
Chapter 3 Community-Based Natural Resource Management (CBNRM)

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Community-based natural resource management simultaneously addresses the problems of poverty and environmental degradation. CBNRM represents a promising approach that encourages communities to take responsibility for managing their resources so everyone benefits.

What is community-based natural resource management?

Much of the world's biodiversity is located in Africa south of the Sahara. In some locations diversity is eight times the world average, four times that of the United States, and twice that of Brazil. However, human impacts on this biodiversity are increasingly severe. Forest, savannah and coastal ecosystems are being rapidly degraded, along with protected areas, national parks, game reserves and forests. The threats to these areas of high global value come from uncontrolled clearing for agriculture, hunting, poaching, logging, grazing, and fuelwood extraction by both residents and outsiders. Often, there is extreme social and political pressure from impoverished communities to overexploit the available resources. Most African governments have neither the resources nor the effective institutions needed to implement environmental regulations deterring unsustainable exploitation.

Sub-Saharan Africa is also one of the world's poorest regions—46 percent of the population lives below the poverty line (less than \$1.08/day). Impoverished communities often live in regions that enjoy high biodiversity, or remain relatively unspoiled, but support only meager subsistence agriculture. Only 5.5 percent of the land in Southern Africa is arable, for example, so a large number of people are living in areas of marginal agricultural value. Some of these areas are officially

protected as parks or national forests; others are communal lands, generally with conflicting national and local claims of ownership.

Community-based natural resource management (CBNRM) attempts to address the problems of poverty and natural resource degradation simultaneously—even though their solutions are often seen as being in direct conflict. It grew out of the recognition that:

CBNRM Principles

CBNRM is premised on the idea that communities will sustainably manage local resources if they:

- are assured of their ownership of the natural resource
- are allowed to use the resources themselves and/or benefit directly from others use of them
- are given a reasonable amount of control over management of the resources

- a) unsustainable local practices often drive resource degradation in Africa;
- b) existing legal, social and economic policies—in particular the absence of nationally recognized individual or communal resource tenure rights—inhibit sustainable resource use; and
- c) governments in developing countries often lack the financial or institutional resources to adequately manage or regulate natural resource use.

CBNRM programs are described here because they represent promising approaches to mitigating or preventing environmental damage to commonly managed or owned resources. Under CBNRM, local communities benefit from the sustainable use of natural resources. Although core principles and elements of CBNRM have been identified, they are still new and evolving. There are many adaptations, depending on variations in locations and legal, social, political and economic contexts.

The premise of CBNRM is that communities will manage local resources in a sustainable manner if they (1) are assured of their ownership of the natural resources; (2) they are allowed to use the resources and/or benefit directly from others' use of them; and (3) given a reasonable level of control over management of the resources.

Secure community tenure rights are essential to the establishment of CBNRM programs. CBNRM efforts involve processes that often help strengthen local democratic governance, increase the community's standard of living, improve gender balance in resource management, and help provide women with greater income and independence.

Ideally, CBNRM objectives are pursued through a collaborative process that includes representatives from the local community, national resource protection agencies, local and district government, sponsoring donors, and NGOs.

Several countries in Africa have created national programs to promote CBNRM. Most have focused on wildlife, since hunting—especially trophy hunting—provides by far the largest source of revenue. In many countries, international aid organizations such as USAID, and international NGOs—in particular the World Conservation Union (IUCN), the African Wildlife Foundation, the World Wildlife Foundation, and Conservation International—have sponsored, facilitated and catalyzed many current CBNRM projects.

Under model CBNRM programs, the first step is changing land tenure laws to give the community secure ownership of and responsibility for

one or more natural resources in its region. With guidance from international donors and NGOs, the community defines boundaries and membership, develops an organizational structure, and decides on a set of operating principles they consider fair and representative. Partners work to help the community resolve disputes over boundaries and obtain legal recognition.

The community, together with the donor and NGO partners, works with technical staff from national natural resource agencies, and with local and regional officials, to develop a set of shared goals, objectives and desired results. As objectives and activities are defined, communities and partners choose among revenue-generating options, set targets, develop a financial management system, and build capacity in both organizational development and financial management. This effort must also ensure that communities have the necessary permits and legal standing to operate revenue-generating CBNRM programs.



Farmers in Mali demonstrate the benefits of community natural resource planning. This field was eroded and virtually useless, but community efforts at building and implementing erosion control measures helped restore the field's fertility.

In many cases, partners provide technical assistance to help communities establish joint ventures with private sector tour operators, hunting safari companies, and operators of lodges, camps and hotels. Under such circumstances, partners collaborate to ensure equitable treatment for the community and individual members through the establishment of legal contractual agreements or “trusts.” If government permits or licenses are necessary to establish a community enterprise using natural resources, partners work together to obtain the permits. These then constitute a contractual agreement between the government and the community.

International partners provide the training necessary to establish and maintain the enterprise, giving particular attention to women in the community. Training may include, but is not limited to, literacy, contract negotiation, bookkeeping, environmental mitigation and monitoring, marketing, and financing. At the same time, partners may work to

CBNRM Enabling Conditions

- Clarified or improved land tenure
- Local community commitment and capacity
- Experienced NGO and government partners
- Targeted technical assistance
- Regional resource management plans, setting limits of acceptable use
- Workable environmental monitoring and mitigation plans
- Access to markets and credit
- Social cohesion in communities adopting CBNRM practices
- Effective resource monitoring and policing
- Genuine economic benefits to the community

develop the capacity to conduct training in CBNRM by other local, regional or national NGOs, and perhaps the government's natural resource agency as well.

Community organizations need to develop guidelines for safely collecting, holding and distributing income, as well as making decisions on community-funded development projects. Revenues and income needs to be distributed fairly within the community and among partners. Community members may then use the funds to establish additional small natural resource-based businesses, especially those using "non-timber forest products" such as herbs, teas, medicinals, wild fruits, ornamental plants, etc. Woodcarving and folk art may also provide local income.

Once the NRM program is established, natural resource use is carefully monitored to ensure sustainability. Over time, oversight from international partners diminishes. NGO and government partners will typically retain a low level of involvement, providing assistance only when needed.

Where and how is it being practiced?

CBNRM has grown significantly in Africa over the last decade, primarily to protect and manage wildlife, but also to foster sustainable management of rangeland, forested areas, watersheds, fishing and coastal resources. Nationally sponsored programs have been developed in many countries, including Botswana, Burkina Faso, Chad, Ghana, Guinea, Kenya, Madagascar, Malawi, Mali, Namibia, Niger, Senegal, South Africa, Tanzania, Uganda, Zambia and Zimbabwe.¹ Many show promise of success, although not enough internal assessments have been conducted, and few third-party evaluations. Many features vary within and between nations, leading to considerable diversity in CBNRM project development, implementation and outcomes.

Experience has shown that a CBNRM program is more likely to be successful where enabling conditions are in place. Among the most critical of these are:

- clarified and improved land tenure;
- local community commitment and strengthened capacity; strong local institutions and participants with adequate skills;
- experienced NGO partners and functional government bureaucracies;
- targeted technical assistance;

¹ Programs involving multiple countries (transboundary programs) are beyond the scope of this document. See *Policy Environment Governing the Great Limpopo Transfrontier Park and Conservation Area: A Review of Relevant International Agreements, SADC Protocols, and National Policies*, by Dr. Candace Buzzard for an example of policy complexities associated with transboundary resources.

- regional resource management plans with set “limits of acceptable use” or “carrying capacity”;
- a workable environmental mitigation and monitoring program;
- access to markets and credit;
- social cohesion both within and across communities adopting CBNRM practices in a region;
- effective resource monitoring and policing; and
- above all, genuine economic benefits.

The establishment of CBNRM regimes can be a lengthy and complicated process. Sustainable programs may require more than a decade to take root.

Selected CBNRM models

Zimbabwe: CAMPFIRE

The first CBNRM program in Africa was established in Zimbabwe in the early 1980s. In an effort to protect wildlife, particularly elephants, from unsustainable levels of poaching, the government of Zimbabwe set up the CAMPFIRE program (Community Area Management Programme For Indigenous Resources). Under CAMPFIRE, authority over wildlife was given to the Regional District Councils (RDCs), administrative arms of government.

CAMPFIRE encourages sustainable trophy hunting of big game. Revenue from the fees paid by hunters goes to the RDCs and a portion is then distributed to lower administrative levels and/or individual households. Each RDC determines its own policy for the use and distribution of funds. Direct payments to households vary according to these policies and the availability of the most prized species of big game in the RDC, e.g., elephant, buffalo, lion and leopard. Studies of selected wards show increases in wildlife populations and habitat retention—these are considered indicators of success. CAMPFIRE communities receive an average of \$1.5 million from the \$15 million spent on trophy hunting each year (Getz 1999).

Critics point to serious shortcomings in the program. In particular, too little revenue from safari hunting in many districts is returned to the local residents who bear the direct costs of wildlife protection, e.g., destruction of maize crops or granaries by elephants. Instead, from 50 to 90 percent of the revenue may be retained by the RDCs. Under such circumstances, households may receive only \$1 to \$3 per year as their share of safari profit, while an illegally killed antelope sold for meat can bring \$7 to \$20 (Campbell 2000).

Botswana

Botswana has been pursuing CBNRM for over 10 years. CBNRM projects in Botswana operate within the boundaries of Controlled

Hunting Areas, a zoning system developed by the Department of Wildlife and National Parks (DWNP) to administer hunting quotas. To participate in the CBNRM program, a community must form a legally recognized community-based organization (CBO) such as a trust, association, society, or cooperative, and fulfill a specific set of requirements needed to obtain Resource Use Head Leases, which are permits for commercial activities. The permit grants authority over the use of natural resources to the community for a 15-year period. The most significant requirement is a DWNP-approved natural resource



Chobe Enclave Conservation Trust was the first CBNRM project to be developed in Botswana with USAID assistance. The Trust's objectives are to sustainably use, protect and manage the natural resources of the Chobe enclave for the benefit and development of the local communities.

development and management plan prepared by the CBO. The CBO must also be a legal entity with a registered constitution that protects the interests of all residents. Equitable membership in the CBO can be difficult to ensure.

CBOs that obtain leases from the Land Board acquire decision-making power over resource use and development. They may focus on one or more wildlife species, veld or range resources. The CBO has sole authority and acts as the community's agent in negotiating contracts for hunting (within established quotas), tourism and other uses. Leases do not, however, grant the community control over access to their territory.

The program dictates that revenues and benefits go directly to the CBO, which can apply them to communal projects or distribute them to families. In practice, distributions to families have been very limited. Families can earn income directly under the Botswana system. Individuals are thus encouraged to develop independent enterprises using the local resource base, as well as to participate in communal activities.

In Botswana in 2002, 61 CBOs are actively involved in natural resource management (NRM). Most of these groups focus primarily on wildlife

resources; these have generally entered into agreements with private companies to manage tourism or trophy hunting. Some non-wildlife resources, such as marula fruit, mopane worms, and thatching grass, are being extracted. Unfortunately, ownership of these natural resources is unclear under current laws. This lack of clarity is thought to discourage sustainable management, although communities are obtaining substantial income from both wildlife and non-wildlife uses. Trophy-hunting remains by far the largest source of income, although 11 of the 18 CBOs assessed in 1999 also harvested veld products. Little monitoring data or research is available on which to base conclusions about the sustainability of these activities (Gujadhur 2000; ADC 1998).

As in other parts of Africa, the support of foreign donors and NGOs to CBNRM projects has been critical. The time from initially organizing to obtaining a lease from the Land Board averages three years. Donors and NGOs are the only source of financial and technical assistance for communities during this period. In general, indigenous governmental and NGOs lack the capacity to provide adequate technical support to CBOs, even after they have obtained their leases. However, promising attempts have been made in strengthening government units and NGOs to provide support to CBOs after foreign assistance ceases. One step in this direction has been the formation of the Botswana Community Based Organisation Network (BOCOBONET), which provides a forum for CBOs and others to meet and share information, experience, and expertise (Rozemeijer 1999). BOCOBONET also offers training in capacity building for CBOs throughout Botswana.

Namibia

The long-term success of CBNRM projects typically requires legal reform, particularly of land tenure law. Namibia is probably the southern African country that has made the greatest progress with such reform. The national government has developed policies and laws that give local communities new authority over the use and protection of wildlife. Their approach borrows from, and improves upon, the CAMPFIRE experience. Namibia's legacy of apartheid resulted in a pattern of land distribution in which 41 percent is rural African communal land, 43 percent white-owned commercial farms, and 14 percent protected area. A small percentage remains unallocated.

Traditional land tenure systems conferred ownership to the chief or king. These systems persisted under white rule, but were undermined by post-independence government policies that weakened the power and status of traditional leaders. A problem of "open access" developed, with local indigenous populations unable to control the settlement of outsiders on communal lands or the use of communal resources. Population growth at rates of 3 percent or more per year in communal areas also increased pressure on natural resources (Jones 1998).

The Namibian Government's approach to CBNRM focuses on encouraging and recognizing communally defined and owned "conservancies." Under laws enacted in 1996, communities that apply for and gain official approval receive rights over wildlife and tourism in

the designated area. Importantly, all income from resource use goes directly to the conservancy.

Any group of persons residing on communal land may apply to have some or all of the area they inhabit declared a conservancy. To qualify, the community must:

- elect a committee to represent the group;
- agree upon a legal constitution that provides for sustainable management of hunting and “non-consumptive” uses of wildlife (e.g., tourism);
- establish a means of managing funds;
- approve an equitable method for distributing income; and
- define the geographic boundaries of the proposed conservancy.

Gazetted conservancies have rights of ownership over huntable game (oryx, springbok, kudu, warthog, buffalo and bushpig). Those include use for residents’ own purposes, capture and sale, hunting and culling. Conservancies also have the right to apply for permits for trophy hunting of protected animals (Jones 1998).

Given the requirements and inevitable bureaucratic aspects of the process, obtaining approval for a conservancy requires considerable investment of time on the part of core leadership, and often assistance from an NGO. In some cases, the process of defining boundaries has led to conflicts with neighboring communities. Mechanisms for resolving these conflicts are now beginning to emerge.

Namibia’s CBNRM program has demonstrated significant achievements over the past eight years. Wildlife populations have rebounded due to a decrease in poaching and greater understanding of wildlife’s needs on the part of local communities. Policy reforms have empowered communities economically and organizationally, creating an identity and establishing authority for the conservancies. Local communities have embraced conservancies as a means of gaining legal control over their land and resources. These communities have been active in monitoring natural resources and promoting integrated sustainable development.

Fourteen communities have been registered as conservancies, and an additional 35 communities are in the process of legal recognition. Conservancies have earned over \$400,000, mainly through hunting and photo safari concessions and hotel construction agreements. Community members also earn income from working as community game guards, women resource monitors and employees at hotels and lodges built under concession, as well as from the sale of thatch grass or folk art. This income is expected to increase substantially with the planned expansion of private sector tourism concessions (Jones 1998). Ensuring equitable distribution of profits among community members, however, is still an issue.

This program has substantially benefited the development community as well. Practical knowledge about CBNRM in the field has been collected,

disseminated and institutionalized. Ten new NGOs have been created to support the project, and the Ministry of Environment and Tourism has increased the number of field staff nationally. The older conservancies have developed capacity and networks to assist newer conservancies as donor technical support is phased out.

Madagascar

In the first phase of Madagascar's National Environmental Action Program (NEAP), international NGOs supported community-centered activities within five-kilometer "buffer zones" around protected areas, applying an integrated conservation and development (ICDP) approach. Management plans for remaining areas of natural forest were prepared at considerable cost in time and money. Disappointingly, implementers found that unforeseen economic, social and infrastructure conditions well outside these "buffer zones" were degrading the ecosystems selected for ICDP interventions. In addition, implementing the carefully prepared management plans did not significantly reduce forest losses or improve socioeconomic well-being among communities living around the forests targeted for management.²

As a result, in the second phase program investments were shifted to community-based efforts to reduce slash-and-burn agriculture and to the development of a larger eco-regional approach taking into account regional economic, social and infrastructure development concerns. Major emphasis was placed on developing the capacity of local NGOs and farmer groups to prepare them to reduce slash-and-burn agriculture while protecting natural resources. A number of pilot community-based forest management efforts were initiated to begin the transfer of forest management rights to local communities and prepare them to undertake sustained-yield harvesting of forest products.

Malawi

Between 1996 and 1999, Malawi put in place a new set of natural resource management statutes covering wildlife, fisheries, forestry, water and environmental management. Collectively, they provide a strong platform for encouraging community involvement in sustainable resources management. Since 2000 new policies on land reform, wildlife and fisheries have appeared, advocating collaborative management of public resources, strengthening land tenure, and providing for revenue sharing. These policies give Malawi one of the world's strongest legal mandates for CBNRM.

Small-scale CBNRM in Malawi focuses on management of fisheries, reforestation, permaculture³ and other sustainable agricultural practices.

² USAID, *Nature, Wealth and Power: Emerging Best Practice for Revitalizing Rural Africa*. August 2002, p. 23

³ Permaculture is a land use system integrating human dwellings, microclimate, plants, animals, soils and water. Farming systems and techniques commonly associated with permaculture include agroforestry, swales, contour plantings, soil and water management,

Malawi faces an acute deforestation problem, as fuelwood is the main energy source for 90 percent of the population. Community reforestation efforts protect agricultural land from erosion, nurture medicinal plants and trees, provide opportunities for otherwise unemployed youths, and disseminate sustainable forestry, agriculture and animal husbandry practices among the rural poor. In many cases, these projects coalesce around a motivated local leader with either experience or interest in integrated resources management. These leaders also function as local technical resource persons and operate their projects as training centers.

Larger-scale CBNRM projects focus on fisheries management. Fisheries are a critical source of employment and nutrition in Malawi, and often the only source of employment in lakeside areas. More than 200,000 people are directly employed in the fishing industry, mainly as artisanal fishermen. As a result of unsustainable fishing practices, fish populations in all of Malawi's lakes have declined, reducing food security in local communities and the incomes of fishing families. Prior to the CBRM program, fisheries resources were open and unregulated. As fish stocks decreased in Lake Malombe, for example, local fishermen reduced the sizes of their mesh nets from 3 inches to half- and quarter-inch. These small nets caught juvenile fish, exacerbating population collapse among target species.

An effort by the fisheries department to control local fishing practices failed because the department lacked funds to enforce regulations on unwilling communities. A community-based program was then instituted by the UN Food and Agricultural Organization (FAO) and the UN Development Programme (UNDP) to conserve fish stocks. Communities established beach village committees (BVCs) to create and enforce fishing policy in their local territories. The BVCs established mesh size limits, controlled night fishing, and closed waters for certain seasons. Their enforcement of these policies has succeeded, since new fishermen are required to receive permission from the local headman. To make up for lost income and food, many fishing families have started farming maize, groundnuts, and vegetables. Also, the German development agency GTZ provided small loans to families to start up small enterprises like fish processing.

Nonetheless, there are obstacles to further promoting CBNRM in Malawi. These include lack of political will or undue political influence, poor understanding of government policies, difficulties in coordinating bureaucracy with community organizations, inadequate technical assistance, inadequate short-term economic returns, and a reliance on donor and NGO external support.

hedgerows and windbreaks, aquaculture, intercropping and polyculture. Permaculture uses gardening and recycling methods such as "edible" landscaping, companion planting, sheet mulching, using chickens (in movable pens) to cultivate fields, herb gardens, and composting.

Tanzania

In Tanzania, legal title to rural land is questionable. Although villages have customary land rights, village land committees are often coerced or manipulated into relinquishing these rights to outsiders. No clearly defined mechanisms for revenue sharing or for partnerships with other stakeholders exist under present natural resource laws. National legislation which would clarify ownership and land use policies has, however, been proposed. In cases where communities work with investors, contracts are used to define roles and responsibilities and to establish a framework for handling disputes. Villages involved in CBNRM generally earn income through agriculture, livestock, fisheries, forestry, mining and various other extractive activities. Adverse impacts include illegal harvesting of timber and non-wood forest products, poaching, and environmentally unsound cultivation and livestock practices. Natural resources may also be overstressed or exhausted by harvesting fuelwood, fodder, building materials, medicines, and wild fruits and vegetables, using traditional methods.

Community-based projects are managed through local authorities: the village assembly, the village finance and planning committees, the village natural resources committees, and/or the village environmental committees. Generally, game scouts and forest guards are used to police areas under community control, but all members of local communities are obliged to help monitor and report illicit activities to the village authorities.

CBNRM projects often are not structured to generate revenue for households, a barrier to adoption of such plans. For plans that involve hunting safaris as funding sources, the government retains the biggest proportion of the revenue in taxes and fees, and employment opportunities and economic linkages are small or non-existent. Most benefit-sharing programs provide social services such as schools, water or roads instead of direct income. Cash benefits were planned under one project, the Ikona Community Wildlife Management Area, but no suggestions were included for sharing money between participating communities or for disbursing funds.

NGOs, bilateral and multi-lateral donors are supporting almost all the CBNRM activities in Tanzania. Although communities have embraced the economic and environmental opportunities embodied in CBNRM, they do not initiate such projects because of high investment costs and lack of expertise. Usually, projects do not collaborate with each other, primarily owing to a lack of coordination among the donors and government agencies that fund projects.

Kakumbi Natural Resources Management Business in the Luangwa Integrated Research Development Project (LIRDP) Area in Zambia

The Kakumbi chiefdom in the Lupande Game Management Area (LGMA), the area closest to the tourism activity in South Luangwa National Park (SLNP), was experiencing significant deforestation and habitat disturbance from extraction activities associated with lodges and other tourism enterprises operating in the Park. Members of the tribe were concerned over this degradation.

In 1996, transformation of the top-down NRM system originally instituted in LIRDP to a more democratic community-based one enabled the community to initiate the expansion of NRM beyond wildlife in the Kakumbi chiefdom, and created a new revenue stream for communities.

Under the new community-based management structure, Area District Councils (ADCs) were vested with substantial authority. The ADCs, established to coordinate activities related to wildlife conservation and use of revenue from wildlife concessions, recognized that other natural resources needed a similar level of attention and should be actively managed for sustainable use. The ADCs resolved that all commercial operations should pay for any resources they used and that resources should only be harvested in a sustainable way.

The LIRDP helped set up a meeting between the ADCs and tour operators. Tour operators, whose livelihoods also depend on the health of the local environment, recognized the validity of the concern and pledged not only to pay for resources used, but to help set up an institution for collecting fees and regulating use.

The ADCs and tour operators, with advice from LIRDP, established the Kakumbi Natural Resources Management Business (KNRMB), designed to preserve biodiversity, develop and manage the area's natural resources in a sustainable manner, raise community awareness of the need for conservation, and generate income for conservation activities and community development.

The KNRMB has established pricing and guidelines for the sustainable use of the area's resources. Forest guards accompany customers during resource collection to ensure that they follow the guidelines. Each month a maximum of 40 percent of revenues is distributed to support the enterprise (administration, salaries, etc.), a minimum of 55 percent to the community for conservation and development, and 5 percent to the chief. In its first six months, the KNRMB generated \$2,500 in revenue. [Phiri 1998 #10]

Zambia

The Administrative Management Design Program (ADMADE), initiated in the early 90s, is the government of Zambia's community-based wildlife management program. ADMADE offers more limited community control and benefits than programs such as Botswana's or Namibia's. Recently, however, ADMADE appears to be moving toward a more democratic approach. Under ADMADE, the government sells concession contracts to safari hunting operators in game management areas that buffer Zambia's national parks. The government passes on 75 percent of revenue to local communities. A little more than half of this (40 percent of total revenue) is dedicated to supporting actual wildlife management such as salaries and vehicle maintenance. Communities may use the remaining funds only for self-directed development projects (35 percent of total revenue).

Funds retained by the government go into a revolving fund that supports ADMADE administrative costs and subsidies for communities that are not self-sufficient. Overall, ADMADE covers 80 percent of its costs with revenue from CBNRM activities. The Wildlife Management Sub-authority, an organization made up of government officials and community leaders, uses ADMADE funds to pay for village scouts and community projects. In 1998, the Zambian government passed a new Wildlife Act that would enable any chiefdom in the country to establish a Community Resource Board (CRB) made up of representatives from the community, the local district authority, and the chief. CRBs are empowered to negotiate "co-management agreements" with safari operators, appoint scouts, and develop land-use management plans in consultation with the Zambia Wildlife Authority. ADMADE has promoted the creation of local Village Area Groups to further improve community involvement. Under the new law, the state is still responsible for collecting and redistributing money.

Populations of key species of wildlife appear to be increasing in game management areas, suggesting that ADMADE has been successful in discouraging illegal poaching, the main threat to wildlife in Zambia.

A separate program, the Luangwa Integrated Research Development Project (LIRDP), was initiated at the same time as ADMADE, with funding from the Norwegian international development organization NORAD. The LIRDP is located in South Luangwa National Park, covering an area of 9,050 sq. km, and in Lupande Game Management Area (LGMA), covering 4800 sq. km. LGMA is inhabited by approximately 36,000 members of the Kunda tribe and is Zambia's most popular tourist destination.

Before the establishment of the LIRDP, elephant populations had declined from over 100,000 in the 1960s to less than 5,000 in the mid-1980s.

LIRDP initially set up a program much like ADMADE. Hunting concessions were sold by LIRDP and resulting income was shared with the community. Interestingly, wildlife populations did not grow rapidly during the first eight years of operation. The failure was attributed to a

top-down management approach and an undemocratic system for distributing income. The LIRD kept 60 percent of the income, and the council of chiefs did not accept general community input and did not distribute the remaining 40 percent equitably. Since the community members did not receive meaningful income or benefit from game hunting revenue, they had little incentive to forego food and income from poaching.

The program was modified in 1996 so that 80 percent of the revenue went to new Village Action Groups (VAGs), and small amounts to other administrative levels including the council of chiefs, the chiefs themselves, and newly established Area District Councils (ADCs). VAGs, community groups of approximately 200 households, elect an oversight committee and choose how to distribute their income at annual general meetings of the whole community. They can assign funds to development projects, or distribute funds directly to households as they see fit. ADCs coordinate activities of VAGs and set broad policy. Elephant populations in the LIRD area are steadily increasing and now number more than 10,000, more than double the levels in the mid-1980s. Equally important, local communities are using their income on valuable development projects and creating new non-wildlife sources of revenue (see box).

For the most part, the various Zambian CBNRM experiments have succeeded in creating new income-generating activities over which communities have some degree of control, and whose revenues are returned to the communities (Gujadhur 2000; ADC 1998; Phiri 1998).

What conditions and elements contribute to success?

Pilot programs in Africa show that while CBNRM success requires action at the national or regional level, other elements must be developed at the local level and/or by project managers. While no existing CBNRM program meets all the conditions for success described below, many are operating relatively effectively, improving conditions for wildlife populations and providing local communities with income. As experience grows, the likelihood that CBNRM programs will achieve a measure of long-term stability and sustainability grows as well.

Management at the national/regional level

Tenure security. Colonialism left a legacy of conflicting official and customary laws that contributed to unsustainable resource exploitation by eroding residents' or communities' confidence in their ownership of the land. Lack of clear tenure rights discourages responsible stewardship. The longer the guaranteed time of control, the greater the confidence communities and individuals will have that the resources belong to them and their heirs. For this reason, relatively short periods of tenure, such as the 15-year life of Botswana's community leases, may not be ideal.

Elements That Contribute to CBNRM Success

- Tenure security for local community property rights
- Clear legal, regulatory and administrative frameworks
- Rights of self-definition, legal recognition and exclusion for local communities
- Devolution and decentralization of authority to the lowest levels
- Functional government services
- Adaptive management
- Absence of corruption
- Proper program scale
- Economic returns to the community
- Information and knowledge management systems in place
- Local input into land use planning
- Need for national NGOs to represent CBNRM and community interests
- Strong involvement by the tourist industry
- Open discussion of environmental issues by local media
- Disaster planning

Absolute tenure is not essential for creating a functioning program. Tenure may be granted only over a particular natural resource, or for limited amounts of time, or only in a particular region. Nevertheless, the growing consensus among CBNRM practitioners and researchers is that sustainable use requires that communities receive tenure that is as close to permanent as possible. Only when community members are confident that the resources will remain under their control—and thus should not be degraded—will communities invest labor and resources in sustainable use.

A clear legal, regulatory and administrative framework. In order to foster smoother and more efficient interactions among participating entities, clear roles, rights, rules and responsibilities are needed for national and local government, NGOs, donors, communities, and individuals. Community-level agreements, officially negotiated with the state, can be an effective way to formally establish respective roles and responsibilities. In the absence of land tenure reform, they also can offer some measure of tenure security and confidence for local communities, as in Botswana.

Rights of self-definition, legal recognition and exclusion. For CBNRM programs, where the community is expected to play a meaningful role, communities must have the right to define themselves, their membership and their boundaries so that their identity is unambiguous. If they are to manage the use of resources and revenue, especially if they are contracting with commercial enterprises such as safari or hotel operators, they need to be able to form legally recognized associations. Finally, communities need the right to exclude or license outsiders who may be attracted either by the area's resources or by the prospect of sharing in the revenue generated by the CBNRM project.

Devolution of authority to the lowest level. Those involved in developing and maintaining CBNRM projects in Africa increasingly believe that projects work best when management decisions are devolved to the lowest functional level. This can be done by decentralizing authority (so that local units within an existing government hierarchy are given greater autonomy), or by delegating authority to a non-governmental organization (such as a CBO), or through some combination of both. The combined option may be best, assuming the community has significant overall control, since local representatives of state agencies may be able to provide guidance and resolve disputes as they arise. Some problems, such as water usage for irrigation, may require management at a higher level. Ultimately, it may be necessary to establish institutions, such as LIRD's Area District Councils in Zambia, to coordinate CBNRM activities for multiple communities.

Functional government services. The participation of government natural resource agencies is usually critical to the long-term success of CBNRM programs. Generally, they coordinate national CBNRM activities. They may also give official recognition to a community (as in Namibia), co-manage the resource, or provide technical assistance. For a CBNRM project to proceed smoothly, government agencies need to adequately perform their functions at the local, regional and national levels. Natural resource agencies in some African countries are hampered

Keeping the community's money safe

Embezzlement of revenue from CBNRM projects by community members or others designated as custodians has occurred. The Kakumbi Natural Resources Management Business (KNRMB) Program in Zambia mentioned earlier, developed detailed protocols for the handling and disbursement of money to prevent such occurrences.

- Only four of the 12 members of the oversight committee are authorized to sign checks and two signatures are required.
- A Luangwa Integrated Research Development Program (LIRD) staff person accompanies the treasurer during monthly collections from customers.
- Money is disbursed to the community and chief on a monthly basis and so does not accumulate.
- Accounts are audited quarterly by LIRD and can be reviewed at will by the Luangwa Safari Operators Association.

for reasons which include insufficient funding, lack of personnel, and personnel without necessary skills. NGOs or the private sector may fill this gap by providing resources and training to local communities. Farmer-to-farmer groups and networks may also serve in this function. Nevertheless, long-term sustainability of CBNRM programs depends on the full partnership and involvement of government agencies throughout design and implementation.

Adaptive management. Long-term success is more likely when project decision-makers are ready to adapt management plans to respond to changing knowledge and circumstances. Adaptive management uses current research and continuously integrates feedback from stakeholders in order to tailor NRM programs to new political and economic conditions, and/or focus on localized market-driven opportunities.

Absence of corruption. Government corruption at all levels often is not discussed, since mentioning it risks offending partner governments and can harm an international organization's ability to work in that country. However, corruption may prevent government CBNRM policies from actually being implemented, sap revenue and resources that should rightly go to local communities, and severely undermine community initiative. The large sums of money (in local terms) generated under safari-hunting CBNRM projects may be especially subject to misuse.

Program scale. Like all NRM programs, CBNRM programs are effective at preventing environmental harm through integrated assessment and planning. Resources for NRM are limited and investments are required at all levels, from micro to national. Local community actions must be factored into an overall ecosystem plan. Programs involving multiple countries (transboundary programs) must balance international policies and institutions with potentially different national and local customs and resource extraction requirements.

Economic return. Programs that encourage cost-effectiveness and provide economic benefits to local communities have better adoption rates than programs that don't provide direct revenues. Privatization may help to encourage financial sustainability, improve program quality and promote accountability to communities. Programs should encourage market development and partnership with private enterprises to increase the value of natural resources and improve the efficiency of resource use. Trend analyses may be useful for designing programs that address future community needs. The creation of rural organizations to manage savings and establish microcredit enterprises should also be encouraged.

Donor funding can often be channeled through NGOs, which then assist communities in managing and reinvesting profits from CBNRM projects. Community investment priorities generally include building infrastructure such as market access roads, schools, water supply and sanitation, and health posts.

Information and knowledge management systems. Successful CBNRM programs rely on networking to share experience and information. These networks promote capacity-building and policy development, as well as reduce training burdens on government

departments. Programs also require monitoring and evaluation at multiple levels in order to make sound management decisions. Local monitoring can be combined with advanced tools like remote sensing and geographic information systems (GIS) to provide decision-makers with more complete information. Data collection, such as resource inventories, should be performed to answer specific management questions. Developing historical baseline data for key indicators is especially important. However, although programs should use science to examine trends and alternatives, deciding among possible courses of action must also involve subjective evaluation of the social, economic and political context.

Land use planning. Devolution of local authority for land use planning and zoning is critical for sustainable management and local enforcement of regulations. Communities must understand, and agree to, the boundaries of the areas of control. They must also have the authority to control membership and privileges within their zones. Setting boundaries should be a participatory process involving all user groups. Communities may require assistance in partitioning resources and mediating land use conflicts. Programs should also incorporate planning for farming, as it is one of the most critical uses of land among the rural poor.

National non-governmental organizations representing rural development and CBNRM interests. These organizations serve as centers for national CBNRM information exchange and as networks for local CBNRM initiatives. They can also play essential roles as advocates for change, promoting increased government financial and technical support and incentives for CBNRM, as well as sound and equitable tourism development and protected area (PA) management.

Strong involvement from the tourism industry. The potential interest of tourism/safari industries operating in Africa has barely been tapped. They represent one of the strongest economic forces available in Africa to promote sustainable management of the ecological resource base, areas and sites of special tourism value, wildlife populations, and unique fauna and flora. With modest organizational support and incentives they could play a critical role in convincing national and local governments that the entire country would benefit economically from (1) creating a secure and attractive experience for visitors; (2) improving monitoring of resource use; (3) developing regional land use and ecological resource management plans; (4) allocating increased financial and technical resources for policing and PA management; (5) ensuring adherence to resource use standards and quotas; and (6) pushing for reform of patronage systems, fiscal mismanagement or malfeasance, and judicial impropriety.

They, and national level civil society organizations representing local NRM interests, could foster needed policy and legislative changes in countries like Uganda, Tanzania, Kenya and Ethiopia, and increased allocation of national and local budgets to various programs necessary for sustainable CBNRM.

Open discussion through the media. One of the most promising developments in governance across Africa over the last three decades has been a growing free press able to cover the environmental harm associated with development and the improper use of natural resources. A healthy press is vital to ensuring that national laws and policies are taken seriously and that political and judicial systems operate with integrity.

Plan for disasters. The benefits of CBNRM projects may be undone during times of crisis—floods, drought, conflict, etc. Such disasters can push people to disregard careful management plans and drain any resources within reach. Programs that include safety nets, e.g., food storage and public works, can provide a buffer against temporary resource overexploitation.

Management at the project level

Protected areas and ecosystems with strong ecological significance and high potential for community and private sector benefits from sustainable management. Projects or management regimes cannot be established everywhere. Until sufficient resources are available, sponsors must carefully select areas that have both high ecological value and the potential for successful community management. Projects must be tailored to accommodate the unique features of each country and region, its history, the socio-economic circumstances of residents, laws and regulatory systems, available natural resources, and existing resource management systems.

Development of common or complementary objectives by partners early in design. Different partners usually enter into projects with different, and sometimes incompatible, purposes, but believe they are pursuing common objectives. Explicitly stating objectives and then working to reconcile differences is an important exercise. Sponsors should avoid focusing exclusively on environmental issues.

Economic viability. Questions of profitability and return on investment are vital to the sustainability of CBNRM ventures. Trophy hunting can generate large and rapid returns. Production of timber and non-timber forest products can also be profitable, if markets exist. Tourism, on the other hand, is harder to establish and less dependable as a source of income. Areas can experience sudden declines in tourism because of national or regional events or instability.

Where income is derived from product sales in distant markets, a strong demand for the product needs to exist, or its development must be supported by outside interests, since many individuals or communities do not have the resources to engage in marketing. Even when markets exist, systems that provide access to markets must ensure goods can be delivered dependably and, for perishable goods, without significant spoilage or loss of inventory. CBNRM projects often target lands adjacent to protected areas that are distant from primary economic

CBNRM Project Level Management Issues

Focus on ecological significance areas or those with potential economic benefits for the community

Encourage partners to develop common or complementary objectives in the early planning

Identify the most likely avenues for economic viability of the project

Ensure that community organizations possess legitimate authority to make decisions

Provide for genuine community participation and benefit in the project

Train communities to use the knowledge they already possess about local conditions and environmental threats

Resist imposing organizational structures from the outside

Recognize the importance of women as CBNRM implementers

Access and use local, traditional community knowledge

Provide good technical and capacity building

Ensure access to credit

Encourage long term, dependable donor and NGO commitment to the project

Help develop mutual trust between communities and sponsors

Ensure that the community members are functionally literate

Focus attention on monitoring project evaluation

centers. Under these circumstances, transport costs must be carefully assessed in determining economic viability.

Legitimacy of authority. An organization representing a community's interests can only influence community behavior if the population recognizes its authority as legitimate. This legitimacy might come through democratic election of its directors or through the traditional status of its leaders, such as a chief.

Energy and commitment to natural resource management and operation of CBNRM enterprises develops only when community members believe they truly have control and management authority over resources. Land and resource tenure rights, organizational structures that are perceived to be fair and representative, and the use of a non-paternalistic development approach all contribute to this process. Sponsors need to resist the tendency to maintain the leading role, and need to progressively cede primary control of the project to the community.



Women, who collect wood, water and natural forest products, often have better knowledge of the local environment than men. Their involvement in a project can be crucial to its success, and is an important to CBNRM program management.

Genuine community participation and benefit. To achieve the dual objectives of economic development and resource conservation, communities must receive a substantial degree of control over management of the resource and use of the revenue. CBNRM experience to date demonstrates that local residents are the best positioned to manage resources sustainably and to allocate income toward development projects that serve their needs, whether this is constructing a fence to protect crops or supplementing household income in times of need. Many projects fall short of providing for genuine community participation and benefits, despite being labeled “community-based.”

Community members in rural villages are entirely capable of assessing both the conditions and the threats to their environment

and can determine appropriate actions. Their ability to do so is enhanced if they are given minimal training.

Organizational structures should not be imposed from outside . Projects should take advantage of existing organizational structures and institute operating procedures that are in harmony with local cultural and social norms. Attempts by sponsors to impose their own structures and processes will impede CBNRM efforts.

Recognize women as key CBNRM implementers. As farmers and as gatherers of wood, water and natural non-wood forest products, women may have more direct knowledge of the local environment than men. And as able entrepreneurs, they may be more likely to use extra income for health, education and general welfare, as long as they receive it directly.

Access to traditional knowledge and expertise. Community members with traditional knowledge and expertise can provide valuable insights into past and current ecological conditions. They may be in the best position to identify potentially marketable flora and fauna as well. Typically, they also know the most about the local socio-cultural context. However, this information is not always available where populations in the region have been recently relocated or internally displaced, and thus are not truly indigenous to the area. Also, traditional knowledge is lost as new generations migrate to the cities.

Good technical and capacity building assistance. Communities may need technical assistance with many different functions:

- developing applications for official recognition;
- drawing up environmental management plans;
- obtaining access to financing;
- setting up management and accounting systems;
- negotiating contracts for concessions;
- setting quotas;
- monitoring and regulating resource extraction;
- enforcement;
- or resolving internal or external disputes.

The ultimate goal is for the community to be self-sufficient

However, for a CBNRM program to be viable, some entity must supply high-quality assistance. Government agencies and local or regional NGOs often have insufficient capacity to support CBOs. For this reason most CBNRM projects have relied heavily on technical and financial assistance from international donors or aid organizations, in cooperation with the government natural resource agency or a local NGO.

Access to credit. In programs where communities or their members are encouraged to develop new resource-based enterprises (such as production of wild fruits, berries, herbs or medicinals), the availability of credit on reasonable terms is essential. Frequently, the amounts involved are small, perhaps no more than \$100 for tools and equipment. Microfinance lending programs are becoming increasingly available in Africa, but many rural populations still lack access to them and have only local moneylenders to borrow from, often at unfavorable rates.

Long-term, dependable donor/NGO funding. CBNRM projects generally take many years to develop. On the other hand, international

funding agencies' resources—and their choices of projects to support—tend to fluctuate and are often based on five-year project cycles. Sometimes local NGOs and CBOs receive too much funding, sometimes too little. When funding is suddenly and unexpectedly reduced, it erodes community confidence and seriously jeopardizes CBNRM program activities.

Mutual trust between communities and sponsors. Sponsors need to develop and express genuine respect for the knowledge, opinions, insights and decisions of the community. Communities will work with technical service personnel as equal partners if they are treated with respect and clear objectives are developed collaboratively.

Functional literacy. To operate moderately sophisticated enterprises, community members must have adequate abilities in reading, writing and calculating. Literacy and numeracy skills training is essential and needs to be integrated with CBNRM training.

Increased attention to project evaluation and independent environmental monitoring. CBNRM can provide economic benefit to local communities. Well-conceived CBNRM programs also show evidence of success in growing populations of wildlife and in managing natural forests, protected areas, fisheries and coastal zones more sustainably. Nevertheless, the impact of CBNRM programs on restoring or protecting biodiversity and ensuring long-term ecosystem stability is less clear. Evaluating results is difficult, in part because so many variables can affect both baseline conditions and program success. Some work has been devoted to developing appropriate indicators, but more attention needs to be given to actual measurement and reporting. Without adequate monitoring it is impossible to know whether a program is operating sustainably.

Challenges Facing CBNRM in Africa

- Social dysfunction within host communities
- Sudden wealth accumulation in traditionally poor communities
- Lack of technical capacity to plan, manage or monitor CBNRM projects
- Lack of community sanctioned environmental management plans
- Absence of ecological monitoring
- Community inability to control resource use by outsiders
- In-migration into a region with successful CBNRM program
- Long term, cumulative impact of population growth in CBNRM areas

What are some of the most significant challenges facing existing CBNRM programs?

Many CBNRM programs are currently encountering what could be called Phase II challenges—those that become most evident only after an initial program is in place. These challenges arise from several sources:

- varying degrees of social dysfunction within host communities;
- the sudden arrival of large amounts of money in historically poor communities with little or no capacity for managing it;
- lack of technical capacity within the community to address planning, management and monitoring issues;
- absence of community environmental management plans for extraction and/or production of non-wood forest products;
- absence of systematic ecological monitoring in most programs;
- lack of power or capacity to control resource use by outsiders;
- in-migration of people from other regions seeking to benefit from CBNRM income; and

- the long-term cumulative impact of population growth in CBNRM areas.

The solutions for some of these challenges are more evident than for others, but mechanisms for addressing all of them must be developed to create programs that provide lasting benefits to community members, while also protecting biodiversity and the integrity of natural resource systems.

Problem Area	Description	Suggested Intervention
Project Design		
Social dysfunction within host communities	Many CBNRM communities are affected by adverse social conditions that may make CBNRM results much harder to achieve. Dysfunction may stem from a variety of sources: the relative geographic isolation and poverty of the area, alcohol abuse and the high percentage of younger adults (especially men) moving away from the area. Recent resettlement of the community from other areas, economic or political instability, civil strife, war or disaster may impede or undo CBNRM efforts. As mentioned earlier, the areas best suited for CBNRM may often be located where agriculture is marginal and on land sufficiently remote from urban centers to have avoided over-exploitation. Because many younger adults leave to seek opportunities in the cities, these communities often have an unusual make-up, with larger numbers of children, women, and older people.	CBNRM may help reverse some of these destabilizing factors in communities. Where opportunities for employment improve through CBNRM, remoteness may be less of a factor influencing the decision of young adults to move away. Some CBNRM practitioners have also developed strategies for reducing alcohol abuse (T. Gujadhur 2000) and for assisting communities in restoring well-being
Vulnerability to natural and man-made disasters	Too little attention is directed to the potential effects of droughts, famines and floods, etc., on CBNRM programs. These programs are often located in areas that are especially vulnerable to climatic shocks (e.g., semi-arid woodlands and savanna, wetlands and coastal ecosystems).	Sound CBNRM program and activity design should examine the interaction between environmental pressures on ecological services and social and political realities by applying Vulnerability Assessment methodologies (see UNDP Disaster Management Training Programme, 1994). Approach interventions with caution where these assessments indicate the risk of program or project failure is high.
Continuing population growth near or within protected areas and in-migration of people seeking to benefit from CBNRM income	Population growth rates of 3 percent or more are not uncommon in CBNRM areas. These rates may be unsustainable over the long term, with increasing cumulative impacts on ecosystems and the physical environment. The creation of new infrastructure (schools, roads, health posts, market centers) may encourage an expansion of population in the CBNRM area, with increased stress on the resource base and ecological function. In situations where CBNRM produces significant community benefits, there may be population movements into the area by extended family members and other individuals who become aware of the relative improvement in economic conditions. Over the long term this in-migration, combined with increased population growth, could undo	Prepare long-term regional environmental action plans or regional environmental impact assessments (EIAs), and set "limits for acceptable use" and human carrying capacity, with full participation from affected stakeholders. Establish a system of permits, deeds or licenses for existing residents, which can be transferred or sold to outsiders. Provide families with incentives to limit family size and discourage additional in-migration. Closely link primary education, health and family planning services to income-generating CBNRM initiatives. In developing

Problem Area	Description	Suggested Intervention
	resource management efforts. This is perhaps the most serious long-term issue confronting CBNRM sustainability.	CBNRM plans, use zoning strategies to reduce potential adverse impacts of infrastructure development on sensitive areas or sites of exceptional value. Where possible, consider siting new infrastructure well away from sites of exceptional value, so as to encourage community relocation to less sensitive areas.
Potential adverse impacts from expanded extraction and/or production of non-wood forest products	Increasingly, CBNRM programs are incorporating efforts to promote the extraction or production of non-wood forest products. Technical assistance is also being provided to develop markets for these products. Marginal areas generally unsuitable for agriculture may, by contrast, support production of unusual fruits and berries, herbs, medicinals, and ornamental plants that have an appeal to western consumers for their “exotic” quality. Other potential products include insects, birds and reptiles. While potential income-generating benefits are important, there are also risks associated with extraction or commercial production of flora and fauna whose biological characteristics, ecological relationships, and effects on the biophysical environment may not be fully understood.	Support biological and ecological research for potential non-wood forest products considered for commercial extraction or production before developing markets for these products. Prepare environmental assessments for all flora and fauna under consideration for commercial production or extraction.
Project Operations		
Inequitable distribution of CBNRM benefits	This is a continuing problem, not only with resource flows down to communities, but also from CBNRM governing bodies within communities to individual households and farmers.	Continuing efforts are needed to inculcate principles of local democracy and governance at all levels—from local community to the management of national programs. It is probably easier to ensure accountability at the local level. However, improving the status of women requires emphasis on changes in social and political environments at the national level, especially through programs promoting the education of women and girls.
Inadequate community experience managing	Embezzlement and mismanagement of CBNRM income are risks that project managers have not yet fully addressed. When CBNRM works, communities may suddenly find themselves in possession of much larger sums of money than they have handled in the past. The	Some CBNRM communities have received assistance in building their own capacity to manage money or to set up protocols that prevent any single individual from having control of large sums (see box on

Problem Area	Description	Suggested Intervention
funds generated through CBNRM	community may have no experience managing such sums, or have little capacity to do so. These sums can be exceptionally large relative to the average income of community members. The temptation to embezzle is therefore large for anyone given exclusive control over some or all of these funds. The absence of experience managing money often makes theft easier. When community money is stolen it undermines confidence in the CBNRM system.	“Keeping the community’s money safe”). In many cases guidance and training in secure financial management is still needed.
Internal conflict at the local level	Where resource management involves decision-making among diverse ethnic or social groups—for example, within a large geographic area—efforts to reach consensus may become protracted and in some cases lead to open conflict.	Apply Vulnerability and Conflict Prevention Assessment methodologies to prevent or mediate conflicts. (see Warner, 2000).
A need for technical assistance	Poor management of earned income is only one example of the problems associated with a lack of ongoing technical assistance. Help may be needed in a variety of areas, including planning; organizational management; legal and financial management; entrepreneurship/enterprise building; contract negotiation; resource monitoring; regulation of resource extraction (including wildlife), and enforcement. In many cases, one or more important type of assistance is not provided or not sustained. Social dysfunction may also undermine these efforts. In addition, community members who have been trained for the purpose of providing local capacity often move to more urban areas where their new skills can earn more and the quality of life is considered better.	Technical assistance is needed at almost every stage, from legal incorporation, to developing a business plan, to evaluating results. Presently, most of this assistance is provided by government agencies and international NGOs at levels that would not be sustainable if the programs were expanded beyond pilot areas. The most stable and potentially sustainable CBNRM programs are typically those that receive extensive ongoing technical assistance. Such assistance is very expensive and has for the most part been paid for by national governments or donor agencies. If continuing assistance is essential, then the economic viability of CBNRM must be reevaluated, a task which means including expenditures on technical assistance as direct program costs. Whether CBNRM will appear a reasonable longer-term investment in this light remains to be demonstrated. Certainly, donor agencies do not have sufficient capital to support expanding CBNRM activities to all theoretically viable locations. Will the income generated by programs eventually be sufficient to pay for the continuing need for technical assistance services? Will the financial return to the communities be large enough for

Problem Area	Description	Suggested Intervention
		communities to pursue CBNRM approaches after donor or government assistance ends? These questions deserve greater attention in program design.
Little genuine ecological monitoring	The only way to determine whether a CBNRM project is achieving its goals of sustainable exploitation/resource conservation is to periodically monitor the state of exploited resources and levels of exploitation. Ecological monitoring is almost invariably resource-intensive and requires some expertise to carry out. A significant amount of theoretical work has been done on the question of how best to measure ecosystem health and monitor specific natural resources, yet little genuine ecological monitoring is taking place. Although there are exceptions to this trend (e.g., Kakumbi Natural Resources Management Business), CBNRM program sponsors bear some responsibility for the lack of monitoring. National and regional governments are failing to establish and coordinate comprehensive national programs or to ensure that the necessary but capital-intensive and/or scientifically advanced types of monitoring are being employed. Remote sensing of vegetative cover with satellites or aircraft can be extremely useful, but must be matched by monitoring on the ground. Monitoring must track the rate at which exploitation is actually occurring—i.e., number and types of animals harvested and changes in biodiversity. Too little capital investment and inadequate institutional capacity contribute significantly to the poor ecological monitoring by both governments and CBNRM projects. Local residents can be trained to collect many types of data, but generally lack the expertise to design the program or analyze the collected information.	Provide a well-structured plan for the design and coordination of ecological and resource monitoring. Drawing on indigenous knowledge on sustainable yields and harvesting techniques may provide useful proxy measurements without necessarily incorporating more costly scientific monitoring.
Lack of power to control resource use by outsiders.	Monitoring data showing a decline in diversity and/or abundance of exploited animals or plants does not necessarily indicate that a project has set quota limits too high. It could also be an indication of unauthorized resource use. Communities in many cases lack the authority or means to prevent outsiders from poaching, illegally harvesting timber or carrying out similar activities. They may also have insufficient resources for policing purposes.	In some locations community members are provided with guns and trained in their use. This has deterred poaching, but may result in excessive emphasis on enforcement, and raises questions regarding the use of weapons by community groups for management purposes.

Guided questions

These questions are not all-inclusive, but can be helpful in CBNRM program design and implementation. Program designers and implementers are advised to systematically address each question that does not receive a “yes” answer.

Assessing enabling conditions

1. Do communities have ownership control over natural resources (e.g., wildlife and forest products) in the host country?
 - a. Do they have, or can they gain, complete control over use and revenue from more than one resource?
 - b. Is tenure secure? Is it permanent (or only for a limited time)?
2. Is there an official process for establishing CBNRM projects?
 - a. Do all levels of government, donor agencies, NGOs, community-based organizations (CBOs) and the private sector have clearly defined roles in the process?
 - b. Are the rights and responsibilities of each party clearly defined?
3. Is the CBO free to create a legally recognized entity?
 - a. Can it define who is a member?
 - b. Can it define its own boundaries? Is there a mechanism for resolving boundary disputes with neighboring communities?
 - c. Is it empowered to exclude or license outsiders who might be attracted by the resource or potential income from it?
4. Will the community receive most of the income from project-related enterprises?
 - a. Has a democratic mechanism for distributing income been established?
 - b. Has a system been put in place to ensure the security of communal funds and provide for equitable distribution through community-led processes?
5. Has control over NRM been devolved from the national to the regional or local level?
 - a. Has the community been given a large degree of control over natural resource planning and management?
 - b. Do district representatives of the national natural resource agency have authority to make decisions if consulted?

6. Is the government's bureaucracy efficient?
 - a. Does the natural resource agency have enough qualified staff?
 - b. Can program be established and maintained without interference from corruption?
7. Has a national survey been conducted to identify the most valuable and ecologically viable areas?
8. Is the tourism industry working closely with the government at the national and district level to develop long-term plans for sustainable management of tourism assets?
9. Are policies and standards in place to encourage and ensure equitable joint ventures between communities and companies doing tourism and safaris?
10. For proposed enterprises, will the primary initial source of revenue generate enough income to support sustainable and profitable CBNRM without outside donor support? Will there be meaningful benefit to the community?
 - a. Are market incentives sufficient? Are they stable?
 - b. Are market reforms needed? If, so what are the prospects for adoption?
 - c. Does the community have access to commercial credit for the initial enterprise or to finance any additional entrepreneurial activities?
 - d. Are markets sufficiently accessible during the seasons the enterprise(s) will be operating?
 - e. Have business plans been prepared to identify income, costs, potential market volatility, social and environmental impacts, etc.?
11. Are natural resource monitoring programs effectively tracking rates of natural resource use (e.g., for forests, wildlife, other flora and fauna)?
12. Does the government, donor agency, or international or local NGO have the resources to provide necessary technical assistance? Have long-term commitments been secured from sponsors to ensure that funding gaps do not jeopardize the project?

Initiating a program

12. Has the community established a representative organization whose authority is recognized?
 - a. Does the organization rely on customary authority, such as a chief, or on the authority of democratically elected representatives?

- b. Are women equal and active participants in the organization?
 - c. Is the community socially viable?
 - d. Is the community free of internal conflicts over resources or management? Free of conflicts with neighboring communities?
- 13. Do community members have a strong sense of project ownership?
 - a. Do they participate as equal partners in project development activities?
 - b. Is their traditional knowledge and advice sought out?
- 14. Do the community, NGO, donor and government have complementary objectives?
- 15. Have sponsors prepared a capacity-building plan in close collaboration with community members?
 - a. Will they be taught to read, write and calculate if they lack these skills?
 - b. Will they receive organizational skills training?
 - c. Will they receive program-related job training?
 - d. Will they be given entrepreneurial training?
 - e. Will they receive training in contract development and negotiation?
 - f. Will they receive training in bookkeeping?
 - g. Will they be taught how to access information and technology? Will they be provided with a means of doing so?
 - h. Will they be trained in impact assessment, environmentally sound design and “best practices?”
- 16. Has a capacity-building plan been prepared for local NGOs?
 - a. Will they be trained to “train trainers”?
 - b. Will they be given adequate budgets to support technical assistance services?
- 17. Do sponsors plan any capacity building with government agencies?

Project Implementation

- 18. Is a plan for ecological monitoring of resource use in place?
 - a. Has a baseline study assessing the distribution, abundance, and diversity of the natural resource base been conducted?

- b. Will resource monitors receive training and equipment?
 - c. Are resources being used on a sustainable basis? Is effective ecological and resource use monitoring occurring? Are quotas and extraction rates for fauna and flora being tracked?
 - d. Are the responsibilities for monitoring clearly defined?
 - e. Will communities receive instruction in enforcement and be provided with necessary equipment?
19. Are communities and sponsors addressing population growth in the area?
- a. Is population growth being tracked? Birth rates? Death rates? In-migration rates and sources? Out-migration rates and reasons?
 - b. Are primary education, health and family planning services closely linked to income-generating CBNRM initiatives?
 - c. Is a community-based plan to establish “limits of acceptable use” or human carrying capacity in the CBNRM area in place?
 - d. Does this plan include “zoning” for new infrastructure (roads, schools, health posts, water points, etc.) to reduce impacts on sites of exceptional value and to encourage community relocation to less sensitive areas?
 - e. Are cumulative environmental impacts being tracked?
 - f. Is there community commitment to implementing the plan?
 - g. Is a system of permits, licenses or fees in place to limit in-migration?
 - h. Are incentives in place to encourage limitations on family size?

Monitoring project or activity results

- 2. Has a satisfactory CBNRM plan been developed?
 - a. Did the community participate fully in development of the plan?
 - b. Does the plan cover more than one resource?
 - c. Has the national natural resource agency reviewed the plan (if necessary)?
 - d. Has the plan been reviewed by independent academic, donor, or NGO experts?
 - e. Is the community satisfied with the plan? Do they regard it as their plan?

- f. Are mechanisms in place to ensure annual independent review of the plan's effectiveness, and for systematic follow-up?
- g. Have targets and indicators to track progress been developed?
- h. Is a system in place to track progress?
- i. Has an analysis of historical baseline conditions been conducted? Have alternatives, including the no-action alternative, and their consequences 20 years hence been analyzed?
- j. Are responsibilities for plan implementation and monitoring clearly defined?

ENVIRONMENTAL SCREENING:

Links Between Proposed Activities and the Environmental and Cultural Resources of Activity/Enterprise Area⁴

This environmental screening form is intended to address community-based NRM and ecotourism environmental issues more directly. It is to be used in conjunction with the Environmental Screening Form/Report promulgated by USAID's Africa Bureau ENCAP program. The form is oriented around major resource/issue clusters and asks "leading questions" to help guide a systematic review of potential environmental impacts affecting CBNRM and ecotourism interventions. *Suggestions and input are requested to help develop this form further. It is intended to be a "living" document subject to adaptation.*

Review the questions that follow. If a question could justify a "yes" then an environmental review report (3-5 pages, typically) is needed to explain and describe the intended activity, as well as the mitigation steps that are planned.

Chapter 3. Will the activities...	YES	NO
<i>Natural Resources</i>		
accelerate erosion by water or wind?		
reduce soil fertility and/or permeability?		
alter existing stream flow or reduce seasonal availability of water resources?		
potentially contaminate surface water and groundwater supplies?		
involve the extraction of renewable natural resources?		
involve the extraction of non-renewable natural resources?		
restrict customary access to natural resources?		
reduce local air quality through dust generation, burning of wastes, or use of fossil fuels and other materials in improperly ventilated areas?		
affect dry-season grazing areas and/or lead to restricted access to a common resource?		
<i>Ecosystems and Biodiversity</i>		
drain wetlands, or be sited on flood plains?		
harvest wetland plant materials or use sediments from bodies of water?		
lead to the clearing of forestlands for agriculture or to the over-harvesting of valuable forest species?		
Promote in-forest beekeeping?		

⁴ This form is inspired by the format used by the COMPASS Grants Manual, USAID/Malawi CBNRM program.

lead to increased hunting, or the collection of animals or plant materials?		
increase risks to endangered or threatened species?		
introduce new exotic species of plants or animals to the area?		
lead to road construction or rehabilitation, or otherwise facilitate access to fragile areas (natural woodlands, wetlands, erosion-prone areas)?		
alter relatively undegraded tropical forest?		
<i>Agricultural and Forestry Production</i>		
have an impact on existing or traditional agricultural production systems by reducing seed availability or reallocating land for other purposes?		
lead to a reduction in fallow periods, the burning of pastureland, or the harvest of forest plantations without replanting?		
affect normal levels of food storage by reducing food inventories or encouraging the incidence of pests?		
affect domestic livestock by reducing grazing areas, or creating conditions that could exacerbate livestock disease problems?		
involve the use of pesticides?		
<i>Community and Social Issues</i>		
have an adverse impact on potable water supplies?		
encourage domestic animals to migrate through natural areas?		
change the existing land tenure system?		
have an adverse impact on culturally important sites in the community?		
disturb or reduce the value of archeologic or historic sites?		
adversely affect scenic values or viewsheds?		
increase in-migration to the area, placing a potential strain on the existing natural resource base?		
lead to the generation of non-biodegradable waste?		
create conditions harmful to community health?		
contribute to the spread of HIV/AIDs?		

COMPARATIVE FRAMEWORK FOR COMMUNITY-BASED NATURAL RESOURCES MANAGEMENT

Key Parameters for Wildlife and Tourism-Based CBNRM

prepared by Candace Buzzard for GTZ September 2001⁵

	COUNTRY & STATUS						
1. NATURAL RESOURCES							
1.1 LAND USE CONSIDERATIONS FOR WILDLIFE AND TOURISM-BASED CBNRM							
PARAMETER	Uganda	Botswana	Namibia	Kenya	Tanzania	Zimbabwe	Malawi
Land area *	Total: 236,040 sq km Land: 199,710 sq km Water: 36,330 sq km	Total: 600,370 sq km Land: 585,370 sq km Water: 15,000 sq km	Total: 825,418 sq km Land: 825,418 sq km Water: 0 sq km	Total: 582,650 sq km Land: 569,250 sq km Water: 13,400 sq km	Total: 945,087 sq km Land: 886,037 sq km Water: 59,050 sq km	Total: 390,580 sq km Land: 386,670 sq km Water: 3,910 sq km	Total: 118,480 sq km Land: 94,080 sq km Water: 24,400 sq km
People-to-land ratio*(excludes water)	116 people/sq km	2.6 people/sq km	2.2 people/sq km	53.3 people/sq km	39.8 people/sq km	29.3 people/sq km	110.4 people/sq km
Land use *	Arable land: 25% Permanent crops: 9% Permanent pastures: 9% Forests and woodland: 28% Other: 29% (1993 est.)	Arable land: 1% Permanent crops: 0% Permanent pastures: 46% Forests and woodland: 47% Other: 6% (1993 est.)	Arable land: 1% Permanent crops: 0% Permanent pastures: 46% Forests and woodland: 22% Other: 31% (1993 est.)	Arable land: 7% Permanent crops: 1% Permanent pastures: 37% Forests and woodland: 30% Other: 25% (1993 est.)	Arable land: 3% Permanent crops: 1% Permanent pastures: 40% Forests and woodland: 38% Other: 18%	Arable land: 7% Permanent crops: 0% Permanent pastures: 13% Forests and woodland: 23% Other: 57%	Arable land: 34% Permanent crops: 0% Permanent pastures: 20% Forests and woodland: 39% Other: 7% (1993 est.)
Wildlife considerations	Wildlife suffered major decline during Amin/Obote era and numbers still very low Restricted mainly to National Parks and Reserves	Large populations of wildlife both in and outside protected areas (PAs) Many big mammals and predators Wildlife present on community lands	Large populations of wildlife both in and outside PAs Many big mammals and predators Wildlife present on community lands	Large populations of wildlife both in and outside PAs Many big mammals and predators Wildlife present on community lands	Large populations of wildlife both in and outside PAs Many big mammals and predators Wildlife is migratory	Large populations of wildlife both in and outside PAs Many big mammals and predators Wildlife is migratory	Wildlife restricted mainly to national parks and reserves Wildlife numbers low compared to historical numbers Poaching

⁵ Buzzard, Candace. *Community-Based Natural Resources Management (CBNRM) in Uganda: A Review of the National Enabling Framework and Comparison with Other African Countries*. Published by GTZ/UWA, Kampala, Uganda. September 2001.

	<p>Half the world's population of mountain gorillas; chimpanzees and other primates in forests; savannah areas with wildlife</p> <p>Indigenous fish in lakes and rivers; tremendous variety and numbers of birds</p> <p>Habitat destruction is major threat; poaching rampant</p>	<p>community lands</p> <p>Large elephant population (over 100,000)</p> <p>Indigenous fish in Okavango delta and rivers</p> <p>Livestock disease fences restrict wildlife migrations</p>	<p>Many desert adapted species</p> <p>Birds</p>	<p>Famous wildlife migrations</p> <p>Poaching</p>	<p>Selous area has reportedly the highest concentrations of elephants in the world</p> <p>Destruction of coral reefs affecting marine life</p>	<p>Reportedly 16,000 elephants on community lands</p> <p>Birds</p> <p>Black rhino significantly reduced by poaching</p>	<p>Lake Malawi—39% of all the freshwater species of fish in the world</p> <p>Birds</p>
Agricultural considerations	<p>Agriculture 44% GDP:</p> <p>Tropical climate with two rainy seasons</p> <p>Some highly productive lands for crops; increasing use of marginal agricultural lands</p> <p>Soil fertility declining</p> <p>Deforestation; conversion of forest and wildlife habitat to agricultural lands</p>	<p>Agriculture 4% GDP:</p> <p>Semi-arid and marginal land for crop agriculture in most of the country</p> <p>Low rainfall</p> <p>Livestock diseases and pests present challenges</p> <p>Recurring droughts</p> <p>Overgrazing; desertification</p>	<p>Agriculture 12% GDP:</p> <p>Desert, hot, dry</p> <p>Rainfall sparse and erratic</p> <p>Marginal land for crop agriculture</p> <p>Large livestock ranches</p> <p>Increasing game ranching</p> <p>Very limited fresh water; desertification occurring</p>	<p>Agriculture 26% GDP:</p> <p>Climate varies from tropical on coast to arid inland</p> <p>Degradation of water quality from increased use of pesticides and fertilizers</p> <p>Deforestation</p> <p>Soil erosion</p> <p>Desertification</p>	<p>Agriculture 49% GDP:</p> <p>Country heavily dependent on agriculture— it provides 85% of exports</p> <p>4% of country has suitable topography and climate for cultivated crops</p> <p>Climate varies from tropical on coast to arid inland</p> <p>Many areas suited to wildlife/livestock</p> <p>Soil degradation, deforestation, desertification</p> <p>Recent droughts have affected marginal agriculture</p>	<p>Agriculture 28% GDP:</p> <p>Agricultural products: corn, cotton, tobacco, wheat, coffee, sugarcane, livestock; game</p> <p>Soil erosion, land degradation, deforestation occurring</p> <p>Some livestock ranches being converted to game farms</p>	<p>Agriculture 37% GDP: (1998 est. for Malawi)</p> <p>Some very productive agricultural lands</p> <p>Water pollution from agricultural runoff and sewage</p> <p>Conversion of forests to agricultural land</p> <p>Soil erosion and decreasing fertility</p> <p>Deforestation occurring at a rapid pace</p>
Natural features/scenic attractions (tourism basis)	<p>Many scenic and cultural attractions:</p> <p>Great Lakes; Albertine Rift Valley; Rwenzori Mountains; Mt. Elgon; Lake Victoria; Nile River</p> <p>Murchison Falls</p>	<p>Many natural features and attractions:</p> <p>Okavango inland delta</p> <p>Chobe River; thousands of elephants during the dry season</p> <p>Kalahari Desert is home to the Bushman</p>	<p>Many natural features and attractions:</p> <p>Namib desert and sand dunes</p> <p>Etosha and other wilderness areas</p> <p>Coast</p>	<p>Many scenic and cultural attractions:</p> <p>Masai Mara, Serengeti; famous wildlife migrations</p> <p>Lake Victoria</p> <p>Mt. Kenya</p>	<p>Many scenic and cultural attractions:</p> <p>Serengeti; world-famous wildlife migrations:</p> <p>Ngorogoro Crater</p> <p>Kilimanjaro</p>	<p>Many scenic and cultural attractions:</p> <p>Victoria Falls; wildlife viewing in parks</p> <p>Zambezi River and Lake Kariba</p> <p>Great Zimbabwe ruins</p>	<p>Scenic and cultural attractions:</p> <p>Lake Malawi is major attraction</p> <p>Wildlife</p> <p>Mountains</p>

	Bwindi Impenetrable Forest (gorillas) Mgahinga National Park (gorillas) Variety of landscapes	home to the Bushman True wilderness opportunities		Rift Valley Coast	Selous - highest density of elephants in the world Coastal attractions Island of Zanzibar		
1.2 NATURAL RESOURCES MONITORING & MANAGEMENT							
PARAMETER	Uganda	Botswana	Namibia	Kenya	Tanzania	Zimbabwe	Malawi
Monitoring and management of wildlife by communities	Community monitoring systems not in place M&E plan for districts/sub-districts is in planning stage	In some areas Resource monitors are employed by CBOs to monitor hunting and ecotourism activities More comprehensive pilot community wildlife monitoring and veld monitoring systems are in place in only a few areas	In some areas Community game guards hired by conservancies to monitor and protect wildlife and gather info on poaching Community Resource Monitors monitor natural resources utilization and use of thatch, basket grass, etc., for crafts and other conservancy uses	In very few areas Community monitoring employed on individual project basis	In very few areas Village game scouts undertake patrol activities, report on natural resource utilization encountered in patrols, apprehend poachers, hunt for meat for village, accompany tourist hunters, prevent or control bush fires	In some areas Community involved in monitoring and quota setting under CAMPFIRE Zimtrust facilitates POMS (Process Oriented Monitoring System) by communities Communities trained in quota setting, monitoring, etc. and facilitated by World Wildlife Fund (WWF)	In some areas Community monitoring activities outlined in individual management agreements

Monitoring and management of wildlife by government and NGOs	Government monitors and surveys some natural resources (NR) Uganda Wildlife Authority (UWA) ranger-based monitoring system; UWA Management Information System (MIST) Forestry	Wildlife surveys, including aerial surveys by Department of Wildlife and Natural Parks (DWNP); BRIMP integrated database DWNP does not allow community input into wildlife quota setting at this point DWNP and Agricultural Resources Board (ARB) assist in initiating and analyzing pilot wildlife/veld monitoring systems Several NGOs and private sector monitor wildlife, esp. predators and trophy animals	Government monitors and surveys some NR NGOs	Government monitors and surveys some NR NGOs, African Wildlife Foundation, WWF, IUCN, others	Government monitors and surveys some NR Tanzania National Parks Authority (TANAPA) – wildlife inside national parks Wildlife Division wildlife outside of parks NGOs, WWF, AWF World Resources Institute	Zimtrust facilitates the POMS WWF support to CAMPFIRE, producing manuals and toolkits for communities, e.g., <i>Quota Setting, Counting Wild Animals, Managing Safari Hunting</i> , etc. WWF provides ecological, wildlife (aerial censuses) and economic information to communities and organizations	Government monitors and surveys wildlife NATURE program Southern African Development Community technical coordinating units headquartered in Malawi for Fisheries, Forestry and Wildlife - undertake monitoring
Research on natural resources	Ongoing	Ongoing	Ongoing	Ongoing	Ongoing	Ongoing	Ongoing
Environmental impact of CBNRM activities assessed	Not yet	In some cases	In some cases	In some cases	In some cases	In some cases	In some cases

2. POLICY AND LEGAL BASIS FOR CBNRM

PARAMETER	Uganda	Botswana	Namibia	Kenya	Tanzania	Zimbabwe	Malawi
Policies and legislation important to CBNRM	National Environment Policy 1994 National Environment Statute 1995 Local Governments Act 1997 Land Act 1998 Wildlife Statutes 1996 Wildlife Policy 1995 Wildlife Policy 1999 Forestry Policy 2000	Constitution 1966 Forest Act 1968 Tribal Land Act 1970 (amended 1993) Herbage Preservation (Prevention of Fires) Act 1977 Wildlife Conservation Policy 1986 National Conservation Strategy 1990	Nature Conservation Amendment Act 1996 Amendment of 1975 Regulations relating to Nature Conservation Wildlife Management, Utilization and Tourism in Communal Areas 1995 Promotion of Community-Based Tourism 1995		National Wildlife Policy 1997 Land and Villages Act 1999 Wildlife Conservation Act 1974 Wildlife Division maintains ownership of wildlife Legislation and guidelines still lacking	1975 Wild Life Act amended in 1992 to grant Appropriate Authority (AA) over wildlife to Rural District Councils (RDCs)(formerly accorded only to private farmers on their land)	National Parks and Wildlife Act 1992 National Parks and Wildlife (Amendment) Bill 1998 Wildlife Policy 2000 Forest Policy 1996 Forestry Act 1997 Environment Management 1996 Fisheries Conservation

	Wetlands Policy 2000	Tourism Policy 1990 Wildlife Conservation and National Parks Act 1992 Tourism Act 1992 Community-Based Strategy for Rural Development Community Wildlife Offtake Policy (DWNP)					and Management Act 1997
Basis for community ownership or control over wildlife	Wildlife Statute 1996	Wildlife Conservation Policy 1986 Wildlife Conservation and National Parks Act 1992	Nature Conservation Amendment Act 1996 (makes provision for communal area conservancies)		The Wildlife Policy 1997 authorizes communities to establish Wildlife Management Areas (WMAs) and to develop plans to govern management and use of wildlife in those areas	1982 Wildlife Act	1998 NP and Wildlife Bill (amendment of 1992) authorizes the director to enter into management agreements with CBOs Wildlife Policy 2000 establishes community role
Basis for CBOs to earn income/benefits from resource use; to enter partnerships with private sector for resources use	Wildlife Statute 1996	Wildlife policies; Joint Venture Guidelines (Note: New attempts by government to reverse earlier policies away from community empowerment)	Wildlife Management, Utilization and Tourism in Communal Areas Policy 1995 Promotion of Community-Based Tourism 1995		Wildlife Policy 1997	1982 Wildlife Act 1991 Guidelines for the Use and Allocation of Wildlife Revenues by districts 1991 Guidelines paid 50% to producer communities, up to 35% to be used for wildlife mgmt, up to 15% to RDC 1992 Guidelines increased community percentage to 80% 1996 Joint statement from Ministry of Environment and Tourism (MET) and Ministry of Local Government, Rural and Urban Development (MLGRUD) said Rural District Councils	Revenue sharing provided by Wildlife Policy 2000

						(RDCs) not held to any specific distribution plan	
Security of community resource tenure (e.g., wildlife)	Must be negotiated on a case-by-case basis.	15 years; for joint venture partnership arrangements, 1 yr., 1 yr., 3 yr., then 5 years	Variable	Variable	Variable	Fairly secure	Variable; depends on agreements
Important pending policies/legislation Policy/legislative gaps and problems	Forestry Act pending Tourism policy needed; updated wildlife policies and guidelines needed	CBNRM policy pending Botswana National Forest Policy Game ranching policy and Regulations National Park and CBNRM policy stalled with Cabinet	Land Act Land Tenure		WMA guidelines Government has not yet provided guidelines to facilitate and legalize WMAs[—urgently needed	Communal Lands Forest Act 1928 (amended 1984) and the Forest Act 1948 (amended 1982)—does not recognize rights of rural communities—needs update	Wildlife Act needs revision—currently in process Policy implementation difficult and slow
3. INSTITUTIONAL FRAMEWORK FOR CBNRM							
3.1 COMMUNITY INSTITUTIONS							
PARAMETER	Uganda	Botswana	Namibia	Kenya	Tanzania	Zimbabwe	Malawi
Community awareness of wildlife- and tourism-based CBNRM	Low	High	High	Medium	Medium	High	Medium
Capacity at community level	Poor	Limited	Limited	Limited	Limited	Limited	Poor
Community-based organizations (CBOs) are in place	Few CBOs involved in CBNRM Mainly specialty CBOs: women's groups, burial societies, farmers groups, some crafts	12 CBOs formally awarded wildlife rights Over 30 CBOs/trusts involved in CBNRM Community organizations legally recognized with power to sign contracts with joint venture or other private sector partners	14 conservancies formally recognized 35 more in process		CBOs organized and in place, awaiting WMA guidelines Village natural resources committee formulates by-laws, keeps record, supervises hunting activities, prepares village land-use guidelines, coordinates between village and district; supervises and coordinates patrol activities	37 wards involved in CAMFIRE; 37 RDAs awarded Appropriate Authority (AA) (out of a total 57)	Many CBOs with varying levels of organizational and institutional capacity

					Village Forest Committees lead community forest management		
CBOs have acquired wildlife resource rights over a legally defined and demarcated community area, recognized by government	No	Yes: Approx. 12 CBOs have been awarded wildlife quotas on their lands Others are utilizing and marketing veld products, i.e. phane caterpillars, devil's claw, marula fruit, etc.	Yes: Conservancies have wildlife rights and tourism rights		Yes: WMAs mobilized and awaiting legislation to finalize establishment Village Natural Resources Committees recognized 6 villages ready to seek WMA approval under Partnership Options for Resources Use Innovations Project (PORI)	Yes: Legal wildlife rights remain with the RDCs—not yet devolved to communities	Few in wildlife
Capacity at community level for tourism, wildlife-based enterprise	Low Need for training and awareness building	Limited Many CBOs trained in leadership, organization, financial record-keeping, empowerment, tender guidelines, ecological monitoring techniques	Limited Many conservancy members trained in conservancy concept, project implementation training, environmental education, small enterprise	Limited Some communities trained	Limited Training planned by govt. in development of Community Natural Resources Management Plans and for development of WMA plans Training in Natural Resources-based enterprise development; school and community outreach; and environmental awareness	Limited Much training has taken place; need for more general accounting, quota setting and enterprise development skills	Limited Training under donor projects and NGOs is underway
CBOs involved in CBNRM represent population within defined geographic areas	Few CBOs involved in CBNRM; generally population subset	Yes, in most cases	Yes Register of names that defines members of a conservancy	Variable	Yes, in many cases	Yes	In some cases, but generally subset

3.2 GOVERNMENT SUPPORT TO CBNRM							
PARAMETER	Uganda	Botswana	Namibia	Kenya	Tanzania	Zimbabwe	Malawi
Decentralization/ Devolution of powers	Yes, some powers to District and Local Govt	Yes, some powers	Yes, some powers	In process	In process	Yes, some powers	In process
Local government understands role in CBNRM and is a supportive partner	Learning new roles; local government prepared to assist CBNRM	Local government members are trained and supportive of wildlife-based CBNRM in certain areas	Role of local govt well understood in certain areas; Involved and supportive	In process; community-govt relationships being developed	In process; Community - Based Conservation (CBC) at early stage of development, communities are keen to get involved	Role of local government generally well understood in CAMPFIRE areas	In process; learning new roles
National-level support to CBNRM	Lack of coordinated CBNRM support at national level; UWA works with communities on PA issues; districts assuming new role in CBNRM; no national strategy	National CBNRM forum: Ministries of Agriculture, Wildlife, and Tourism; others participate; DWNP staff take CBNRM course at wildlife training college; familiar with and supportive of CBNRM Government-funded community Conservation Fund provides grants to CBOs for CBNRM activities; Agricultural Resources Board (ARB) active in CBNRM for veld products.	Ministry of Environment and Tourism responsible for CBNRM; contains Directorates of Environmental Affairs (DEA), Resources Mgmt (DRM), Forestry (DoF) and Tourism (DoT) DoT employs a community-based tourism officer who liaises w/ communities;	Kenya Wildlife Service Wildlife Forum	TANAPA created Community Conservation Services Program Wildlife Division CBC program	Active Collaborative Group DWNP within MET MET provides AA to communities under CAMPFIRE District Environmental Action Planning (DEAP) initiated that works w/ communities to tackle most pressing environmental problems DWNP participates in the Collaborative Group	Proposed National Coordinating Body for CBNRM Forestry Dept w/in Min of Natural Resources and Env. Affairs has forest extension agents and forest guards at community level DNPW under policy amendment, can assist communities, encourage local govt to provide extension, enter wildlife mgmt agreements
Local/District government services that support CBNRM accessible to communities	New local govt services are being developed	Yes; CBOs have access to technical expertise of DWNP, Land Board, local government and other govt institutions DWNP assists communities to organize and to obtain quota	Yes DEA publicizes CBNRM at local levels and provides the "Toolbox" with information and instructions on how to form a conservancy DRM awards wildlife	Yes	Yes Conservation Services Program within TANAPA provides services and training to communities Wildlife Division implements Community-Based	Yes District and Wards are primary players RDCs and Ministry negotiate joint venture contracts with safari operators; communities have limited input	Yes Local govt encouraged to provide wildlife extension under new policy Forestry extension workers in place

		<p>quota</p> <p>District Land Board awards leases</p> <p>DWNP awards quotas and provides problem animal control</p> <p>Community Conservation Fund (DWNP), about \$4 million from 1997 to 2001, can fund mobilization, CBO formation, CBO activities, etc.</p>	<p>quotas, provides Problem Animal Control</p>		<p>Conservation CBC</p> <p>District Steering Committee (chairperson is District Executive Director plus various stakeholders) recommends quota. Coordinate CBNRM activities in district, establish arbitration panel for conflicts</p>		
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3.3 NGO SUPPORT TO CBNRM

PARAMETER	Uganda	Botswana	Namibia	Kenya	Tanzania	Zimbabwe	Malawi
NGOs provide support, advocacy, training, services to CBOs	<p>Few Uganda NGOs work at community level:</p> <p>Advocates Coalition for Development and Environment (ACODE) provides advocacy and legal advice</p> <p>Uganda Community Tourism Association (UCOTA)</p> <p>Promotion of Rural Initiatives and Development Enterprises (PRIDE)</p> <p>Heritage Trails</p> <p>Uganda Wildlife Society</p> <p>Some international NGOs: CARE, IUCN, AWF, International Gorilla Conservation Project (IGCP), Wildlife Conservation Society (WCS)</p>	<p>Several NGOs provide technical, financial, legal and mobilization support to CBOs:</p> <p>BOCOBONET—national NGO w/ CBO members, CBNRM advocacy and training, started 1998</p> <p>People and Nature Trust</p> <p>Thusano Lefatseng</p> <p>Botswana Craft</p> <p>Kalahari Conservation Society</p> <p>Hotel and Tourist Association of Botswana (HATAB)</p> <p>Conservation International</p> <p>Chobe Wildlife Trust others</p> <p>IUCN/SNV CBNRM Support Program</p>	<p>Several strong NGO support providers:</p> <p>CBNRM Assoc. of Namibia (CAN)</p> <p>Namibia NGO forum (NANGOF) manages the Secretariat of the national CBNRM association</p> <p>Namibia Nature Foundation (NNF)</p> <p>Integrated Rural Development & Nature Conservation (IRDNC) provides capacity—building, services, networking visits to communities, and advanced services</p> <p>Nyae Nyae Development Foundation supports CBO in NE Namibia assists w/ tender negotiations and investment strategies</p>	<p>Several NGOs provide support:</p> <p>AWF facilitates services to communities: training, financial management, small enterprise development, etc.</p>	<p>Several NGOs provide support:</p> <p>AWF</p> <p>Africare</p> <p>GreenCom</p> <p>Sokoine University of Agriculture/ Tuskegee University (SUA/TU)</p> <p>Inyuat e Maa (IeM) (local NGO in Tarangire/Manyara area)</p> <p>Mazingira Bora Karatu</p>	<p>Several strong NGOs provide support:</p> <p>CAMPFIRE Association represents producer communities of RDCs with AA, and chairs CAMPFIRE Collaborative group</p> <p>Zimbabwe Trust, Institutional Development Unit, promotes CBNRM through mobilization and establishment of community institutions</p> <p>SAFIRE—promotes diversification and integration of CBNRM (DANIDA)</p> <p>African Resources Trust (ART)</p> <p>Center for Applied Social Sciences (CASS)</p>	<p>CURE is NGO umbrella organization, with 50 NGOs; approx. 12 member NGOs use CBNRM approach**</p>

	Society (WCS)	Support Program	NACOBTA provides business marketing and training to CB tourism operators, over 40 members pay for services Rossing Foundation—training & education for small farmers & crafts producers				
NGOs provide marketing or other linkages for CBO products, services	Some UCOTA provides marketing for tourism establishments and crafts	Some Thusano Lefatseng assists veld product marketing BOCOBONET assists linkages for all member CBOs Botswana Craft markets crafts/curios locally and internationally	Some Rossing Foundation—provides product development marketing and institutional support to crafts producers NACOBTA provides tourism linkages Others	Some AWF assists with community–private sector linkages for butterfly farming, tourism, etc.	Some AWF assists with community–private sector linkages WWF	Several NGOs assist	Some CURE assists linkages of member organizations

3.4 PRIVATE SECTOR LINKAGES TO COMMUNITIES

PARAMETER	Uganda	Botswana	Namibia	Kenya	Tanzania	Zimbabwe	Malawi
Economic opportunity & marketing linkages between CBOs and private sector	Few linkages	Partnerships present for wildlife/tourism	Partnerships present for wildlife/tourism	Partnerships present for wildlife/tourism	Partnerships pending or present for wildlife/tourism	Partnerships present for wildlife/tourism Joint venture partnerships undertaken by RDCs on behalf of communities	Few partnership s
CBOs use private sector services (financial, auditing, marketing, design, etc.)	Very little	Some	Some	Some	Some	Some	Some

3.5 DONOR SUPPORT TO CBNRM

PARAMETER	Uganda	Botswana	Namibia	Kenya	Tanzania	Zimbabwe	Malawi
Current donor	Yes	Yes	Yes	Yes	Yes	Yes	Yes

programs related to CBNRM underway							
3.6 RESEARCH							
CBNRM-related research undertaken	Yes, by various institutions: IGAD, MUIENR, ACODE, university, projects, others	Yes, by various institutions: IUCN, SNV, University of Botswana, Government	Yes, by various institutions	Yes, by various institutions	Yes, by various institutions: AWF, WWF	Yes, by various institutions: CASS, UZ, ART, Zimtrust, IUCN, Government	Yes, starting to undertake CBNRM research by various institutions
3.7 CBNRM COORDINATION MECHANISM							
CBNRM national forum or body in place	No	Yes	Yes	No	No	Yes	Yes, very new
Clearly defined roles of players in CBNRM process	Not yet worked out; in process	Yes, but still working on best mechanisms	Yes, but still working on best mechanisms	In process	Somewhat; awaiting guidelines	Yes, but still working on best mechanisms	In process
4. ECONOMIC CONSIDERATIONS							
PARAMETER	Uganda	Botswana	Namibia	Kenya	Tanzania	Zimbabwe	Malawi
Options for wildlife or tourism enterprises identified locally	Yes, in some areas; but viability and feasibility of enterprises needs work	Yes, in some areas	Yes, in some areas	Yes, in some areas	Yes, in some areas	Yes, in some areas	Yes, in some areas
Cost-benefit analysis and/or business/marketing plans prepared for CBNRM enterprises	Very few ; mostly on pilot basis	Mostly though private sector partnerships; increasingly through CB enterprises	Mostly though private sector partnerships; increasingly through CB enterprises	In some cases	Mostly though private sector partnerships; increasingly through CB enterprises	Mostly though private sector partnerships; increasingly through CB enterprises	In some cases, mainly with donor assistance
CBOs/communities receive major share of income from wildlife/tourism community-private sector partnerships	Few private sector partnerships in place; communities do not receive a major share	Yes, from formal partnerships	Yes, from conservancy partnerships	Variable	Variable	Yes, from CAMPFIRE partnerships	Variable
CBOs have access to credit and/or grants	In some cases Through donor projects, trusts, ECOTRUST Uganda	Some access Community Conservation Fund (Government Of Botswana); others	Some access	Some access	Some access	Some access	Some access Community Partnerships for Sustainable Resource Management (COMPASS)
Wildlife-based tourism status	Low level of wildlife-based tourism	High level of wildlife-based tourism	High level of wildlife-based tourism	High level of wildlife-based tourism	High level of wildlife-based tourism	High level of wildlife-based tourism underway	Limited wildlife-based tourism; Limited wildlife areas/parks;

	Economic feasibility affected by poor security situation and scarcity of international tourists					underway	new initiatives being started
Hunting activities undertaken	No; feasibility being explored in select areas, but wildlife numbers low Uganda Wildlife Authority (UWA) moving forward with pilot hunting permit in Lake Mburo Area; need to carefully assess sustainability to avoid further drops in wildlife populations	Yes	Yes	Yes	Yes	Yes	No; possibility in very restricted areas
Products and services provided by communities	Some guide services, community campgrounds, boat trips, bird walks, curios, etc. Tourism very low in Uganda at present; bargaining position not firm Some crafts/curios marketed internationally by Uganda Community Tourism Association (UCOTA) Charcoal Thriving illegal bush meat market exists	Joint venture partners hire negotiated number of community members Guides and service workers employed by tourism and recreation industries CB enterprises provide services and products in some areas Botswana baskets and other crafts marketed locally and through NGOs Veld products collected and marketed (phane caterpillars, marula, devil's claw, etc.)	Private sector partners hire community members Employment by tourism and recreational industries CB enterprises provide services and products in some areas Crafts marketed locally and through NGOs Veld products and traditional medicines collected and marketed	Some	Some	Private sector partners hire community members Products and services offered by communities to tourists, others	Many products including: Firewood and Charcoal (even though illegal) Fish Bushmeat (even though illegal) Wooden and other Crafts and Curios; Non-timber forest products Labor for Service Industry

5. SOCIO-CULTURAL CONSIDERATIONS

PARAMETER	Uganda	Botswana	Namibia	Kenya	Tanzania	Zimbabwe	Malawi
Demographics	Population: 23,317,560 Population growth rate:	Population: 1,576,470 Population growth	Population: 1,771,327 Population growth	Population: 30,339,770 Population growth rate	Population 35,306,126 Population growth rate	Population: 11,342,521 Population growth	Population: 10,385,849 Population growth

	2.72% (2000 est.)	rate: 0.76% (2000 est.)	rate: 1.57% (2000 est.)	1.53% (2000 est.)	2.57%0 (2000 est.)	rate: 0.26% (2000 est.)	rate: 1.61% (2000 est.)
Literacy* (age 15 and over can read and write)	61.8% total 73.7% male 50.2% female (1995 est.)	69.8% total 80.5% male 59.9% female (1995 est.)	38% total 45% male 31% female (1960 est.)	78.1% Total 86.3% male 70% female (1995 est.)	67.8% total 79.4% male 56.8% female (1995 est.)	85% total 90% male 80% female (1995 est.)	58% total 72.8% male 43.4% female (1999 est.)
Gender Issues	Women's groups are motivated but have difficulties getting access to resources; women less educated than men	Women and men involved on CBO boards, but chairmen are generally men	Women active in CBNRM; educational gender issues	Women less educated, less access to resources	Women less educated than men; less access to financial resources	Both women and men involved in deciding use of CAMPFIRE funds	Women's groups are motivated and involved
Poverty Level*	55% below poverty line (1993 est.)	47% (1999 est.)	NA%	42% below poverty line (1992 est.)	51.1% below poverty line (1991 est.)	60% population below poverty line (1999 est.)	54% population below poverty line (1991 est.)
GDP per capita (purchasing power parity)*	\$1,060 (1999 est.)	\$3,900 (1999 est.)	\$4,300 (1999 est.)	\$1,600 (1999 est.)	\$550 (1999 est.)	\$2400 (1999 est.)	\$940 (1999 est.)
Social Issues	82% of labor force engaged in agriculture Conflict, rebel activities, insecurity in some areas; migration of locals within Uganda to escape conflict Refugees from surrounding countries settling in Uganda Lack of capacity at local level Many ethnic groups, languages HIV/AIDS, malaria, schistosomiasis	80% engaged in agriculture, mostly livestock raising Communities with sudden high income levels from CBNRM adjusting to changes HIV/AIDS, malaria	Educational level Lack of capacity at local level Remoteness of communities Recovering from conflict and apartheid Many ethnic groups, languages HIV/AIDS, malaria	Many ethnic groups with history of conflict; 75-80% labor force engaged in agriculture HIV/AIDS	HIV/AIDS 90% labor force engaged in agriculture Varying lifestyles	Land tenure issues HIV/AIDS Current instability in country affecting peoples livelihoods Education/capacity at local level low	86% labor force engaged in agriculture Lack of capacity at local level Many ethnic groups, languages Lack of clear role for traditional authorities in CBNRM HIV/AIDS, malaria
Level of Corruption: Transparency International Corruption score 2001**** 10=highly clean	1.9	6.0	5.4	2.0	2.2	2.9	3.2

0=highly corrupt							
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* Based on CIA World Factbook (2000) Figures

** Simons (2000)

*** Trick (2000)

**** Transparency International 2001 Corruption Perception Index (2001)

Resources and References

Resources

- Borrini-Feyerabend, G., ed. (1997). *Beyond Fences: Seeking Social Sustainability in Conservation*. IUCN, Gland (Switzerland). http://www.iucn.org/themes/spg/beyond_fences/beyond_fences.html.

Beyond Fences is an extensive resource designed to help professionals involved in conservation initiatives to identify social concerns relevant to their work, assess options for action and implement them. Volume 1 is a companion to a process of planning, evaluating or re-designing a conservation initiative. It uses a “learning by doing” approach, involving meetings and field-based activities. Volume 2 is a reference book containing an extensive set of resource pieces on subjects ranging from ecotourism to conflict resolution. This material is to be consulted as needed.

- Buzzard, Candace (2001). *Community-Based Natural Resources Management (CBNRM) in Uganda: A Review of the National Enabling Framework and Comparison with Other African Countries*. Published by GTZ/UWA, Kampala, Uganda. September.
- Buzzard, Candace (2001). *Policy Environment Governing the Great Limpopo Transfrontier Park and Conservation Area: A Review of Relevant International Agreements, SADC Protocols, and National Policies*. Prepared by Development Alternatives Inc. for USAID. November.
- The CBNRM Support Programme in Botswana (<http://www.cbnrm.uwc.ac.za/> and <http://www.cbnrm.bw/>) makes available many reports released by several different agencies. A set of practical tools and models is particularly useful. The following are a subset of these reports, produced by Chemonics International for the Botswana Department of Wildlife and Natural Parks (DWNP). These were funded by USAID and can be obtained by sending a request to information@cbnrm.bw. As additional publications become available they will be listed at http://www.cbnrm.bw/pages_sub_dir/Publications.htm:
 - *Practitioners Guide—Community Based Natural Resources Management* (1999). Easy-reference manual for extension staff of DWNP and local NGOs. The guide is divided in three sections: Botswana's CBNRM Programme overview, a guide to CBNRM activities, a brief overview of different stages of development and options available, a CBNRM tool kit and a bibliography.
 - *Joint Venture Guidelines: A Guide to Developing Natural Resource Based Ventures in Community Areas* (1999). Used by communities, safari companies and Government of Botswana extension staff to guide the process of facilitating joint venture agreements or partnerships between a community and the private sector. This booklet explains the roles and responsibilities of the different stakeholders involved and the procedures to be followed.
 - *Community Management of Hunting Quotas: Discussion Draft* (1996). Botswana Department of Wildlife and Natural Parks.
 - *Enterprise Development Tool Kit* (n.d.). Botswana Department of Wildlife and National Parks. The tool kit gives suggestions on how to establish a CBNRM enterprise. Discusses assistance that might be required (by an accountant, lawyer, bank manager, consultant) as well as how to prepare a business plan, market the product and manage the

business. In addition, an overview is provided on legislation regarding business licenses in Botswana.

- *Problem Animal Control Manual* (1995). Instructions and technical guidance in problem animal control for DWNP staff.
- *Community Escort Guide Manual* (1999). Instructions and technical guidance for community escort guides on how to escort hunting clients. DWNP.
- *Developing a Methodology for a Community Natural Resource Inventory and Monitoring System* (1999). A methodology developed for Sankuyo (NG33/34 in Ngamiland) and Ukhwi area (KD1 in Kgalagadi district) that covers both comprehensive records on and monitoring methodologies of veld products and vegetation in the study areas.
- *Procedures for Establishing and Implementing Community-Based Wildlife Monitoring Programs* (1999). A methodology for communities to monitor wildlife density and distribution in their areas.
- DWNP's Monitoring and Evaluation Experience with the Natural Resources Management Project: Lessons Learnt and Priorities for the Future (1997). Four case studies on work in Zutshwa, D'Kar, Sankuyo and the Chobe Enclave.
- *Nqwaa Khobee Xeya Trust Constitution*. Nqwaa Khobee Xeya Trust. <http://www.cbnrm.bw/nkxtconsti.pdf>. Legal constitution of a CBO, the Nqwaa Khobee Xeya Trust, registered on 10 June 1998.
- *Integrating the Socio-economic and Biophysical Data for Monitoring and Evaluating CBNRM: Conceptual Design Report* (1999).

The FRAME Web site offers a collection of resources about CBNRM at <http://www.frameweb.org/TechnicalInformation/topicsectorC.html#cbnrm>. This Web site supports strategic analysis of environmental issues in Africa, including the environmental investments of USAID and others. Contents range from the [African Conservation Centre \(ACC\) Database of Community -Based Conservation Projects](#), to the report on [Community Based Conservation Experience in Tanzania: An Assessment of Lessons Learned](#), to a report from the [Second National Conference on CBNRM in Mozambique](#).

The Natural Resource Management Tracker Tool is found at <http://www.nrmtracker.org/default.cfm>.

Sponsored by the USAID Africa Bureau's Office of Sustainable Development, the Tracker Web site has been developed to facilitate information capture and sharing among those interested in improving resource management through work with local communities. The Web site exists to capture local experiences and sharing through the mediums of e-mail, Web, and CD-ROM. The Tracker database allows users to enter their own experiences from local resource management or learn about best practices and key lessons from the experiences of others. Tracker thus:

- helps field offices and local partner organizations capture and organize information about their own activities in local-level conservation and natural resources management (useful for reporting to the home office and sharing lessons between country programs);
- helps home offices put their partner organizations and country program offices in touch with one another; keeps track of experiences being gained by multiple projects;
- consolidates material for ready use in developing reports to donors; and

- disseminates experiences among other conservation and sustainable development organizations for potential partnerships, mutual learning, and other collaborative opportunities.

A small sample of organizations with information in Tracker about their activities in African conservation and NRM include: USAID/Africa Bureau/Office of Sustainable Development; Conservation International (Madagascar); Cooperative League of the USA (CLUSA); International Resources Group, Ltd.; Development Alternatives, Inc.; Savanna Conservation Nigeria; Appui-Recherche-Cooperation (Burkina Faso); Ministère de l'environnement et du tourisme (MET—Burkina Faso), Association de Développement de l'Elevage et de la Faune Africaine (ADEFA—Burkina Faso); University of Dschang Department of Rural Education (Cameroon); United Nations Development Program (UNDP—numerous countries); Christian Relief and Development Association (Ethiopia); Kenya Agricultural Research Institute (KARI); WWF—Madagascar; and numerous independent African consultants in the environmental field.

Information about CBNRM in Malawi can be found at <http://www.compass-malawi.com>. Similar information can be found at <http://www.admade.org.zm/> and <http://www.campfire-zimbabwe.org/> for Zambia and Zimbabwe, respectively.

A set of model documents and tools produced by SNV/Netherlands are also listed at http://www.cbnrm.bw/pages_sub_dir/Publications.htm and are available by sending a request to information@cbnrm.bw :

- *KDI Land Use and Management Plan* (1999). This document describes how the inhabitants of KD 1, organised under the Nqwaa Khobee Xeya Trust, intend to manage the natural resources in their Controlled Hunting Area (CHA).
- *NG 4 Management Plan*, Cgaecgae Tlhabololo. The NG 4 Management Plan describes how the inhabitants of NG 4, now organised in the Cgaecgae Tlhabololo Community Trust, intend to manage the natural resources in their controlled hunting area (CHA).
- *NG 4 Tender Guidelines*, Cgaecgae Tlhabololo Community Trust. These guidelines indicate the community trust's conditions for joint ventures to interested private sector companies for tender of the communities' hunting quota or non-consumptive tourism potential.

References

- ADC (1998). *Assessment of Community-Based Natural Resource Management (CBNRM) in Southern Africa*. USAID Regional Center for Southern Africa.
- Barrow, E., H. Gichohi and M. Infield. *Rhetoric or Reality? A Review of Community Conservation Policy and Practice in East Africa*, IIED Biodiversity Group. <http://www.iied.org/bookshop/pubs/7807.html>
- Byers, Bruce (1998). *Seminar on Community-Based Natural Resource Management Summary Report*. USAID Global Environment Center.
- Campbell, Bruce et al. (2000). "CAMPFIRE Experiences in Zimbabwe." *Science* 287(5450): 42.
- CBNRM (2000). *Proceedings and CBNRM Status Report 1999/2000*. First National CBNRM Forum, May 30t-31, Botswana. CBNRM Support Programme. Available from the CBNRM Support Programme, free of charge; information@cbnrm.bw.

- CBNRM Support Programme (1999). Report of Workshop Proceedings of "Natural Resources Monitoring and CBNRM in Botswana." Natural Resource Monitoring and CBNRM in Botswana (Workshop), June 10–11, Gaborone, Botswana. Available from the CBNRM Support Programme, free of charge. (1999, ISBN: 99912-0-309-5, 72pgs)
http://www.cbnrm.bw/pages_sub_dir/Publications.htm

- Child, Brian, Kara Page, George Taylor et al. (2001). *Mid-term Review of (LIFE) II Project and Assessment of the Namibia National CBNRM Programme*. Published by IRG/EPIQ for US AID/Namibia. August. <http://www.frameweb.org/Documents/Namibia%20Final%20Report.zip>

This document is a review of the LIFE II program, which supports the national CBNRM program in Namibia. It describes the program's achievements to date and outlines actions to take to expand the program over the next two years.

- Fisher, Weston A. (1999). *Award Fee Determination Report for Chemonics Contract Extension in Support of the Botswana Component of the Natural Resources Management Project* (690-0251.33). Prepared for USAID Regional Center for Southern Africa (USAID/RCSA). July 23.

This assessment involved an evaluation of program activities and field examination of community-managed projects supported by USAID through the Botswana NRMP. Many challenges facing Phase II CBNRM implementation were identified during this exercise.

- Getz, Wayne M. et al. (1999). "Sustaining Natural and Human Capital: Villagers and Scientists (Community-Based Natural Resource Management in Africa." *Science* 283(5409) Pages 1855-1856.
- Gujadhur, Tara (2000). *Organisations and Their Approaches in CBNRM in Botswana, Namibia, Zambia and Zimbabwe*. CBNRM Support Programme. Can be requested through
<http://www.cbnrm.bw/mailform.htm> or information@cbnrm.bw.
- IUCN (2000). *Community Wildlife Management in Southern Africa: A Regional Review*. IUNC.
[Http://www.iied.org/bookshop/pubs/7805.html](http://www.iied.org/bookshop/pubs/7805.html)

The report gives a brief review of the extent and progress of community wildlife management (CWM) in the seven countries of southern Africa—Botswana, Malawi, Mozambique, Namibia, South Africa, Zambia and Zimbabwe. It includes a summary of supporting legislation for CWM projects and the extent of project establishment. Key emerging issues are discussed. These range from land tenure and conservation/biodiversity impacts, to participation and vertical/horizontal integration, along with many others. In addition, strengths and weaknesses in existing knowledge are indicated.

- Jones, B. (1999). *Community-Based Natural Resource Management in Botswana and Namibia: An Inventory and Preliminary Analysis of Progress*. <http://www.iied.org/bookshop/pubs/7799.html>

A brief history of CBNRM activities in Botswana and Namibia covering socio-economic and environmental aspects, together with the policy and legal framework for CBNRM; national level activities; major implementing organizations; and short project profiles detailing the location, activities, and implementing partners of individual local projects.

- Jones, Brian T.B. (1998). *Namibia's Approach to Community -Based Natural Resource Management*. Scandinavian Seminar College. <http://www.cdr.dk/sscafrica/jones-na.htm>

This paper examines the development and implementation of a policy to promote the sustainable management of wildlife and wild habitats by rural communities occupying communal land in Namibia, the most arid country south of the Sahara.

- *Key Questions to Be Addressed in West Africa Stock-Taking Exercise: Natural Resources Management in West Africa—Taking Stock* (1999). December 6–10, Koudougou, Burkina Faso. USAID.
- Moyo, Nobel and Francis Epulani (2002). *Examples of CBNRM Best Practices in Malawi*. Published by Community Partnerships for Sustainable Resource Management in Malawi (COMPASS). April. <https://tamis.dai.com/compass.nsf/e06e1bcbfd53d83b42256b59003217d2/9f768f075b65e5d242256a7d003ffc15?OpenDocument>

This publication covers 19 examples of small-scale CBNRM best practices. These practices mainly include integrated natural resources management (NRM), communal reforestation, permaculture, and other sustainable agricultural practices. There are also cases where community-based organizations (CBOs) gradually evolved to become local NGOs. COMPASS will keep up with the developments at these model sites to monitor changes and record new lessons that can be shared with partners.

- Phiri, Elias and Cheryl Butler (1998). *A Case Study of Local Community Initiatives Towards the Sustainable Use of Natural Resources: Kakumbi Natural Resources Management Business in the Luangwa Integrated Resources Development Project Area in Zambia*. <http://www.cdr.dk/sscafrica/ph&bu-za.htm>.
- Rozemeijer, Nico (2002). *CBNRM in Botswana today*. Published by the World Conservation Union. July 2002. <http://www.cbnrm.bw/CBNRMInBotswanatoday.pdf>

Brief overview and assessment of all CBNRM projects in Botswana to date.

- Rozemeijer, Nico and Corjan van der Jagt (2000). *Community Based Natural Resources Management (CBNRM) in Botswana: How Community Based is CBNRM in Botswana?* CBNRM Support Programme. <http://www.cbnrm.bw/Powerrelationsstudy.pdf>.

A contribution to a comparative study dealing with institutional issues in community-based natural resources management (CBNRM) in the Southern Africa Development Community (SADC) region (funded by WWF and coordinated by Bruce Campbell and Sheona Shackleton)

- Rozemeijer, N. et al. (1999). Background Paper. National Conference on Community Based Natural Resources Management in Botswana, July 26–29, Gaborone, Botswana. http://www.cbnrm.bw/pages_sub_dir/Conf99BGPaper.htm.
- Trick, Peter and Linda Manning (2002). *Charcoal, Chiefs and Chambo: Status of CBNRM Policies and Results of Collaborative Problem-Solving in CBNRM Programme Analysis and Implementation*. Published by Community Partnerships for Sustainable Resource Management in Malawi (COMPASS). June. <https://tamis.dai.com/compass.nsf/e06e1bcbfd53d83b42256b59003217d2/942876310db365b242256bed001da108?OpenDocument>

This report presents an overview of CBNRM policy in Malawi and documents the outcomes of the policy analysis training and CBNRM policy dialogue conducted in April/May 2002. This report presents three legal analyses (on fisheries, wildlife and land reform) conducted by the trainers/facilitators to update understanding of these important sectors and support future CBNRM efforts. It also records the consensus, processes and outcomes of the collaborative group analyses conducted over the course of the workshop.

- USAID. *Country-Specific Information: USAID/Botswana Activities*. Accessed February 19, 2001. <http://www.frame-web.org/AIDMaterials/2Pagars/botswana12.html>.

The Botswana NRMP component aims to make rural households more prosperous by encouraging local communities to have more direct involvement in managing wildlife and products produced from the country's dry woodland savannah ("veld"). This project promotes sustainable, conservation-based development of marginal lands that previously were used only for crop production and domestic livestock.

- USAID (2000). *Community-Based Conservation Experience in Tanzania: An Assessment of Lessons Learned*. Published by USAID. August.
<http://www.frameweb.org/Documents/COMPLETESummaryReportCBCLessonsLearnedstudy.doc>

This assessment summarizes the status of the CBNRM activities in Tanzania based on a review of a selection of case studies researched during 1999. The report describes the overall policy framework in place in Tanzania as well as individual projects.

- USAID (2002). *Nature, Wealth, and Power: Emerging Best Practice for Revitalizing Rural Africa*. August. <http://www.frameweb.org/wssd.html#reports>

Building on lessons learned from more than 20 years of natural resource-based development in rural Africa, this discussion paper presents principles and action steps that can serve as a guide to investment. It was prepared by the Environment and Natural Resource Team of the Sustainable Development Office in USAID's Africa Bureau (AFR/SD). The paper is intended as an opening statement in a dialogue on rural Africa. Comments are welcome and can be sent to Jon Anderson, Natural Resource Policy Advisor, Economic Growth, Agriculture and Trade Bureau (USAID/EGAT) janderson@usaid.gov.

- UNDP Disaster Management Training Programme (1994). *Vulnerability and Risk Assessment*. Second Edition. Prepared by Cambridge Architectural Research Limited. Cambridge, UK.
http://www.undmtp.org/english/vulnerability_riskassessment/vulnerability.pdf
- Warner, Michael (2000). *Conflict Management in Community-Based Natural Resource Projects: Experience from Fiji and Papua New Guinea*. Working Paper 135. Overseas Development Institute. London, UK. http://www.odi.org.uk/publications/working_papers/wp135.pdf