests that non-timber forest products (NTFPs) provide an important safety net for the poor (Angelsen & Wunder 2003; Campbell et al. 2002), but that forest products are unlikely to lift significant numbers of people out of poverty (Campbell et al. 2002).

Furthermore forest products in general are currently threatened worldwide both due to habitat destruction and over-exploitation. Clearly, a shift from unsustainable management practices of the land and natural resources that provide safety nets for the poor and have important economic impacts on livelihoods, is in itself a contribution to combating poverty. As Turner (2003) suggests for southern Africa:

Given that so many of the informal resource use and management systems around the region are now in tatters, it can also be argued that the renovation and reinforcement of such systems could significantly increase the economic output of natural resource-based production, with corresponding benefits for rural livelihoods.

In many instances, some of the key issues regarding management of wildlife on communal lands that have attracted the attention of CBNRM 'programmes' manifest themselves in the management of grazing, forest, and other natural resources upon which people depend for basic livelihood needs. Underlying problems include lack of secure communal tenure over land and resources and the breakdown of previously existing management regimes as noted by Turner. In a survey of the Kavango region of Namibia, local residents repeatedly emphasised the need to re-establish some form of local control over natural resources (Jones 2001). They were frustrated because they did not have the authority to prevent outsiders from using what they considered to be their own resources. In these circumstances CBNRM, with its emphasis on devolving rights over land and resources to defined local jurisdictions, is a relevant strategy to promote sustainable resource management. Jones and Murphree (2004) suggest that in areas with medium/low market value resources:

...the emphasis should shift away from direct natural resource market values towards other institutional and ecosystem values. Sustainable agrobiodiversity should be the generalized goal, with the more diffuse but powerful incentives of collective empowerment providing the dynamic.

Shackleton and Shackleton (2004) suggest that CBNRM interventions should focus on the role of all natural resources in local livelihoods, even in areas where there are high-value resources. The aim of CBNRM should be enhanced management of complete ecosystems rather than management of individual species or a narrow suite of species. The distinctions between programmes that

promote CBNRM through policy and field-based interventions and indigenous ‘everyday’ community management of resources are not always clearly defined. Some of these programmes empower communities to manage other natural resources in their landscapes and livelihoods more effectively (S Turner, pers. comm.) and communities are able to respond to policy changes without external interventions. However, CBNRM programmes of intervention by agencies external to local communities remain a central feature of strategies to promote conservation and combat poverty in the region. The analysis of CBNRM that follows focuses primarily on these programmes.

4 A new understanding of poverty and strategies to combat poverty

Shifts in thinking about poverty

Over the past ten years there have been important shifts in thinking regarding the causes of poverty and the strategies needed to deal with poverty. These shifts have important implications for understanding the contribution that CBNRM can make to combating poverty. The new ideas were articulated in a coherent and comprehensive manner in the *World development report (WDR) 2000/2001* (World Bank 2001). The report synthesised a wide body of research and findings regarding the causes of poverty and strategies required for combating poverty. It notes how previous understandings of poverty had emphasised material deprivation measured by income or consumption levels, and levels of access to education and good health. The remedy was economic growth combined with the provision of public-funded social services. However, the WDR suggests that the notion of poverty needs to be expanded to include vulnerability, exposure to risk, voicelessness and powerlessness. According to the WDR, this means that dealing with poverty must move beyond the promotion of general economic growth to adopt a broader agenda of action that includes providing targeted economic opportunities for the poor, building up the assets of poor people, facilitating their empowerment and reducing their vulnerability to various risks and shocks.

New strategies to combat poverty

The realisation that the causes of poverty are multi-dimensional – and involve political and social as well as economic processes – has led to the development of new strategies to combat poverty. In its WDR 2000/2001, the World Bank, for example, suggests that a number of issues need to be addressed.

Targeted economic opportunities

The WDR notes that while economic growth is important, there is a need to ensure that the benefits of growth actually reach poor people. ‘The distribution of growth benefits matters, not least because distributional conflict can undermine the stability needed for overall growth’ (World Bank 2001:38). Market reforms and efforts to promote economic growth need to identify the barriers that prevent the poor receiving the benefits. Pro-poor strategies might therefore include simplifying regulations affecting small enterprises, enabling rural people to use land as collateral or other means of providing credit.

Building assets

The WDR identified five types of assets that people need to lift them out 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.

The WDR emphasises that gaining access to assets is dependent upon market forces, as well as political and social processes, and the performance of state and social institutions – for example,

access to assets can be determined by membership of a particular ethnic group or class within a local community or by government policy.

Empowerment

The WDR views empowerment as crucial to reducing poverty:

Empowerment means enhancing the capacity of poor people to influence the state institutions that affect their lives, by strengthening their participation in political processes and local decision making. And it means removing the barriers – political, legal and social – that work against particular groups and building assets of poor people to enable them to engage effectively in markets
(World Bank 2001:39).

The report emphasises the need for good governance and empowerment of citizens at the national level, but also stresses the importance of ‘mobilising poor people in their own organisations to hold state institutions accountable and ensuring the rule of law in their daily lives’ (World Bank 2001:39).

The need for empowerment is strongly emphasised in a World Bank strategy for poverty reduction in Africa called community-driven development (CDD). This approach suggests that ‘local empowerment is a form of poverty reduction in its own right, quite independent of its income effects’ (World Bank 2000). The goals of CDD are:

to promote security, opportunity and empowerment by:

- a) strengthening accountable, inclusive community groups*
- b) supporting broad-based participation by poor people in the strategies and decisions that affect them*
- c) facilitating access to information and linkages to the market*
- d) improving governance, institutions and policies so that local and central governments and service providers, including NGOs and the private sector, respond to community demand.*

www.worldbank.org/cdd

One of the strategies promoted by the CDD approach is to provide communities with untied funds which allow them to choose their own priorities and implement their own programmes. This process can be kick-started with grants as small as US\$5 000–US\$10 000 (World Bank 2000).

One form of empowerment is through supporting local institutions. The WDR suggests that:

Poor, marginalised communities can be mobilised to help reduce their poverty by drawing on and strengthening their social institutions. Groups with a strong collective identity – and a willingness to collaborate with outside agents to forge new solutions – can work to increase their access to health, education, and other public services, improving their living conditions and raising their incomes
(World Bank 2001:125).

Further, strong accountable local institutions can be important agents for increasing the capacity of the poor to engage society’s power structures and to articulate their interests and aspirations.

Security

The WDR suggests that enhancing security for poor people means reducing their vulnerability to such risks as ill-health, economic shocks and natural disasters and helping them to cope with such shocks when they occur (World Bank 2001). Dealing with vulnerability can include supporting the range of assets that people have, supporting the institutions that help poor people manage risk, supporting state-run and local-level social safety nets and ensuring that government policies and institutions are geared for appropriate reactions when shocks occur.

The notion of a set of assets that are important for people's well-being is one of the conceptual foundations of the sustainable livelihoods (SL) approach that has gained currency as a poverty reduction strategy in recent years (Carney 1998a). The realisation that the causes of poverty are multi-dimensional led to the evolution of the SL approach as a means of analysing people's livelihoods and working with them to identify the means to improve their livelihoods. The approach has been adopted by the UK Department for International Development (DFID), among others, which defines a sustainable rural livelihood as follows:

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 maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base (Carney 1998b:4).

The SL approach emphasises the need to understand a set of key conditions that affect people's ability to build capital assets. These are:

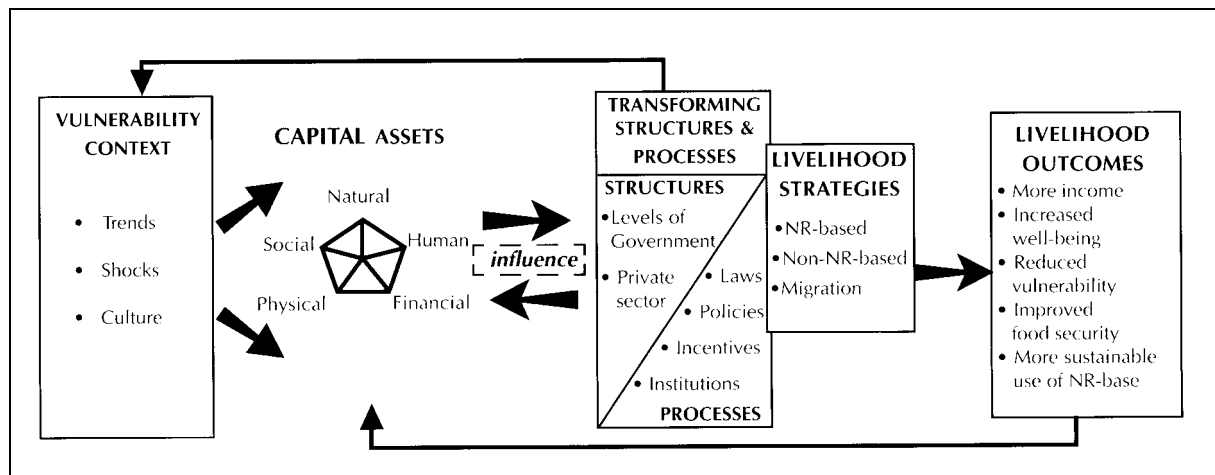
- the vulnerability context in which capital assets exist, that is the trends, shocks and local cultural practices that affect livelihoods
- the structures – such as organisations, levels of government and the private sector – that affect livelihoods
- the processes – such as policies, laws, rules of the game and incentives – that define livelihood options.

The structures and processes are important in determining who gains access to assets, the value of different assets, as well as the options available for developing livelihood strategies (Carney 1998b). The SL approach is essentially a holistic analytical tool for helping to understand livelihoods in specific contexts and identifying interventions based on people's needs, rather than preconceived project blueprints. The links between the different factors that contribute to positive SL outcomes are made clear in the sustainable livelihoods framework shown in Figure 1.

Another strategy to emerge recently is the rights-based approach (RBA), which has been adopted by major international aid agencies such as Oxfam and CARE (Cooperative for Assistance and Relief Everywhere Inc.). The RBA emphasises the need to respect and advance human rights as a foundation for combating poverty. This approach has evolved from several streams of thought and practice (IDS 2003):

- using the international legal human rights framework to emphasise the responsibility of governments to recognise the rights of citizens as they relate to the conditions that lead to poverty or enable people to rise out of poverty
- demands by movements representing women, the landless and indigenous peoples for participation in decisions which affect their lives

Figure 1: Sustainable livelihoods framework



Source: Carney 1998b (NR = natural resource)

- an evolution of thinking that sees people as citizens rather than welfare beneficiaries or purchasers of services.

The RBA is based on the nature of the relationship between those who claim a right and those whose obligation it is to fulfil that right. In order to claim a right a person needs to know that they hold the right, and have the voice and opportunity to exercise the claim; to fulfil a right requires the ability to recognise the right, and to have the resources, the will and authority to enable citizens to exercise the right (MacWilliams undated). The RBA aims to link root causes of poverty to the system of human rights law to define the problem and identify who owes a duty to whom and to analyse power imbalances that reduce people’s ability to claim their rights. A key focus is building the capacity of poor people to claim their rights and assisting the state to meet its legal obligations. RBA analysis can help to identify whether government officials have the responsibility, authority and resources to fulfil their obligations to citizens and whether the appropriate policies and processes are in place to ensure accountability to citizens.

Poverty reduction or poverty alleviation?

In much of the literature, poverty reduction and poverty alleviation appear to be used interchangeably (for example, Campbell et al. 2002). However, ‘reduction’ and ‘alleviation’ clearly have different meanings. If we want to understand the contribution that CBNRM can make to combating poverty it is important to have some clarity about basic concepts relating to fighting poverty. Dewdney (1996:64) distinguishes between poverty reduction and alleviation. He defines poverty reduction as:

The long-term decline in the incidence of poverty as a result of an increase in the ability of poor households to help themselves, through increasing subsistence output or gaining employment.

He defines poverty alleviation as:

The short-term relief from the symptoms of poverty, often by the State through transfer payments but also – and especially in developing countries – through NGOs, donors and community self-help mechanisms.

This appears to be a useful approach as it distinguishes between the long-term decline in the incidence of poverty and short-term relief from the symptoms of poverty. It then becomes possible to analyse whether CBNRM can contribute to this long-term decline, or whether it helps to provide short-term relief from the symptoms of poverty. Although both of these contributions are assumed to be desirable, ultimately development strategies are required that deal with root causes of poverty and that lift people out of poverty.

5 Poverty and sustainable livelihoods in the southern African context

In order to begin to assess the contribution that CBNRM can make to combating poverty in southern Africa, it is important to understand the particular conditions that affect rural livelihoods in much of the region and to understand the livelihood strategies of the rural poor. The southern African region exhibits considerable ecological diversity that ranges from the Namib deserts of Namibia, to high rainfall montane conditions in parts of Malawi, Mozambique, Zimbabwe and South Africa. However, much of the region can be classified semi-arid, including large parts of Botswana, Zimbabwe, and western South Africa. At the extreme end of the scale, Namibia is the driest country south of the Sahara. Its highest rainfall area in the north east, with an average of 650mm, is only marginal for rain-fed agriculture. Only 1% of the land area has soils with a medium to high potential for rain-fed or irrigated arable production (Kruger 2002). As a result agricultural-led development options are clearly limited. Even within higher rainfall areas in the region, precipitation often shows considerable variation from year to year and droughts are likely. The effects of poverty in these conditions is often exacerbated by the lack of livelihood and development options caused by the scarcity of water and climatic uncertainty.

An increasing body of work in the region enables us to identify the key constraints and challenges to sustainable livelihoods in these 'drylands'. Campbell et al. (2002) identify a number of constraints that characterise life in the drylands of southern Africa:

- the often marginal environmental conditions for crop growing and even livestock production created by low and erratic rainfall, frequent droughts and generally poor soils
- surface and groundwater supplies are often poorly developed, unreliable or contaminated by livestock
- access to good quality crop-growing land is often limited in some cases by high population densities and in others (South Africa, Namibia, Zimbabwe) by allocation of better farming land to white freehold farmers
- risk and uncertainty due to variable rainfall and the recurrence of drought
- dependence upon renewable natural resources to supplement livelihoods
- weak local institutions and high transaction costs that make it difficult to manage common pool resources as new pressures emerge
- deforestation, overgrazing and soil erosion
- socio-economic problems such as lack of access to credit, under-developed or remote markets, poor extension services, labour scarcities and vulnerability to macro-economic conditions.

Under these circumstances, a predominant coping strategy is diversification of livelihood activities. Analysis of two case study sites in semi-arid areas of Zimbabwe (Cambell et al. 2002) showed that most households relied on income (cash and subsistence) from a variety of sources, including dryland crop production, gardening, livestock, harvesting woodland products, wages or home industries and remittances or gifts. The analysis showed that while some households might concentrate on a particular activity, households were largely involved in the same set of basic activities with different amounts of time spent on each and different returns derived from each. Some activities were mutually supportive. Significantly, only 10% of cash income came from dryland cropping while 73% came from wages/ home industries and remittances/ gifts.

Livelihood research in Namibia reveals similar findings. Diversification of activities is also a crucial coping strategy. In the Caprivi region, for example, residents are dependent upon cropping,

livestock, piecework, wages, pensions and the use of a variety of natural resources, while in the dryer Kunene region in the north west, people depend upon livestock, irrigated gardening, pensions, limited employment and natural resources (Long 2004b). Generally, crop farming does not provide rural households in Namibia with significant cash income, although it is important for subsistence. Results of studies on rural livelihoods in Kavango region, with relatively high rainfall for Namibia, suggest that although farming is an important direct provider of staple food for many rural households, it makes virtually no contribution to the cash incomes of most households (NPC 2001).

Based on their case studies from Zimbabwe, Campbell et al. (2002:133) suggest that rural poverty in semi-arid areas is the result of a 'suite of social, economic and environmental components and processes operating at a range of scales'. These various factors include:

- adverse biophysical conditions, resulting in low agricultural potential and livestock crashes
- insufficient high-quality land
- labour scarcities exacerbated by HIV/Aids
- economic remoteness
- lack of credit markets as a result of little or no collateral
- few employment opportunities and low levels of education and skill
- low incomes affecting ability to provide for basic needs
- poor macro-economic conditions
- the HIV/Aids pandemic – resulting in loss of breadwinners, labour scarcities, rising costs
- low levels of empowerment
- declining woodland resources leading to the need for greater investments to acquire basic products.

Campbell et al. (2002) note that this list, while not exhaustive, shows that poverty in semi-arid areas is caused by a range of often interrelated factors that operate at different political/administrative scales (international, national, regional, local) and across different temporal scales (seasonal due to regular climatic conditions, yearly due to climatic fluctuations, long-term with regard to environmental degradation). They suggest a number of development interventions that could assist the residents of their case study areas. Those that are likely to be relevant for most semi-arid regions in southern Africa include:

- providing an enabling environment that supports the adaptiveness of the system, allowing farmers to respond to change and exploit opportunities, particularly through enabling the mobilisation of indigenous capital, enabling farmers to explore technological options themselves and enabling better access to markets and market information
- strengthening institutions and organisations that enable effective management of common pool resources
- redistributing land more equitably in situations where land has been alienated by colonial settlers
- introducing labour-saving devices
- introducing micro-credit schemes where appropriate and investing in activities that support diversification on non-farm income

- promotion of irrigated gardening where local markets exist or to promote better household nutrition
- establishment of common property institutional arrangements for improved range and livestock management
- maintaining the safety net role of woodlands for the poorest members of society.

Although Campbell et al. (2002:140) believe the interventions noted above are necessary they question the nature of the impacts that can be expected:

Our overall conclusion is that there are very few options for significantly reducing poverty in semi-arid regions. The poverty alleviation targets set by the international community are extremely ambitious, and the current rates of donor investment will not go very far to meeting these targets. Our analyses suggest that rainfall variation and the state of the macro-economy appear to have a greater impact on livelihood status than any of the rural development interventions.

These findings echo similar analyses for Namibia. In their profile of the Kavango region of Namibia, Mendelsohn and el Obeid note that a number of improvements have been made to rural lives through the introduction of improved technology, improved seeds and some diversification of income-generating opportunities such as craft sales, but the overall gains from these developments have been generally small. Other potential improvements are also only likely to benefit fairly small numbers of people:

It is hard to escape the bleak conclusion that there is little chance of significantly improving the livelihoods of most rural people. This is particularly true if development agents continue to see land and small-scale farming as the means by which livelihoods can be improved. Kavango's low soil fertility unreliable rainfall, farming traditions and difficulties in marketing simply make small-scale farming extremely unproductive (Mendelsohn & el Obeid 2003).

The solutions suggested by Mendelsohn and el Obeid for rural people in Kavango are for development interventions to focus on providing other sources of income, particularly job creation in urban areas, and on improving urban planning and infrastructure. The conclusions drawn by Campbell et al. (2002) and Mendelsohn and el Obeid (2003) suggest that in the drylands of southern Africa there are few options for development, largely due to prevailing climatic and environmental conditions. The options for improving livelihoods are limited and will not have significant impacts on poverty reduction. In order to achieve poverty reduction, favourable macro-economic conditions are required as well as development interventions that focus on providing jobs in urban areas in order to provide escape routes for the rural poor to leave the land.

However, there are still good reasons for investing in rural areas in drylands. Urban and rural economies are often strongly linked, rural areas often contain significant untapped resources that could aid development, many areas have important non-agricultural land-use options, some areas allow for high-intensity agricultural production and rural areas still provide social safety nets in countries with no or under-developed social security systems (Anderson et al. 2004). A number of activities and interventions can be initiated that can *alleviate* poverty in rural areas, provide safety nets for the poorest residents and bring about small improvements in people's livelihoods. Crucially, though, these interventions need to be multi-faceted and integrated because of the multi-dimensional and linked factors that cause poverty. Priority needs to be given to interventions that assist people in the diversification of livelihoods and approaches that enable people to take control of their own affairs, particularly with regard to sustainable management of common pool natural resources.

6 Impacts of CBNRM interventions on poverty in Botswana, Namibia and Zimbabwe

Section 3 considered the conceptual foundations of CBNRM and showed how the aims of CBNRM programmes have tended to change over time and according to different agendas of various stakeholders such as conservation agencies and international development agencies. To some extent, expectations of the ability of CBNRM interventions to assist in the fight against poverty have been exaggerated by practitioners seeking donor support. Section 4 showed how definitions of poverty and our understanding of the causes of poverty have changed over time. Focus has been placed on issues such as lack of empowerment, vulnerability to shocks, lack of secure livelihoods, the need for recognition of human rights, and the role of local institutions, as well as the traditional issues of income and access to education and health services. Section 5 considered poverty in the southern African context and particularly in the context of livelihoods in the drylands that cover much of the region. This section highlighted the lack of development options in the drylands but showed that appropriately targeted interventions can assist poverty alleviation. Against this background, Section 6 uses available data³ to document the impacts of existing CBNRM programme activities in three focal countries, Botswana, Namibia and Zimbabwe.

Botswana

CBNRM implementation in Botswana mobilises local communities to form legal trusts so that they can gain quotas from the Wildlife Department and enter into joint venture agreements for trophy hunting or photographic tourism with the private sector. A number of trusts have formed around the management of other resources such as veld products.

Economic benefits

In 2003 there were 46 community-based organisations (CBOs) with registered constitutions covering over 100 villages (Rozemeijer 2003). Fourteen CBOs had signed joint venture (JV) agreements with the private sector. These agreements generated P9 million (about US\$1.6 million) in total income for the CBOs. The trusts are able to enter into direct contracts with private sector photographic and trophy hunting operators and retain 100% of the income from these contracts (joint venture agreements).

Arntzen et al. (2003) analysed the level of income that could go to individuals from CBO earnings. Assuming that trusts generate an additional 25% to their JV earnings, the average financial benefit per resident would be around P1 050 (about US\$190) a year, if earnings were distributed as dividends to trust members. In areas of the remote north west of Botswana, average household income is estimated at around US\$52 a month and the poverty datum line (PDL) for a family of seven at US\$202 (Arntzen 2003). In one CBNRM area in north-west Botswana, the wildlife income from trophy hunting divided per household per month amounts to around 87% of the estimated average household income or 23% of the estimated PDL. Arntzen concludes that such revenue is 'highly significant in proportion to local incomes and needs' (2003:26). Evidence cited in the study by Arntzen et al. (2003) suggests that when small amounts of income are distributed to household level, they are highly appreciated and help to develop a sense of belonging to the trust.

It should be noted however, that few trusts have opted for household or individual cash distribution of income. Often, the income has remained in bank accounts as the trust committees try to decide what the best use of the income would be. Trusts also have to pay for operating costs before they can declare a profit for distribution or re-investment. A number of trusts have tried to invest in business operations but these have often failed or work inefficiently (Arntzen et al. 2003). Such businesses have included craft shops, bottle stores, campsites, vegetable plots and guest houses. Other uses of community income by CBOs have included (Arntzen et al. 2003):

- building community assets such as a community hall and toilets
- banking part of the income in order to build up financial assets and generate interest
- training and scholarships for community members.

It is useful to look at the ways in which individual trusts have approached benefit distribution as this gives a better understanding of impacts than broad generalisations. Table 1 shows the use of benefits in four case study CBOs.

Table 1: Benefit distribution in four case study CBOs

	Sankuyo Tswharagano Management Trust	Kgetsi Ya Tsie Women's Community Trust	Khwai Development Trust	Nqwaa Khobee Xeya Trust
Distribution of expenditures	1999–2001: Trust expenditure 70 to 82%, community benefits range from 4 to 14%, capital expenditure 10 to 24%. Surplus is banked.	Most revenues spent on trust operation.	Revenues spent on trust operations and invested in development of camps.	Mostly spent on trust (now close to 100% of revenues). Little on projects (mostly donations) and communities (only one cash payment in 2001).
Type of community benefits	Some community facilities: Scholarships, support for soccer team.	Empowerment training and organisational skill development.	None	Social responsibility programme run by private company. Few community benefits worked out.
Type of community member benefits	Annual cash payment to members. Contribution to funeral expenditures. Support for poorest in village. Free meat for poorest in village.	In 2003, average payment to members was around P100. With own direct sales, members could have raised P200–300. Growing number of micro loans.	None at present In the past: Free game meat for destitutes, subsidised transport to Maun.	One cash payment of P40/member.

Source: Arntzen et al. 2003

Total employment from CBNRM (trust employees and JV jobs) is estimated at around 1 200–1 500. Other material benefits to community members include access to game meat and skins and improved access to other services and markets.

Although some socio-economic impacts are clearly being made by CBNRM in Botswana, these are limited and not consistently spread across the existing CBOs:

The District workshops endorsed the view that the overall socio-economic performance of CBOs appears to be haphazard and volatile and that there is no significant upward trend in performance as yet. This suggests that most CBOs have not yet reached maturity, and that internal processes as well as external 'shocks' have an important impact on the overall performance of CBOs (Arntzen et al 2003).

Some of the external events that influence CBO performance include availability of assistance from donors and government, availability of technical assistance and facilitation, changes in the wildlife quota imposed by government, changes in exchange rates and the global tourism market.

The poorest members of some communities – the Basarwa – have sometimes been disadvantaged by the CBNRM approach. The allocation of unified wildlife quotas to a community body has often meant that the Basarwa, who held special game licences for subsistence hunting, were deprived of these licences. This is despite a provision in the government directive on community hunting and tourism activities that the community should demonstrate that the needs of special game license holders are being met. However, Arntzen et al. (2003) note that most trusts have some limited support for destitute people, particularly through the provision of free meat.

Institutions

Arntzen et al. (2003) found that the performance of the 46 CBOs varied and was mainly determined by their capacity, which in turn depended upon several factors: their stage of development; the quality and quantity of the resource base; income generated; mechanisms for equitable benefit sharing; availability of support; and the effectiveness of management structures. The withdrawal of external donor-funded support from trusts that were not yet mature enough to sustain themselves caused considerable problems in these trusts. Generally, the CBOs assessed by Arntzen et al. were only partially meeting their long-term objectives. Among the main accomplishments of CBOs are:

- Some have developed successful tourism enterprises.
- Some are having positive socio-economic and environmental impacts.
- Skills development in a number of different areas has taken place for community members.
- A significant number have developed management plans.
- CBOs have participated in national policy dialogue and have played an active part in lobbying on key issues affecting their interests.

Among the main weaknesses identified were:

- Problems at the staffing and operational level. Few employ managers and most experience problems in effectively implementing their activities.
- A lack of accountable decision-making. ‘Although some CBOS demonstrate a participatory management style and membership is involved in decision-making, the majority of CBOs shows serious deficiencies in this area’ (Arntzen et al. 2003:18).
- Benefit distribution. The fact that few CBOs distribute income at household level means that the most vulnerable groups often do not benefit.

Sustainability

With the withdrawal of external support, CBOs have tended to either under-perform or collapse. An important observation is that some CBOs that had been established for a long time were not performing well, while some that had been established more recently were successful:

The inconsistent performance of older and more recently established CBOs shows that organisational capacity changes over the life-time of organisations, and is determined by the ability of organisations to effectively respond to the challenges they meet in both their internal and external environment
(Arntzen et al. 2003:15).

Skills and capacity

Arntzen et al. (2003) identify a wide range of intangible benefits from CBNRM, of which the most significant are:

- development of representative village institutions that can be used for other development activities
- local empowerment, pride and self-confidence and reduced dependency on government
- technology and product development and 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 and other support institutions
- retaining educated and productive youth in rural areas.

Environmental impact

About 50% of commercial hunting now takes place in community-designated areas with 100% of the concession and quota fees accruing to CBOs. This contrasts with the situation in 1989 when very little management took place in the wildlife management areas, largely uncontrolled citizen hunting was taking place and the state controlled commercial hunting (Rozemeijer 2003).

Data in Arntzen et al. (2003) show that national wildlife population levels and trends from 1987 for most species have remained stable, while steenbok, impala and elephant numbers have increased by up to 5%. Numbers of some water-dependent species have declined, probably because of the contracting of the water in the Okavango Delta and burning of papyrus, while there have been declines in some species in CBNRM areas. There is no indication given of the causes of these declines. CBOs, private sector companies and government personnel agree that poaching is low in CBNRM areas and seems to be decreasing, although there is no conclusive quantitative data to prove this. Figures for Ngamiland do show that poaching mostly takes place outside CBNRM areas (Arntzen et al. 2003).

Livelihood security and diversity

It is clear from the data presented by Arntzen et al. (2003) that CBNRM has not had a significant impact on poverty reduction in Botswana and they conclude that 'except for employees and those with access to allowances, CBNRM projects are at best an additional, but not a main, source of livelihood' and that 'CBNRM has probably made a stronger contribution towards improving livelihood security by diversifying livelihood sources'. They suggest that this is being achieved in the following ways:

- CBNRM projects provide limited income from sources that previously did not contribute to rural livelihoods, that is, commercial use of wildlife and veld products.
- CBOs provide non-material benefits that are important to rural livelihoods, for example, transport, insurance and funeral assistance.
- CBNRM has reduced people's dependency on drought-prone agriculture.
- CBNRM projects have empowered community members with assets that can support future livelihoods, including natural resource use rights, financial assets and credit, physical assets

and human skills. In this way, communities have the opportunity to reduce dependency on government handouts, and increase livelihood security.

They conclude that there appear to be few alternative development and conservation approaches and note that social welfare approaches and remote area development programmes mostly provide handouts, and have not been successful in empowering communities. Most CBNRM projects operate in remote parts of western and northern Botswana where the agricultural potential is marginal and access to other economic opportunities is extremely limited. Few people are engaged in crop production and livestock is fairly limited (Arntzen et al. 2003).

Arntzen et al. also argue that CBNRM projects have several important benefits to the national economy. They offer growth opportunities for commercial hunting, tourism and commercial use of veld products as new areas are opened up for these opportunities. This also offers additional incentives for foreign investments. The commercial hunting sector alone generates an estimated US\$12.5 million a year and makes a significant contribution to the local economy (half of the expenditure).

They argue further that CBNRM projects:

- empower communities, and have the potential to reduce dependency on government handouts from welfare programmes, drought relief and remote area development programme.
- generate government revenues through taxation and district royalties (4% of gross income of private companies goes to district councils). Total government revenue from private hunting companies is estimated to be US\$ 0.9 million per annum.
- retain younger, better-educated and more productive people in rural areas, and offer an alternative for urbanisation.

Namibia

The main focus of CBNRM in Namibia is on establishing common property resource management institutions for wildlife management called conservancies. Once registered by government, conservancies gain limited rights over wildlife and tourism. As in Botswana, the conservancies are able to enter into contracts with private photographic tourism and trophy hunting operators. Conservancies are also able to sell live game or sell game for meat hunting. In January 2004 there were 31 communal area conservancies in Namibia covering more than 7 million ha of land (LIFE 2004). This is an increase from four conservancies in 1998 covering an area of 1 682 100ha. An additional 30 conservancies are being formed.

Significantly, a number of communities that do not have much potential to generate income from wildlife and tourism have formed conservancies. In some cases there might be unrealistic expectations concerning income generation. In others residents seem to believe that conservancies can provide useful institutional arrangements for managing other resources such as grazing and for gaining a stronger claim over their land in the absence of secure group tenure over land.

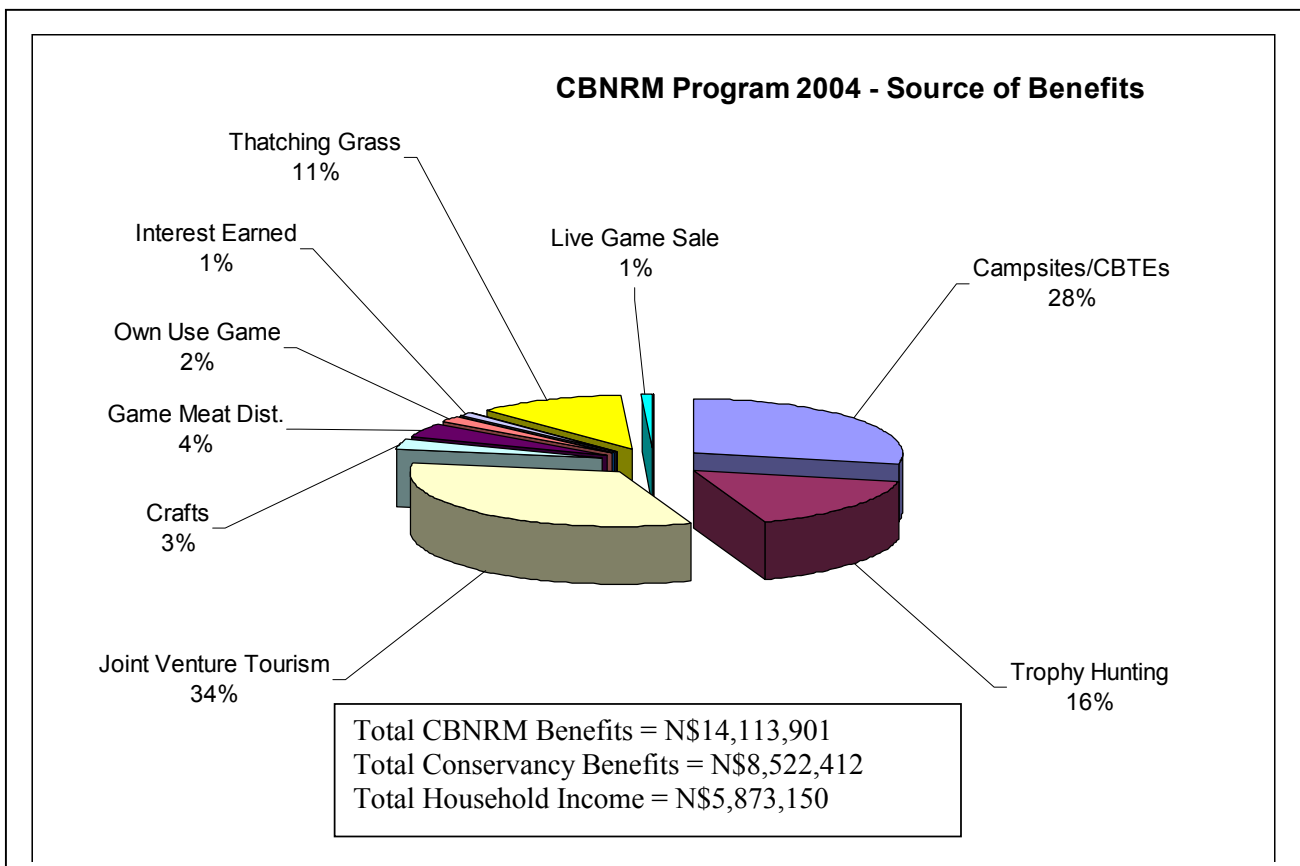
Economic benefits

Total direct income and benefits to conservancies and community members reached N\$14 113 901 (or US\$2 142 723⁴) in 2004 (LIFE 2004). This was made up as follows: cash income to conservancies of N\$6 572 458 from various enterprises; household/wage income of N\$5 873 150; and conservancy non-financial benefits of N\$1 668 293, mostly in the form of game meat from either trophy animals or game cropped by the conservancies. The highest earning conservancy was Nyae Nyae Conservancy with an income of N\$644 440 (US\$97 837). In late 2004 there were five

conservancies that had become financially independent, which means they can pay all of their staff salaries, vehicle operating costs and infrastructure maintenance costs, while at the same time allowing for benefits distributions to conservancy members (LIFE 2004). Six more conservancies are close to becoming self-financing.

There is considerable diversity in the source of economic benefits being provided by CBNRM in Namibia. The main sources are joint venture tourism, campsites and other community-based tourism enterprises, trophy hunting and thatching grass (see Figure 2).

Figure 2: Sources of income from Namibian CBNRM 2004 (by percentage)



Source: LIFE 2004

CBNRM enterprises have resulted in the creation of 547 full-time and 3 250 part-time jobs (LIFE 2004).

Consideration of the way in which income is used in individual conservancies provides an idea of the scale of impacts at community and household level. For some time in Namibia it seemed as if few conservancies were willing to distribute income at household level. However, during 2003 four different approaches to supporting households seem to have emerged (Murphy & Roe 2004):

- individual equal cash payouts to registered members (Nyae Nyae Conservancy N\$620 to each of 770 members and Torra Conservancy N\$630 to each member) where the number of members is relatively small and the revenue considerable
- a conservancy 'social fund' where members can request finances on a needs basis (Marienfluss and Purros conservancies)

- pay outs on a village base (Salambala Conservancy and the West Caprivi Trust) where numbers of members are large and revenues modest in relation to numbers of members
- expenditure on social services such as support to schools and old age pensioners. In addition to its pay out to members, Torra Conservancy has distributed N\$20 000 for a school fence, N\$10 000 for a community kindergarten and N\$5 000 for a photocopy machine purchase and repairs. In addition, members over 60 years were given a blanket and other items (men – socks, wallets and hats – and women – handbags and scarves) as a Christmas gift. Nyae Nyae Conservancy pays the salaries of seven local teachers who provide education in the local San language.

The San residents of Nyae Nyae Conservancy in north-eastern Namibia are among the poorest and most marginalised in the country. Weaver and Skyer (2003) show that in 2003 the conservancy directly provided 28% of the jobs in the area and approximately 35% of the cash income of the 2 000 conservancy residents. They suggest that the conservancy's natural resource management and support framework also strongly enhances handicraft and tourism revenues, meaning that as much as N\$1 073 100 (or more than 50%) of the cash income received by the conservancy residents in 2003 could be viewed as conservancy-related. In addition, the conservancy provides game meat from trophy hunting, supports the maintenance of village and wildlife water points and pays for local teachers.

The amounts contributed by conservancies to household incomes appear small when translated into currency such as US\$ or when considered in isolation. Their significance becomes clear when one considers these contributions in relation to purchasing power and average incomes in local contexts. According to Long (2004b), the pay out of N\$630⁵ to each member of the Torra Conservancy in 2003 could cover basic grocery costs for a local household for three months, was almost equivalent to the average amount raised annually from the sale of live goats and is equivalent to 14% of the average annual income (N\$4 500) for individuals in the region and 8% of the average annual income of households (N\$8 000). The most common use of the cash was for school fees as the pay out took place in January prior to the start of the new school year.

Following a study of tourism benefits to local communities in conservancies in north-east and north-west Namibia, Murphy and Roe (2004) drew the following conclusions concerning livelihood impacts:

- Tourism in communal areas is currently benefiting the livelihoods of a limited number of people, by delivering income, employment, capacity building and career path development.
- In some cases tourism is providing an enabling environment for local entrepreneurs.
- For those who benefit directly, tourism is diversifying livelihoods and leading to economic development.
- Tourism is leading to a re-valuing of culture and tradition.
- In some cases there is a better understanding by residents of the value of natural resources for sustainable livelihoods and improved local governance.
- Substantial amounts of collective revenue are being generated that can be ploughed back into rural areas in support of sustainable management of natural resources.

They also concluded that:

...in the short-term, the provision of individual benefits through employment and entrepreneurship has greater potential for poverty reduction than the generation of

collective income that accrues to conservancies
(Murphy & Roe 2004).

It is only recently that detailed attention is being given to trying to measure the household impact of CBNRM in Namibia. In 2002 a survey of 1 192 households in seven conservancies was carried out by the Wildlife Integration for Livelihood Diversification Project (WILD) Project and the Environmental Economics Unit of the Directorate of Environmental Affairs in the Ministry of Environment and Tourism (Long 2004a). Bandyopadhyay et al. (2004) ran several analyses of the household survey data in order to answer three questions:

- Do conservancies significantly increase household welfare?
- How do changes in a household's welfare resulting from conservancies vary by household socio-economic characteristics?
- Does participation in conservancies increase household welfare relative to those who choose not to participate?

In order to consider whether conservancies increase household welfare, they analysed data from well-established conservancies that were earning income and new conservancies that were earning little income as the survey had not gathered data from non-conservancy areas. According to Bandyopadhyay et al. (2004:20):

Despite data limitations, we were able to conclude that conservancies have an overall beneficial effect on household welfare. This result is supported by a simple comparison of indicators of welfare as well as multivariate analyses. We find that the majority of household welfare indicators are higher for established conservancies relative to comparator groups.

They also found that the improved welfare effects were poverty-neutral in Kunene region in the north west and pro-poor in the north eastern Caprivi region.

There is little evidence to suggest that better-educated or the asset-rich are gaining more from conservancies relative to their less-educated or poor counterparts. Thus we conclude that conservancies, if not pro-poor, are at least not being dominated by the elite
(Bandyopadhyay et al. 2004:20).

They also found that participants in conservancies do not necessarily enjoy higher levels of income or expenditure to non-participants and suggest that non-cash benefits, such as meat distribution and community infrastructure, may be the reason that conservancies have a positive impact on the average household's welfare, but conservancy participants themselves do not gain significantly.

Experience in Namibia points to the importance of conservancies diversifying their income-generation activities (Jones 2004b). For example, for several years until early 2002 tourism in the Caprivi region in north-east Namibia had come to a halt because of political unrest and the spilling over the civil war in southern Angola into Namibia. While income from photographic tourism disappeared, trophy hunting continued so that conservancies still had a basic level of income. Torra Conservancy in north-west Namibia, with only 120 households, provides benefits to members from a number of different activities. It has a diversified portfolio of wildlife utilisation activities that includes trophy hunting, live sale of game and culling for meat. It has a JV agreement for an up-market lodge and is planning to develop its own mid-market lodge.

In Namibia the first conservancies that were established have only been operating for six years. Several conservancies, like Torra, have yet to reach their full potential in terms of income generation. Weaver and Skyer (2003) suggest that wildlife- and tourism-related income and benefits

generated in the Nyae Nyae Conservancy could feasibly increase from N\$1 270 574 in 2002 to N\$4 572 311 in 2007 and N\$11 510 996 by 2015. This translates to the equivalent of pro-rated per capita benefits for the residents of Nyae Nyae Conservancy Ju/'Hoansi people of N\$635 in 2002, N\$2 031 in 2007, and N\$4 038 in 2015 (assuming the present day conservancy population of 2000 people grows at an annual rate of 3%). These figures were based on conservative projections of game increases, actual prices of game sold on auction in Namibia and South Africa, and actual interest by the private sector in developing tourist lodges in the area.

Institutions

As with CBOs in Botswana, the performance of conservancies as institutions in Namibia is mixed. Generally, the older conservancies are performing better because they have benefited from considerable capacity building, financial support and fairly intensive facilitation from NGOs (Jones 2004b). An evaluation of CBNRM activities in Caprivi in north-eastern Namibia considered the performance of five registered conservancies (Bond et al. 2004). The evaluation found that the conservancies were managing their own affairs (with varying quality) in the following ways:

- all committees are meeting regularly (although it was not known if they all kept minutes and feedback to villages needed improving)
- three conservancies were managing grants from NGOs
- five conservancies were managing hunting contracts
- four conservancies were managing their own game guards and community resource monitors and the NGO Integrated Rural Development and Nature Conservation (IRDNC) is in the process of transferring this function to one other
- all were holding AGMs, which were improving year by year in effectiveness
- a wildlife monitoring system was in place and being implemented under supervision of committees
- committees were holding meetings with JV partners
- four committees were managing their own campsites
- conservancy committees had hosted four exchange visits, devising the programme for their guests and making their own local arrangements.

Concerns have been raised about the accountability of conservancy committees to members (Child et al. 2001; Long 2004a). Conservancies tend to be accountable upwards to government – from where they derive their rights over wildlife – and to NGOs – from where they gain financial and other support. Communications with members is often difficult either because of large distances (in the north west) or because of large numbers of members (the north and north east). Efforts are being made by CBNRM implementers to ensure that conservancy committees become more accountable to their members partly through the establishment of smaller units of decision-making within conservancies.

Despite these concerns, during 2004, in some cases where conservancy committee members have given themselves large loans from conservancy funds or members felt the committee was not acting in their interests, new elections were held and committee members and chairpersons were replaced.

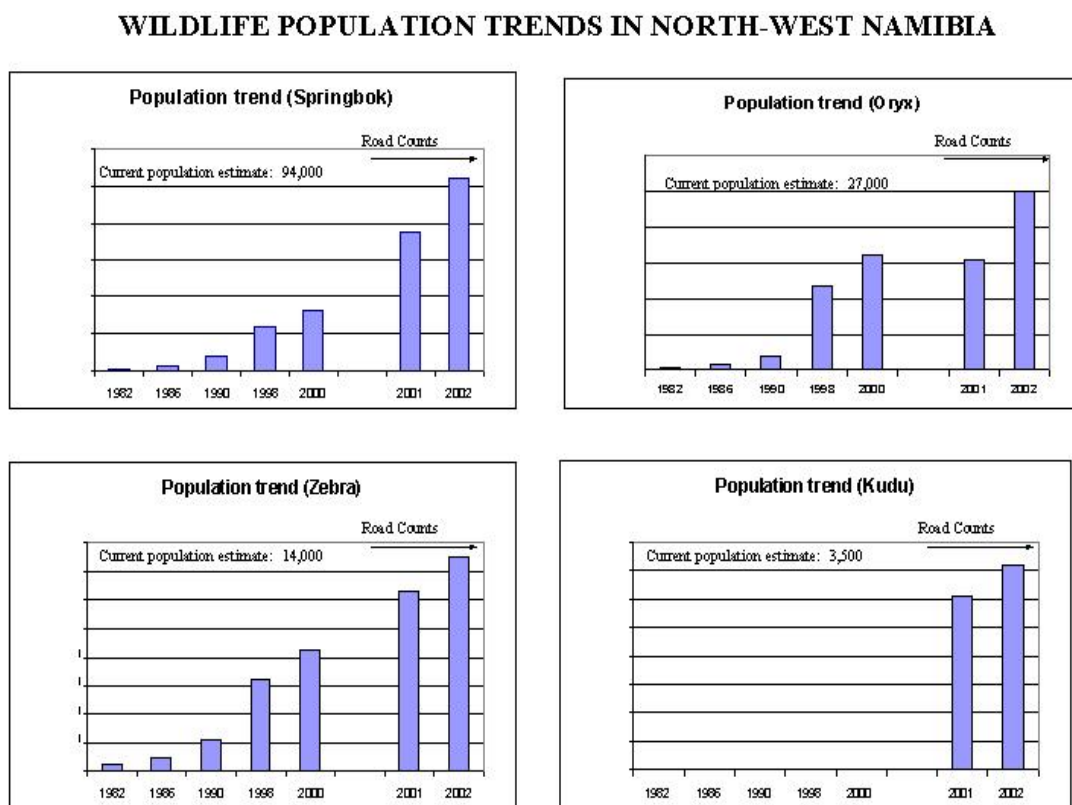
Environmental impact

The development of conservancies has contributed to the maintenance of wild habitat and has helped to promote wildlife and tourism as legitimate land uses (Jones & Weaver 2003). Most of the

registered conservancies have zoned specific areas of their conservancies as dedicated wildlife management areas in which trophy hunting and/or tourism is being promoted. This zoning precludes the use of these wildlife areas for settlement and cropping and, in many cases, for livestock. There are increasing demands for wildlife to be reintroduced onto communal lands. Since 1999, more than 3 000 mixed plains game animals have been reintroduced into six communal conservancies. CBNRM is contributing to a recovery of wildlife populations across large parts of northern Namibia, in particular the north west. The population growths of such endangered species as black rhino and Hartmann's zebra are well documented in north-west Namibia. Elephant numbers are increasing (from 300 in the early 1990s to around 800 at present) and elephant are expanding their range in both the north west and north east. Figure 3 shows population trends of four species on communal land in north west Namibia.

Eighteen of the registered conservancies are found immediately adjacent to or in key corridors between national parks or game reserves. These 18 conservancies provide an additional 55 192km² of land being used for conservation objectives to the existing protected area network of 114 080km², increasing land available to wildlife by 48.4% beyond the existing protected area system (LIFE 2004).

Figure 3: Growth trends (1982–2002) for springbok, oryx, Hartmann's zebra, and kudu in north-western Namibian registered and emerging conservancies



Source: LIFE 2002

Zimbabwe

Campfire operates through the devolution of rights over wildlife to rural district councils (RDCs). The aim was that councils would devolve these rights further down to ward and village level so that the communities most affected by wildlife on their land could benefit. However, few councils have done this and most have retained authority themselves. Although the programme started with a

focus on wildlife, and particularly trophy hunting, attempts have been made to diversify into photographic tourism and other resources such as veld products.

Institutions

Zimbabwe policy and legislation devolve rights over wildlife to the RDCs, which are government bodies. Although the original Campfire guidelines encouraged RDCs to devolve down to lower levels, this has not often happened. Where such devolution has taken place, the implementing institutions are ward wildlife committees. The wards are predetermined administrative units below the district level and consist usually of several villages. An evaluation carried out by Child et al. (2003) of USAID support to Campfire found that, despite the constraining political and economic circumstances in Zimbabwe, a number of council and ward wildlife committees were still functioning effectively. Wildlife numbers and hunting revenues were being recorded and income distributed at local level. However, wildlife management in most Campfire districts still remains centralised at the council level.

In order to promote further devolution within Campfire, implementers have tried to encourage the formation of community trusts, mainly to oversee specific local activities such as community-based tourism enterprises (CBTEs). The trusts are able to gain land leases from RDCs, which places them in a strong position in terms of providing group rights over land and resources. However, only a few were functioning effectively, and none had been established for very long at the time of the evaluation by Child et al. For the trust approach to be successful, the trusts need more capacity and support in developing appropriate accountable and transparent relationships between the trustees and the community members. Ultimately, however, trust formation still depends upon the willingness of councils to allow communities to take on increased management responsibility.

Child et al. (2003) also found that debate about further devolution within Campfire was still alive and was still lively. In many respects there are strong reasons for councils to hold onto power. They receive the rights over wildlife through legislation and the exploitation of wildlife brings much needed revenue to RDCs, particularly at a time when central government funding for RDCs has been cut to almost nothing. Despite the tendency of RDCs to hang on to power, there are some positive signs that further devolution can be achieved once broader political change takes place in Zimbabwe. Despite its centralising tendency, the present government has been willing to devolve authority over water management to institutions other than RDCs and to local-level institutions. At the local level, there is a strong demand for more rights and authority over natural resources (documented by Chitsike 2000) and communities are willing to pressure RDCs to establish concrete plans and time-tables for implementing devolution (Murphree & Mazambani 2002). The establishment of community trusts adds a new dimension to the debate on devolution within the Campfire community, as local level institutions have been established outside of the existing ward development committee (Wadco) and village development committee (Vidco) structures. Trusts can act relatively autonomously of councils and could potentially lease land from councils.

There has also been some progress in the devolution of management responsibilities from district to lower level institutions. Generally districts have devolved quota setting to Ward level and the Department of National Parks and Wildlife Management has accepted that there should be local participation in quota setting. Some wards, such as Masoka Ward in Guruve district and Mahenye Ward in Chiredzi district, have been successful in demanding greater decision-making authority from their RDCs. In Mahenye, the contract with Zimbabwe Sun for ecotourism stipulates that 80% of revenue should be passed by the RDC to the ward. One RDC, Chiredzi, has agreed that the safari operator can pay the income from safari hunting directly to sub-district institutions.

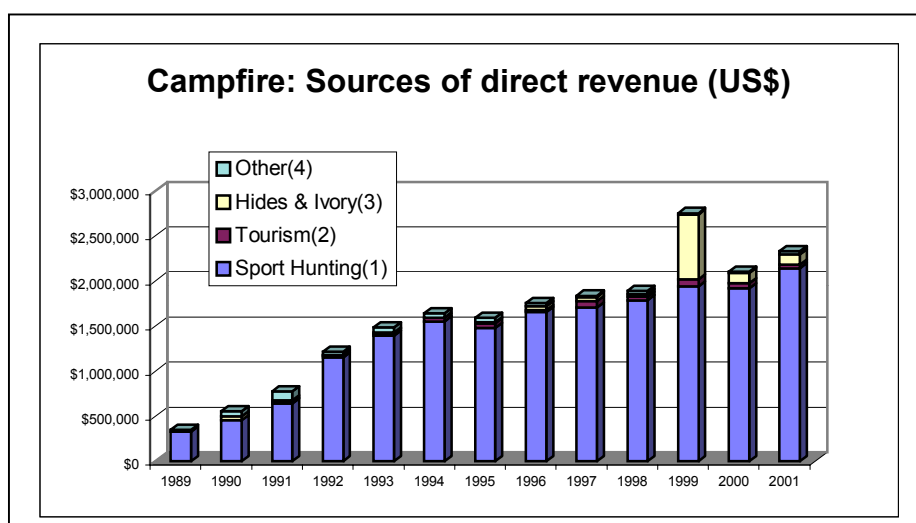
If implemented and enforced by the Campfire Association, new revenue guidelines should help to ensure that: a) producer communities receive a fair and significant share of revenue; b) other

revenue sources are captured for distribution to producer communities; and c) management activities are decentralised to producer communities where appropriate.

Socio-economic benefits

Campfire has succeeded in increasing the value of wildlife and capturing some of this value for local communities. From 1989, the income from safari hunting increased rapidly to US\$2 million annually (Child et al. 2003). In addition to direct revenues, a proportion of safari operating expenses is paid locally as wages and salaries (some US\$0.5 million annually), and for the purchase of materials, but this is not captured in Campfire monitoring records. Figure 4 shows the main sources of Campfire revenue.

Figure 4: Direct income to Campfire



Source: Child et al. 2003 (based on WWF Zimbabwe data)

Between 1989 and 2001, Campfire delivered US\$20.3 million in direct income for RDCs and communities. This derives from wildlife in some 90–110 wards, and consistently benefits over 80 000 households or around 560 000 people (Child et al. 2003).

Income to communities in recent years in particular has suffered a double blow. Although trophy hunting has continued despite political and economic instability, in 2001 and 2002, safari operators generally paid for hunting at the official exchange rate of 55, compared to the parallel rate of Z\$500 and Z\$1 500 to the US\$. Communities' income was therefore less than 10% of what it should have been. Further Campfire has tried to diversify away from a reliance on trophy hunting into photographic tourism which, while generating less income, has an important economic multiplier effect and generates more jobs and wages. However, because of the political and economic instability, tourism to Zimbabwe has collapsed. To some extent the real value of tourism to Campfire is not clear because much of this revenue, including direct fees to RDCs, is not recorded directly as Campfire income, partly because RDCs do not want to be obliged to share it with communities

Data on economic benefits generated by Campfire show that early in the programme RDCs appeared willing to reduce the amount of revenue they retained and increase the amount going directly to sub-district levels. By 1996 the proportion of income going to communities for use at their own discretion was 62%, with an additional 5% reaching communities but being managed by

the RDC. By the year 2001, community benefits fell to only 38%, although there are exceptions such as Binga which allows communities to receive between 70% and 80% of the wildlife income.

The reluctance of RDCs to devolve income generation to lower institutions severely reduces the amount of income reaching households. Bond (2001) found that in real terms the median benefit per household from wildlife was US\$4.49 in 1996. In most years the financial benefit per household from wildlife revenue is low and constitutes less than 10% of gross agricultural production, suggesting that in most wards wildlife is not financially viable at the household level.

Environmental impact

Campfire protects an area of land roughly equivalent in size to Zimbabwe's Parks and Wildlife Estate, including land used for residential and crop growing purposes. Child et al. (2003) suggest that this is a major indicator of the successful impact of the Campfire programme. Land under Campfire control contains roughly 12 000 elephants, up from about 4 000 in 1989. The increase in elephants reflects the natural population doubling time of 13 years (elephant populations can grow cumulatively at 5–7% annually), but may also reflect movement from heavily overstocked national parks and increased protection in communal areas (Child et al. 2003). Despite a serious drought in 1992, which resulted in buffalo die-offs in some protected areas, buffalo populations have at least maintained themselves in Campfire areas, and numbers are estimated at 14 000. Importantly, plains game have also increased in Campfire areas. According to Child et al. (2003:50):

Plains-game are a much more sensitive indicator of short-term changes in management, because they are easily poached, and mature more quickly with a shorter lag between increasing populations and the offtake of mature trophy males. Plains game quotas have increased by 50% since 1993. This suggests a similar increase in populations, and lends credence to the anecdotal evidence that poaching is decreasing and wildlife populations increasing in Campfire areas.

Despite the rapid conversion of wild land to settlements and agriculture in much of Zimbabwe, most of the original 12 Campfire districts have been able to maintain substantial wildlife areas. In some districts this has been accomplished by designating and fencing settlement areas (for example, Masoka and Binga); in others by fencing land to protect it from settlement (for example, the Gokwe North wildlife corridor); and in others through tacit community support (for example, Mahenye, Chiredzi, Bulalimangwe, Tsholotsho and Hwange). In the early 1990s, encouraged by the income from wildlife, a number of districts set aside wildlife areas or corridors. Some of these are still in operation. More recently, the communities in more highly populated areas wanting to diversify into ecotourism have also set aside small parcels of land that protect remnant habitats in otherwise highly populated areas that are under-represented by the Parks and Wildlife Estate.

From interviews with knowledgeable persons, Child et al. (2003) tried to assess the impact of Campfire on the protection of wild land and of the more recent setting aside of land for ecotourism (Tables 2 and 3). While much smaller, they have nevertheless protected remnant environments in otherwise highly populated areas (that are under-represented by the Parks and Wildlife Estate) and are effectively community conserved protected areas.

Table 2: Establishment of wildlife and other protected areas in Campfire districts

District	What has been done?	Has it worked? ⁶
Muzarabani	Mavuradonha Wilderness area set aside. Less able to protect land in valley floor from settlement	Yes, in some areas
Guruve	Main producer wards have reduced spread of settlement. A game ranch has	Yes

	been established in Ward 4	
Hurungwe	Area along Mana Pools National Park and Charara Safari Area boundaries protected from settlement	Yes
Binga	Enclosure fencing of people and wildlife areas has protected wild land	Yes
Gokwe North	In the face of massive settlement, only remaining wildlife area is the game corridor	Yes
Hwange	Area along Zambezi river, generally too harsh for settlement developed for wildlife	Yes
Tsholotsho	Settlement restricted in northern area adjacent to Hwange NP, also for livestock transhumance	Yes
Bulilima Mangwe	Wildlife area is restricted in north of Bulilima (Maitengwe) adjacent to Hwange NP, also for livestock transhumance	Yes
Beitbridge	Some areas too harsh for settlement, but some key wildlife habitats (for example, Chikwarakwara) now cultivated	Not well
Chiredzi	Niavasha area, areas along Gonarezou, and Limpopo river zone protected from settlement	Yes
Chipinge	Mahenye community has centralised and released land for wildlife	Yes

Source: Child et al. 2003

Table 3: Land and/or resources protected by ecotourism and other projects

District	What has been done?	Has it worked?
Chimanimani	Forest protected for ornithological eco-tourism and for cultural rites in Vhimba Ward	Yes
Nyanga	Area along the Gaerezi river and the surroundings has been protected for eco-tourism Rwenya River Wilderness area in the north of the district	Yes Not well
Mudzi	Nyatana Wilderness Area	Yes
Rushinga	Nyatana Wilderness Area	Yes
UMP	Nyatana Wilderness Area	Yes
Mazowe	Mwenje Fishery Project Banje Mountain protected for eco-tourism	Yes Yes
Matobo	Ntunjambili Caves	Yes
Beitbridge	Fishery	Yes
Nkayi	Bee-keeping and ilala palm plantations	Yes
Bulilima and Mangwe	Mopane worm harvesting areas have been demarcated for protection	Yes
Pfura	Four villages are protecting a bamboo forest	Yes
Goromonzi	Ngomakurira hills and caves	Yes
Manyame	A woodland area in Mayambara Ward has been preserved next to Prince Edward dam for ecotourism purposes	Yes
Mwenezi	The entire area surrounding Manyuchi dam in four wards has been protected	Yes

Source: Child et al. 2003

Little data exists to show the extent to which wild habitat is being actively managed by local communities. However, Child et al. (2003:54–55) conclude from anecdotal evidence and site visits that Campfire has served to reduce the unsustainable management of trees and other resources. While much of this difference results from behavioural changes associated with Campfire revenues and natural resource management awareness and training (e.g. the control of indiscriminate cutting of trees; use of pollarding rather than burning to cut trees) there are several specific examples of deliberate programmes to improve habitat management:

- Fire control programmes were developed in Gokwe North, Chipinge, and Chiredzi.
- There is independent evidence from Mazowe that resource monitors are fining people for illegal fishing with the proceeds from fines being shared between salaries and costs of monitors, and community benefits.
- The transhumance system operating in Tsholotsho and Bulilima Mangwe, which protects the northern area along the boundary of Hwange National park for seasonal cattle grazing, has been reinforced by the value of wildlife.

Costs to communities of CBNRM

Any consideration of the impact of CBNRM on poverty and livelihoods has to take into account the costs that rural residents experience as a result of CBNRM interventions. A number of costs can be identified easily, such as increased problem animal incidents where wildlife numbers increase and the amount of time taken up by CBNRM meetings and workshops. In some cases new employment opportunities created by CBNRM can mean less time available for other household activities such as herding or caring for family. Murphy and Roe (2004) show how tourism developments can impact livelihoods by denying residents access to land that was formerly used for a number of purposes.

The WILD project in Namibia made some estimates of the value of crops lost to wildlife in two Caprivi conservancies and concluded that the losses represented 18% (in Mayuni Conservancy) and 22% (in Kwandu Conservancy) of average annual household incomes for the region (Murphy et al. 2004). In the Kunene region in the north west where there is low rainfall, most costs incurred by wildlife are livestock losses to predators, damage to water infrastructure by elephants and damage to gardens by elephants. Murphy et al. (2004) suggest that these types of impacts can contribute to poverty by reducing household food security and options for generating cash, and can be particularly problematic for households that have little security from the outset.

In Namibia a number of attempts have been made to deal with the negative impacts of wildlife on livelihoods. One approach has been the introduction of a scheme that compensates farmers for stock losses to predators that is administered by the conservancies in conjunction with the government and Integrated Rural Development and Nature Conservation. Clear rules and guidelines have been established for the value of livestock and the grounds on which compensation will be paid. At least one conservancy is providing the compensation from its own income and the others in the scheme are expected to follow once they increase their income sufficiently. In Zimbabwe, communities have erected electric fences to keep out elephants with varying degrees of success.

Conclusions

Against the background of the discussion of poverty in Section 4 and the discussion of livelihoods in southern African drylands presented in Section 5, the data from CBNRM interventions in Botswana, Namibia and Zimbabwe provided above suggest that CBNRM in the region can and does have positive impacts on livelihoods and contributes to combating poverty. The positive impacts include:

- generating discretionary income at community level for social welfare or other purposes such as infrastructure development
- providing jobs and additional income for some residents
- increasing household and community assets
- providing land use diversification options in semi-arid and arid areas
- providing livelihood diversification options for some residents
- building skills and capacity
- empowering marginalised rural people through devolved decision making, fiscal devolution, improved advocacy, institutional development
- supporting local safety nets
- promoting sustainable natural resource management
- strengthening or building local institutions for common property resource management and driving local development.

A few other key points emerge. While the amounts of income earned are often small, they are often significant in terms of cash availability and timing is often important (such as when school fees are due or it is close to Christmas). Jobs are being created in areas where there are few job opportunities. CBNRM can have its highest impact in areas where there are few other development options and where wildlife is an appropriate land use. In Namibia, there is evidence to show that elite capture is not taking place in terms of distribution of benefits from conservancies. At the same time CBNRM interventions also bring costs to individuals and communities such as crop and livestock losses.

The contribution of CBNRM programmes to combating poverty is currently more in terms of diversification of livelihoods, creating buffers against risk and shocks and empowering and giving a voice to local communities, than in terms of income generation. In many cases these contributions are being overlooked because they have not been recognised and are not being measured. Turner (2004) makes this point in her study of the benefits from tourism to the Makuleke community in South Africa, which regained land inside the Kruger National Park under South African post-apartheid land restitution laws. She suggests that with regard to CBNRM, attention to material development has often outweighed a focus on democracy, yet ‘CBNRM emerges from a conservation history deeply intertwined with injustice, exclusion and dislocation, and it is far from clear that a materialist strategy can respond adequately to this legacy’ (Turner 2004:10). She notes that a key consideration for the Makuleke people was not only improved economic conditions, but regaining title to their ancestral land, which was viewed as ‘an immense symbolic achievement’. Further, the nature of the agreement with the park authorities over management of the restored land empowers the Makuleke to take key commercial decisions and limits the authority of officials. Turner (2004) concludes that ‘ultimately, participation, rather than development, may prove the determinant of CBNRM “success”’.

However, in terms of income generation, evidence from Botswana (Arntzen et al. 2003) and Namibia suggests that CBNRM projects do not yet fully exploit their potential. Sometimes this is because communities keep their income in the bank, but often the range of income-generating opportunities has not been either fully implemented or fully explored. Further, as Jones and Murphree (2004) suggest, the impacts of CBNRM could be increased if the underlying principles, particularly of devolution, were more rigorously applied. Stronger devolution needs to ensure that local communities have access to the full income-generation potential of natural resources. For

example, forest legislation needs to afford rights to local communities over what in Mozambique are called ‘productive forests’, that is, those with sufficient reserves of commercially exploitable hardwood timber. In several countries legislation can be amended to expand the range of uses of wildlife of which communities can take advantage. At the same time, means need to be found to ensure that a greater share of income from tourism activities reaches local levels. If governments in the region are serious about the use of CBNRM as a strategy for combating poverty then the requisite policy shifts need to be taken to enable optimum impact of this strategy. This means that governments need to show the political will to follow through on the limited devolution that has been introduced in the region thus far.

Overall consideration of the data provided in this section suggests that CBNRM is not sufficient on its own to combat poverty. It can lift a few people out of poverty (particularly through job creation) but, in terms of income generation, probably contributes most to poverty alleviation rather than poverty reduction. But as Campbell et al. (2002) point out, few, if any, other interventions in the region’s drylands are actually contributing significantly to poverty reduction. From this perspective, CBNRM needs to be viewed as one of the strategies that can be applied with others – such as improved agricultural practices – to sustain livelihoods in the drylands. It addresses a number of the key issues identified in Sections 4 and 5 as being necessary to combat poverty, such as diversification, generating off-farm income, institutional development, empowerment, providing safety nets and so forth.

Recognition needs to be given to the uneven distribution of resources across the rural landscape such that not all communities will be able to derive large amounts of income from sustainable use of high-value species (Jones & Murphree 2004). However, sustainable management of grazing, forests, wetlands and other important resources and habitats on which people depend for sustaining their livelihoods is in itself a significant impact. Given the multifaceted causes of poverty emphasised in Sections 4 and 5, it is not surprising that CBNRM in any of its forms is not a panacea for poverty reduction. It has to be viewed as one of a package of inter-linked and complementary strategies to address poverty at different scales within a national framework to combat poverty. Within such a national framework CBNRM can play an important role as an additional strategy for supporting livelihoods in marginalised and marginal rural areas while governments give attention to issues such as job creation in urban areas and creating the macro-economic conditions for growth.

Having drawn these conclusions though, it is also true that it is difficult to rigorously analyse the contribution of CBNRM to combating poverty because insufficient data is available. Few CBNRM programmes have developed indicators specifically aimed at demonstrating a broad range of poverty impacts. There is some collection of data to show overall economic benefit generation (for example, the data provided in this section from the LIFE project in Namibia and the Campfire project in Zimbabwe). Often, household impact is calculated by taking the overall income generated nationally and dividing this by the total number of households in the CBNRM areas. This is clearly inadequate in many ways, often simply because the income is not reaching many households in many CBNRM communities and because it masks areas where there are plentiful resources and high income and areas where there are few resources and income can never be high. Further, the indicators used for project monitoring tend to focus on economic impacts without adequately capturing the other important aspects of poverty highlighted in this paper.

CBNRM programmes in southern Africa started off as primarily aimed at promoting sustainable resource management, but have been claimed by various stakeholders as part of a broader development agenda. Yet the ways in which CBNRM impacts are measured have not evolved in line with these different expectations. This paper has tried to realistically locate CBNRM within the broader development agenda in terms of what it can be expected to achieve. The next section suggests some of criteria by which CBNRM should be judged in terms of its contribution to combating poverty.

7 Developing criteria for assessing the contribution of CBNRM to combating poverty

The measurement of poverty and of the impacts of attempts to combat poverty are fraught with difficulty (Angelsen & Wunder 2003; World Bank 2001). There is considerable debate about the best way to measure different factors such as vulnerability or voice, which do not lend themselves easily to quantification in the same way as factors such as household income. There are also different ways of perceiving poverty that affect the way that it is measured. For example, the World Bank 2000/2001 World Development Report (World Bank 2001) emphasises the dangers of analysing poverty in an aggregate way that masks differences across dimensions, regions, countries, communities and individuals. Based on a realisation of the need to develop understandings of poverty that capture these differences, analysts have begun to develop definitions of poverty that are based on more regional or localised criteria rather than criteria that are applied at a global level. From this perspective poverty can be understood as:

...a lack of the resources required to participate in activities and to enjoy living standards that are customary or widely accepted in the society in which poverty is being measured (World Bank 2001:23).

It would be easy to become bogged down in the debates around measurement of poverty and the need for collection of detailed data sets that provide a comprehensive picture of the relationship between poverty and CBNRM. Instead, it is more helpful to try to provide a framework that is simple and as inexpensive as possible, but which remains as relevant as possible. For these reasons I have tried to suggest a few key minimum criteria for assessing the contribution of CBNRM to combating poverty that CBNRM programmes should be addressing in their monitoring and evaluation.

So far, no CBNRM projects or programmes in the region have developed monitoring frameworks that adequately measure impacts on the various dimensions of poverty. Even those programmes that capture data on income do so at the aggregate community level and not at a household level – very few baselines exist. Occasionally data is collected for one or two localised projects, but there is usually insufficient data to provide an overall national perspective. Based on the discussions of poverty and livelihoods in Sections 4 and 5 and the evidence from Section 6 from current CBNRM interventions, I suggest that the following key factors need to be measured:

1. CBNRM contribution to household economic well-being

This should measure household and per capita income and expenditure, disaggregated by gender, education and wealth in order to indicate any distributional inequalities (Bandyopadhyay et al. 2004). Where possible a baseline needs to be established from which improvement can be measured. Further, improvement should be measured against local and national average household and per capita incomes. In order to understand fully how CBNRM income makes a positive contribution, the costs of CBNRM should also be identified and quantified.

2. CBNRM contribution to empowerment of people and institutions

We need to measure whether CBNRM is increasing the empowerment of local people by improving their advocacy at national level, increasing the extent to which they are taking control of their own lives and developing new skills and capacity. It should be possible for example to track the extent to which CBNRM institutions are involved in local, district and national policy dialogue events and whether their policy aims are being achieved. For households, it should be possible to track the extent to which individuals are able to influence decision making within CBNRM institutions and the extent to which they feel that these institutions represent their interests. It should also be

possible to track training events and the number of people that receive training and skills development.

3. CBNRM contribution to improved infrastructure and social welfare schemes in local community areas

This would capture how community discretionary income is being used to provide infrastructure or assist community members such as through micro credit or provision of education bursaries and so on.

4. The extent to which CBNRM contributes to diversification of income-generation opportunities

There is a need to capture the extent to which CBNRM is generating new off-farm income-generating opportunities and to document the type of opportunity, the number of jobs created and the type of job. The extent to which these opportunities are taken up by specific groups such as women and the poorest in the community should be captured.

5. The extent to which CBNRM contributes to improved resource management

This should include measurement of improved stocks such as wildlife as well as extent of habitat change and the extent to which management is taking place and the nature of management interventions (for example, wildlife monitoring, setting aside land for wildlife, restrictions on tree cutting and so on.)

I have not elaborated on methodologies required to collect this data because there is plenty of experience contained in the poverty literature of the various methodologies that would be appropriate for capturing these issues. Not all of these methodologies are ideal or manage to eliminate all external factors so that direct causality can be shown. Common sense sometimes needs to be applied to assessing causality as much as academic rigour. In some cases, attitudinal surveys might be appropriate where resources for data collection are limited. Such surveys can gauge the level of satisfaction of community members over a number of issues, always recognising that few people, even among the rich, believe that they have enough income. These key factors do not capture all aspects of poverty or all of the ways in which CBNRM can contribute to combating poverty. However, I believe they would provide a sufficient indication of general impact with enough detail without being too expensive or difficult to collect. The above criteria capture at least some of the factors related to the three-pronged approach to combating poverty proposed by the World Bank (2001); providing increased economic opportunity, increased empowerment and increased security against shocks. They capture some of the elements required for community-driven development (World Bank 2000) and some of the elements suggested by Campbell et al. (2002) that are needed to support livelihoods in drylands in southern Africa.

Neither the proponents of CBNRM nor the critics of the approach can accurately build a case regarding its contribution to combating poverty without an adequate understanding of the nature of poverty and appropriate strategies required to reduce and alleviate poverty. Further, nobody can accurately build a case for or against CBNRM without adequate data. So far, the debate has been built on a narrow focus on only one aspect of poverty (income generation) and on limited data. This paper has tried to identify the multi-faceted ways in which CBNRM can potentially contribute to combating poverty, and has used some of the limited data available to suggest that CBNRM does contribute in a number of ways. It has also suggested some criteria for measuring this contribution. However, no firm conclusions can be drawn until researchers and practitioners begin to collect sufficient data and analyse it against a comprehensive framework that reflects the many dimensions of both poverty and of CBNRM. Ideally, this monitoring should be built into the assessment frameworks as part of national poverty reduction strategies carried out by governments.

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Endnotes

¹ 'Drylands' is the term used to describe areas receiving about 100–1 000mm rainfall annually which falls on a highly seasonal basis so that there is a prolonged dry season during which plant production is severely curtailed. Evaporation rates are usually high in such areas. (Based on Anderson et al. 2004). A further characteristic of drylands is the temporal and spatial variation in rainfall which increases in the more arid regions. Thus even the areas of southern Africa with the highest rainfall can be subject to considerable annual variation in rainfall and to periodic droughts, leading to uncertainty and risk for livelihood strategies.

² Seventeen percent under protected area management and 22% designated as wildlife management areas.

³ Much of the material for this section is drawn from four key texts: a summary of CBNRM impacts in the region by Jones (2004a); a review of CBNRM in Botswana by Arntzen et al. (2003); a review of livelihoods and CBNRM in Namibia edited by Long (2004a) and an evaluation of USAID support to the Campfire Programme in Zimbabwe by Child et al. (2003).

⁴ Based on an exchange rate of US\$1 = N\$6.5869

⁵ Approximately US\$63 according to the exchange rate at the time.

⁶ That is, is the land actually being maintained for its conservation or tourism purposes?