

*ASSESSMENT OF COMMUNITY-BASED NATURAL RESOURCE  
MANAGEMENT (CBNRM) IN SOUTHERN AFRICA*

Prepared for:

The Regional Center for Southern Africa (RCSA)  
USAID, Gaborone, Botswana

Prepared by:

Agricultural Development Consultants, Inc.  
6900 SW 117<sup>th</sup> Avenue, Suite C-207  
Miami, Florida, 33186

July 1998

(DRAFT)

**An Assessment of Community Based Natural Resources Management (CBNRM)  
In Southern Africa**

**TABLE OF CONTENTS**

	<u>Page No.</u>
EXECUTIVE SUMMARY	1
1. SUMMARY OF FINDINGS	1
2. METHODOLOGY	3
3. THE ASSESSMENT	4
OVERVIEW	4
TOPIC 1.    State of the Art of CBNRM	7
TOPIC 2.    Modes of Implementation	12
TOPIC 3.    Spread of CBNRM and Potential Sustainability	15
TOPIC 4.    Physical and Socio-Economic Characteristics	20
TOPIC 5.    Biophysical Trends	22
TOPIC 6.    Economic Dimensions	24
TOPIC 7.    CBNRM Analytical Framework	29
TOPIC 8.    Effectiveness in Serving Clients' Needs	32
TOPIC 9.    Sustainability and Future Activities	36
TOPIC 10.   Disadvantaged People and Women	38
4. LESSONS LEARNED	41
5. RECOMMENDATIONS (Follow- on RCSA activities in CBNRM and NRM)	42
ANNEX A: Acronyms	
ANNEX B: Bibliography	
ANNEX C: Contacts	
ANNEX D. Duties (Assessment team work plan)	
ANNEX E: Economic Assessment	
ANNEX F: Analytical Framework	

**An Assessment of Community Based Natural Resources Management (CBNRM)  
In Southern Africa**

**EXECUTIVE SUMMARY**

The objective of this assessment was to determine the status of USAID's Community Based Natural Resource Management (CBNRM) program activities in the Southern Africa region as a part of RCSA's internal planning process for the development of strategies for the next planning cycle. This is neither an evaluation nor a design element in the process of management of USAID's regional portfolio; the information provided here is a short summary of the regional experiences since original pilot effort funding for CBNRM commenced in 1989.

The stated purposes of this assessment were to: a.) inform USAID, particularly the Africa Bureau and RCSA, of the potential for future involvement by RCSA in CBNRM; b.) provide information that will assist USAID in quantifying the impacts and sustainability of CBNRM in Southern Africa; and, c.) assist the RCSA, AFR/SD, and the regional partners in identifying design issues and important considerations that need to be addressed in design of a regional follow-on CBNRM project.

USAID, through RCSA and the Southern Africa Development Fund (SARP), funds programs supporting CBNRM. The USAID Natural Resources Management Project (NRMP) started in 1989 and supports component activities for Botswana, Namibia, Zambia, and Zimbabwe; and a regional coordinating unit in Southern Africa Development Community's (SADC) Wildlife Sector Technical Coordinating unit Malawi, supported through a grant to the World Conservation Union (IUCN),. The assessment addresses these programs.

RCSA's current NRM program has an PACD (program activity completion date) of September, 1999. During this period, zthe NRMP ahs supported CBNRM activities in furtherance of the natural resources component of RCSA's Strategic Objective No. 3: "accelerated regional adoption of sustainable Ag/NRM approaches" toward achievement of the following:

**Result 1.** demonstrate through practical examples, the technical, social, economic and ecological viability and replicability of CBNRM and utilization programs on marginal lands for increasing household and community incomes while sustaining natural resources; and

**Result 2.** improve national and local capability to halt the decline in the wildlife, range, watershed, veld products, and biodiversity of the resource base through training, education, protection, communication and technology transfer.

**1. SUMMARY OF FINDINGS**

1. RCSA's current version of the natural resources management portion of its Strategic Objective Three (SO3) is making substantial progress toward full achievement of the objectives listed in both Result 1 and Result 2. Even though it was started in 1989, the regional NRMP, with slight amendment, fits well within the context of the currently stated SO3 and results framework.

2. USAID's initial pilot-program focus on the wildlife resources was correct; this sector was already tied to an existing market, was threatened by over-exploitation, and was of major concern across the region and around the world. Governments, NGOs and local people and communities remain motivated and active, enabling the CBNRM approach to continue to gain momentum.

3. CBNRM is an evolving viable program mechanism for the long-term rational management and use of renewable natural resources on marginal lands; it is succeeding to the extent that the stakeholders perceive that their total *socio-economic and financial benefits* exceed their individual *total input costs*.

4. CBNRM is effectively reaching the traditionally disadvantaged rural poor because their marginal communal lands (in terms of agriculture) are becoming *profitable* lands in terms of wildlife production systems; evidence suggests that CBNRM is making meaningful contribution to many *local* economies where the people have been previously dependent upon "marginal" lands and remittances.

5. There is evidence of increase in wildlife populations and trends of a few species, and the improvement of habitat in specific locations; however, there is insufficient evidence to conclude any cause and effect relationships of CBNRM activities to broad biophysical trends.

6. Indigenous program designs tend to work best in CBNRM implementation. Distinct socio-political structures of individual countries show that CBNRM is *adaptable* if not *replicable*; ideas, experiences and results are shared across the region and each country is continuing to test nuances in the process which lead to a blending of approaches.

7.) Implementing organizations (agencies, CBOs, NGOs, etc.) still lack the absorptive capacity to efficiently, effectively, and rapidly use donor support; the magnitude of donor funding and the short (4-5 year) implementing cycles are not well synchronized to internal conditions and constraints.

#### **SUMMARY OF RECOMMENDATIONS:**

1. Expansion of CBNRM efforts should be geared toward linkage of existing market demands to additional products and/or services that can be supplied by the communities and individuals from the natural resources base, while not ignoring the wildlife sector where it exists.

2. RCSA's new NRM strategy should aggressively support the maintenance and conservation of biodiversity by assisting the development and implementation of centrally coordinated monitoring of biological indicators.

3. In the non-presence context RCSA should continue its assistance to governments, indigenous NGOs, and rural community leaders through SADC, and to regionally-based NGOs directly, in promoting the adoption of CBNRM practices that are important to the needs of rural beneficiaries, the region's economies, and the maintenance of biodiversity.

4. Extend the PACDs of USAID bi-lateral projects without necessarily increasing the level of funding; in the context of non-presence countries, international NGOs such as IUCN and WWF

could be contracted to continue the project momentum.

**LESSONS LEARNED** from the Southern Africa CBNRM program efforts to date are:

1. The dependent users of natural resources on common lands respond positively and effectively to the needs to manage and conserve those resources when they acquire the authority and responsibility to act for enhancement of their benefits.

2. The intent of conservation law or policy is best achieved when the people are motivated to participate with officials to achieve the objectives of that law or policy.

3. CBNRM programs are process oriented and evolutionary in nature; they do not spring fully-formed into existence, nor do they mature rapidly. Progress is incremental, building on a series of successive changes as the motivation of the participants increases.

4. The national policy environment within a country allows for replication of CBNRM activities within that country, but differences in the institutional environments among countries makes it impossible to replicate programs from one country to another. Instead, CBNRM principles and lessons are adapted to each country's unique environment.

## **2. METHODOLOGY**

The assessment was carried out by a four person consultancy contract team which operated out of the RCSA in Gaborone, Botswana, during a six-weeks period from May-July, 1998, under the sponsorship of the SO-3 coordinating unit.

The greatest portion of the information for this assessment came from a desk study of a large volume of recent USAID and partner CBNRM project evaluation reports, regional scientific research papers, special case-study reports, and preview information relating to up-coming project efforts by donor countries and international NGOs (see Annex B). This was augmented by personal interviews with key donors, NGOs, and government officials at the CBNRM project sponsorship level in Botswana, Malawi, Namibia, Zambia and Zimbabwe (see Annex C).

After completion of the initial summary of all the information attainable within this tightly defined period, a roundtable discussion was held at RCSA on June 22<sup>nd</sup> to present the assessment team's tentative findings and to elicit open discussion of ideas and issues requiring clarification.

This half-day workshop was chaired by IUCN, and featured nine leaders of CBNRM activities from around the region as respondents to the team's presentation on the nine major points of focus from the scope of work for the assessment. This was followed by an open forum discussion to get comments and questions from the 24 observers at the session (see Annex C).

Key elements of this roundtable discussion were incorporated into this assessment document.

Analyses of data and information were facilitated by use of comparative methodology, in which the results being reflected in the programs of each individual country were compared to those in the other countries by numerous processes of normative ranking. This was extremely helpful in understanding the sometimes subtle variations between countries when attempting to find

cause and effect relationships for assessing impacts of CBNRM. This approach is valid in the context of the countries studied because of their contiguous geographical position, their recent political emergence as independent nations, their similarity in terms of broadly abundant and diverse wildlife resources, and their international attractiveness to the safari/tourism market.

In conducting the assessment the following working definitions were used for continuity and clarity of analysis:

biodiversity: a rhetorical term used to refer to the broad ecological web of life forms in their natural environments; not presently quantifiable.

community: a self-identified group of families with shared interests, needs, wants and desires working together for their common good. A community need not be a homogenous group and may often include competing interest groups or individuals that do not necessarily share the same vision except when they come together in their common interests.

natural resource(s): the fruits of nature rising from the innate character of a defined landscape; specifically its renewable life forms together with its surface waters. This omits the stock resources (soil, minerals, geologic water) and the flow resources (air and sunlight).

management: the process of planning, organizing and implementing activities which lead to the rational and systematic production of desired goods and services.

sustainability: the capability of a system or thing to reproduce and nurture itself into the future.

community-based natural resource management: when a community with a common dependency on an identified natural resource(s) base works together to utilize and manage those resources.

policy: the manner in which legal or recognized authority is exercised or applied to the subject of that authority. Law is not policy, *per se*, but only the arbitrated or adjudicated intent of the imposing authority; policy is pragmatic; it is the perceived result of how the law actually works in the social context.

### 3. THE ASSESSMENT

#### Overview:

Southern Africa is one of the world's important biodiversity regions. Approximately 13 percent of the region, excluding South Africa, is made up of freshwater ecosystems. The diversity of plant species found in South Africa, Lesotho and Swaziland is eight times the world average, four times that of the United States, and double that of Brazil, when measured as the average number of plant species per 1,000 kilometers. Roughly three-quarters of the region supports tree cover. Despite the large and extensive protected areas network of the region, several ecologically important areas remain under-protected, including the mountain forests and lowland rain forests. Of special note is the fact that only about 5.5% of the land in Southern Africa is arable. This fact

alone requires both sustainable management of natural resources and maximization of income from these areas to the people that live in them.

The objective of this assessment was to determine the status of USAID's Community Based Natural Resource Management (CBNRM) program activities in the Southern Africa region as a part of RCSA's internal planning process for the development of strategies for the next planning cycle. This is neither an evaluation nor a design element in the process of management of USAID's regional portfolio; the information provided here is a short summary of the regional situation since original pilot effort funding for CBNRM commenced in 1989.

USAID, through RCSA and the Southern Africa Development Fund (SARP), funds programs supporting CBNRM. The RCSA Natural Resources Management Project (NRMP) started in 1989 and supports component activities for Botswana, Namibia, Zambia, and Zimbabwe, plus a regional coordinating unit in Malawi. Through a technical service contract with RCSA, the World Conservation Union (IUCN) supports the Southern Africa Development Community's (SADC) Wildlife Sector technical coordinating unit (TCU). This TCU provides regional services: 1.) to strengthen the capacity of the SADC Wildlife Sector's TCU; and 2.) to improve regional coordination, communication, understanding and technical knowledge of CBNRM throughout the region. It organizes and facilitates the regional CBNRM biennial conferences, exposure visits for peer groups, workshops, publishes a newsletter, and publicizes lessons learned. It has also focused on regional level monitoring and evaluation. The TCU is operated by the regional office of IUCN in cooperation with WWF/Zimbabwe and ART/Zimbabwe.

RCSA's current CBNRM program is near completion of its second strategic planning period which ends in 1999. During this period, CBNRM activities have been carried out in furtherance of the natural resources component of RCSA's (revised 1994) Strategic Objective No. 3: **accelerated regional adoption of sustainable Ag/NRM approaches.**

The stated purposes of this assessment were to: 1.) inform USAID, particularly the Africa Bureau and RCSA, of the potential for future involvement by RCSA in CBNRM; 2.) provide information that will assist USAID in quantifying the impacts and sustainability of CBNRM in Southern Africa; and, 3.) assist the RCSA, AFR/SD, and the regional partners in identifying design issues and important considerations that need to be addressed in design of a regional follow-on CBNRM project.

Principles and Features of CBNRM. Regional experts state the basic hypothesis underlying the principles of CBNRM in Southern Africa as: - For a community to manage its resource base sustainably, the community must receive direct benefits arising from the use of the resource(s). These benefits must exceed the perceived costs of managing the resource(s) and must be secure over time.

Discussion about CBNRM differentiates between "optimal principles," which express the desired conditions for communities to manage their communal property resources sustainably, and "pragmatic principles," which express the need to adapt the optimal principles to the real-world constraints and opportunities that shaped the existing policy framework in each country.

Five optimal principles for CBNRM (paraphrased from Murphree 1993) are widely cited:

1. Effective management of natural resources is best achieved by giving the resource a

focused value, in order to determine whether the benefits of management exceed the costs.

2. Differential inputs must result in differential benefits, communities managing the resource bear higher costs and should receive higher benefits than those who do not bear these costs.
3. There must be a positive correlation between the quality of management and the magnitude of derived benefits.
4. The decision-making unit of proprietorship should be the same as the unit of production, management, and benefit.
5. The unit of proprietorship should be as small as practicable, within ecological and socio-political constraints.

From these principles, a list of the operational features of a fully developed and optimal CBNRM program is derived here to address the capabilities reasonably necessary to attain self-reliance and sustainability.

A. Appropriate enabling policies and laws are in place for government action, community authority, and people's rights:

1. Devolution of proprietorship rights and management authority over local natural resources to local communities or CBOs.
2. Proprietorship rights of community-based organizations (CBOs) equivalent to the rights enjoyed by the private sector, including the right to control access and use and the rights to sell or make contracts for use of resources.
3. Decentralization of state civil authority to the district level (or regional level, in Namibian terms).
4. Sufficient political support for CBNRM as a rural development strategy throughout government and not just in a few sectoral agencies.
5. Laws and policies encourage communities or CBOs to manage resources sustainably.
6. Government has the oversight responsibility and capacity to monitor resource use to ensure that use is ecologically sustainable.

B. Appropriate community level organization and capabilities are in place:

1. Communities have established institutions (CBOs) for decision-making, cost and benefit sharing, and interaction with other institutions.
2. CBOs have representative and democratically elected leadership with the authority to govern, make decisions, and resolve local conflicts.
3. CBOs have functioning linkages with state and district levels of government, traditional authorities, and the market sector.
4. CBOs function as representative and accountable bodies.
5. CBOs have the technical capacity to manage their resources and operate successful resource-based enterprises.
6. CBOs have the capacity to utilize baseline, resource-monitoring, and market information and have access to adequate and timely information upon which to base their resource management and business decisions.

The analysis presented below is structured according to the nine specific topics presented in the scope of work document. They are re-stated at the first of each section for quick reference. Special effort has been made to avoid redundancy in the topic by topic presentation by referring to more detailed coverage under other topic sections. Topic 10, 'Women and Disadvantaged

Groups' was added by the team. Annexes E and F give complete treatment of Topics 6 and 7, respectively.

**TOPIC 1.** Document the state-of-the-art of CBNRM as it is practiced throughout the region in USAID NRMP activities as well as activities of other donors or national structures. The analysis shall determine what policies and other important conditions have helped CBNRM move toward sustainability and which have been constraints for the programs to operate in each country.

**Discussion:**

Discussion about the state of the art of CBNRM in the region focuses around these issues:

- a.) enabling and constraining laws and policies; and
- b.) enabling and constraining conditions.

They are presented here in a country-by-country format.

The government of Botswana has developed a community-based rural development strategy and a statutory Community Conservation Fund to support it through national appropriation of funds. In the wildlife sector, rural communities that form a Community Trust can gain access to wildlife and tourism concessions through leases from the local Land Board in areas designated for community use. While the establishment of a trust potentially provides for a strong collective decision-making body, the resource rights obtained are through a commercial process in which the community is favored by policy directives. These rights are less strong than proprietorship of the resource. Veld resources remain open access and policy needs to address proprietorship of these resources if communities are to gain adequate control to encourage management. The Forestry Division in the Ministry of Agriculture is developing a new forest policy which will provide for greater community involvement, possibly also through community trusts.

District and local level government institutions have well-defined roles in supporting the trusts in acquiring their lease rights, and are not in competition for the income. Communities are realizing substantial income from trophy hunting, tourism, and the harvesting and sale of marula fruit and mopane worms, although household share of this income is relatively small. In most cases communities are not yet re-investing income in management of the wildlife resource and most organizational costs are still being borne by government or donors.

The organizational and technical capacities of most of the eight existing trusts is still being developed and they are not yet ready to operate without support. Systems are being developed to involve communities in wildlife monitoring and veld resource projects having conservation components. Generally, communities have not yet moved from exploitation of benefits to resource management. Project personnel believe this will develop as people realize they have long-term tenure over leases and that income flows will continue.

The institutional framework of support organizations in Botswana is based on a national program bringing together a number of partners with coordination coming from the Department of Wildlife and National Parks (DWNP) and the USAID-funded Natural Resource Management Program (NRMP), which is housed within DWNP. The DWNP provides information and extension support to communities along with assistance in problem animal control, and liaison with other government departments on policy and legislation. DWNP lacks capacity to

adequately carry out these roles. International NGOs such as Private Agencies Collaborating Together (PACT) and Netherlands Development Organization (SNV), and local NGOs such as Thusano Lefatsheng provide institution and capacity building support to communities, but local NGOs generally lack the capacity to be effective. The private sector provides the marketing and other expertise to run tourism and safari hunting enterprises, but experience with the private sector has been mixed as the art of negotiating develops.

Malawi has insignificant populations of wildlife, even in protected areas, and is the most densely settled country in the region. Land has been converted to agriculture on a large scale. Draft wildlife policy aims to increase cooperation between protected areas and neighbors on communal land through revenue sharing and controlled access to some resources within protected areas. The wildlife authority has already instituted revenue sharing with local communities and promoted the establishment of natural resource management committees which manage the use of resources by community members within the national park.

The fisheries sector in Malawi has gone the furthest in developing CBNRM approaches. In 1993 (with GTZ), fishermen got together to address a decline in fish yield and began to develop and enforce their own fishing rules. As a result of the success, other fishing groups have taken similar initiatives. The government now recognizes these groups in law and concludes agreements with them over the management of the resource. The powers of the fishing groups in terms of law enforcement are not yet defined.

Recent policy (1996) and law (1997) changes in the Malawi forestry sector provide for community management of forests on customary lands, through the establishment of village forest committees. These committees may develop a forest management plan and then conclude Village Forest Agreements with government. No such agreements are yet in place, and progress is expected to be slow. The law gives strong and exclusive resource tenure to communities through the village forest committees and the government says it will help defend the rights of a particular community against outsiders.

Recent (1996) policy and legislation in Namibia gives strong resource rights over wildlife and tourism directly to local communities that form a common property resource management institution called a “conservancy”. Policy allows the communities to define themselves, and registered conservancies can receive income directly through contracts or sales to the market sector, rather than through government. New land policy (1998) provides for conservancies to hold land leases from local land boards (yet to be established). Proposed forestry and water legislation will devolve rights to community bodies similar to conservancies, providing the potential for integrated resource management.

Relationships between the emerging conservancies and intermediate layers of civil authority such as regional (district) government are not well defined. Four conservancies have been approved by government and are functioning as CBOs with constitutions, elected committees and an agreed plan for the equitable distribution of income. Another 11 are in various stages of formation. They all still need assistance in developing organizational and technical capacity. The Ministry of Environment and Tourism is assisting communities to develop a data base for wildlife management and a monitoring system. Some conservancies are beginning to integrate wildlife and tourism with other land uses and are developing their own land use plans.

The conservancies have just begun negotiating contracts with tourism and hunting operators, but

economic projections suggest that resource-rich communities can pay their own way. Namibia has a well-developed national program approach to implementation. Government is changing enabling policies and legislation, and provides information and extension. NGOs provide institution and capacity building support to communities, but the number involved is small and limits program expansion.

The government of Zambia has a revenue sharing approach to community-based wildlife utilization called Administrative Management Design Program (ADMAD). It has established a wildlife revenue *revolving* fund through which 40% of revenue from trophy hunting is channeled to local communities in game management areas (GMA)s. Funds are currently allocated to a Wildlife Management Sub-authority (WMSA) consisting of government officials and community leaders, and then spent on community projects and the employment of village scouts to deal with poaching. While income meets administrative costs in wildlife rich GMAs it does not in others. The organizational and technical capacity of the WMSAs are weak outside of the nine supported by USAID.

The Zambian institutional framework is less complex than in neighboring countries. The government enters into contracts with safari hunting operators and shares a portion of the revenue with local communities. DNPWS provides the support and training to the WMSAs and to the village scouts, but there is insufficient capacity to support all GMAs. The Netherlands is working with IUCN to develop a CBNRM program in Zambia's Western Province, promoting the establishment of village natural resource management committees and including resources such as forests.

Another CBNRM project under the auspices of the DNPWS is the Luangwa Integrated Resource Development Project (LIRDP), funded by NORAD. It is focused on the South Luangwa National Park and the adjacent Lupande GMA. It began as an integrated rural development project, but has recently confined itself to renewable natural resource management with a primary focus on wildlife. The project aims to improve the wildlife resources in the project area, maintain biodiversity, and create a favorable environment for the safari industry so that income can be generated for the benefit of local communities and management of the resources. Wildlife within LIRDP has been increasing, largely due to the strengthening of law enforcement inputs backed up by greater support for wildlife from the local community.

A new Wildlife Act (1998) in Zambia provides for the establishment of Community Resources Boards (CRBs) which would cover the area of a chiefdom in any area of the country. A CRB would include community representatives, a representative of the local district authority and a representative of the chief. In recognition of the strong status of chiefs in Zambia, the chief would be the *patron* (not defined) of the CRB. The CRB would negotiate "co-management agreements" with safari operators, manage the wildlife under its jurisdiction, appoint village scouts and, in consultation with the Zambia Wildlife Authority (ZWA), develop land use management plans. In some areas ADMAD is also promoting the establishment of more local level institutions called Village Area Groups (VAGs) which would interact with WMSAs or CRBs to improve community involvement.

Zimbabwe has devolved proprietorship (appropriate authority) over wildlife to its Rural District Councils (RDCs), which are administrative arms of government. The rights are strong and legally entrenched, but they are generally perceived to be located at an inappropriate level. In the few cases where RDCs have devolved their authority to lower administrative levels such as

Wards, local control over the resources and the benefits creates much stronger incentives. In these cases, communities are actively managing their wildlife resources as an integral part of their other land uses. Accountability and transparency appear to be higher than in larger communities. Most RDCs and Wards do not yet have the capacity to operate their wildlife activities without external assistance. The CAMPFIRE approach of distributing income from wildlife at household level clearly establishes the link between the resource and the benefit and facilitates accountability. Households in the more advanced CBOs use their income strategically, keeping it primarily for household needs in time of drought and using a higher proportion for community projects when times are better. Although household share of income is not high in cash terms, it is important.

Zimbabwe has a well-developed institutional framework for supporting CBNRM activities, which is coordinated through a collaborative group made up of government and implementing NGO representatives. The collaborative group is chaired by the CAMPFIRE Association, a body representing 36 Rural District Councils that have received appropriate authority.

#### Enabling and constraining laws, policies and conditions

Although Botswana's policies generally favor CBNRM, the resource rights of communities are not strong and direct. Other government policies and actions threaten to undermine CBNRM activities. These include the network of veterinary fencing in support of beef producers and the opening up of new grazing lands in the arid west and north west. Reforms giving stronger land and resource rights to trusts would provide CBNRM activities with a much firmer foundation. The lack of strong indigenous NGOs with CBNRM expertise and the lack of government capacity remain as constraints.

The policy environment for CBNRM in Malawi has improved considerably in recent years and there is potential, particularly within the fisheries and forestry sectors, for CBNRM to spread. However, there is the danger of establishing a plethora of committees at village and district level focusing narrowly on only one resource. A further concern is that, while the policy environment appears good, implementation will be slow because of a lack of government capacity to assist communities. There is no strong NGO sector to assist in these activities.

Namibia's policy and legislation goes further than any other in the region in giving direct rights over resources to local communities, and in providing for community-level common property resource management. However, the establishment of conservancies has been a protracted process, partly because in having to define themselves, communities need to negotiate their boundaries with neighbors. This has led to land disputes for which conflict resolution mechanisms are just beginning to evolve. The lack of a defined relationship with emerging regional and local government structures could lead to competition for the rights and revenues which conservancies currently enjoy.

The CRBs and VAGs represent a significant recent shift within ADMAD in Zambia towards a more democratic approach to community involvement. However, the income from hunting and tourism concessions will still first be paid into the ZWA and only then will a percentage be passed on to the CRB. Furthermore, the act does not define the "management" function over wildlife ascribed to CRBs. It gives land owners the "absolute right" to harvest wild animals resident on their land subject to provisions of the Act, but it is not clear whether this applies to

communal land. It is also not clear how the new institutions for resource management will relate to various district level authorities. A major difference between LIRDP and ADMADE is that within LIRDP, all the income generated goes directly to the community. If plans go ahead to integrate LIRDP with ADMADE this could change and undermine LIRDP. The overall poor economic situation in Zambia, linked to an established culture of corruption, represents a general constraint to progress. Another concern is that the new parastatal ZWA will be in even greater competition with local communities for the revenues being generated by wildlife.

The resource rights given to RDCs in Zimbabwe are strong, but need to be devolved to lower levels of community organization. Land tenure reform would assist in dealing with the constraints on progress in some areas caused by uncontrolled in-migration of people from outside. Recommendations for such reform have been made by a government Commission but never implemented. A new policy statement (1998) by the Ministry of Mines, Environment and Tourism says government will consider further devolution of Appropriate Authority below the RDCs to the wards and villages, and will consider how communities can gain authority over other resources. This represents an important shift by government as the recent tendency had been towards re-centralization of authority.

#### **FINDINGS:**

F1. Policies affecting CBNRM are in a process of rapid evolution and change, indicating a high degree of motivation generally favorable to the CBNRM concept. But some particular shifts could have negative affects. With the exception of Botswana, these governments are in general financial difficulty and may seek short-term revenue producing solutions that could have long-term negative impacts on CBNRM.

F2. The institutional frameworks, from center to local level, are mostly in place, but many of the linkages are weak and capacity is highly variable from one level to another, as expected in a dynamic process where change is neither uniform nor linear.

#### **RECOMMENDATIONS:**

R1. Donors and sponsors need to maintain their involvement with the CBNRM policy formulation processes for 2-3 more years during this period of rapid change, with particular attention to proprietorship rights, benefit-sharing issues, and environmental quality assurance.

R2. Integration of resource management activities within one community institution or within nested and related institutions should be promoted.

**TOPIC 2:** Each country or activity has had a different mode of implementation. These shall be documented, particularly in terms of the length of time in operation and level of intensity of technical assistance and progress toward sustainability of the two results in paragraph two of the Background section of this SOW. Most of this information is included in the recently completed project evaluations. The team will suggest methods that could be used to document measures of progress in CBNRM over time for use in future CBNRM activities.

#### **Discussion:**

The results framework of RCSA's NRMP supports activities that should achieve the following:

CBNRM Assessment Document (Draft # 2)

Result 1. demonstrate, through practical examples, the technical, social, economic and ecological viability of CBNRM and utilization programs on marginal lands for increasing household and community incomes while sustaining natural resources; and

Result 2. improve national and local capability to halt the decline in the wildlife, range, watershed, veld products, and biodiversity of the resource base through training, education, protection, communication and technology transfer.

Zimbabwe was the first of the five countries in RCSA's current NRMP program to explore the concept of what is known today as CBNRM. After an earlier attempt in the late 1970s was side-tracked during the revolutionary period, the CAMPFIRE program finally started in 1984. Organized by the Department of National Parks and Wildlife Management (DNPWM) to control poaching of game animals and recover their dwindling numbers, it went directly to the people in the field who were closest to the problem. In 1988, Zambia introduced the ADMADE program. Both of these programs were internally conceived and initiated by their respective governments.

When RCSA activated the NRMP in 1989, both Zimbabwe and Zambia requested bi-lateral support through their respective USAID Missions, and they, along with Botswana, were the first clients. Shortly, Namibia gained independence (1991) and subsequently developed its internally driven LIFE program which closely paralleled the philosophy of NRMP. In 1992, RCSA funded project support to LIFE as a pass-through in coordination with USAID/Windhoek.

USAID technical assistance varies according to the particular program scale and scope which has been worked out by agreement with the various host countries. In Botswana, implementation is through U.S. contractors working through counter-parts from the DWNP. In Namibia, Zimbabwe and Zambia the technical assistance is provided through indigenous contractors. In all of these cases, additional support is provided by NGOs, the most prominent being WWF and IUCN. Some local adaptation of extension methodology is being used in every case to facilitate community organization and to introduce new concepts and technologies. Motivating people to get involved in the process of change has been shown to be a key initiating strategy, as well as a commonly recurring theme throughout each stage of the CBNRM program effort.

NRMP support to Malawi has been to assist the government in fulfilling its role as the SADC technical coordinating unit (TCU) for "Regional Development of Community Based Management and Utilization of Wildlife Resources in Marginal Areas". In 1996, Malawi instituted its NATURE program to incorporate the CBNRM model into its internal operations. This has led to the preparation of a bi-lateral CBNRM project with USAID/Lilongwe which is due to go into effect sometime in 1998.

The USAID level of effort to the NRMP since August 1989 is shown in the table below.

USAID FUNDING FOR REGIONAL NATURAL RESOURCE MANAGEMENT PROJECT (funding expressed in millions of US dollars)					
	Botswana NRMP	Namibia LIFE	Zambia ADMADE	Zimbabwe CAMPFIRE	SADC TCU and RCSA

*CBNRM Assessment Document (Draft # 2)*

Initial Project Date	Aug 1989	Aug 1983	Aug 1989	Aug 1989	Aug 1989
Most Recent PACD	Aug 1999	Aug 1999	Dec 1999	Aug 1999	Aug 1999
USAID Project Funding	23.4	15.0	4.8	12.1	4.3 total

The different governments have their own theories of operation and different authority structures as befits their own internal situations. Because today's CBNRM program is the outgrowth of separate indigenous initiatives, the mode of implementation within each government is unique.

Details about the policy process, discussed in Topic No. 1 (above), provide additional insight into these differences. In general, Botswana and Namibia have developed along the idea of setting up CBOs as officially registered and chartered organizations, allowing them to operate as enterprises with the capacity to contract directly with the market sector in carrying out management operations on their communal lands. Malawi is still in the development stages of its operational philosophy, but is tending toward adapting the basic model used in Zambia and Zimbabwe. This can be generally characterized as a revenue model, in that government is the contracting agent, collects the incomes generated, then re-distributes a percentage to the communities at the district or sub-district level.

The overall result of these differences in policy and organizational structure affects the actual capacity of the local people to have access to the use of the resources and to have inputs into the decision making process. These two facets of the results of policy are the real effects of the degree of devolution of resource rights to local levels from central government, as shown in the schematics (below) for the wildlife and forestry sectors of production. These sectors are not coordinated by the same agencies in their respective governments.

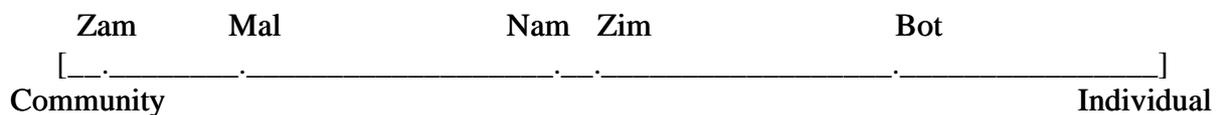
The effect of these different modes of operation is reflected in the results being obtained by the various programs. Both the revenue model and the enterprise model have had nearly the same positive effect on utilization and income generation, as evidenced by the data discussed in Topic 6 (Economics), and the decreased rate of conversion of land to agricultural production in some areas since the program's participatory approach began to take effect in the past five years.

**Comparative Degrees of Devolution**



In Zambia, income generated by the program is disbursed only to the community, while Namibia and Zimbabwe CBOs vote on the percentage split between community and household. In Botswana the income goes more directly to the producer of the effort -- to individuals, or households, or to the CBO if it holds the contract which generated the funds. The case for increasing individual household incomes is less clear for Namibia and Zimbabwe, because they may vote all of the income to households during drought years, as a survival mechanism, then turn around in some years and vote most of it to community infrastructure investments. The best opportunity for individual households to gain is found in Botswana, where the people are encouraged to seek individual opportunities to generate income in addition to whatever the CBO takes on as a group. In arriving at this comparison of the benefit streams, the total of individual household and community were considered together. The differential in the local benefit stream between countries can be shown as a continuum (below):

**Comparative Local Benefit Stream**



Assessing the degree of progress toward sustainability for each country in terms of Result 1 (increasing incomes) is facilitated by reference to the analytical framework presented in Topic 7 of this report. The framework sets up three stages of CBNRM development; the initiating stage, the implementing stage, and the sustaining stage. Subjective analysis leads to the conclusion that: Zimbabwe reached the early level of the **Sustaining Stage** within the last 3 years; Botswana entered the late **Implementing Stage** within the last 2 years; Namibia and Zambia are near the middle of the **Implementing Stage** at the present time; and Malawi is near the start of the **Initiating Stage**.

With respect to Result 2 (conservation), both modes of implementation appear to have had positive impacts on wildlife populations on communal lands. Although part of this has been directly attributed to participatory control of poaching, there has also been a reduction in the incidence and size of veld fires (with the exception of Botswana) which can have seasonal and/or long-term impacts on habitat quantity and quality.

Assessing the degree of progress toward sustainability for each country in terms of Result 2 can, as above, be facilitated by reference to the analytical framework in Topic 7 of this report. Subjective analysis leads to the conclusion that: Zimbabwe is presently entering the early

**Sustaining Stage;** Botswana, Namibia and Zambia are near the center of the **Implementing Stage**; and Malawi is in the early **Implementing Stage**. The most salient single factor in arriving at these ratings is the capability of the national and local organizations. In general, capability at national levels appears to have increased in the past two years (except in Malawi), while local capability has expanded much more slowly (except in Zimbabwe). It is also worth noting that the level of the result correlates closely with the availability and capacity of NGOs, and with the length of time the programs have been deployed in the field.

Overall, the modes of implementation within countries and the comparable differences between them are becoming more dynamic and less distinct. The common, over-riding theme of involving the local user communities to help reduce the impacts of poaching is still a part of the approach in the initial stage; but focus rapidly shifts beyond that, toward utilization and management. As these shifts occur, the differentiation of modes, between the “revenue” group and the “enterprise” group is becoming less distinct. Sharing ideas between the countries is also a significant part of this evolution as they learn from each other. This is viewed as an early indicator of the increasing degree of sophistication of the CBNRM process as the long-term effects of people’s participation begin to emerge.

#### **FINDINGS:**

F3. CBNRM implementation is in a stage of acceleration within the region after having undergone nearly ten years of initiating efforts; implementing organizations (agencies, CBOs, NGOs, etc.) still lack the absorptive capacity to efficiently, effectively, and rapidly use donor support; the magnitude of donor funding and the short (4-5 year) implementing cycles are not well synchronized to internal conditions and constraints.

#### **RECOMMENDATIONS:**

R3. Extend the PACDs of USAID bi-lateral projects without necessarily increasing the level of funding; in the context of non-presence countries, international NGOs such as IUCN and WWF could be contracted to continue the project momentum.

**TOPIC 3.** Characterize CBNRM in terms of its spread and potential sustainability based on such variables as climate, land type/cover, land tenure, social structures, and policy frameworks and economic impact. The analysis shall catalogue, to the extent possible, CBNRM approaches by key characteristics using as a guide those different approaches described in the draft concept paper, done in September 1997, for a new design and the pre-conference paper for Beyond the Tragedy of the Commons Conference held in Kasane in 1995 as points of departure.

#### **Discussion:**

The spread and potential sustainability of CBNRM in the region are dependent upon different interest groups that are concerned about two primary and three secondary focal points of support.

One primary focus is economic development which concentrates on improving the incomes of rural disadvantaged people on communal lands, and is reinforced by the development arena's emphasis on community and popular participation. The second primary focus is wildlife conservation, which initially enlisted popular support for anti-poaching activities. Local participation was gained by sharing the financial benefits from wildlife with the rural communities.

The three secondary points of support for CBNRM are: 1.) the democracy in governance movement, concentrating on decentralizing government and devolving authority, rights, and responsibility to the people; 2.) the market economy, diminishing the importance of central planning and increasing the importance of responding to market demands and opportunities; and, 3.) human rights concerns, demonstrated by the interest in fair treatment and equality, and the emphasis on working with disadvantaged people on communal lands.

Zimbabwe (1980) and Namibia (1991) only recently became independent majority-rule countries, and in both countries, the politically sensitive "land issue" is a legacy of their colonial past. The colonial pattern of evicting indigenous people from their best lands and converting them to freehold tenure for Europeans, shows today in the differential rights between these freeholds and communal lands. Colonial authorities in many countries in the region also evicted people from lands that were converted into national parks or controlled hunting areas. Now, the issue of devolving rights to lands and other natural resources in communal areas is enmeshed in this larger and more contentious land issue. Perhaps the specific nature of the CBNRM-related issue of tenure rights to communal lands and resources will allow it to be resolved gradually. The fragmented natural resources agencies, by sector, and the current practice of addressing community rights issues sector by sector, could result in piecemeal solutions to this issue.

Current CBNRM projects began by concentrating on targets of opportunity on communal lands. These were locations unfavorable for agriculture, or not completely converted to agricultural use, and had significant wildlife populations under threat. There was a corresponding low density of human population. These early locations featured pre-existing market opportunities for wildlife and there were existing benefit streams from contracts and licenses that were diverted to benefit the community without the need for large amounts of start-up capital investment. The early locations also featured existing organizations (NGOs or CBOs) or social or political willingness to participate in the program. These factors facilitated recruiting the communities.

In Botswana and Namibia, CBNRM activities are concentrated in the north, where the semi-arid climate and generally sandy soils create conditions that are marginal at best for crop production. Low density populations of agriculturalists, agro-pastoralists, and hunters and gatherers co-exist on communal lands with economically significant wildlife populations. The area contains some significant rivers and wetlands, including the famed Okavango Delta. The "land issue" influences CBNRM in Namibia, while in Botswana, a politically and economically powerful livestock sector influences CBNRM areas by a continual pressure to permit access by more cattle to communal grazing lands and by construction of veterinary fences that restrict migratory wildlife.

In Zimbabwe, the CAMPFIRE program covers a broad horseshoe-shaped expanse of marginal land surrounding the central plateau. These are the marginal lands where Africans remained or were resettled, and are low in elevation, receive less rainfall, and are less favorable for crop production. Portions of the marginal lands are also reserved as protected areas. CBNRM activities are not developed evenly across these lands, but are concentrated in the drier areas along the Zambezi River in the north and in the southeastern lowlands.

In Zambia, the ADMADE program covers all of the country's Game Management Areas (GMAs) which were established next to national parks to create buffer zones. About 30% of Zambia is in parks and GMAs, and although GMA many lands are suitable in climate and soil fertility for crop production, they are sparsely populated by subsistence farmers with communal tenure. The

conservation concern in Zambia is more about poaching, which has been rampant in the past, than about converting parks to cropland. The land issue is not as important in Zambia, and there is less pressure to convert GMAs to farmland because urbanized Zambia has a relatively low rural population density.

In Malawi, the scattering of locations and land types reflects the absence of a coordinated national program. This is one of the poorest countries in Africa. The few remaining wildlife are found in national parks, and soil erosion and deforestation are the major environmental concerns. Poverty and population growth combine to create political pressure to convert protected areas to cropland. Recently initiated CBNRM activities range from lakeside fishing communities to subsistence farmers on communal lands surrounding national parks or adjacent to forest reserves.

An inherent limitation of CBNRM in its early implementation in the region was its almost exclusive emphasis on wildlife utilization to supply market demands for safari hunting and tourism. There is little doubt that this wildlife focus was the most appropriate from the time of the initial efforts with until the middle of the present decade, because the interests of the regional and international political communities were focused on the high perceived values of the endangered wildlife resources. International donors (including USAID) and NGOs were anxious to help provide for this type of development focus. Initially, this resulted in less attention being paid to other veld and forest resources that may be appropriate for CBO management and marketing, or to the integration of wildlife with range and forest management.

There is mounting empirical and anecdotal evidence that attempting to apply the wildlife/tourism model to all areas will not generate adequate economic activity to make it viable. Much of the long-term economic potential of the human and natural resources on communal lands is apparently being ignored and under-developed. As land form, climate, and social structures vary from one area to another, the rational use and development of the resources also shift. Opportunities for forests, range lands, freshwater fisheries, and a wide variety of marketable veld and non-timber forest products are largely ignored, even in those cases where it is the stated intent to develop them in the implementation programs. The challenge, now, is to find the mixture of existing internal consumption demands and/or external market demands for these other products, and to develop management scenarios to produce them in lieu of developing programs solely on wildlife utilization and tourism.

Botswana appears to have moved ahead of the others in terms of developing non-wildlife economic uses of its community resources through its community-based processing and marketing of marula fruits and mopane worms. Some thatching grass and crafts enterprises in Namibia are other examples. These marketing efforts were initiated by the women of their respective communities, and some may develop into significant economic examples to other CBOs of what can be done.

The CBNRM approach has been used successfully as a natural resource management approach on common grazing lands in Lesotho and Pakistan, and on devolved-tenure forest lands in Nepal, where marketable wildlife resources do not exist. In the Southern African region, people who embrace the ideas of CBNRM, but live in wildlife-deprived areas, could be incorporated into the programs by this conceptual expansion of the potential scope of CBNRM.

People involved with CBNRM in the study area have combined ideal principles and lessons

learned about practical and political necessities to produce a consensus about the features of a potentially fully operational CBNRM program in Southern Africa (see Topic 1, above). The long-term potential scale of CBNRM would include all rural disadvantaged people and all rural communal lands in the region. Full-scale governmental support would mean that all resource-related ministries were involved. The potential scope of CBNRM would include all renewable natural resources and tourism.

The actual scale and scope of CBNRM varies. Although there is a general consensus about the complex of institutional features of a fully operational CBNRM, the complex in its entirety does not exist anywhere in the study area. Programs and activities express varying degrees of progress in achieving all of the features, and there is a general sense of optimism at all levels about the probability of continuing to advance toward the ideal.

The fully developed CBNRM complex does not spring fully-formed into existence, but evolves through phases of capacity building and negotiation among interest groups. At least two evolutionary processes are operating. The first concerns changes in governmental and legal policies. The second occurs at the community level and includes development of management capabilities. Although not universal, decentralization of civil authority to the district level seems to occur before the devolution of legal rights to the community level. Neither change is likely to be implemented quickly, even when demanded by changes in policy. What actually occurs is a gradual (or discontinuous) coming into operation of functions and authority at the new level as people (and offices) at that level gain the capacity to manage their new responsibilities, and as people (and offices) at the earlier level relinquish control.

Evolutionary change also occurs at the community level. Since previous social and political organization and authority differ among communities, the pace and degree of development of CBNRM at the community level varies from one location to another. Rather than the immediate creation of fully operational CBOs and community level democratic leadership, it is more common for these organizations and their leadership to evolve through a process of authority-accepting and capacity-building.

The process of creating and building the democratic representativeness and the governance capacity of CBOs has to be gradual. Many of the existing CBOs are still under the effective control of traditional authorities. Aside from family-based social units of lineage and clan, or religious congregations, the only continuous tradition of community is based on pre-colonial models under the leadership of a traditional authority (chief or headman). Thus, many of the CBNRM "communities" correspond with the population under a traditional authority.

Devolution of rights to the community level often means, in reality, the devolution of rights to organizations that are now controlled or sanctioned by traditional authorities, and that need to find mechanisms to ensure their development as fully democratic organizations. Before the devolution of rights, there were no reasons for local people to create management units to contest the control of traditional authorities over natural resources, but local people are now realizing that there really are important locally-controlled resources worth contesting. All of the governments openly promote democratic organization in the political arena, so there will be a gradual shift at the community level toward democratic organizations and leadership. The new organizations and leaders have little or no practical experience governing or managing. Time, education, and capacity-building are needed. Learning through experience means that mistakes will be made, and

conflicts will arise that leaders and organizations will have to learn to manage.

The potential sustainability of CBNRM as a resource management system is high in terms of the commonly held popularity of the approach in the region. People in the resource dependent communities are quickly motivated to share responsibilities for the management of resources in exchange for commensurate authority over those resources and an equitable share of the benefit stream, while their managements abilities have not yet been demonstrated. Meanwhile, the foundation of national and international support is a fragile and unstable alliance of interest groups. The resilience of this alliance is not clear, but there are a number of potential fault lines. There are obvious conflicts between international animal rights groups and the regional emphasis on wildlife utilization. There is a conflict between the needs or desires for central planning and continued central governmental control over hunting quotas, versus the emphasis on responding to market demands. There is the fundamental question of the depth of government commitment to devolution, and the contradiction between democratic local organizations and traditional leaders with their ritual and customary claims to control.

There is also the issue of the capacities of various institutions, ranging from the suspect or obviously deficient management capacity of CBOs and ministries to the supportive capacity of NGOs. At issue as well is the capacity of the market to absorb the additional production if the CBNRM programs vastly expand in scale and scope.

#### **FINDINGS:**

F4. The initial focus of CBNRM on the wildlife sector was correct, and has been an important force for its spread throughout the region.

F5. The fully operational CBNRM complex in its entirety does not exist anywhere in the study area. Programs and activities express varying degrees of progress, and changes are not uniform. The fully developed CBNRM complex does not spring fully-formed into existence, but evolves through phases of capacity building, negotiation among interest groups, and experience in natural resource management.

F7. Both decentralization of civil authority and devolution of rights are necessary for CBNRM programs to operate effectively.

#### **RECOMMENDATIONS:**

R4. Long-term sustainability of CBNRM will be enhanced by expansion of the scope to other productive sectors of the natural resource base.

R5. Continue to promote both the decentralization of governmental civil authority functions and the devolution of proprietorship rights to CBOs.

**TOPIC 4.** The physical and socio-economic characteristics of the programs that are on-going shall be determined. The Team shall ascertain generally which areas contain similar characteristics so that an understanding may be achieved of the potential of CBNRM in Southern Africa.

**Discussion:**

Whereas the Southern Africa Region (the SADC nations) is a vast area of 12 separate countries lying southward from the equator in Tanzania to the Cape of Good Hope and including the island nation of Mauritius, this assessment deals specifically only with Botswana, Malawi, Namibia, Zambia and Zimbabwe (See Overview).

Physical. There are at least 45 species of large mammals in the five countries covered by this assessment, 38 of which are large ungulates or 'mega-fauna'. Together with the major predators and scavengers that are essential parts of this wildlife community, these animals are not only an important segment of the natural biodiversity of the region, but are also widely recognized and admired around the world because of their charisma. When the non-game species of birds, mammals, and reptiles are added to these, they are nearly beyond comprehension to most people from the more affluent developed countries of the world. This adds to the mystique and charisma of the veld, and to the region's capacity to supply unique safari hunting/tourism experiences to meet the high world-wide demand.

Habitats are very diverse throughout the area, ranging from the Namib desert in the southwest to the evergreen mountain forests of eastern Zimbabwe and the cool, high plateau of Malawi. The most common vegetative cover throughout the area is a mixture of deciduous forest, thorn-shrub savannah and mixed savannah grasslands. There are major wetlands in Botswana, Namibia and Zambia. Malawi claims the major portion of the waters of Lake Malawi which forms part of her international border with Tanzania and Mozambique. Botanically, the area is rich as the source of origin of hundreds of plants which are used by mankind. These include vegetables, medicinals, ornamentals, forages, and florals. Altogether, the physical, climatic and biological diversity of the area is of huge proportions.

USAID Project areas in Botswana and Namibia are in the arid and semi-arid tropical zones of the Kalahari, ranging northward to the less fragile and less arid river systems of the Zambezi, Chobe, and Okavango which flow from the Angolan highlands. Two project areas are in near proximity in the Okavango delta and the Caprivi strip. Sandy, low fertility soils and very low precipitation have severely limited the development of agriculture in these areas. Traditional uses of these lands are livestock herding and subsistence hunting and gathering. Rural human populations are of very low density as a result of the natural limitations of soil, water and climate which constrain the total biomass productivity for sustaining life.

Progressing northward into Zimbabwe, Zambia, and Malawi, the land becomes increasingly more green and fertile as precipitation and soil structure improve with decreasing latitude. Total potential biomass productivity increases significantly in response to these more amenable growing conditions, and human population density in the rural areas increases in comparison to the desert environments of the south. With this increase in the productive capacity of the land we observe an increase in its capability for agricultural exploitation. This, in turn, leads to an ever diminishing physical area for non-agricultural land-use systems of the traditional users at the same time that their population expands.

Socio-economic. Pre-colonial Southern Africa has been described as a widely dispersed rural society of low human population density, high game animal density, and a traditional system of low-impact land uses which included the management and exploitation of wildlife under

communal proprietorship. Except for ivory exploitation, wildlife products were predominantly for local subsistence. The traditional social structure over the majority of the region's communal lands is one of dispersed small village or family groups under a tribal authority which varies from one ethnic group to the next, but is essentially adapted to the natural environment. In spite of the Colonial Era, these tribal structures still exist in varying degrees. An important part of these traditional units is their similarity, in the cultural context, of self-imposed systems of allocation and management of their natural resources. In spite of the rationality of lowest density human populations occurring in the lowest biomass capacity areas, and the corresponding increase in population as potential biomass productivity increases, there is an abundant amount of concern being expressed that the area's overall *population growth rate* of nearly 3.5% is not sustainable under currently perceived limitations on resource productivity.

The USAID NRM project (1989) was initially designed to address the improvement of wildlife management systems in the region through involvement of the local people as participatory managers with the government and the private enterprise concessionaires as the other key actors. The long-term goal is to "increase incomes and enhance capability to meet basic human needs through sustainable utilization and conservation of natural resources", and the imputed approach was focused on improved economic utilization of wildlife. Previously recognized high levels of international market demand for the various types of "safari experiences", and the already functioning linkage between governments and private enterprises to supply this demand, were the springboards for launching the project. It appears that the potential success of wildlife-based CBNRM activities is working best on semi-arid marginal lands with low human population densities, together with large and economically significant wildlife populations.

#### **FINDINGS:**

F7. CBNRM in the region is currently targeted on communal lands which are marginal for agriculture but of potentially high productivity under integrated natural resources management.

#### **RECOMMENDATIONS:**

R6. New efforts for expansion of CBNRM in the region should consider concentrating on those areas where human population densities are posing a current threat to long-term natural resources capacity and productivity.

**TOPIC 5.** Identify **broad biophysical trends** which have been or are being affected by CBNRM. Classify these trends in terms of effect on the natural resource base. Describe the current state of knowledge on the impacts of CBNRM in the region. Develop an approach to document these trends during the continuation of RCSA's activities in CBNRM. The approach should include informational tools to collect, manage, analyze, and disseminate information about CBNRM.

#### **Discussion:**

Changes, over time, are an inevitable part of the evolution of all life-forms. To address the RCSA mandate *to improve the quality of life of all its people*, and the SO3 of *sustainable natural resource management*, we must face up to the reality that biodiversity will gradually (and certainly) yield to the long-term survival needs of man as we evolve into new dimensions of balancing our needs with the finite realities of our environment. The concept of *sustainability*, itself, implies the capacity to adapt and modify to fit the shifting circumstances of imposed changes due to a myriad of internal and external forces. Such things as population(s), productive

capacity, markets, technology, basic knowledge, policy, and community identity are dynamic and will continue to force changes and/or narrow the resource management options in the future.

It is too early in the implementation stage, an average of 3-4 years of accelerating activity, to measure the impacts on biodiversity of most of the CBNRM projects in the region. In most cases, the community institutions are only beginning to reach the stage where they can play an active part in management interventions. There are no long-term programs linked to monitoring of CBNRM activities for measuring biodiversity (other than wildlife census).

Namibia is just now in the initial stage of a project specifically aimed at the long-term measuring and monitoring of biodiversity in its CBNRM areas for comparison with similar non-CBNRM areas. This project will try to establish whether there is any causal linkage of any identifiable changes. This is, necessarily, a long-term effort in order to allow CBOs to arrive at the management stage of their programs, and to account for cyclic climatic variations.

There is growing evidence to show that wildlife populations are increasing, and empirical evidence from some observations that habitats are being maintained on functioning CBNRM areas. A recent survey of three CAMPFIRE wards in Zimbabwe (Conybeare, 1998) concluded that wildlife populations were increasing, there was very little reduction in the area of the habitat, and no significant loss of or modification of habitat – other than possibly by elephants.

In northwest Namibia (Kunene region), community involvement in curbing poaching and local tolerance of life threatening animals such as lion, elephant and rhinoceros has made significant contribution to general and sustained increases in wildlife numbers between 1982 and 1997 (Durbin, et al, 1997). The endangered black rhinoceros is increasing in numbers on the communal lands of this area. In the same area, elephants are currently increasing and expanding their range onto communal lands.

In Zambia, the CBNRM areas under both ADMADE and LIRDPA which are generating the most income from safari hunting are also seeing an increase in wildlife numbers. Recognition of high value for legitimate off-take has decreased the impacts of poaching and increased community interest in managing these animals. Some species in certain areas, such as the hippopotamus in the South Luangwa Valley are considered to be over-abundant at present. Meanwhile, there is an air of sensitivity among wildlife officials in Botswana and Zimbabwe when they are asked how large the elephant herds on particular areas will be allowed to grow. Crowe (1995) reports that the elephant herds in northeastern Botswana increased from 45,000 in 1987 to 78,000 in 1984, while other big-game species such as buffalo and zebra have declined significantly.

Discussions with officials from the forestry, wildlife, and parks sectors in Malawi revealed that the habitat on their protected lands is lush and highly diverse in plants and non-game wildlife. But, they have suffered a significant loss of biodiversity (not CBNRM related) due to intense and frequent subsistence hunting and poaching of the game species. This has led to the disappearance of most dependent predator and scavenger species as well. Very high density human populations around the perimeters of these protected areas have also caused some serious localized decreases in plant diversity where intrusions are frequent and in large numbers. Malawi's recently liberalized forest policy is intended to benefit those people and communities interested in "co-management", and this will be one focus of the new CBNRM project to be sponsored by USAID/Lilongwe.

Any trends in the forest, range, and surface water resources that might be taking place within CBNRM areas appear to be either confined to small areas with negligible regional impacts, or to be masked by the cyclic dry-wet conditions of climatic variation and the regular seasonal fluctuations of the ecosystems. Up until now, the evidence has not been collected and subjected to routine tests of validity and reliability, so definitive answers are not available.

Current information about the impacts of CBNRM is essentially limited to monitoring big game populations in order to set harvest quotas. Although empirical data on species distributions, populations, fecundity and condition of game animals can give a *relative* measure of productivity of the system over time, base-line scientific data of the *quality and quantity* of the habitats supporting these animals are scarce. Except for some site specific monitoring of agricultural land clearing with aerial photography, and some generalized vegetative monitoring by weather satellite imagery, not enough is known about the past, present, and trend conditions of the forests and rangelands in terms of the sustainable productive capacities of the resource base.

Biodiversity is a complex ecological concept which should not be loosely equated to the temporal changes in abundance of any one (or few) individual species (either plant or animal) without comparative temporal trends to other associated species. In the absence of reliable historic baseline data for the associated (and to some degree interdependent) group of species, systematic monitoring and inventory of their quantity and quality can provide the basis for reliable trend analysis and lead to valid temporal conclusions. These measures can then be harmonized with the cyclic climatic patterns to establish a predictable and independent measure of the long-term “normal” span of the zones of fluctuation.

Field measurements of this type, done on an individual management unit basis, should be expected to be the minimum essential information required if the people responsible for long-term management of a “natural” system are expected to be able to sustain that system. Such ground level data can then be used to sensitize and fine-tune the color resolution on weather satellite imagery (available at low cost) for monitoring both short and long-term vegetation patterns. These, in turn, can be matched up with periodic game census to predict the best population distributions for a management unit.

At least two organizations are using these weather satellite images to track vegetative cover and condition trends in the region: the Famine Early Warning System (FEWS), and the Botswana Range Inventory and Monitoring Project (BRIMP) located in the Ministry of Agriculture, Forestry and Range Division (funded by the Department for International Development). Even so, there is an expressed opinion by wildlife managers and/or biologists in government agencies and some international NGOs, that baseline survey and monitoring of the natural habitats is too expensive and time consuming.

There is limited (and optimistic) empirical evidence to suggest that CBNRM has induced a shift away from the clearing of land for agriculture in Zambia and Zimbabwe, as a result of more marginal opportunity costs for agriculture in comparison to game management; but, this is neither *broad* nor a *trend* at this time. Likewise, the reversion of some large cattle stations back to wildlife production (e.g., Namibia and Zimbabwe), is too recent and of insufficient area to evaluate biophysically, except as specific individual cases.

In some of the CAMPFIRE areas in Zimbabwe and ADMADE areas in Zambia, concern is rising that human population growth is putting more pressure on the conversion of wildlife habitat to

agricultural production. The idea of family planning has begun to surface in some of these CBNRM areas, and has been openly discussed by men in community meetings with technical advisors.

#### **FINDINGS:**

F8. In spite of several years of CBNRM development activity, most of the CBOs in the USAID project areas are only beginning to reach the stage where they can make active and positive management interventions.

F9. In spite of the evidence on wildlife populations and trends of a few species, there is a lack of specific evidence to support any indications of identifiable, positive or negative, broadly distributed biophysical trends in the region that can be directly attributed to CBNRM.

#### **RECOMMENDATIONS:**

R7. RCSA should coordinate with the Namibia Ministry of Environment, SADC, FEWS, and BRIMP to explore the technical and financial feasibility of adapting the Namibian biodiversity monitoring program to a regional scale.

R8. Technical inputs and training are needed at the local level to organize and implement systematic measurement and monitoring of habitat conditions at the management unit level, and link them to wildlife population levels.

**TOPIC 6.** Determine an estimated value for CBNRM, both in direct terms and linkages to the local (perhaps household) and regional economy by identifying potential economically significant resources to the extent possible. Describe how other income sources such as tourism do or can contribute to the people involved in CBNRM. Provide a depiction of how CBNRM optimizes resource (or land) management in terms of benefits to households, and communities, and how this affects national accounts. Determine the estimated value from CBNRM in terms of income flows, risk reduction, and resource optimization using data available in project reports and evaluations. Similarly, determine implied values based on traditional, religious, or social mores. Identify key development needs stemming from this analysis which indicate the economic, social significance, and sustainability of CBNRM. Identify requirements for further analysis on these areas required for USAID/RCSA follow on CBNRM programs. In providing information on income, any significant local CBNRM propagated enterprises will be described.

#### **Discussion:**

**ECONOMIC VALUE.** It is appropriate in considering the value of CBNRM to include: direct use value, indirect use value, option value, existence value, and bequest value. Given the broad goals of CBNRM at the local, national and international scales, all of these are components of the value of the natural resource base that CBNRM is intended to enhance. Clearly, it is not possible to specify quantitative measures of all these, but it is important to recognize these as part of the economic values that CBNRM efforts are generating.

Wildlife is by far the most economically significant resource associated with CBNRM. Where wildlife occurs in sufficient numbers trophy hunting and tourism have created the potential and the reality for considerable community income. CBNRM programs are enabling the communities and households to capture part of the monetary value associated with wildlife oriented enterprises.

While some communities have wildlife on their common lands that attract hunters, others do not.

Some have proximity to landscape features that can attract tourists: fishing in some areas and birding in others. Additionally, these areas were once habitat for a wide range of other wildlife, and this wildlife may return if conditions are correct. CBNRM efforts over a longer time period can help communities enhance conditions for wildlife and the potential for tourism in their areas.

In a contingent valuation study in Namibia, Jon Barnes *et al.* (1997) established an aggregate economic value associated with wildlife viewing tourism of US\$203 million per year (US\$738 per tourist). This translates into US\$ 67 million per year in net national income to Namibia and US\$40 million per year in consumer surplus to the tourists. Given that CBNRM efforts have the potential of improving wildlife in many areas, the future aggregate values and consumer surplus is likely to grow significantly and add to Namibia's net national income. Many of the other SADC countries have similar potential.

Veld Products. Some CBOs are exploring the potential of various natural products that come from their communal lands. The ones most often mentioned are marula fruit, pane worms, thatching grass, cochineal and grapple (devil's claw). In Namibia, it was recognized that the expansion in tourism was causing an increasing demand for thatching grass. The harvesting and marketing processes were improved and the women of three communities involved in collecting thatching grass increased their incomes from US\$15,000 in 1994, to over US\$100,000 in 1997. While the management operation and compensation effects need to continue to improve, there is established demand and market linkage for some veld products, and CBNRM can enhance the potential.

Service. Although this is not occurring presently, CBNRM efforts can provide additional value through provision of various land management and other services. There are service activities that need to be performed in rural areas, and members of the communities are in the best position to perform these. CBNRM efforts can help identify the demand for these services and organize the community members to provide them. The result would be an increase in value for each nation and for the specific community, as well as income for individuals.

Ecosystems' Values: While these economic values are difficult to quantify in monetary terms, economists do agree that people do hold these values. People in other countries, especially developed countries, see Southern Africa's flora and fauna in special ways that translate into a monetary willingness to pay to assure long-term ecological integrity. Jon Barnes *et al.*'s research in Namibia gives insight into these values and the way they relate to CBNRM. The contingent value survey of tourists viewing wildlife in Namibia posed questions concerning willingness to pay into a wildlife conservation fund in Namibia. The average tourist expressed a willingness to pay of US\$23 per year, which aggregate to US\$6.3 million per year for the number of tourists in 1995. Additionally, the average tourist expressed willingness to pay US\$5.75 into a community trust fund aimed at improving the rural communities living within the natural ecosystems. This is an aggregate value of US\$1.6 million per year.

It is reasonable to assume tourists coming to other Southern African countries have similar values that translate into willingness to pay. Also, it is reasonable to assume people not actually coming to the region hold values toward these ecosystems. For example, if one-tenth of the U.S. population was willing to contribute the price of a cup of coffee (\$1.00) per year, the aggregate willingness to pay would be in the order of US\$25 million per year. One could expect people in other wealthy nations to have similar ecosystem values.

Derived Value of CBNRM. In general the direct value of CBNRM is derived from the broad range of activities associated with the landscape that are enhanced by better ecosystem management. Better management will occur where the communities and their individual members better understand the consequences of their actions and recognize the potential for compensation for their resource management actions. CBNRM is accomplishing this in some areas and has potential for positive effects in additional areas of the region.

INCOME SOURCES AND LINKAGES. Income to the people will occur to the degree that they are involved in the provision of products and services demanded in the market place. Monetary income will flow to the individuals and communities as compensation for their efforts and for allowing use of various types of capital they control. Individuals will receive wages and salaries for their efforts and the community will receive royalties from private businesses that use natural capital (i.e. the landscape) the community controls and manages. Additionally, income is stemming from linkages to other valuable activities, spin-offs, and secondary effects. The goal of CBNRM is to enhance the potential for these forms of income.

Tourism around the world is growing very rapidly as real incomes rise. The World bank has recognized this trend and has declared tourism the world's largest economic sector. Southern Africa is well placed in the market to see continued expansion of demand by tourists, and this will translate into increased income for the nations, communities and individuals. Data do not exist that relate tourism activities directly to the rural communities and incomes. It is helpful to consider the Zimbabwe case to gain insight. Since independence in 1980, Zimbabwe's tourism industry has grown by six-fold up to a present level of 1.6 million visitors. While tourism was growing, the over-all economy has been in decline. Average real income declined by 50%, but during this time, tourism and safari hunting contributed increasing income to rural people. Just sport hunters spend US\$15 million per year, and this translates into US\$1.5 million to the CAMPFIRE communities. Other countries are similar, and CBNRM is playing an important role as a generator of rural incomes.

Future. It is expected that tourism in Southern Africa will continue to grow rapidly. The growing number of visitors to the region has spurred private sector investments in facilities, and governments are improving roads allowing easier travel within and between countries. Governments have also made it easier for visitors to enter and leave the countries. These improvements open the way for those interested in Southern Africa, but who are less adventurous than travelers of the past. Residents of the Southern African region are also traveling more, both within and between countries. Inherently, tourism has linkages throughout the region.

Other sources of income to rural communities and individuals are less impressive, although for the communities without tourism potential the income from these can be important. There is demand for some veld products, and these are contributing income to communities and individuals. It is not clear as to how robust the demand is for marula products, pane worms, cochineal, grapple and such products. It is possible if a number of communities expand collection and production of the same veld products, supply can outstrip demand, resulting in price and income decline. To the degree that the demand for certain veld products is linked to the expanding tourism sector, income from these can grow. This is the case for thatching grasses and crafts.

Communities and individuals have potential for generating income by providing services.

Presently, the wildlife guards in protected areas and on communal lands are doing this. There is need for other landscape services, and if these services are developed in conjunction with those needing them, income can result. Effective fire management in many areas is an example. Income from these additional sources will have limited multiplying effects in the communities until trade between residents becomes more developed.

OPTIMIZATION OF RESOURCE MANAGEMENT. CBNRM is being implemented where people are greatly dependent upon natural resources and the landscape for their basic survival. The landscape resources are seen by the user-community as their long-term source of goods and products for survival. Because of long-cycle drought and inadequate markets they do not see a means for quick gains from the resources. They have an inherently long planning horizon. Also, with limited means, they are likely to have a low discount rate (although, given extreme short-term survival conditions, they may temporarily demonstrate a high discount rate). Financially, they have little liquid collateral and thus little opportunity to leverage their financial position. Fundamentally, with local community control over the resource base and a functioning community decision making process, it would not be expected that the community would opt for over-exploitation of their natural resource base.

Traditional values of communities are more likely to be reflected in natural resource decisions where the CBNRM approach is used, providing means of rationalizing the decisions of the group and the individuals within it. Traditions can be reflected by both the individuals and the group and be incorporated into their decisions. Reflections of the community's values leads to decisions based on those values. CBNRM also provides means for the community members to explicitly address the manner in which the consequences, benefits and detriments, will be distributed among the community members. They have the opportunity to set and meet their own standards of equity.

External environmental and economic events can send shockwaves through communities and nations. Communities with limited resources need to evolve a wide range of economic and ecological strategies for ameliorating these shocks. If clearly thought through and made operational, CBNRM can provide a means for broadening the production base, improving market access, and increasing cash flow. Reports (Ashley, 1998) indicates that incomes from veld products and tourism concessions have been very important for the purchase of food during droughts. Establishing a community based decision process has a high likelihood of providing the community with long-term economic and ecological resilience.

NATIONAL ACCOUNTS. To the degree that products and services derived from CBNRM enter the market place they will be reflected in the national accounts. Tourism associated with the rural landscape is highly likely to continue to increase. Both the direct expenditure and the growth in tourist facilities will be reflected in the accounts. Similarly, the incomes associated with veld products and other products and services resulting from effective CBNRM will add to the national accounts.

Green Accounts are supplemental accounts intended to complement traditional accounts. They are being proposed to cover the many things of value that do not have an established market value. In these accounts, estimates are made of the environmental service flows that stem from natural capital and that are not reflected in market exchange. Many market goods stem from natural processes within ecosystems; decline in the viability of these processes will reduce the

revenues from these products. To the degree that CBNRM leads to decisions that enhance the long-term ecological potential, greater productivity results. Tourism, too, is dependent upon viable ecosystems; for continued foreign exchange earning through tourism, the ecological systems must be maintained. If the national heritage is seen as inclusive of the landscape and the wildlife, enhancement through CBNRM increases their resilience to provide these services into the long-term future, thereby enhancing the national accounts.

**KEY DEVELOPMENT NEEDS OF CBNRM.** Key development needs from an economic and social perspective deal with who has control and decision making authority over the landscape's natural capital, understanding of the characteristics and productivity of the natural capital, and the demand for products and services that can stem from the combination of natural capital and community organization (see Annex E for the complete listing of these).

#### **FINDINGS:**

F10. Whereas most of the countries in the region are experiencing down-turns in their aggregate economies, the tourism sector associated with wildlife and the rural landscape has continued to grow and to generate much-needed foreign exchange and jobs. Through the CBNRM process, incomes at the local level of rural society have been increasing in opposition to the national trends.

#### **RECOMMENDATIONS:**

R9. Donor activities should intensify their focus, through CBNRM, on efforts designed to recognize and meet economic demand for products and services of the rural landscape, including but not limited to the initial focus on wildlife and tourism.

**TOPIC 7.** Describe a draft hypothetical analytical framework upon which CBNRM depends. Outline the framework's key enabling conditions, their sequencing, inter-relationships, and relationships to achieving strategic results. Determine the hypotheses inherent in the design of these activities. The framework would serve as a key design element in the NRMP follow-on for the RCSA. This draft framework will be a key element in determining the enabling conditions of CBNRM for this assessment. The draft framework will then serve as a base to be refined during the design of a follow on project should one be required.

#### **Discussion:**

CBNRM, as advanced by the government and international donors in Southern Africa, is predicated on a range of conditions found in the region, broadly identified as: economic, demographic, technologic, ecological and institutional. All are in a state of change. This part of the report is presented here in summary form; see Annex F for the unabridged analysis.

With the political changes in the region during the past 25 years, economies over the intermediate time period are expected to accelerate, and over longer time periods, economic integration is expected. Urban growth will occur as urban incomes continue to rise relative to rural incomes. People with above average education will be drawn to urban areas. Technological change will occur in urban areas and radiate outward. Communication technologies and transportation will play major roles in the increasingly modern economies. Agriculture in rural areas with high quality resources will continue to be commercial in structure and to adopt modern technologies.

Rural people will be employed, but the wage rates will continue to be low because of market forces. Agriculture in areas of marginal lands will remain traditional in its practice, providing at best a subsistence level of living for those remaining on the land. Typically, people on the marginal lands will have low levels of education and few marketable skills. Few employment opportunities will exist, and a large proportion of people's livelihoods will depend on the ecological systems of these lands. Based on past observations, if there are not changes in the way the people relate to the land, the ecological systems will deteriorate.

These marginal lands of Southern Africa, because they are among the last remaining habitat for African mega-fauna, have special value. But it is value that, up until recently, was not legally capturable by the inhabitants. Instead, the institutional structures in most of the nations have alienated the people from the natural resources that generate this value. CBNRM is an evolutionary approach that is intended to facilitate shifts and changes in the understanding of the natural resource base, in the management of the resources and the institutional structure, and in processes that will allow the people managing and conserving the resources, to capture in meaningful terms, the value associated with these scarce resources.

#### Key Hypotheses and Enabling Conditions.

A broad range of hypotheses are inherent in many CBNRM documents. These can be summarized as:

- 1.) the ecological resiliency of landscapes is threatened by inappropriate activities that are causing resource decline and threaten the well-being of people dependent on them;
- 2.) individuals and communities most intimately involved with the resources can best manage the resources and should reap the consequences of their actions, both positive and negative;
- 3.) government agencies, NGOs, and the private sector all have important roles to play in CBNRM.

Closely related enabling conditions and forces stem from these hypotheses in the context of Southern Africa and are presented here in aggregate form.

Enabling conditions are: 1.) the ecosystems of protected areas and communal lands are viable; and 2.) tourism and safari hunting are expanding economic activities that have positive effects on the involved communities.

Enabling forces are: 1.) residual traditional values among rural community members – people desire to stay on their ancestral lands; 2.) national governments desire to foster habitat conservation and community development through legislation and policy change; and 3.) the private sector, NGOs and donors are highly motivated to facilitate CBNRM.

Enabling Actions necessary if the momentum of CBNRM in the region is to continue and CBNRM is to become institutionalized at all levels are:

1. The communities must further develop and foster internal processes necessary for decision making and actions that lead to long-term continuity. Whereas the community may have evolved processes for dealing with other important issues, it is likely they will have to develop new processes for integrated resource management;
2. Government must continue to take legislative and policy action to allow communities

meaningful authority, responsibilities and duties that will lead to their obtaining of benefits and bearing costs related to their activities in managing the natural resources.

3. International donors must continue to be involved in facilitating the international evolution of CBNRM in the region, but at a decreasing scale. Donors need to facilitate the acceptance of CBNRM by all the actors, thus promoting the institutionalizing of CBNRM and sustainability.

Inter-relationships: There is congruence of the enabling factors making up the context of specific CBNRM efforts. Many of the conditions and forces have been created and established in much broader social, economic and political processes; these have major influence on the viability of CBNRM in specific applications. The situation is that while these affect CBNRM efforts, CBNRM efforts are not likely to affect the conditions and forces at the broader level. Instead, it is necessary that specific enabling actions stem from this broader context.

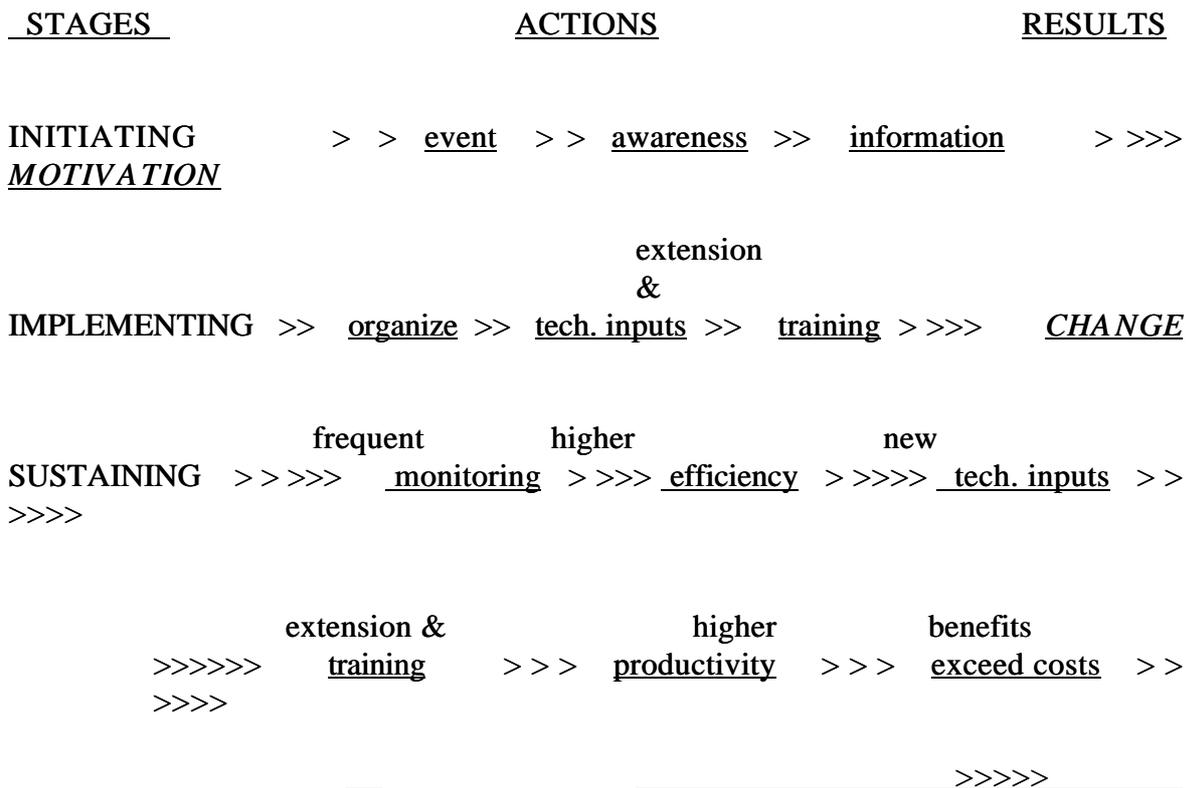
An Analytical Framework for Assessment:

At the time of this assessment, CBNRM development processes in the sub-region (study area) have evolved to the point where change is accelerating. Actions have, in general, moved it from the **initiating stage** to the **implementing stage** (see the schematic, below). There is also substantial evidence that there is adequate motivation throughout the process to continue to drive CBNRM to the **sustaining stage**.

In Botswana, Namibia, Zambia and Zimbabwe, CBNRM is at this implementing stage, and each effort has different characteristics, different successes and failures, different lessons learned. It is the mobilization of the knowledge gained in each effort combined with the enabling actions stemming from the broader context that can propel CBNRM into the sustaining stage. Facilitating this mobilization is an appropriate role for the donor community.

One way of using the analytical framework is depicted in the schematic diagram below:

CBNRM ANALYTICAL FRAMEWORK



There are three development stages in the CBNRM process; initiating, implementing, and sustaining:

The *initiating stage* is characterized by:  
 an event (e.g., loss of a species), which creates awareness of a need, problem or opportunity, which causes an infusion of ideas and information, creating motivation to

take action;

The *implementing stage* is characterized by:

**organizing** resources for action (planning, capacity building, re-structuring, etc.), followed by the infusion of **technical inputs** delivered through **extension and training**, which create **change**;

The *sustaining stage* is characterized by:

**management** of the system to assure that regular **monitoring and evaluation** lead to identification of **new opportunities** and **increased efficiency** which will require infusion of **new technologies** through regular and systematic **information and extension** leading to higher **productivity** to secure a mixture of **benefits** which exceed the costs of the process, leading to **sustainability** of the system.

This framework describes a means of tracking the process of CBNRM development. It can be used at any level of the operation (agency, district, CBO, etc.) where inputs are being made to help achieve the overall objective. As an assessment tool, it was used to determine broad trends and situations to identify the degree of momentum and development at the program level. As a design tool, it could be used to chart the elements necessary in a program or project, as well as help to estimate time and budget necessary to achieve a certain point in the process. As an evaluative tool, it could be used to determine the comparative stages of development between CBOs, or districts, or agencies at a specified point in time.

#### **FINDINGS:**

F11. The framework described here is a functional way of tracking the development stages and progress of CBNRM projects.

#### **RECOMMENDATIONS:**

R10. Donors should consider using this analytical framework in the design, monitoring, and evaluation of CBNRM projects.

**TOPIC 8.** Consider CBNRM in a regional (RCSA), bilateral (USAID country missions), and non-presence (Botswana, Lesotho, and Swaziland) context. Are clients' needs being served effectively (or how effectively) in each context? What are effective means of serving clients' needs in each context? While addressing regionality issue, describe the connection between field-testing approaches in a national or sub-regional framework and applying (dissemination) lessons learned in regional framework or network of Southern African CBNRM partners (or practitioners) (NRMP Regional Project). How effectively have CBNRM approaches been transferred in each context? How sustainable are USAID-supported interventions in CBNRM at this time?

This section specifically addresses CBNRM from the perspective of USAID/RCSA. CBNRM in the Southern African region exists in a complex institutional environment. This assessment reviews only Botswana, Malawi, Namibia, Zambia, and Zimbabwe. Other countries that the team did not visit are apparently also testing or developing CBNRM activities in some way, and South Africa and Tanzania have just recently joined into the RCSA/NRMP but have not begun any activities. Regional organizations, such as SADC, numerous multilateral and

bilateral donors, such as the World Bank, European Union, United Nations, the Netherlands and Norwegian governments, and various NGOs, such as IUCN and WWF, also play important roles in the spread of CBNRM within the region.

The structure of the USAID program is also complex and evolving. There are bilateral missions in four of the study countries (Malawi, Namibia, Zambia, and Zimbabwe), while Botswana has graduated to a 'non-presence' status. In the region, Lesotho and Swaziland are also non-presence countries, while Namibia, South Africa and Zimbabwe are expected to graduate to non-presence status within a few years. RCSA was established in Gaborone, Botswana and, aside from new regional programs, is also administering the Botswana NRMP II.

In addition to programs related to natural resources within individual countries, there are some NRM issues that transcend national borders. These transboundary issues include managing water resources, including watersheds such as the Zambezi River Basin system, the potential for managing contiguous parks or protected wildlife areas in adjacent countries, and the potential for international collaboration in managing or conserving other terrestrial resources that migrate across state borders or aquatic resources that live in rivers that form state borders.

Within each country in the region, the responsibility for managing various renewable natural resources and tourism is fragmented among different departments. This institutional fragmentation makes it more difficult for donors to coordinate and manage program activities in a non-presence context. Another complication within each country is the patchwork of different specific laws and policies that are associated with different systems of rights to resources. These laws and policies are in a very active stage of evolution which makes USAID (or other donor) liaison difficult in a non-presence context.

Who are the clients who should be served by the USAID/RCSA? The four USAID bilateral missions clearly indicated that they are, or should be, the primary clients, and that the regional program should not be funding any projects in specific countries, but should be supporting country programs and looking for ways to facilitate those programs. It appears that this is essentially what is occurring.

RCSA also needs to provide some level of residual management in non-presence countries for continuing programs that were initiated by earlier bilateral missions or as part of earlier regional programs. In the transitional case the Government of Botswana is a direct client of RCSA because of the continuing implementation of the Botswana NRMP. This appears to be working satisfactorily, perhaps because RCSA is physically located in Botswana. One bilateral mission noted that people from non-presence countries could attend the PCC (Project Coordinating Committee) meetings to learn about what is happening in the region.

SADC, and its Technical Coordinating Units (TCUs), are obvious clients for RCSA, as are certain NGOs that operate in a regional capacity. Can the governments and ministries of individual countries be clients of a regional mission? If so, in what capacity? Are the people in the region (or the region, as opposed to the SADC organization) a client? Can (should) USAID-RCSA act in the perceived best interests of the region as client? Are there other clients as well?

The current restriction of USAID-funded CBNRM activities to only four countries in the region is a product of historical circumstances rather than strategic planning. For future programming, RCSA should not remain constrained by history. The actual Southern African region contains twelve countries, including the dynamic and resourceful South Africa. Future programs should play with the full deck, which increases the options for future regional programs and requires decisions to be made about where USAID-RCSA should allocate its scarce resources.

What do RCSA's clients need, and what sorts of services can a regional center provide? Some needs were clearly stated, such as help with training and capacity-building, communication and networking, especially with region-wide or multi-country exchanges of ideas and lessons learned, regional information systems, sponsoring workshops and exchange visits on transboundary issues, and monitoring and evaluation. One specific area is to encourage national-level political leaders to continue with decentralization and devolution.

The 1997 Biannual SADC-NRMP Conference with traditional leaders and Parliamentarians at Victoria Falls was helpful and provides a clear example of how the regional program is helping national programs. A regional councillor from Kunene (Namibia) who was blocking progress toward the formation of a conservancy changed his mind after talking with pro-CBNRM government people from other countries at that conference.

The veterinary fences along Caprivi-Botswana border are a clear transboundary issue. For some issues like this, the top people in the ministries have to actually attend and talk about issues or see other ways for anything to change.

Is USAID/RCSA restricted to facilitating the activities of the organizations (bilateral missions, NGOs, etc.) that are its clients? Is indirect facilitation the only appropriate format, and only at a regional level? Can any RCSA programs be adapted to the needs and conditions of any one country? Can (should) RCSA help establish transboundary natural resource management organizations (such as parks and water authorities)? What other services would be useful and appropriate?

The interaction of national and international programs is occurring in terms of three processes: testing national approaches within each country; the international transfer of lessons learned; and the evolution of CBNRM approaches. The testing and modification in place of national programs has been occurring within the context of a strong awareness of lessons learned in other countries. RCSA has provided important resources to strengthen this international transfer of ideas through the Regional NRMP.

In addition, the most recently established NRM program (Namibia), as well as recent changes in Zambia and new development of interest in Malawi, South Africa and Tanzania show that the evolution of CBNRM is still continuing.

Here it is important to distinguish between the replication of CBNRM approaches versus the adaptation of CBNRM principles and lessons learned. There is general agreement within the region on broad CBNRM principles. Within each country the national policy environment allows for replication of CBNRM activities within numerous communities. Even so, the communities within each country's CBNRM program are heterogeneous in size, composition,

and activities.

What are the most important threats to the sustainability of USAID's CBNRM programs in the region? The most important and obvious threat is the latent reluctance of governments, ministries, and the private sector to share power and resources with the communal sector. Even when there is a willingness to share, ministerial fragmentation and lack of capacity may cause the failure of efforts to decentralize and devolve power. Another hurdle is the slowness in establishing community-level rights to resources, because effective CBOs will not develop until communities actually have something to manage. People are not interested in wasting their time in meaningless activities. Communities will not and cannot learn to manage until they have something worth managing. Another problem is the lack of management capacity at all levels: community, district, and national. These problems are interlinked, as are their solutions.

Other threats are market-related. There may be inadequate market demand for some CBNRM products, resulting in a lack of incomes to the communities. Programs may also fail because they fail to demonstrate the benefits of CBNRM to communities. One reason for this may be the non-transparency of the relationship between conservation and benefits. In the longer-term, CBNRM will not be sustainable unless the programs generate the financial resources to permit the CBOs to achieve economic self-reliance.

The sustainability of wildlife conservation efforts also must be evaluated in different terms -- the long-term survival of animal species (including humans) and plant (habitat) populations. The human population in the region is increasing, as are people's demands for improved sustenance (food security) and a better standard of living. Co-existence with wildlife has real physical costs for people residing in weakly-constructed houses, growing crops, raising livestock, walking around and conducting their daily activities in the unrestrained presence of elephants, buffalo, hippos, and lions. The costs and dangers that are evident daily must be balanced by people's perceptions of their intrinsic, socio-economic, and financial benefits from conserving wildlife and their habitats. The rewards must be both real and apparent.

One problematic element in CBNRM programs in many areas is that they are funding infrastructural improvements, such as schools and clinics. These may be what the communities want and may demonstrate how the community benefits from CBNRM activities, but there are problems. First of all, CBNRM is supposed to be enriching communities. Are governments viewing CBNRM-funding for infrastructure as an excuse to transfer funds from CBNRM communities to non-CBNRM communities? What happens to community motivation when government does not produce the recurrent funding for staff and operating expenses, and the schools and clinics remain empty shells?

When evaluating the sustainability of CBNRM, it is important to step back and take a broader view of potential threats. One example is the CAMPFIRE program, which is criticized because its district-level management is seen as an obstacle to community-level devolution of benefits and rights. Malawi and Zambia are attempting now to decentralize civil authority to the district level. People in those countries would be happy to achieve what is seen now in Zimbabwe as an obstacle to progress. It must be recognized that there are political pressures in Zimbabwe to recentralize back to the level of the state, as well as financial pressures (for parks departments to become self-financing) in several countries that could cause state-level agencies to compete against CBOs for wildlife and tourism revenue.

**FINDINGS:**

F12. The testing and modification in place of national programs has been occurring within the context of a strong awareness of lessons learned in other countries. RCSA has provided important resources to strengthen this international transfer of ideas through the international NRMP. The RCSA-funded regional network of organizations, people, and mechanisms (biannual conferences, newsletter, publications, etc.) is effectively disseminating information (including lessons learned and best practices) about CBNRM throughout the study area.

F13. Policy changes in the study area show an evolution of CBNRM approaches from the earlier emphasis on decentralization of funding to the district level toward a devolution of legal rights (proprietaryship) and control over resources to the community level.

F14. The national policy environment within a country allows for replication of CBNRM activities, but the communities within each country's CBNRM program are heterogeneous. Differences in the institutional environments among countries makes it impossible to replicate programs from one country to another. Instead, CBNRM principles and lessons are being adapted to each country's unique environment, so the national programs are heterogeneous.

F15. CBNRM is considered to be an indigenous movement and program by important actors in the government and civil society. Assistance from international donors is welcome and helpful as it supports the national CBNRM programs from the political and economic pressures of competing interests.

**RECOMMENDATIONS:**

R11. Continue to support the regional network of organizations, people, and mechanisms that is effectively disseminating information about CBNRM.

**TOPIC 9.** Estimate the activities that will be required and the time necessary to take CBNRM to sustainability and to a point where USAID Southern Africa might be able to withdraw from direct support to developing CBNRM management systems and enabling frameworks. At this point CBNRM groups will understand their role and management requirements, and be able to have sufficient incomes to operate from year to year. What more must be done to ensure sustainability of CBNRM in Southern Africa?

**Discussion:**

The issue of sustainability is complicated by the fact that each country program is at a different stage of development, and within each country, communities have also reached different stages of development. From the information gathered during this assessment and from the experience of the team members, key features and criteria of a sustainable CBNRM program were presented in the Overview (Chapter 3) of this report. This section is an assessment of the extent to which these features and criteria have been met.

Activities needed to ensure sustainability and effective withdrawal of direct USAID support: at the bilateral level each country has made different levels of progress in each area. Generally, the existing CBNRM communities in each country still require support for organizational and technical capacity building, new information, and inter-community liaison. In most countries

except Zimbabwe there is potential for new communities to participate, and they will need the full range of support. All NRMP countries still need to work on improving the enabling policy and legislative framework, particularly with respect to land tenure, the harmonization of sectoral policy and legislation, and community access to markets for their products and services. An important activity requiring strengthening is the development of representative CBO associations which can speak on behalf of CBNRM constituencies in the national political arena.

Most of the above can be achieved where governments and NGOs have the capacity to provide the required services. In most countries, this capacity is still weak or the number of service providers is small, or both. If RCSA considers individual CBNRM country programs as its clients, this type of support should be a priority.

At the regional level, a number of activities can facilitate the move towards sustainability. These include:

- a.) support to further study and dialogue on common policy issues such as land tenure, and on lessons learned;
- b.) support to market linkages and diversification of opportunities;
- c.) continued support of regional exposure visits for peer groups in order to speed the spread of ideas, approaches and lessons learned;
- d.) support for regional biophysical inventory and monitoring activities; and
- e.) Support for socio-economic monitoring of capacity-building progress.

The time needed to ensure sustainability and effective withdrawal of direct USAID support is highly variable on a country by country basis. A common thread throughout this assessment is that CBNRM is an adaptive and evolutionary process, which moves along at a pace governed by factors which include community response time (often slow), government response time (sometimes very slow) and the influence of external events linked to international politics and the global economy. It is not possible to predict precisely when CBNRM will have reached sustainability in the region. One response might be that sustainability has been achieved when all of the criteria have been met, but clearly this will be different for each country. Some general conclusions, however, can be drawn from experience and progress in the region. For CBNRM to meet the sustainability criteria in full, it is likely to need between 10 and 20 years from the time of inception. None of the NRMP countries have reached this stage yet. However, if USAID withdrew support now from Botswana, Namibia, Zambia and Zimbabwe, it is likely that CBNRM would continue in each country since it is sufficiently established nationally as a movement. Progress towards sustainability would, however, be slowed, and the risk of failure in individual communities increased. It also seems clear that other donors would pick up at least some of the activities that USAID has been supporting.

Additional activities to ensure sustainability: An option for USAID to consider in terms of sustainability is to leave some form of trust fund for in-country use by national CBNRM programs through an NGO or PCC mechanism. This is already being discussed in Namibia and in Zimbabwe. The Botswana Government has established its own CBNRM fund (the Community Conservation Fund), to which USAID could contribute. Another option is for a regional fund to be established which can provide funding to regional activities, e.g., networking conferences for sharing lessons learned and best practices, and exposure meetings

for Ministers or Permanent Secretaries, through SADC or regional NGOs. Such a fund could perhaps also provide support to national programs for specific activities which have some regional value added, such as policy research.

Consideration should also be given to support for a regional coordinating body for CBNRM activities which is multi-sectoral and located at the highest possible government technical level, such as director or deputy director. To some extent the SADC Wildlife Technical Coordinating Unit Project Coordinating Committee (PCC) fulfils this function, but is limited in scope because of its focus on wildlife. In any event, the transformation of the PCC to include countries other than NRMP countries should continue.

**FINDING:**

F16. Established national CBNRM programs in Botswana, Namibia, Zambia and Zimbabwe will continue without further USAID assistance beyond current PACDs, but their long-term opportunities for sustainability can be significantly strengthened by a continued regional presence facilitated by RCSA.

**RECOMMENDATION:**

R12. The next strategic planning period for RCSA should retain essentially the same strategic objective of “accelerated regional adoption of sustainable resource management approaches”.

**TOPIC 10.** (not listed specifically in SOW). Describe all CBNRM activities that assist disadvantaged groups, specifically those that assist women, or where women have a particular advantage. Collect and include gender-disaggregated data wherever possible. Recommend how women (and other disadvantaged groups) could be assisted in future CBNRM activities.

Human rights concerns are an inherent and fundamental component of all CBNRM activities in the study area. The Southern African region contains 12 countries that face tremendous challenges to their efforts to achieve sustainable social and economic development. The legacies of colonialism and apartheid are apparent in many of these countries. The majority of the populations are historically disadvantaged because these people have been largely denied access to health, educational, and economic facilities and to advancement opportunities for decades. Only by fully addressing the needs of these people, can full transformation of the countries in this region take place. CBNRM programs and activities focus on working with these rural people who are living on communal lands. The importance and sensitivity of land distribution and tenure in all of these countries, and securing local control of the natural resources (including wildlife) are important enabling conditions for CBNRM.

Both in theory and in practice, disadvantaged people are the primary beneficiaries of CBNRM programs and activities in the study area. Thus, any increases in income, improvements in access to and control over resources and marketing opportunities, and improvements in infrastructural facilities are benefitting the appropriate clients. There is less emphasis in these programs and activities on reaching relatively more disadvantaged sub-populations within this poor rural population, e.g., those disadvantaged by gender, age, ethnic identity, etc. They are not commonly targeted for special assistance or attention. Two of these sub-populations in the

study area are the San (Bushmen) and women.

The democratic principle of equal representation and power (one person, one vote) is now universally accepted and strongly promoted in the political arena throughout the study area, but the equality of women and some ethnicities is not as widely accepted in the social arena. Some female chiefs and chieftainships traditionally exist in some societies in Southern Africa, and family and social group membership is based on matrilineality in some societies and patrilineality in others. But generally, the simplest societies (such as the San) are characterized by more social (and gender) equality, and the more complex and densely settled societies by more inequality.

#### The San (Bushmen) in Botswana and Namibia

Pre-colonial societies in Southern Africa were heterogeneous. They varied in many ways, including in their primary mode of livelihood, scale, complexity, social and political organization, power, and relationships with other people. A few people, such as the San, were hunters and gatherers, lived in small-scale mobile bands, and had a small-scale and simple socio-political organization. A band was the largest social or political unit. There were no powerful traditional political authorities (chiefs), the highest traditional political authority being the headman of a band, with little or no coercive authority and leading primarily by example. Other pre-colonial societies ranged in mode of livelihood, societal scale, population density, and mobility from semi-nomadic pastoralists, through agro-pastoralists, to densely settled fishing communities and agriculturalists. In terms of political organization, power, and relationships with other peoples, these societies ranged from less to more warlike, domineering, and imperialistic with correspondingly variable intensity of traditional socio-political authority up to kings and kingdoms.

Throughout the region, the small numbers of hunting and gathering peoples have been pushed onto the marginal lands by the pressure of other, more populous societies. Traditionally the San have been dominated by other people, and they have retreated to the semi-arid margins of the Kalahari in Botswana and Namibia. During the years of anti-colonial warfare, inter-ethnic hostility added another dimension when some of the San were employed as scouts by the South African military.

In both countries, the San generally remain vulnerable to threats from other groups, particularly richer cattle herders. In Botswana, where the San are formally called Remote Area Dwellers (RADs), a band of San were forcibly removed from the Central Kalahari Game Reserve, where the government considered them to be a threat to tourism and wildlife. Their case is still unsettled, as are the people. This is clearly a case in which CBNRM principles are not being applied.

In both Namibia and Botswana, the CBNRM programs have enabled minority groups such as the San to gain greater control over their resources and greater income generating opportunities. A San community was the first to have a conservancy formally established (gazetted) in Namibia, and several San communities in Botswana are forming trusts, some in partnership with residents from other ethnic groups.

However, there is another dimension of sustainability that must be noted when dealing with

communities. The complete complex of features characteristic of CBNRM (see Overview) does not always translate well into San communities, where people usually prefer to reach decisions by consensus and are uncomfortable with concepts of representation and majority decision-making. San have kept their own traditions of non-authoritarian and consensual self-governance. Particularly in these cases, the self-governing needs of the community are more important to program implementation than the abstract ideas of outsiders. Governments and donors should be sensitive to the rights of people to determine their own modes of organization and representation.

### Gender Equality and Equity

Women's participation in the process of social, economic, and political transformation is crucial to the process of change. Their influences on their families and the wider interests of society need to be fully taken into account. Women and children are the majority of the poor, uneducated, and unemployed, and are victims of violence. Gender disparities in education, health, housing, economy, and democracy and governance affect women directly and also constrain the rest of society because of women's crucial role in rearing, caring for, and educating children. Women must be fully integrated as participants and beneficiaries of the development process.

To the extent that gender disparities are recognized and considered important in the different societies and countries, there is a recognition that women have been disadvantaged in all ethnic categories. Trying to redress the gender disadvantage means that women of European descent may qualify for USAID program assistance, and apparently some women of European descent in Namibia have been sent for training. However, since the CBNRM program concentrates on working in rural communal areas, this generally restricts the program to working with women of African or mixed descent.

There are income-generating CBNRM activities in Botswana and Namibia in which women are the direct and primary beneficiaries. All of these activities deal with natural resources (marula fruit, thatching grass, palm fronds, mopane worms, weaving baskets, and other handicrafts) other than wildlife. This has implications for the scope (only wildlife) and gender (only men) of CBNRM programs that continue to focus exclusively on wildlife utilization, and which may prove difficult in directing benefits to women. This is being surmounted where rural households receive direct financial benefits from a wildlife-based CBNRM program. Women in these households, especially when they are heads of their households, will receive direct benefits without having been singled out for special attention.

Experience with CBNRM activities in the study area also reveals a dynamic evolution to the issue of women's involvement in natural resource management. When programs in Namibia began, they centered around wildlife (the men's sector of activity). Early discussions and decisions were made by male headmen and elders. As the program has matured and changed focus from wildlife utilization to developing representative community management institutions, the role of women has increased. This did not happen because external donors insisted upon it, but because local people recognized that women are key stakeholders and decision-makers within the community. Women are increasingly elected to management committees, take on the role of community activator, are hired as community resource monitors, receive wildlife revenues as heads of households, etc. This process has ensured that

women have been able to take a more central role in community natural resource management rather than remaining marginalized.

#### **FINDINGS:**

F17. Disadvantaged rural poor people are the primary beneficiaries of CBNRM activities, and their marginal (in terms of agriculture) communal lands are becoming profitable lands in terms of wildlife production systems.

F18. As CBNRM programs have matured and changed focus from conserving wildlife to developing representative community management institutions, the role of women has increased.

#### **RECOMMENDATIONS:**

R13. Continue to monitor and evaluate the effectiveness of CBNRM activities in distributing control and benefits equitably throughout the communities.

R14. Donors should increase their policy dialogue with governments to avoid recurrence of incidents such as the one described in the case of the San in Botswana.

#### **4. LESSONS LEARNED**

The dependent users of natural resources on common lands respond positively and effectively to the needs to manage and conserve those resources when they acquire the authority and responsibility to act for enhancement of their benefits.

The intent of conservation law or policy is best achieved when the people are motivated to participate with officials to achieve the objectives of that law or policy.

CBNRM programs are process oriented and evolutionary in nature; they do not spring fully-formed into existence, nor do they mature rapidly. Progress is incremental, building on a series of successive changes as the motivation of the participants increases.

The national policy environment within a country allows for replication of CBNRM activities within that country, but differences in the institutional environments among countries makes it impossible to replicate programs from one country to another. Instead, CBNRM principles and lessons are adapted to each country's unique environment.

#### **5. RECOMMENDATIONS FOR FOLLOW-ON ACTIVITIES**

RCSA should continue to assist SADC governments, regionally-based NGOs, and rural community leaders in promoting the adoption of sustainable NRM practices that are important to the needs of rural beneficiaries, the region's economies, and the maintenance of biodiversity.

RCSA's new NRM strategy should aggressively support the maintenance and conservation of regional biodiversity through assisting in the development and implementation of centrally

coordinated monitoring of biological and development indicators.

COMMUNITY BASED NATURAL RESOURCES MANAGEMENT

ANNEX A : ACRONYMS

ADMADE	Administrative Management Design Program (Zambia)
AG/NRM	Agriculture and Natural Resources Management
CAMPFIRE	Communal Areas Management Program for Indigenous Resources
CBNRM	Community Based Natural Resources Management
CBO	Community-based Organization
CITES	Convention for International Trade in Endangered Species
CRB	Community Resources Board
DFID	Department for International Development (U.K.)
DNPWLM	Department of National Parks and Wildlife Management (Zimbabwe)
DNPW	Department of National Parks and Wildlife (Malawi)
DNPWS	Department of National Parks and Wildlife Service (Zambia)
DWNP	Department of Wildlife and National Parks (Botswana)
GDP	gross domestic product
GMA	Game Management Area
GTZ	Gesellschaft für Technische Zusammenarbeit
IUCN	The World Conservation Union
LIFE	Living in a Finite Environment
LIRD	Luangwa Integrated Resource Development Project (Zambia)
NGO	Non-Governmental Organization
NORAD	Norwegian Development Agency
NRM	Natural Resource Management
NRMP	Natural Resources Management Project
PACT	Private Agencies Collaborating Together
PCC	Project Coordinating Committee
RCSA	Regional Center for Southern Africa (USAID)
RDC	Rural District Council
SADC	Southern African Development Community
SARP	Southern African Regional Program
SNV	Netherlands Development Organization
SO	Strategic Objective (USAID)
SOW	Scope of Work
TCU	Technical Coordinating Unit (SADC Wildlife Sector)
USAID	United States Agency for International Development
VAG	Village Area Group
WMSA	Wildlife Management Sub-Authority
WWF	World Wide Fund for Nature
ZWA	Zambia Wildlife Authority

\*\*\*\*\*

ANNEX B

BIBLIOGRAPHY

Documents that evaluate, assess, design, or refer only to one country or to programs in one country are listed under that country (Botswana, Malawi, Namibia, Zambia, and Zimbabwe). Reports and research papers of more general or regional relevance, including regional RCSA documents, are in the general list.

**General Interest and Research Papers:**

- Africa Resources Trust. September 1996. Rural Development and Conservation in Africa: Studies in Community Resource Management. Proceedings of a Seminar Tour (USA, 15-29 June 1996). 60 pages.
- Africa Resources Trust. January 1996. Report on a Workshop to Examine and Comment on the Arguments Against the Consumptive Use of Wild Species (Village Inn, Nyanga, Zimbabwe, 18 January 1996). 43 pages.
- Agrawal, Arun. 1997. Community in Conservation: Beyond Enchantment and Disenchantment. Conservation and Development Forum (CDF) Discussion Paper. Gainesville, Florida: CDF. 103 pages.
- Ashley, Caroline. May 1998. Intangibles Matter: Non-financial Dividends of Community Based Resource Management in Namibia. Report for World Wildlife Fund Living in a Finite Environment (LIFE) Program. Windhoek, Namibia: LIFE Program. 31 pages.
- Ashley, Caroline. November 1996. Incentives Affecting Biodiversity Conservation and Sustainable Use: The Case of Land Use Options in Namibia. DEA Research Discussion Paper No. 13. Windhoek, Namibia: Directorate of Environmental Affairs (DEA), Ministry of Environment and Tourism (MET), Government of Namibia (GON). 21 pages.
- Ashley, Caroline, and Christopher LaFranchi. August 1997. Livelihood Strategies of Rural Households in Caprivi: Implications for Conservancies and Natural Resource Management. DEA Research Discussion Paper No. 20. Windhoek, Namibia: Directorate of Environmental Affairs (DEA), Ministry of Environment and Tourism (MET), Government of Namibia (GON). 96 pages.
- Ashley, Caroline, Jon Barnes, Chris Brown, and Brian Jones. May 1997. Using Resource Economics for Natural Resource Management: Namibia's Experience. DEA Research Discussion Paper No. 16. Windhoek, Namibia: Directorate of Environmental Affairs (DEA), Ministry of Environment and Tourism (MET), Government of Namibia (GON). 23 pages.

- Ashley, Caroline, and Jon Barnes. September 1996. *Wildlife Use for Economic Gain: The Potential for Wildlife to Contribute to Development in Namibia*. DEA Research Discussion Paper No. 12. Windhoek, Namibia: Directorate of Environmental Affairs (DEA), Ministry of Environment and Tourism (MET), Government of Namibia (GON). 23 pages.
- Ashley, Caroline, with Hansjorg Muller and Martin Harris. September 1995. *Population Dynamics, the Environment, and Demand for Water and Energy in Namibia*. DEA Research Discussion Paper No. 7. Windhoek, Namibia: Directorate of Environmental Affairs (DEA), Ministry of Environment and Tourism (MET), Government of Namibia (GON). 28 pages.
- Ashley, Caroline, and Elizabeth Garland. October 1994. *Promoting Community-Based Tourism Development: Why, What and How?* DEA Research Discussion Paper No. 4. Windhoek, Namibia: Directorate of Environmental Affairs (DEA), Ministry of Environment and Tourism (MET), Government of Namibia (GON). 37 pages plus 17 pages of appendices.
- Ashley, Caroline, Jon Barnes, and Tim Healy. August 1994. *Profits, Equity, Growth and Sustainability: The Potential Role of Wildlife Enterprises in Caprivi and Other Communal Areas of Namibia*. DEA Research Discussion Paper No. 2. Windhoek, Namibia: Directorate of Environmental Affairs (DEA), Ministry of Environment and Tourism (MET), Government of Namibia (GON). 26 pages.
- Barnes, Jon I. May 1995. *The Value of Non-Agricultural Land Use in Some Namibian Communal Areas: A Data Base for Planning*. DEA Research Discussion Paper No. 6. Windhoek, Namibia: Directorate of Environmental Affairs (DEA), Ministry of Environment and Tourism (MET), Government of Namibia (GON). 21 pages.
- Barnes, Jon I. March 1995. *Current and Potential Use Values for Natural Resources in Some Namibian Communal Areas: A Planning Tool. A Working Document of the Directorate of Environmental Affairs, Ministry of Environment and Tourism, Government of Namibia*. 67 pages.
- Barnes, Jon I., C. Schier, and G. van Rooy. March 1997. *Tourists' Willingness to Pay for Wildlife Viewing and Wildlife Conservation in Namibia*. DEA Research Discussion Paper No. 15. Windhoek, Namibia: Directorate of Environmental Affairs (DEA), Ministry of Environment and Tourism (MET), Government of Namibia (GON). 24 pages.
- Barnes, Jon I., and J. L. V. de Jager. September 1995. *Economic and Financial Incentives for Wildlife Use on Private Land in Namibia and the Implications for Policy*. DEA Research Discussion Paper No. 8. Windhoek, Namibia: Directorate of Environmental Affairs (DEA), Ministry of Environment and Tourism (MET), Government of Namibia (GON). 21 pages.

- Bird, Cherry, and Simon Metcalfe. 1995. Two Views from CAMPFIRE in Zimbabwe's Hurungwe District. Training and Motivation: Who Benefits and Who Doesn't? Wildlife and Development Series No. 5. London: International Institute for Environment and Development (IIED). 18 pages.
- Bird, Cherry, J. Clarke, J. Moyo, J. M. Moyo, P. Nyakunu, and S. Thomas. 1995. Was Mrs. Mutendoi Only Joking? Access to Timber in Zimbabwe's Communal Lands. Wildlife and Development Series No. 6. London: International Institute for Environment and Development (IIED). 20 pages.
- Bond, I. April 1993. The Economics of Wildlife and Landuse in Zimbabwe: An Examination of Current Knowledge and Issues. Project Paper No. 36, Multispecies Animal Production Systems Project. Harare: Worldwide Fund for Nature (WWF). 61 pages.
- Campbell, Alec. 1990. The Nature of Botswana: A Guide to Conservation and Development. Gland, Switzerland: IUCN. 87 pages.
- Chenje, Munyaradzi, and Phyllis Johnson, eds. 1996. Water in Southern Africa. Harare, Zimbabwe: Southern African Development Community (SADC). 238 pages.
- Conybeare, A. February 1998. Assessment of Habitat Maintenance, Diversity and Productivity under Communal Management. WWF Resource Management Support to CAMPFIRE Project (SupCamp). Harare: WWF. 53 pages.
- Cooke, John, and Alex Campbell. 1987. Developing our Environmental Strategy: Proceedings of a Seminar by the Botswana Society, Gaborone, July 14-16, 1987. 42 pages.
- Cumming, D. H. M., and I. Bond. July 1991. Animal Production in Southern Africa: Present Practices and Opportunities for Peasant Farmers in Arid Lands. Project Paper No. 22. Multispecies Animal Production Systems Project. Harare: Worldwide Fund for Nature (WWF). 146 pages.
- Cutshall, C. R. August 1989. Masoka/Kanyurira Ward: A Socio-Economic Baseline Survey of Community Households. Harare, Zimbabwe: Centre for Applied Social Sciences (CASS), University of Zimbabwe. 32 pages.
- Dawe, M., and J. M. Hutton. March 1994. An Analysis of the Production and Economic Significance of Elephant Hide in Zimbabwe. Harare, Zimbabwe: Africa Resources Trust (ART). 12 pages.
- DEA Research Discussion Papers (Numbers 2-4, 6-8, 12-13, and 15-20) are listed in alphabetical order by author. Windhoek, Namibia: Directorate of Environmental Affairs (DEA), Ministry of Environment and Tourism (MET), Government of Namibia (GON).
- Derman, Bill. January 1998. Preliminary Reflections on a Comparative Study of the Mazowe and Mupfure Pilot Catchments in the Context of Zimbabwe's New Water Act. CASS Occasional Paper, NRM Series, CPN 94/98. Harare, Zimbabwe: Centre for Applied Social Sciences (CASS), University of Zimbabwe. 29 pages.

- Dickson, Barnabus. December 1994. What's Wrong with Consumptive Use? An Analysis and Assessment of the Arguments Against Consumptive Use. Harare, Zimbabwe: Africa Resources Trust (ART). 18 pages.
- Dzingirai, Vupenyu. October 1997. A Study of Attitudinal Responses to the Proposed Mazoe Eco-Tourism Project. CASS Working Paper, NRM Series, CPN 89/1997. Harare, Zimbabwe: Centre for Applied Social Sciences (CASS), University of Zimbabwe. 8 pages.
- Environmental Consultants (PVT) Ltd. 1992. Wildlife: Relic of the Past, or Resource of the Future? The Realities of Zimbabwe's Wildlife Policymaking and Management. Harare: The Zimbabwe Trust. 48 pages.
- Fortmann, Louise, and Nontokozo Nabane. July 1992. The Fruits of their Labours: Gender, Property and Trees in Mhondoro District. CASS Occasional Paper Series, NRM, 6/1992. Harare, Zimbabwe: Centre for Applied Social Sciences (CASS), University of Zimbabwe. 47 pages.
- Goebel, Allison. September 1996. Process, Perception and Power: Notes from "Participatory" Research in a Zimbabwean Resettlement Area. CASS Occasional Paper, NRM Series, 1996. Harare, Zimbabwe: Centre for Applied Social Sciences (CASS), University of Zimbabwe. 23 pages.
- Gunderson, L. H., C. S. Holling and S. S. Light, eds. 1995. Barriers and Bridges to the Renewal of Ecosystems and Institutions. New York: Columbia University Press. 593 pages.
- Hachongela, Patricia. January 1997. A Gender Analysis of Participation in Planning for Village Regrouping on Lake Kariba Shoreline (Zambia). CASS Occasional Paper, NRM Series, CPN 84/1997. Harare, Zimbabwe: Centre for Applied Social Sciences (CASS), University of Zimbabwe. 19 pages.
- Hasler, Richard. 1995. Political Ecologies of Scale: The Multi-Tiered Co-Management of Zimbabwean Wildlife Resources. Wildlife and Development Series No. 7. London: International Institute for Environment and Development (IIED). 16 pages.
- Hulme, David. n.d. Community Conservation in Practice: A Case Study of Lake Mburo National Park, Uganda. Paper in a collaborative research project on Community Conservation in Africa: Principles and Comparative Practice. Submitted for publication in a book to be published by the Institute for Development Theory and Management, University of Manchester, England. 51 pages.
- Hutton, J. M., and J. Cumming. January 1994. Conservation in Conflict - Sustainable Use and Animal Welfare. Harare: Africa Resources Trust (ART). 9 pages.
- Jachmann, H., and M. Billiouw. 1997. Elephant Poaching and Law Enforcement in the Central Luangwa Valley, Zambia. *Journal of Applied Ecology* 34: 233-244.
- Jansen, D. J. January 1991. What is a Joint Venture? Guidelines for District Councils with Appropriate Authority. Project Paper No. 16. Multispecies Animal Production Systems Project. Harare: Worldwide Fund for Nature (WWF). 20 pages.

- Jones, Brian T. n.d. A Case Study of Community Based Natural Resource Management in the Kunene Region of Namibia. Paper prepared as part of a collaborative research project on Community Conservation in Africa: Principles and Comparative Practice. Submitted for publication in a book to be published by the Institute for Development Theory and Management, University of Manchester, England. 23 pages.
- Jones, Brian T. B. May 1997. Community-Based Natural Resource Management in Botswana and Namibia - An Inventory and Preliminary Analysis of Progress. Report to the Southern African Sustainable Use Specialist Group for the Project: "Evaluating Eden" of the International Institute for Environment and Development. Windhoek, Namibia. 98 pages.
- Kalahari Conservation Society. 1988. Sustainable Wildlife Utilisation: The Role of Wildlife Management Areas. Workshop Proceedings (in cooperation with the Department of Wildlife and National Parks), Gaborone, Botswana, Nov 21-22, 1988. 87 pages.
- Kievit, Henrietta. November 1995. Conservation of the Nile Crocodile: Has CITES Helped or Hindered? Harare, Zimbabwe: Africa Resources Trust (ART). 17 pages.
- Kiss, Agnes, ed. 1990. Living with Wildlife: Wildlife Resource Management with Local Participation in Africa. World Bank Tech Paper No. 130, Africa Technical Department Series. Washington, D.C.: World Bank. 217 pages.
- Lange, Glenn-Marie. June 1997. An Approach to Sustainable Water Management Using Natural Resource Accounts: The Use of Water, the Economic Value of Water, and Implications for Policy. DEA Research Discussion Paper No. 18. Windhoek, Namibia: Directorate of Environmental Affairs (DEA), Ministry of Environment and Tourism (MET), Government of Namibia (GON). 39 pages.
- Lange, Glenn-Marie and Daniel J. Motinga. June 1997. The Contribution of Resource Rents from Minerals and Fisheries to Sustainable Economic Development in Namibia. DEA Research Discussion Paper No. 19. Windhoek, Namibia: Directorate of Environmental Affairs (DEA), Ministry of Environment and Tourism (MET), Government of Namibia (GON). 28 pages.
- Lange, Glenn-Marie, Jon I. Barnes, and Daniel J. Motinga. June 1997. Cattle Numbers, Biomass, Productivity, and Land Degradation in the Commercial Farming Sector of Namibia, 1915 to 1995. DEA Research Discussion Paper No. 17. Windhoek, Namibia: Directorate of Environmental Affairs (DEA), Ministry of Environment and Tourism (MET), Government of Namibia (GON). 32 pages.
- Madzudzo, Elias. November 1996. Producer Communities in a Community Based Wildlife Management Programme: A Case Study of Bulilimamangwe and Tsholostho Districts. CASS Occasional Paper, NRM 1996. Harare, Zimbabwe: Centre for Applied Social Sciences (CASS), University of Zimbabwe. 10 pages.
- Makombe, Kudzai, ed. 1993. Sharing the Land: Wildlife, People and Development in Africa. IUCN-ROSA Environmental Issues Series No. 1. Harare: The World Conservation Union (IUCN). 36 pages.
- Martin, R. B. June 1997. Criteria for Sustainable Use: Who Wants Them? Harare: Africa Resources Trust

(ART). 11 pages.

- Matiza, T., S. Crafter, and P. Dale, eds. 1995. *Water Resource Use in the Zambezi Basin: Proceedings of a Workshop held at Kasane, Botswana, 28 April to 2 May 1993*. Gland, Switzerland: IUCN. 174 pages.
- Matowanyika, Joseph Z. Z., and Henry Sibanda, eds. 1998. *The Missing Links: Reviving Indigenous Knowledge Systems in Promoting Sustainable Natural Resource Management in Southern Africa. Proceedings of a Regional Workshop held in Midmar, KwaZulu-Natal Province, South Africa, 23-28 April 1995*. 75 pages.
- Matowanyika, Joseph Z. Z., and Nelson Marongwe. 1998. *Land and Sustainable Development in Southern Africa: An Exploration of Some Emerging Issues. Sustainable Land Management Working-Discussion Paper Series No. 1*. Harare: ZERO Regional Environmental Organization. 47 pages.
- McLagan, Patricia, and Christa Nel. 1997. *The Age of Participation*. San Francisco: Barrett-Koehler Publishing. 323 pages.
- Mendelsohn, John, and Carole Roberts. 1997. *An Environmental Profile and Atlas of Caprivi*. Windhoek, Namibia: Directorate of Environmental Affairs, Ministry of Environment and Tourism. 45 pages plus 6 pages of annexes.

- Moore, Donald S. November 1996. *A River Runs Through It: Environmental History and the Politics of Community in Zimbabwe's Eastern Highlands*. CASS Occasional Paper, NRM Series, 1996. Harare, Zimbabwe: Centre for Applied Social Sciences (CASS), University of Zimbabwe. 67 pages.
- Murombedzi, James. January 1997. *The Implications of the Land Tenure Commission for Rural Land Tenure Systems, Renewable Resources and Development in Zimbabwe*. CASS Occasional Paper, NRM Series, CPN 90/1997. Harare, Zimbabwe: Centre for Applied Social Sciences (CASS), University of Zimbabwe. 15 pages.
- Murombedzi, James. August 1996. *Paying the Buffalo Bill: The Impact and Implications of External Aid on the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE)*. CASS Occasional Paper, NRM Series, CPN 93/97. Harare, Zimbabwe: Centre for Applied Social Sciences (CASS), University of Zimbabwe. 18 pages.
- Murphree, Marshall W. June 1997. *Congruent Objectives, Competing Interests and Strategic Compromise: Concept and Process in the Evolution of Zimbabwe's CAMPFIRE Programme*. Paper presented at the Conference on "Representing Communities: Histories and Politics of Community-Based Resource Management" at Unicoi Lodge, Helen, Georgia (USA) 1-3 June 1997. 47 pages.
- Murphree, Marshall W. 1995. *Optimal Principles and Pragmatic Strategies: Creating an Enabling Politico-Legal Environment for Community Based Natural Resource Management (CBNRM)*. Key Note Address to the 1995 Annual Regional Conference of the Natural Resources Management Programme. In Rihoy, Elizabeth, ed. *The Commons Without the Tragedy? Strategies for Community Based Natural Resource Management in Southern Africa*. Proceedings of the Regional Natural Resources Management Programme Annual Conference, Kasane, Botswana, April 3-6 1995. Harare, Zimbabwe: Southern Africa Development Community (SADC) Wildlife Technical Coordination Unit, Malawi. Pages 47-52.
- Murphree, Marshall. 1995. *The Lesson from Mahenye: Rural Poverty, Democracy and Wildlife Conservation*. Wildlife and Development Series No. 1. London: International Institute for Environment and Development (IIED). 12 pages.
- Nellis, M. Duane, Charles E. Bussing, Tom L. Coleman, Musisi Nkambwe, and Susan Ringrose. 1997. *Spatial and Spectral Dimensions of Rural Lands and Grazing Systems in the Southern District of Botswana*. *Geocarto International* 12: 1: 41-47 (March 1997).

Nhira, Calvin, with Bill Derman. August 1997. Towards Reforming the Institutional and Legal Basis of the Water Sector in Zimbabwe: Current Weaknesses, Recent Initiatives and their Operational Problems. CASS Occasional Paper, NRM Series, CPN 86/1997. Harare, Zimbabwe: Centre for Applied Social Sciences (CASS), University of Zimbabwe. 69 pages.

Painter, Michael. April 1997. DWNP's Monitoring and Evaluation Experience with the Natural Resources Management Project: Lessons Learned and Priorities for the Future. Gaborone, Botswana: USAID. 51 pages.

Quan, Julian, David Barton, and Czech Conroy. n.d. The Economic Impact of Desertification in Northern Communal Areas: Uukwaluudhi. Extracted from A Preliminary Assessment of the Economic Impact of Desertification in Namibia. DEA Research Discussion Paper No. 3. Windhoek, Namibia: Directorate of Environmental Affairs (DEA), Ministry of Environment and Tourism (MET), Government of Namibia (GON). 35 pages.

Rihoy, Elizabeth, ed. 1995. The Commons Without the Tragedy? Strategies for Community Based Natural Resource Management in Southern Africa. Proceedings of the Regional Natural Resources Management Programme Annual Conference, Kasane, Botswana, April 3-6 1995. Harare, Zimbabwe: Southern Africa Development Community (SADC) Wildlife Technical Coordination Unit, Malawi. 221 pages plus appendices.

Rolfes, Michael 't Sas. July 1996. The Kruger National Park: A Heritage for All South Africans? Harare, Zimbabwe: Africa Resources Trust (ART). 111 pages.

Scudder, T. et al. 1993. The IUCN Review of the Southern Okavango Integrated Water Development Project. Gland, Switzerland: The World Conservation Union (IUCN). 543 pages.

Sigwele, H.K. and D.W. Norman. November 1993. Rural Development in Botswana: A Case Study. Manhattan, Kansas: Kansas Agricultural Experiment Station, Cont. No. 94-125-D. 37 pages.

Southern Africa Sustainable Use Specialist Group (SASUSG). November 1997. Synthesis Report (Fourth Draft). Evaluating Eden, Phase One: Southern Africa. A Review of Community Wildlife Management in Southern Africa. The World Conservation Union (IUCN). 33 pages.

Southern African Development Community (SADC) Natural Resource Management Programme (NRMP). Resource Africa Newsletter. Various issues. Lilongwe, Malawi: SADC-NRMP.

- Steiner, Achim, and Elizabeth Rihoy. 1995. A Review of Lessons and Experiences from Natural Resources Management Programmes in Botswana, Namibia, Zambia and Zimbabwe. Background Paper for the 1995 Annual Regional Conference of the Natural Resources Management Programme. In Rihoy, Elizabeth, ed. *The Commons Without the Tragedy? Strategies for Community Based Natural Resource Management in Southern Africa*. Proceedings of the Regional Natural Resources Management Programme Annual Conference, Kasane, Botswana, April 3-6 1995. Harare, Zimbabwe: Southern Africa Development Community (SADC) Wildlife Technical Coordination Unit, Malawi. Pages 9-43.
- Taylor, M. December 1996. *Community-Based Natural Resource Management (CBNRM): A Select Foundation Bibliography with Emphasis on Southern Africa*. Harare: Africa Resources Trust. 242 pages.
- Taylor, Russel. 1995. *From Liability to Asset: Wildlife in the Omay Communal Land of Zimbabwe*. Wildlife and Development Series No. 8. London: International Institute for Environment and Development (IIED). 15 pages.
- Taylor, R. D., and C. S. Mackie. April 1997. *Aerial Census Results for Elephant and Buffalo in Selected CAMPFIRE Areas*. Project Paper No. 51. Multispecies Animal Production Systems Project. Harare: Worldwide Fund for Nature (WWF). 30 pages.
- Thomas, Stephen. 1995. *The Legacy of Dualism in Decision-Making within CAMPFIRE*. Wildlife and Development Series No. 4. London: International Institute for Environment and Development (IIED). 24 pages.
- Thomas, Stephen. 1995. *Share and Share Alike: Equity in CAMPFIRE*. Wildlife and Development Series No. 2. London: International Institute for Environment and Development (IIED). 18 pages.
- Tiffen, Mary, and M. R. Mulele. 1994. *The Environmental Impact of the 1991-92 Drought on Zambia*. IUCN Environmental Assessment Service. Gland, Switzerland and Lusaka, Zambia: The World Conservation Union (IUCN). 108 pages.
- USAID. May 1998. *Learning from Diverse CBNRM Cases: Drawing Knowledge from Experience*. Manuscript. USAID Global Bureau, Environmental Center. Washington, DC: USAID. Not paginated.
- USAID. December 1997. *Project Implementation Review (October 1996 - September 1997). Regional Networking and Capacity Building Initiative for Southern Africa (NETCAB): Co-operative Agreement from USAID/RCSA Initiative for Southern Africa Project No. 690-0283-A-00-5950-00*. 20 pages.
- USAID. September 1997. *USAID/RCSA -- Concept Paper: Community Based Natural Resources Program*. Gaborone, Botswana: USAID. 27 pages.
- USAID. August 1997. *Regional Integration Through Partnership and Participation: Regional Center for Southern Africa Strategic Plan 1997-2003*. Gaborone, Botswana: USAID. 90 pages.
- USAID. August 1989. *Natural Resources Management Project: USAID Project No. 690-0251. Volume*

I: Regional Overview (131 pages plus appendices). Volume II: Country-Specific Project Descriptions (170 pages). Washington DC: USAID.

Worldwide Fund for Nature (WWF). December 1996. Programme Outline. Harare: WWF Programme Office. 6 pages.

Worldwide Fund for Nature (WWF). November 1995. Summary Outline of Current Major Projects. Harare: WWF Programme Office. 8 pages.

**Botswana:**

Spinage, Clive. 1991. History and Evolution of the Fauna Conservation Laws of Botswana. Gaborone: The Botswana Society. 118 pages.

USAID. January 1997. Final Evaluation of the Botswana Natural Resources Management Project (690-0251). Gainesville, Florida: Tropical Research and Development, Inc. 7 parts plus appendices.

**Malawi:**

Malawi Environmental Programme. May 1998. Preliminary Report on the Shire Investigation. A collaborative investigation and joint report by the Departments of Forestry, Meteorology, Surveys, Land Resources Conservation, and National Research Council and Environmental Affairs. 22 pages.

Seymour, Tony. March 1998. Malawi Policies for Natural Resource Management: An analysis of resource management issues and themes for policy reform. Manuscript, 19 pages.

World Bank. May 1997. Staff Appraisal Report: Republic of Malawi Environmental Management Project. Environment and Agriculture, Africa Region. Washington, DC: World Bank. 24 pages, plus nine annexes and maps.

**Namibia:**

Durbin, J., B. T. B. Jones, and M. W. Murphree. May 1997. Namibian Community-Based Natural Resource Management Programme (WWF NA0004: Namibia): Project Evaluation. Windhoek, Namibia and Gland, Switzerland: Worldwide Fund for Nature (WWF).

*CBNRM Assessment Document (Draft # 2)*

Hagen, Roy, Brian T. B. Jones, and Barbara Wyckoff-Baird. April 1998. Concept Paper for USAID: Support to the National CBNRM Programme beyond the current LIFE Programme. Namibia: USAID. 24 pages plus 7 pages of appendices.

Hagen, Roy, Brian T. B. Jones, and Barbara Wyckoff-Baird, with Dorothy Oyier and Jon Barnes. April 1998. Sector Assessment for Namibia: Community-Based Natural Resource Management (CBNRM). Namibia: USAID. 43 pages plus appendices.

Hagen, Roy and Barbara Wyckoff-Baird with Steve Johnson, Tim Resch, and Dorothy Oyier. March 1998. Evaluation: Living in a Finite Environment (LIFE). Namibia: USAID. 36 pages plus appendices.

Ministry of Environment and Tourism, Government of the Republic of Namibia. n.d. Annual Visitor Arrival Statistics 1996. Windhoek: Policy, Planning and Management Information Unit. 1 page.

Ministry of Environment and Tourism, Government of the Republic of Namibia. April 1995. Annual Visitor Arrival Statistics 1993. Windhoek: Policy, Planning and Management Information Unit. 25 pages.

Namibian Community Based Tourism Association (NACOBTA). November 1997. The Constitution. Windhoek, Namibia: NACOBTA. 6 pages.

USAID. March 1998. USAID/Namibia FY 2000 R4: Results Report Parts I, II and III. Windhoek, Namibia: USAID. 46 pages.

USAID. September 1995. Natural Resource Management Project Namibian Component: 690-0251.73. Living in a Finite Environment. Project Paper Supplement Amendment No. 1. 39 pages plus many pages of appendices.

Ministry of Environment and Tourism (MET), Government of Namibia (GON). n.d. Capital Investment and Sustainable Development of the Environment and Tourism Sector: The Investment Budget and Economic Benefits. Windhoek, Namibia: MET, GON. 11 pages.

**Zambia:**

ARCA Consulting and Carl Bro International. 1998. From the NPWS to the ZWA: Management Restructuring Consultancy. Volume I - Main Report (65 pages). Volumes II-III; Annexes A-F. European Development Fund - The Republic of Zambia EDF-NPWS Project.

Benneker, Charlotte E. B. October 1997. Literature Study to the Kafue National Park and its Environs. Wageningen Agricultural University, Holland. Lusaka, Zambia: Kafue Anti-Poaching Company Ltd. (KANTIPO). 66 pages plus maps.

Billings, Jim. n.d. Untitled consultancy report for USAID/Zambia (1994 or 1995).

European Union News. May 1998. Wildlife Supplement (on changes in NPWS). European Union News, May 1998, Pages 3-6.

*CBNRM Assessment Document (Draft # 2)*

- Kafue Anti-Poaching Company Ltd. (KANTIPO). June 1998. Unsolicited Request for Support for the Conservation and Development of the Kafue National Park in Zambia: KANTIPO Action Plan 1998-2000. Lusaka, Zambia: KANTIPO. 48 pages.
- Kafue Anti-Poaching Company Ltd. (KANTIPO). April 1998. Progress and Financial Report, December 1997 - March 1998. Lusaka, Zambia: KANTIPO. 28 pages.
- Kafue Anti-Poaching Company Ltd. (KANTIPO). June 1997. Report on the Fact Finding Mission on Wildlife Crime in Kafue National Park and Game Management Areas. Lusaka, Zambia: KANTIPO. 13 pages plus appendices.
- Kafue Anti-Poaching Company Ltd. (KANTIPO). December 1996. Request for Assistance: Towards Sustainable Wildlife Utilisation in the Kafue National Park: Action Plan 1997. Lusaka, Zambia: KANTIPO. 45 pages.
- Lunoe, Bjorn, Robert Thomson, Gilbert Mudenda, Harriet Ntalasha, and Charles Shindaile. May/June 1998. Luangwa Integrated Resource Development Project: Project Review Phase III, Project Appraisal Phase IV. 138 pages plus appendices.
- Mano Consultancy Services Ltd. January-February 1998. ADMADE '98: An Evaluation of the ADMADE Programme with Special Reference to the "Strengthening Phase" 1995-1997. Mano Consultancy Services Ltd. 3 parts plus appendices.
- Queiroz, Joao S. de. October 1997. Strategic Planning Background Document. Environmental Threats Assessment: Zambia. USAID/REDSO/ESA. 57 pages.
- Republic of Zambia. August 1993. Policy for Wildlife in Zambia. Chilanga, Zambia: National Parks and Wildlife Service, Ministry of Tourism, Government of the Republic of Zambia. 11 pages.
- Rosenthal, Irving, and Frederick W. Sowers. August 1995. Program Review and Evaluation. Natural Resources Management Project: Zambia Component of Southern Africa Regional Project: A Success in the Making. 96 pages plus many pages of annexes.
- Staff. February 1998. KANTIPO - Aiming for Proper Conservation. Profit: Zambia's Business Magazine, No. 6/8: 28-31.

**Zimbabwe:**

- CAMPFIRE Association. CAMPFIRE News Newsletter. Various issues. Harare: CAMPFIRE Association.
- Dix, Anne. June 1996. CAMPFIRE: Communal Areas Management Programme for Indigenous Resources: An Annotated Bibliography (1985-1996). Harare, Zimbabwe: Centre for Applied Social Sciences (CASS), University of Zimbabwe. Paginated by section.
- Mitchell Group, Inc. May 1998. Draft of Interim Executive Summary and Overview Chapter of Mid-Term Evaluation Report: Communal Areas Management Programme for Indigenous Resources, CAMPFIRE, USAID/Zimbabwe Natural Resources Management Project, Phase II (690-0251.13 and 613-0241). Washington, D.C.: The Mitchell Group, Inc. I-IV plus 25 pages.
- Patel, Heena. 1998. Sustainable Utilization and African Wildlife Policy. The Case of Zimbabwe's Communal Areas Management Programme for Indigenous Resources (CAMPFIRE): Rhetoric or Reality? Indigenous Environmental Policy Center. 47 pages.
- Peterson, J. H., Jr. 1991. CAMPFIRE: A Zimbabwean Approach to Sustainable Development and Community Empowerment through Wildlife Utilization. CASS Occasional Paper Series, NRM, 1991. Harare, Zimbabwe: Centre for Applied Social Sciences (CASS), University of Zimbabwe. 148 pages.
- Siamachira, Johnson. 1998. Campfire under Fire from Western Skeptics. Feature article in The Herald newspaper, Harare, Zimbabwe, May 21, 1998.
- Staff Reporter. June 1998. National Parks to Get Z\$1.2 B(illion) to Improve Operations. News article in The Herald newspaper, Harare, Zimbabwe, June 6, 1998. 1 page.
- ULG Consultants Ltd. January 1994. Midterm Evaluation of the Zimbabwe Natural Resources Management Project (Project Number 690-0251.13). Highlands, Harare, Zimbabwe: ULG Consultants Ltd.

## ANNEX C

### CONTACTS

The assessment team met and talked with the following people during the USAID-RCSA sponsored assessment of CBNRM programs in the region, 25 May to 4 July 1998

#### Botswana:

USAID (SO-3 Team), phones 267-324-449; fax 267-324-404

Plot 1 48 1 8, Lebatlane Road (P.O. Box 2427, Gaborone)

International mail or Pouch address to USAID/Gaborone United States

1. Albert Merkel, Agriculture and Natural Resources (A/NR) Development Officer
2. Candace H. Buzzard, Project Manager (cbuzzard@usaid.gov)
3. Oliver Chapeyama (olchapeyama@usaid.gov)
4. Donna Stauffer, Program Development Officer
5. Tekane Tekane, Project Development Officer
6. Elizabeth Sodestrom (AAAS Fellow), Water Resources Advisor
7. Beatrice Zulu-Siwila, Program Assistant/Environment
8. Robert McCulloch (retired Agriculture and Natural Resources Development Officer)

CHEMONICS NRMP TEAM, phone 267-306-396; fax 267-300-978

(P.O. Box 131, Gaborone) (botsnrmp@info.bw)

1. Richard L. Smith, Chief of Party.
2. Laura Vinoly, Administrative Officer
3. Gary Clark, Human Resources.
4. John Hazam, Community Extension Advisor.
5. John "Spud" Ludbrook.
6. Wilf Slade
7. Pauline Wynter.

Department of Wildlife and National Parks (DWNP), phones 267-371-349, 267-371-405, fax 267-312-354, P.O. Box 131, Gaborone

1. Sedie C. Modise, Director (dwnpbots@global.bw) (267-327-257 home phone)

Department of Crop Production and Forestry, Division of Forestry, Range Ecology, and Bee-Keeping, Ministry of Agriculture, phone 350-688; faxes (for all in MoA) 356-027, 307-057 (Private Bag 003, Gaborone)

1. K. K. Kajinga, Chief Forestry, Range Ecology, and Beekeeping Officer
2. M. Sekgopo, Forest Officer, Management of Indigenous Woodlands
3. Raymond M. Kwerepe, Principal Rangeland Ecologist, Rangeland Ecology Section  
phone 267-350-511 (work), 267-328-790 (home) (brimp@info.bw)
4. Greg Stuart-Hill, Consultant Team Leader, Botswana Range Inventory and Monitoring Project (BRIMP), phones 350-440 (work), 306-484 (home) (brimp@wn.apc.org)

Policy Analysis and Management (Natural Resources), Ministry of Agriculture, phone 267-350-566 (work) or 267-373-261 (home); fax 267-356-027

1. Ntjidzi Manyothwane, Agricultural Economist (daps@global.bw) (350-566)

*CBNRM Assessment Document (Draft # 2)*

Institutional Reinforcement for Community Empowerment (PACT-IRCE), phone 267-314-757; fax 267-314-784; Plot 246, Moremi Road (Private Bag 245, Gaborone) (pact@info.bw)

1. Joan K. Leavitt, Co-Director
2. Jonathan HaBarad, Community Development Specialist, Social Science Advisor

The World Conservation Union (IUCN), phone/fax 267-371-584; phone 267-301-584  
Plot 2403, Hospital Way (Private Bag 00300, Gaborone) (iucn@info.bw)  
Regional Office for Southern Africa (ROSA), 6 Lanark Road, Belgravia, Harare, Zimbabwe  
(P.O. Box 745, Harare), phone 263-4-728-266, -267; fax 263-4-720-738 (sia@rosa.iucn.ch)

1. Ruud Jansen, Country Representative, IUCN Botswana Office

Rural Sociology Unit, Department of ..., Ministry of Agriculture

1. Bonnake Tsimako, Principal Rural Sociologist (not yet met)
2. Mpopi

**Namibia:**

**USAID**

1. Gary Cohen
2. Carol Culler

Directorate of Environmental Affairs (DEA), Ministry of Environment and Tourism (MET),  
phones 264-061-249-015, 016, 017, 018; fax 264-061-240-339 (Private Bag 13306, Windhoek)

1. Jonathan (Jon) Barnes (jb@dea1.dea.met.gov.na)
2. Jo Tagg (jotagg@iafrica.com.na)

LIFE Project, World Wildlife Fund, phone 264-61-239-945; fax 264-61-239-799  
68/A Robert Mugabe Ave., Windhoek (P.O. Box 9681, Windhoek)

1. Karl Mutani Aribeb, Programme Officer
2. David Callihan, Management Advisor (callihan@iafrica.com.na)

Namibia Community Based Tourism Association (NACOBTA), phone 264-(0)61-250-558;  
fax 264-(0)61-222-647 (P.O. Box 86099, Windhoek), 18 Liliencron Street

1. Maxi Louis, Project Manager

**Zimbabwe:**

USAID, phones 263-4-720-630, 720-739, 720-757; fax 263-4-722-418 or 263-4-720-722  
1 Pascoe Avenue, Belgravia, Harare (mail to P.O. Box 6988, Harare)  
International mail to: Harare (ID), Washington DC 20521-2180, USA

1. Eric R. Loken, Chief, Agriculture and Natural Resources (A/NR) Division  
(SO1 Team) (eloken@usaid.gov)
2. Charles R. Cutshall
3. Joseph Zvakwidza Chizororo, NRM Specialist (jchizororo@usaid.gov)

CAMPFIRE Coordinating Unit, Extension and Interpretation Unit, Deputy Director for  
Administration and Finance, Department of National Parks and Wildlife Management  
(DNPWLM), phones fax

1. Olivia Mufute, Ecologist

CAMPFIRE Association, phones 263-4-747-422, 429, 430, 457; fax 263-4-747-470  
Mukuvisi Woodlands, Cnr Hillside Rd and Glenara Ave. South (P.O. Box 661, Harare)

1. Abraham Sithole, Second Vice Chairman (and Chairman, Chiredzi RDC)  
P.O. Box 128, Chiredzi (phone 263-131-2375 or 2547)
2. Taparendava N. Maveneke, Executive Director
3. Stephen Kasere, Deputy Director, Projects (direct phone 747-436)
4. Ngoni Wasarirevhu, Deputy Director, Finance and Administration

Africa Resources Trust (ART), phones 263-4-732-254, 735-497, 732-625; fax 731-719  
3 Allan Wilson Ave., Belgravia, Harare

1. Linda Mujakachi
2. Maxwell Gomera, Project Officer (gomera@art.org.zw)

IUCN (World Conservation Union), phones 263-4- fax

1. Yemi Katerere IUCN-ROSA

Multispecies Animal Production Systems Project, World Wide Fund for Nature (WWF),  
phone and fax 263-4-730-599 (P.O. Box 8437, Causeway, Harare)

1. David H. M. Cumming, Ecologist
2. Jonas Chafota
3. Tim Lynam, Economist
4. Ivan Bond, Economist

ZIMTRUST

1. Champion Chinhoje, General Manager, Institutional Management Unit

Ministry of Local Government and National Housing (MLGNH)

1. J. T. Mutamivi, Under Secretary
2. P. F. Duri, Principal Administrative Officer
3. J. Madzivanyika, Principal Administrative Officer
4. A. F. Mangena, Principal Administrative Officer

**Malawi:**

USAID

1. Kirt Toh, Mission Director, USAID/Lilongwe
2. David Himelfarb, Chief, A/NR Division
3. Steve Machira
4. Jim Dunn
5. Wayne McDonald

SADC Wildlife Coordinating Unit

1. Ramosh Jiah, Acting Deputy Director
2. John Mpande, Director (did not see)
3. Aisha Mtimkhulu, Administrative Officer
4. Komani Mwandamere, Librarian

NRMP Project Office

1. Steve Johnson

Wildlife Department

1. Tressa Mandaule

Department of National Parks and Wildlife, Ministry of Tourism and Wildlife  
phones 265-723-566; fax 265-723-089 (P.O. Box 30131, Lilongwe 3)

1. Leonard Sefu, Acting Director, Management and Administration
2. Humphrey Nzima, Deputy Director (GTZ Coordinator), tel:782-702

Department of Forestry and Fisheries, Ministry of Environmental Affairs (TCUs)

1. Ken Nyasulu, Director of Forests
1. Mkoko, Director of Fisheries

TRAFFIC East/Southern Africa, phones 265-743-645 (direct), 265-723-676. -566  
(department); fax 265-743-648 (direct), 265-723-089 (department) (P.O. Box 30131, Lilongwe  
3)

1. Tom Milliken, Director

GTZ, phone 265-730-323, 265-733-287; fax 265-732-594

P.O. Box 31131, Lilongwe 10

1. Matthias Frhr. von Bechtolsheim, GTZ Advisor to DNPW (phone, fax 744-741)
2. Scholz, GTZ Advisor to Fisheries (did not see?)
3. Jennifer Graham, ex-PCV with Nyika project in Muzuzu, phone 335-202 (did not see)

World Bank, phones 265-780-611; fax 265-781-158 (telex 44529 WORLDBK MI)

P.O. Box 30557, Capital City, Lilongwe 3

1. Dr. Pickford K. Sibale, Agricultural Research Specialist (psibale@ai@worldbank.org)

UNDP (Peter Kulemeka is in charge of Sustainable Livelihoods, which includes ENR; Flemming  
Nelson is another person in the ENR section))

1. Mrs. Etta M'mangisa, Environment and Natural Resources (etta.mmangisa@undp.org)

Deloitte and Touche Public Accountants, phone 783-069, 732-525 (home); fax 782-276

Old Mutual House (P.O. Box 30364, Lilongwe 3)

1. John Bourke, Manager

Zambia:

USAID, phones 260-1-254-303, -304, -305, -306, -522; fax 260-1-254-532

351 Independence Ave (P.O. Box 32481, Lusaka 10101)

USA mailing address: Lusaka (ID), Department of State, Washington DC 20521-2310

1. Walter ..., Mission Director
2. David Soroko, Chief, Agriculture Development Office (dasoroko@usaid.gov)
3. Morse Nansengwa

Department of National Parks and Wildlife Services (DNPWS), Ministry of Tourism,

phones ; fax

1. Gilson Kaweche, Deputy Director
2. Lewis Saiwana, Chief Wildlife Warden
3. Elvis Simbili, Accountant, Wildlife Conservation Revolving Fund
4. William Banda, Training Officer
5. Dale Lewis, Technical Advisor, Nyamaluma Research and Training Centre

National Cooperative Business Association (NCBA), Cooperative League of the USA (CLUSA),

phone 235-747 (USA address: National Cooperative Business Center, 1401 New York Avenue NW, Suite 1100, Washington DC 20005-2160, phone 202-638-6222; fax 202-638-1374)

1. Ronald Phillips

Embassy of the Netherlands

Royal Norwegian Embassy (NORAD), phone 252-188; fax 253-915; telex NORAD ZA 40100  
Corner Birdcage Walk and Haile Selassie Ave (P.O. Box 34570, Lusaka)

1. Gudbrand Steve, Second Secretary, Agriculture

Delegation of the European Commission to Zambia (EC), European Union (EU),  
phones 260-1-250-711, 251-140; faxes 260-1-250-906, 252-336; telegrams DELECOMEUR  
Plot 4899, Los Angeles Boulevard, Kabulonga (P.O. Box 34871, Lusaka)

1. Paulo Wandschneider, Economic Adviser (deczam@zammet.zm) (zamnet?)

Kafue Anti-Poaching Company (KANTIPO), phone/fax 260-1-295-004; phone 260-1-291-377  
200A Ngwerere Road, Roma, Lusaka (P.O. Box 34089, Lusaka)

1. Yusuf Patel, Chairman
2. Stephan Sindern-Forster, Consultant to KANTIPO, ZELU Consulting

Wildlife Resource Monitoring Unit, phone 260-1-262-245

1. Hugo Jackmann, Consultant (jackmann@zamnet.zm)

**People Attending RCSA CBNRM Assessment Round Table:**

**(RCSA Conference room, Gaborone, 22 June 1998)**

**Participants (13):**

1. Ruud Jansen (Moderator), Country Representative for IUCN (Botswana)
2. Gary Naughton, Team Leader, CBNRM Assessment Team
3. Brian Jones, CBNRM Assessment Team
4. Art Hansen, CBNRM Assessment Team
5. Clyde K. Kiker, CBNRM Assessment Team
6. Sedie Modise, Director of DWNP (Botswana), direct phone 314-577
7. Malan Lindeque, Deputy Director of Department of Conservation, Division of Specialist Services, Ministry of Environment and Tourism (Namibia)
8. James Murombedzi, Ford Foundation (Johannesburg, South Africa)
9. Joe Matowanyika, ZERO (Zimbabwe)
10. Steve Johnson, SADC-NRMP (Malawi)

11. Yemi Keterere, Regional Director for IUCN-ROSA (Zimbabwe)
12. Richard Davies, North West Parks Board or Madikwe Game Reserve (Rustenburg, South Africa)
13. Roger Collinson, Consultant, ex-Director of Bophufhatswana National Parks (South Africa)

**Observers (24):**

1. Mrs. B. K. Molosiwa, Deputy Permanent Secretary, Ministry of Finance and Development Planning (Botswana), phone 350-288, Private Bag 008, Gaborone
2. Chandida Monyadzwe, DWNP (Botswana), Private Bag 131, Gaborone
3. Rosinah Masilo-Rakeidasi, DWNP (Botswana), Private Bag 131, Gaborone
4. Jan Broekhuis, DWNP, SWO-WWF (Botswana), P.O. Box 611, Gaborone
5. Raymond M. Kwerepe, Ministry of Agriculture (Botswana), Private Bag 003, Gaborone (brimp@info.bw), phone 267-350-511, fax 267-307-057
6. P. M. Mogotsi, Agricultural Resources Board (Botswana), Private Bag 003, Gaborone, fax 350-746
7. Felix Monggae, Kalahari Conservation Society (Botswana), P.O. Box 859, Gaborone
8. Stephen Cartwright, British High Commission, DFID (Botswana)
9. Moses Samson, UNDP, NCS Agency (Botswana), Private Bag 0068, Gaborone
10. Mrs. Dicky Methorst de Bie, Director of Netherlands Development Organization (SNV, Botswana), P.O. Box 611, Gaborone, phone 352-913
11. Frank van Bussel, Program Officer, Netherlands Development Organization (SNV, Botswana)
12. Wendy Stickel, Deputy Director, USAID, RCSA (Botswana)
13. Donna Stauffer, Program Development Officer, USAID, RCSA (Botswana)
14. Al Merkel, Agriculture and Natural Resources Development Officer, USAID, RCSA (Botswana)
15. Elizabeth Soderstrom, Water Resources Advisor, USAID, RCSA (Botswana)
16. Maureen Shauket, Contract Officer, USAID, RCSA (Botswana)
17. Tekane Tekane, Project Development Officer, USAID, RCSA (Botswana)

*CBNRM Assessment Document (Draft # 2)*

18. Laurel Neme, USAID, Advisor to AFR/SD/ROS Management, IRG-FRAME (Vermont, USA), phone 802-655-1185 (laurelneme@aol.com)
19. Richard L. Smith, NRMP, Chemonics (Botswana) - phone 306-396, Gaborone
20. John Hazam, NRMP, Chemonics (Botswana), P.O. Box 2427, Gaborone
21. Joan Leavitt, NRMP, PACT-IRCE (Botswana), Private Bag 245, Gaborone (pact@info.bw), phone 314-757
22. Pauline Wynter, NRMP, Chemonics (Botswana), P.O. Box 131, Gaborone (pw@megr.bw)
23. C. Gary Clark, NRMP (Botswana), P.O. Box 2427, Gaborone
24. Frederick O. Simon, U.S. Geological Survey (Reston VA, USA), phone 703-648-6055 (fsimon@usgs.gov)

**ANNEX D  
Duty Schedule (Work Plan) CBNRM Assessment Team**

(approved by Albert Merkel, COTR, 6/1/98)

<u>Date</u>	<u>Activity</u>
Mon May 25:	Team departs USA for Gaborone, Botswana
Tue May 26:	Arrive at Gaborone 17:40
Wed May 27:	Introductory meetings at RCSA 14:00 >> Familiarization with TDY work room and reference materials, Review SOW w/ RCSA, assignment of key responsibilities to team.
Thu May 28:	At RCSA >> Introductory discussions of the assessment mission >> review documents >> re-draft work plan for discussion w/ RCSA >> Brian Jones arrives from Namibia
Fri May 29:	At RCSA >> Meet w/ SO-3 Team >> Document Review Adjust travel schedule >> establish e-mail linkage
Sat May 30:	Team meetings and revision of work plan >> clarification of individual assignments >> Reading background reports
Sun May 31:	Rest.
Mon Jun 1:	Meeting w/ Dept of Wildlife >> Finalize work plan >> Team meeting
Tue Jun 2 :	Meeting w/ Chemonics, Botswana NRMP
Wed Jun 3:	Meeting w/ PACT >> Hansen & Kiker to Namibia
Thu Jun 4:	Meetings w/ other Botswana partners and PACT sub-grantees (Naughton & Jones) >> Meetings with USAID Namibia LIFE Project (Hansen & Kiker)
Fri Jun 5:	Meetings w/ other Botswana partners and PACT sub-grantees (Naughton & Jones) >> Meetings with Gov't of Namibia (Hansen & Kiker)
Sat Jun 6:	Travel to Harare, Zimbabwe (all)
Sun Jun 7:	Rest.
Mon Jun 8:	Meetings w/ USAID/Harare
Tue Jun 9:	Meetings in Harare w/ IUCN, ART, WWF, Univ of Zimbabwe >> Review evaluation of Zimbabwe NRM Project
Wed Jun 10:	Travel to Malawi (All)

CBNRM Assessment Document (Draft # 2)

- Thu Jun 11: Meet w/ SADC Wildlife unit and IUCN
- Fri Jun 12: Continuation in Malawi
- Sat Jun 13: Team splits (Hansen & Jones to Lusaka; Kiker & Naughton to Gaborone)
- Sun Jun 14: Rest.
- Mon Jun 15: Meetings with USAID/Zambia(Hansen & Jones); meetings w/ Botswana partners (Kiker & Naughton)
- Tue Jun 16: Review ADMADE Project (Hansen & Jones); pre-draft writing (Kiker & Naughton)
- Wed Jun 17: Hansen & Jones return to Gaborone >> Team meeting
- Thu Jun 18: Team meetings and re-cap of travel findings >> Compile Info, review data  
Submit discussion paper for round-table
- Fri Jun 19: Continue round-table preparation >> focus on the future >> resource sustainability issues >> community needs issues >> implementation issues.
- Sat Jun 20: Team meeting >> reconciliation of issues and consolidation of approach to findings
- Sun Jun 21: Rest.
- Mon Jun 22: Roundtable presentations, 0830-1230
- Tue Jun 23: Individual consultations (team members/RCSA staff) >> writing first draft
- Wed Jun 24: Writing first draft
- Thu Jun 25: Finish first draft, (to Merkel at 14:30)
- Fri Jun 26: Team edit of first draft of report to RCSA staff
- Sat Jun 27: Internal (team) review and critique of first draft >> refinement of Economic Analysis & findings & recommendations >>
- Sun Jun 28: Rest.(Jones departs team)
- Mon Jun 29: Continued review of documents for clarification of issues and improved understanding of potential solutions
- Tue Jun 30: Receive and review RCSA comments on first draft >> Begin preparation of Second draft report

*CBNRM Assessment Document (Draft # 2)*

Wed Jul 1 : Re-write

Thu Jul 2: Second Draft of report to RCSA by 16:00

Fri Jul 3 : Team Meeting (internal evaluation of the job and final logistical and administrative details)

Sat Jul 4 : Team departs for USA

## ANNEX E

### ECONOMIC ASSESSMENT OF CBNRM IN THE SOUTHERN AFRICA REGION

---

The USAID Regional Center for Southern Africa (RCSA) has requested an assessment of community based natural resource management (CBNRM) as it is developing in the region. The terms of the assessment are given in the Scope of Work (SOW) and cover a range of issues. While the assessment is to consider CBNRM in all the nations of Southern Africa, the focus is to be on Botswana, Malawi, Namibia, Zambia and Zimbabwe. The following economic assessment is a topic of that assessment. The specific parts presented in the economic assessment relate directly to the issues raised in the Scope of Work item number 6 (SOW 6 on page 7). The specific issues in SOW6 will be used as introductory headings for each part of the economic assessment. Following consideration of all the specific issues, a final section is presented which considers the economic issues as a whole.

1. DETERMINE AN ESTIMATED VALUE FOR CBNRM, BOTH IN DIRECT TERMS AND LINKAGES TO THE LOCAL (PERHAPS HOUSEHOLD) AND REGIONAL ECONOMY BY IDENTIFYING POTENTIALLY ECONOMICALLY SIGNIFICANT RESOURCES TO THE EXTENT POSSIBLE.

---

It is appropriate in considering the value of CBNRM to include : direct use value, indirect use value, option value, existence value, and bequest value. Given the broad goals of CBNRM at the local, national and international scales, all of these are components of the value of the natural resource base that CBNRM is intended to enhance. Clearly, it is not possible to specify quantitative measurers of all these, but it is important to recognize these as part of the economic values that CBNRM efforts are generating.

In addition to the direct values associated with CBNRM these is indirect value stemming from linkage to other valuable activities, spin-offs and secondary effects of CBNRM. Other activities and enterprises at the local, national and international scales are affected by CBNRM related activities. Again, it is not possible at this time to quantify the associated value. It is, however, possible to give illustrative cases, and in so doing identify some of the economically significant resources.

#### DIRECT VALUE

Wildlife. By far the most economically significant resource associated with CBNRM is wildlife. Where wildlife occurs in sufficient numbers trophy hunting and tourism have created the potential and the reality for considerable community income. CBNRM programs have facilitated the creation of community organisations that allow the communities and households to capture part of the monetary value associated with wildlife orientated enterprises. In Botswana's Chobe Enclave Conservation Trust and Sankuyo Tshwaragano Management trust, safari company concessions and trophy fees provided US\$85,000 (for 1997) and US\$ 120,000 (for 1998), respectively. In Zambia under the

ADMADE program, US\$46,000 flowed to Mwanya Sub-Authority for community development and resource management. Additionally, ABNRM programs under CAMPFIRE in Zimbabwe and LIFE are providing income to communities and households. Clearly, the natural capital, the ecosystem that generates the wildlife flows, has considerable value, and this value is enhanced by CBNRM.

While some communities have wildlife on this common lands that attract hunters, others do not. Some do have proximity to landscape features that can attract tourists: fishing in some areas (the value of tourist fishing in Caprivi and of Namibia was valued at US\$113,000 in 1994) and finding in others. Additionally, these areas were once habitat for a wide range of other wildlife, and this wildlife will return if conditions are correct. CBNRM efforts over a longer time period can help establish community efforts that will enhance conditions for wildlife and the potential for tourism in their areas.

In a contingent valuation study in Namibia, Jon Barnes *et al.* established an aggregate economic value associated with wildlife receiving tourism of US\$202 million (US\$738 per tourist). This translates into US\$ 67 million in net national income to Namibia and US\$40 million in consumer surplus to the tourists. Given that CBNRM efforts have the potential of improving wildlife in many areas, the future aggregate values and consumes surplus is likely to grow significantly and add to Namibia's net national income. Many of the other SADC countries have similar potentials.

Veld Products. Some CBNRM efforts are exploring the potential of various products that come from their communal lands. The ones most often mentioned are marula fruit, mopane worms, thatching grass, cochineal and grapple (devil's claw). While some of these (cochineal in Okwo WMA and grapple in Kwanenga District, both in Botswana) are just being explored, others are providing earnings to households and communities. In the Namibian CBNRM program it was recognized that the expansion in tourism was causing an increasing demand for thatching grass. The marketing process was improved. The result of the marketing was the women of three communities involved in collecting thatching grass saw their incomes increase from US\$15,000 (in 1994) to over US\$100,000 (in 1997). In Botswana's Tswapong Hills Kgetsi ya Tsie Project, mopane worm, thatching grass and marula activities have added approximately US\$625 to the annual income of the 85 women involved. A larger scale marula processing effort in Gwezotshaa CBO has total revenues approaching US\$350,000 and expected net revenues in the order of US\$200,000. While the management, operation and compensation efforts need to continue to improve, there is demand for veld products, and CBNRM can enhance the income potential.

There is, additionally, a complementary relationship between tourism and veld products coming from communities. Demand for crafts and local products increase with the number of tourists coming into the area.

Service. Although this is not occurring presently, CBNRM efforts can provide additional value through provision of various land management and other services. There are service activities that need to be performed in rural areas, and members of the communities are in the best position to perform these. There are several illustrative examples. Fire is a structuring process in many of the ecosystems. It can be both destructive and enhancing.

The people of the area can best provide appropriate fire management under the supervision of government agency personnel, thereby providing a national service and being compensated for it. Similarly, in Botswana the Department of Crop Production and Forestry conducts an annual forest seed collection effort. The local communities could readily contract with the Department to conduct the collection, reduce government's cost and obtain income for the communities. Additionally, the community members would now have a vested interest in the trees that provide seeds. There are, similarly, a number of landscape management services that the communities could provide. CBNRM efforts can help identify the demand for these services and organise the community members to provide them. The result would be increase in value for each nation for the specific community, as well as income for individuals.

Ecosystems' Values: As was mentioned at the outset, the value of CBNRM has a number of components including ecosystem option value, existence value and bequest value. While these economic values are difficult to quantify in monetary terms, economists do agree that people do hold these values. For the Southern African landscape, these values exist at the community level, the national level and the international level. People at the community level see these aspects of the landscape as their heritage and as what they hope to leave for their children. At the national level the ecosystems are seen as both generating income streams for the present and the future and as the national heritage. Additionally, people in other countries, especially developed countries, see the Southern African flora and fauna in special ways that translates into a monetary willingness to pay to assure long-term ecological integrity.

Jon Barnes et al's research in Namibia gives insight into these values and the way they relate to CBNRM. The contingent value survey of tourists viewing wildlife in Namibia posed questions concerning willingness to pay into a wildlife conservation fund in Namibia. The average tourist expressed a willingness to pay of US\$23 per year, which aggregate to US\$6.3 million per year for the number of tourists in 1995. Additionally, the average tourist expressed willingness to pay US\$5.75 into a community trust fund aimed at improving the rural communities living within the natural ecosystems. This is an aggregate value of US\$1.6million per year.

It is reasonable to assume tourists coming to other Southern African countries have similar values that translate into willingness to pay. Also, it is reasonable to assume people not actually coming to the region hold values toward these ecosystems. For example, if one-tenth of the U.S. population was willing to contribute the price of a cup of coffee (\$1.00) per year, the aggregate willingness to pay would be in the order of US\$25 million per year. One could expect people in other wealthy nations to have similar ecosystem values.

Derived Value of CBNRM. In summary, the client value of CBNRM is a derived value. It is derived from the broad range of activities associated with the landscape that are enhanced by better ecosystem management. And, better management will occur where the communities and their individual members better understand the consequences of their actions and recognize the potential for compensation for their resource management actions. CBNRM is accomplishing this in some areas and has potential for positive effects in additional areas of the region.

## LINKAGES

Communities. The various CBNRM efforts are inducing a number of spin-offs and secondly effects. The greatest of these are associated with tourism and safari hunting. Of the five, focus countries only Malawi has experienced limited impacts. Communities in Botswana, Namibia, Zambia and Zimbabwe have experienced considerable spin-offs and secondary effects of tourism and hunting related activities. A few examples can illustrate these. In all four countries safari camping facilities have been built in communities creating jobs for both men and women. In Botswana, the Sankunyo Tshwaragano management trust members elected to establish a store in the community. The Lizauli Traditional Village and community – run camp site were established in the Caprivi area of Namibia. In Chikiva community of Zambia, a clinic was built and staffed with funds derived from safari hunting. It is estimated that the savings in time for community members results in a “social rate of return” of almost 100 percent per annum. And, in Zimbabwe with CAMPFIRE and the large number of communities given “appropriate authority”, there have been a number of secondary effects resulting from the additional revenues flowing to the rural district councils and downward to the communities.

While veld products are being additional revenues into the communities and having some secondary impacts, these are not get dramatic. To the degree that tourists come into these communities the demand for veld products and crafts is likely to increase, and result in additional household incomes.

Since, other than game guards, few other land management services have been pursued, the revenues from such activities and resulting spin-offs are limited. Land management services, however, ultimately could be a meaningful part of individuals incomes and induce greater community economic activities.

Commercial and Transportation Sections. Given that a substantial part of the tourism sector is associated with the regions’ landscapes and that CBNRM has potential for increasing the potential for tourism, tourism is likely to continue to grow. Though linkages growth will occur in the commercial service sector that supports tourisms and in the transportation sector. Increasingly, in many parts of the world, tourism is becoming the major economic sector, resulting in increasing employment in the various service sectors. This is likely to be the case in Southern Africa.

Agricultural Sector. There are linkages between CBNRM and agriculture, but it is not clear as to what their consequences will be. In Namibia and Zimbabwe lands once in agriculture are being managed for wildlife. But in Botswana there appears to be conflict between cattle grazing on communal lands and with goals of communities with evolving CBNRM programs.

Dynamics. CBNRM is in a transient stage. It certainly has not yet developed into a nature system having major impacts on the management of much of Southern Africa’s landscape. As specific aspects of CBNRM are adopted and applied to activities on the landscape, this will have economic consequences. With the linkages that exist between the landscape and tourism, many sectors will experience positive effects.

## VALUE IN CBNRM “CAPITAL”

The value of CBNRM is to a considerable degree a derived value. It is derived from the valuable final products that it facilitates. As explained, tourism and safari hunting presently are the dominant economic activities, but other complementary products and services are being developed. What CBNRM can do is lead to the enhancement of the various types of “capital” that lie behind the products and services.

Fundamentally, there are three types of “capital” involved. First, and foremost, is the natural capital i.e. the landscape with its wildlife. This capital, if improved, can generate more economic value, especially in tourism. Involving the community members in management activities is a solid way to improve the natural capital base. Second, is the physical, facilities necessary for producing products and providing services. This capital is best provided by the private sector, but these are roles for the community to play in its development. Third, and probably the most important form of capital is human capabilities. For the other forms to come together in the necessary way, human organizational skills are needed.

Economic value will be manifested when these three types of capital are brought together and result in an expansion of the output of products and service desired in the market place. CBNRM will have derived value to the degree that there is the expansion of economic output from the combination of these three fundamental forms of capital.

## 2. DESCRIBE HOW OTHER INCOME SOURCES SUCH AS TOURISM DO OR CAN CONTRIBUTE TO THE PEOPLE INVOLVED IN CBNRM

---

Income to the people involved with CBNRM will occur to the degree that they are involved in the provision of products and services demanded in the market place. Monetary income will flow to the individuals and communities as compensation for their efforts and for allowing use of various types of capital they control. Individuals will receive wages and salaries for their efforts and the community will receive royalties from private businesses that use natural capital (i.e. the landscape) the community controls and manages. The goal of CBNRM is to enhance the potential for these forms of income.

As discussed in item 1 above, the three demands that when met can translate into income are tourism/safari hunting, veld products and landscape management services.

## TOURISM/SAFARI HUNTING

Tourism all around the world is growing very rapidly as real incomes rise. The World bank has recognized this trend and has declared tourism the world’s largest economic sector.

Southern Africa is well placed in the market to see continued expansion of demand by tourists, and this will translate into increased income for the nations, communities and individuals.

Present. Data do not exist that relates tourism activities directly to the rural communities and incomes. It is possible to consider aggregate cases to gain insights into potential.

Zimbabwe in 1980 had a total of 268,000 tourists in 1980 with 36,000 from Europe and North America. By 1996 these figures had grown to 1,600,000 and 270,000 respectively. These people came for a variety of reasons, and clearly for some it was for the African landscape and people. Data on sports hunting gives insight into the growth in tourism demand associated with the landscape. In 1986 there was 4,250 days of sports hunting; this grew to 14,140 days in 1993. The value in 1993 was US\$12.8 million, up from US\$10.8 million in 1992. In the years since growth in numbers and value have both continued to grow, as has all forms of tourism associated with wildlife and the landscape.

The expansion in tourism in Zimbabwe has occurred during a period when other sectors were declining. From 1985 to 1993 real wages declined by 50%, this was especially the case in rural areas. Most rural people do not have formal employment; only 12% of the total population has formal employment. CBNRM based programs like CAMPFIRE play an important income role in some rural communities. The aggregate of all CAMPFIRE communities' incomes in 1996 was US\$1.75 million. This translated into maximum household incomes from CAMPFIRE sources of US\$550 per household, a very significant amount for rural households where the annual per capita income is near YS\$500. It should be made clear, however, that not all CAMPFIRE communities are receiving this level of associated income. The high level occurs where safari hunting occurs. Other "appropriate authority" communities receive for less income because of the much lower level of tourism. The point here is that tourism and safari hunting can contribute meaningful incomes to households and communities participating in CBNRM.

Namibia can provide further insight. By 1995 Namibia had 276,000 tourists with 83,000 from Europe and North America. Ashly and Garland, to give help understand the community income potential of "eco-tourism" analyse three types of up-market tourism lodges: One run entirely by an outside entrepreneur with no community involvement; one that voluntarily shared a percentage of revenue with local people; and one that is established through a joint venture and partnership between an investor and a community. Their analysis shows that all three enterprises boost local jobs and individual incomes, but the revenue lodges; One run entirely by an outside entrepreneur with no community involvement; one that voluntarily shared a percentage of revenues with local people; and one that is established through a joint venture and partnership between an investor and a community. Their analysis shows that all three enterprises boost local jobs and individual incomes, but the revenue sharing and/or joint venture do more overall, cash earnings ranging from US\$540 (for a small composite) to over US\$27,000 (from a joint venture lodge) can be a significant contribution to poor rural communities. Accompanying jobs contribute similar amounts to household incomes. At this time it is not clear as to what the income potential in rural communities of other countries might be, but it is expected that the organizational aspects of CBNRM can contribute to the potential.

Future. It is highly likely that tourism in Southern Africa will continue to rapidly grow. Tourism is growing rapidly globally. Given the advances in the global economy this is likely to continue. Additionally, demographics of the developed economics point to greater travel. There is broad public interest in African people and their landscape (ex.,

Disney World new African landscape attraction). Media coverage of the areas landscape and wildlife is extensive. Additionally, it is easy to get to Southern Africa – there are frequent non-stop flights from Europe and North America.

The growing number of visitors to the region has spurred private sector investments in facilities. Additionally, governments are improving roads allowing easier travel within and between countries. Governments have also made it easier for visitors to enter and leave the countries. These improvements open the way for those interested in Southern Africa, but are less adventurous than travelers of the past.

Residents of the Southern African region are also traveling more, both within and between countries. Urban dwellers are becoming more interested in the wildlife and the ecology of the region. These travelers along with the ones from abroad will expand the demand for activities in the rural areas. And, improve the quality of their natural capital and their community capital, they should be able to expand their income coming from tourism.

Other sources of income to rural communities and individuals are as individual enterprises less impressive, although for the communities without tourism potential the income from these can be important. As discussed in item 1 above there is demand for some veld products, and these are contributing income to communities and individuals. At this time it is not clear as to how robust the demand is for marula products, mopane worms, cochineal, grapple and such products. It is possible if a number of communities expand collection and production of some veld products, supply can outstrip demand, resulting in price and income decline. To the degree that the demand for certain veld products is linked to the expanding tourism sector, income from these can grow. As mentioned this is the case for thatching grass and crafts.

Other products that have been traditionally collected from the landscape can also be collected from communal lands under CBNRM. These can contribute income, but if not managed well, these can cause long-term ecological costs that diminish other incomes. As example is wood fuels and charcoal.

In Zambia 96 percent of household fuels come from wood. Charcoal accounts for 2.3 percent of GDP, and it is estimated that 41,000 rural people are involved in charcoal production and 45,000 others are involved in transport and distribution. While this product provides income to people, if not carefully managed the result can lead to declining incomes. In some areas where there is strong demand for crafts, the raw material for the crafts is being diminished. In Malawi fish stocks on some lakes have declined. Typically, in these areas there are not functioning CBNRM programs.

In Botswana, Namibia and Zimbabwe studies are showing that wildlife for meat and hides can also be profitable enterprise. Thus far it has been commercial farms undertaking this production. In Namibia these groups have joined together to create conservancies and are removing fences to increase wildlife production. These groups are not community based in the usual sense of CBNRM, but they are encouraging conservation of landscape resources and generating income.

Again, as discussed in item 1, the communities and individuals have potential for

generating income by providing services. Presently, the wildlife guards in protected areas and on communal lands are doing this. There is need for other landscape services, and if these services are developed in conjunction with those needing them, income can result. Effective fire management in many areas is an example.

PROVIDE A DEPICTION OF HOW CBNRM OPTIMIZES RESOURCE (OR LAND) MANAGEMENT IN TERMS OF BENEFITS TO HOUSEHOLDS AND COMMUNITIES, AND HOW THIS AFFECTS NATIONAL ACCOUNTS. DETERMINE THE ESTIMATED VALUE FROM CBNRM IN TERMS OF INCOME FLOWS, RISK REDUCTION, AND RESOURCE OPTIMIZATION USING DATA AVAILABLE IN PROJECT REPORTS AND EVALUATION. SIMILARLY, DETERMINES IMPLIES VALUES BASED ON TRADITIONAL, RELIGIOUS, OR SOCIAL MORES.

---

Several components of these issues have been covered in the discussion of the estimated value of CBNRM (item 1) and of income and income sources (item 2). Risk reduction issues will be dealt within the discussion of how CBNRM optimizes resource management. Similarly, traditional, religious, and social moves will be considered from the perspective of resource management. The effects of CBNRM on national accounts will be discussed last.

#### **CBNRM IN OPTIMIZATION OF RESOURCE MANAGEMENT.**

Land Resource Management. Landscape resources (ecological capital) are interconnected and intertwined. There are structuring (dominant) processes and entrained (dependent) processes. The result is that, although there is great diversity and complexity in ecosystems, a small set of variables may have a great influence on the sustainability (resilience) of the ecosystem. Clear examples of structuring variables or processes are elevation, climate, and fire, others are less clear. What this perspective of ecosystems leads to is a view that ecosystem management should be taken up holistically to avoid human actions that can fundamentally change the ecosystem structure and induce loss of its inherent resilience. A straight forward example is establishment of a species at populations skewed within so low or so high that they upset the relationship with the broader system that supports them. The result is loss of productivity and possible ecological resilience.

Recognizing this view of ecosystems opens the possibility of CBNRM as a meaningful approach to managing Southern Africa's complex landscapes. While there is substantial knowledge about the regions ecosystems, no one knows precisely how they should be managed on a day-to-day basis. Institutionally embracing the idea that people closest to the unfolding ecological processes have both the most intimate relationship with the ecological system and the consequences of positive or negative actions. The CBNRM approach in principle provides a means for all community members to contribute their knowledge to the management of the complex natural resource system.

Optimization. Theory of natural resource economics suggest that the owner (the person or group that gains benefits and bears costs associated with resource will allocate the resource in such a way that the net value (benefits), expressed in present net value terms, will be maximal. Given the relative prices and costs of extraction of the natural resources, a high discount rate will spur more rapid use, and a low discount rate will slow the rate of use. Additionally, given the discount rate, relatively higher prices and lower costs will

lead to more rapid use. An optimal use formula can be derived mathematically.

Economic theory can point the way, but empirical studies – a larger proportion of the studies – indicate the renewable natural resources are used at a rate exceeding the economic optimum given prices, costs, and a ‘market’ discount rate. It is not clear why this is the case. It is possible that the planning period for renewable natural resources is shorter than the regenerative period, and that this pervasive uncertainty is perceived by the decision makers. The result is the present net value of resource use is over-estimated (where all other conditions are correctly interpreted). Also, if the future pieces are underestimated and/or future costs of resource use are over-estimated, the result is again an over-estimate of the present net value of use. Each of these cases lead to non-optimal use of the resource. If these uses are consumptive or ecologically damaging, they lead to serious degradation of the overall system and loss of the capacity to sustain use at the economically national (optimal) levels. Short-term financial obligations or exigencies can lead to similar exploitive allocative decisions: “take it all now and pay off the debts.”

The CBNRM Approach. Involving the community more explicitly offers an approach that has a greater likelihood of optimal natural resource use. CBNRM is being implemented where people are greatly dependent upon natural resources and the landscape for their basic survival. From an agricultural perspective, these landscapes are generally considered marginal, and most tillage based systems have failed. The landscape resources are seen by the user-community as their long-term source of goods and products for survival. Because of long cycle drought and inadequate markets they do not see a means for quick gains from the resources. They have an inherently long planning horizon. Also, with limited means, they are likely to have a low discount (although, given extreme short-term survival conditions, they may temporarily demonstrate a high discount rate). Financially, they have little liquid collateral and thus little opportunity to leverage their financial position. Fundamentally, with local community control over the resource base and a functioning community decision making process, it would not be expected that the community would opt for over-exploitation of their natural resource base. Theoretically, they would be expected to arrive at an optimal allocation (plan of use) for their natural resources.

Traditional, Religious, and Social Mores. Traditional values of communities are more likely to be reflected in natural resource decisions where the CBNRM approach is used. The approach provides means of rationalizing the decisions of the group and the individuals within it. Traditions can be reflected by both the individuals and the group and be incorporated in the decisions. Reflections of the community’s values leads to decisions based on those values. Additionally, CBNRM provides means for the community members to explicitly address the manner in which the consequences, benefits and detriments, will be distributed among the community members. They have the opportunity to set and meet their own standard of equity.

There are values beyond the community that must also be considered. The society beyond the local community also have values towards, and interest in the landscape resources. Under a CBNRM approach these societal values become broad, clearly defined constraints. Constrained by the broader sanctions of society, the community’s authority is consistent with broader societal goals. The same social constraints may be seen in the

pattern of household decisions within a community; a similar structure tends to keep household decisions consistent with community values.

Economic and Ecological Resilience. The future can never be seen with perfect clarity. Many large scale forces operating on a global scale can cause a community's or a nation's fortunes to rise and fall. External environmental and economic events can send shockwaves through communities and nations. Communities with limited resources are advised to evolve a wide range of economic and ecological strategies for ameliorating these shocks. CBNRM, if clearly thought through and made operational, can provide a means for broadening the production base, improving market access, and increasing cash flow. Establishing a community based decision process has a high likelihood of providing the community with long-term economic and ecological resilience.

## **NATIONAL ACCOUNTS.**

Traditional Accounts. Traditional economic accounts reflect all products and services that enter markets, are valued there, and for which data from the market transactions are collected. To the degree that products and services derived from CBNRM enter the market place they will be reflected in the item 2 above, tourism associated with the rural landscape is highly likely to continue to increase. Both the direct expenditure and the growth in tourist facilities will be reflected in the accounts. Similarly, the incomes associated with veld products and other products and services resulting from effective CBNRM will add to the national accounts.

Green Accounts. As described above traditional national accounts deal with things of value for which monetary values have been established. Supplemental accounts intended to complement traditional accounts are being proposed to cover the many things of value that do not have a market established value. In these accounts, estimates are made of the environmental service flows that stem from natural capital and that are not reflected in market exchange. Many market goods stem from natural processes within ecosystems; decline in the viability of these processes will reduce the revenues from these products. Over-grazing of range and savannah systems reduce animal and vegetative yields, and ultimately related revenue. To the degree that CBNRM leads to decisions that enhance the long-term ecological potential of ranges and savannahs, greater productivity results. Similarly, tourism is dependent upon viable ecosystems; for continued foreign exchange earning through tourism, the ecological systems must be maintained. Also, non-monetary values can be reflected in these accounts. If the national heritage is seen as inclusive of the landscape and the wildlife, enhancement through CBNRM increases their resilience to provide these services into the long-term future, thereby enhancing the national accounts.

**IDENTIFY KEY DEVELOPMENT NEEDS STEMMING FROM THIS ANALYSIS WHICH INDICATE THE ECONOMIC, SOCIAL SIGNIFICANCE, AND SUSTAINABILITY OF CBNRM.**

Key development needs from an economic and social perspective deal with who has control and decision making authority over the landscape's natural capital, understanding of the characteristics and productivity of the natural capital and the demand for products

and services that can stem from the combination of natural capital and community organization. Explicitly, these development needs are:

The establishment of clear entitlement to natural resource use and management of the lands of the community.

The power and authority for the communities to develop enterprises associated with the community's lands and to enter into long-term contracts with other enterprises.

Clear understanding within the community as to how individuals of the community are to be compensated for their contributions to use, management of the community's resources.

Clear understanding of the communities natural resource base and its productive potential. An understanding of the demand for products and services associated with the natural resource base.

Inherently, the sustainability of CBNRM ties to motivation and responsibility. If the community members understand the potential for gain (demand for products and services) and the potential of their natural resource base, they will be motivated to act. But, there must be a legal foundation for their actions; the broader society must sanction their actions. Additionally, individuals must understand their relationship to the community and the broader society. The fundamental key development that is needed is clear understanding of the potential gain and the accompanying duties and responsibilities. The key development need is a system of functioning checks and balances.

#### **FINDINGS:**

1. The direct monetary value of CBNRM derives from improved management of the natural capital base in relationship to good management of associated enterprises.
2. Some communities have seen significant increases in their incomes arising from tourism/safari hunting enterprises; other communities have seen lesser increases in incomes arising from veld products and crafts.
3. Many of the southern African nations derive considerable foreign exchange earnings from their tourism sectors; continuation of these earnings is dependent upon maintaining the quality of the landscape resources and wildlife. Additionally, the tourism sectors has linkages to many other economic sectors.
4. Individuals at the community level, the national level and the international level value the southern African landscape and wildlife, and these values translate into a significant aggregate willingness to pay.

There has not, however, developed in southern Africa a means by which those who steward the landscape and wildlife can be compensated for their services.

#### **RECOMMENDATIONS:**

Southern African nations and donors should facilitate:

*CBNRM Assessment Document (Draft # 2)*

1. The development of model codes that clarify communities' entitlements to natural resources and their management.
2. Clarification of the power of communities to develop enterprises based on their natural resources and to contract with private enterprises.
3. Management approaches in communities that compensate individuals for their contributions to management and conservation of the community's resources.
4. Establish the characteristics of communities' natural resource base as it relates to money-earning enterprises.
5. Community knowledge of the demand for products and services associated with the natural resource base.

ANNEX F  
AN ANALYTICAL FRAMEWORK FOR CBNRM

This annex is the un-abridged version of the assessment of Topic 7, referred to in the main body of the preceding text, reproduced here for the sake of preserving details of the analysis.

**Discussion:**

CBNRM, as advanced by the government and international donors in Southern Africa, is predicated on a range of conditions found in the region, broadly identified as: economic, demographic, technologic, ecological and institutional. All are in a state of change.

With the political change in the region during the past 25 years, economies over the intermediate time period are expected to accelerate, and over longer time periods, economic integration is expected. Urban growth will occur as urban incomes continue to rise relative to rural incomes. People with above average education will be drawn to urban areas. Technological change will occur in urban areas and radiate outward. Communication technologies and transportation will play major roles in the increasingly modern economies. Agriculture in rural areas with high quality resources will continue to be commercial in structure and to adopt modern technologies. Rural people will be employed, but the wage rates will continue to be low because of market forces. Agriculture in areas of marginal lands will remain traditional in its practice, providing at best a subsistence level of living for those remaining on the land. Typically, people on the marginal lands will have low levels of education and few marketable skills. Few employment opportunities will exist, and a large proportion of people's livelihoods will depend on the ecological systems of these lands. Based on past observations, if there are not changes in the way the people relate to the land, the ecological systems will deteriorate.

These marginal lands of Southern Africa, because they are among the last remaining habitat for African mega-fauna, have special value. But it is value that, up until recently, was not legally capturable by the inhabitants. Instead, the institutional structures in most of the nations have alienated the people from the natural resources that generate this value. CBNRM is an evolutionary approach that is intended to facilitate shifts and changes in the understanding of the natural resource base, in the management of the resources and the institutional structure, and in processes that will allow the people managing and conserving the resources, to capture in meaningful terms, the value associated with these scarce resources.

Key hypotheses inherent in present CBNRM efforts.

Since initiation of CBNRM in the Southern Africa region a large number of documents have been prepared which reflect a number of useful hypotheses for analyzing follow-on activities. These key hypotheses are:

1. The ecological resiliency of landscapes is threatened by inappropriate activities that are causing resource decline and threaten the well being of people dependent upon them;

2. Economic and institutional forces external to the rural communities can induce inappropriate landscape use;
3. People from outside the region value the landscape resources and are willing to help support conservation efforts;
4. Marginal landscapes have few economically viable uses, are occupied by very people with few marketable skills, and have their greatest economic potential as “natural” capital;
5. Individuals and communities most intimately involved with these resources can best manage the natural capital;
6. Tourism associated with wildlife and the landscape offers the greatest potential return to the natural capital, although veld products offer complementary enterprises;
7. Individuals and communities who take actions with landscape resources should reap the consequences of their actions, both positive and negative;
8. Government agencies have important roles in understanding the natural capital’s potential and in protecting the aggregate environment;
9. There is considerable indigenous ecological knowledge and expertise in the region;
10. Commercial enterprises and services in the region can link communities to product and labor markets in developing enterprises and management capabilities;
11. There is need for NGOs that can provide services to communities not provided by the government or market sectors;
12. International donors will play important facilitating roles as CBNRM moves from early trials to become institutionalized as a mature local, national and regional process.

Key enabling conditions for CBNRM:

These conditions are subsets of the broader conditions found in the Southern Africa region. They, too, are best understood in terms of economic, demographic, technologic, ecological and institutional dimensions:

1. Ecosystems of protected areas and communal lands remain viable in much of the region; improved management can lead to stability of ecological functions;
2. Landscapes of interest, being largely marginal lands, have low opportunity costs in terms of other economic uses;
3. The region’s scientists and land managers have sufficient knowledge of the ecosystems and their functions;
4. Landscapes and wildlife are of considerable interest to the people of economically developed countries;
5. Expanding air service to the region enhances tourism potential;
6. Tourism is viewed as an economically viable sector by the government and market sectors in the region;
7. The rural transportation infrastructure is improving both within and between countries;
8. Few competing enterprises for the natural resources on marginal lands;
9. People of the rural communities occupying the marginal lands desire jobs and improved quality of life.

Key enabling forces for CBNRM.

Whereas the key enabling conditions create a fertile context for CBNRM, key enabling forces lead to explicit actions that directly foster CBNRM:

1. Residual traditional values among the rural community members – people desire to stay on their ancestral lands;
2. Motivated market sector entrepreneurs – from large-scale tourism companies to small-scale local businesses are ready to provide the broad range of services and products that support a growing sector;
3. Capable local and national NGOs are ready to provide needed services not provided by the government and market sectors;
4. National governments are motivated to foster habitat conservation and community development through legislation and policy change;
5. Some governmental agencies have acquired capacity to deal with CBNRM, are strong supporters of the approach, and will facilitate its implementation;
6. Strong international donor commitment to facilitating CBNRM implementation.

Enabling Actions necessary.

The following actions are necessary if the momentum of CBNRM in the region is to continue and CBNRM is to become institutionalized at all levels:

1. The communities must further develop and foster internal processes necessary for decision making and actions that lead to long-term continuity. Whereas the community may have evolved processes for dealing with other important issues, it is likely they will have to develop new processes for integrated resource management;
2. Government must continue to take legislative and policy action to allow communities meaningful authority, responsibilities and duties that will lead to their obtaining of benefits and bearing costs related to their activities in managing the natural resources.
3. International donors must continue to be involved in facilitating the international evolution of CBNRM in the region, but at a decreasing scale. Donors need to facilitate the acceptance of CBNRM by all the actors, thus promoting the institutionalizing of CBNRM and sustainability.

Inter-relationships:

There is congruence of the enabling factors making up the context of specific CBNRM efforts. Many of the conditions and forces have been created and established in much broader social, economic and political processes; these have major influence on the viability of CBNRM in specific applications. The situation is that while these affect CBNRM efforts, CBNRM efforts are not likely to affect the conditions and forces at the broader level. Instead, it is necessary that specific enabling actions stem from this broader context.

An Analytical Framework for Assessment:

At the time of this assessment, CBNRM development processes in the region have moved to the stage where change is accelerating. Actions have moved it from the **initiating stage** to the **implementing stage** (see the schematic, below). There is also substantial evidence that there is adequate motivation throughout the process to continue to drive CBNRM to the **sustaining stage**. Throughout the Southern Africa region CBNRM is at this implementing stage, and each effort has different characteristics, different successes and failures, different lessons learned. It is the mobilizations of the knowledge gained in each effort combined with the enabling actions stemming from the broader context that can propel CBNRM into the sustaining stage. Facilitating this mobilization is an appropriate role for the donor community.

## **SUSTAINABILITY !**

There are three *development stages* in the CBNRM process; initiating, implementing , and sustaining;

The *initiating stage* is characterized by:

an **event** (e.g., loss of a species), which creates **awareness** of a need, problem or opportunity, which causes an infusion of **ideas and information**, creating **motivation** to take action;

The *implementing stage* is characterized by:

**organizing** resources for action (planning, capacity building, re-structuring, etc.), followed by the infusion of **technical inputs** delivered through **extension and training**, which create **change**;

The *sustaining stage* is characterized by:

**management** of the system to assure that regular **monitoring and evaluation** lead to identification of **new opportunities** and **increased efficiency** which will require infusion of **new technologies** through regular and systematic **information and extension** leading to higher **productivity** to secure a mixture of **benefits** which exceed the costs of the process, leading to **sustainability** of the system.

This framework describes a means of tracking the process of CBNRM development. It can be used at any level of the operation (agency, district, CBO, etc.) where inputs are being made to help achieve the overall objective. As an assessment tool, it was used to determine broad trends and situations to identify the degree of momentum and development at the program level. As a design tool, it could be used to chart the elements necessary in a program or project, as well as help to estimate time and budget necessary to achieve a certain point in the process. As an evaluative tool, it could be used to determine the comparative stages of development between CBOs, or districts, or agencies at a specified point in time.

*CBNRM Assessment Document (Draft # 2)*