



NATURAL RESOURCES  
POLICY CONSULTATIVE  
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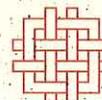
## **ANALYSIS OF THE STRATEGIC OBJECTIVES LINKAGES FOR THE BOTSWANA COMPONENT OF NRMP**

**Asif M. Shaikh**  
**The Natural Resources Policy Consultative Group**  
**World Resources Institute**

**Prepared for:**

**The Regional Center for Southern Africa**  
**United States Agency for International Development**  
**Gaborone, Botswana**

**Final Report**  
**May 1996**



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Asif M. Shaikh  
President and CEO  
International Resources Group  
Suite 700, 1211 Connecticut Avenue, N.W.  
Washington, DC 20036

Tel: (202) 289-0100 Fax: (202) 289-7601  
E-mail: asif%irg@mcimail.com

## ACRONYMS

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AID	Agency for International Development
AIDS	Acquired Immune Deficiency Syndrome
CBNRM	Community-Based Natural Resources Management
CILSS	Interstate Committee to Fight Drought in the Sahel
D&G	Democracy and Governance
DLF	Dynamic Linkages Framework
DWNP	Department of Wildlife and National Parks
FONSAG	Forum on Sustainable Agriculture (an NGO)
GOB	Government of Botswana
HIV	Human Immuno-suppressive virus
IRG	International Resources Group
NGO	Non-governmental organization
NRM	Natural resources management
NRMP	Natural Resources Management Project
OECD	Organisation for Economic Cooperation and Development
PCG	Natural Resources Policy Consultative Group for Africa
RBE	Resource-based enterprise
RCSA	Regional Center for Southern Africa of USAID
SADC	Southern Africa Development Council
SME	Small or medium enterprise
TA	Technical assistance
USAID	United States Agency for International Development
WRI	World Resources Institute

## PRINCIPAL FINDINGS

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1. Botswana's productive natural resource base is the single most important economic asset in the country. The new regional economy in Southern Africa fundamentally alters the potential returns on this stock of natural capital. High value commercial uses (both consumptive and non-consumptive) offer real alternatives to subsistence, and low value uses. Therefore, the best economic strategy for rural Botswana is one which capitalizes on both regional and international opportunities.
2. Raising the returns on natural capital is necessary for giving rural communities a financial stake in sustainable resource management. Because subsistence resource use tends to degrade the environment, the window of opportunity for moving to commercial use is closing. If the integration into regional markets is not well-established in the next ten to fifteen years, that window may be closed.
3. NRMP's approach to tapping into the regional market to raise the returns on natural capital has been to develop Resource-Based Enterprises (RBEs). By any measure, the potential for these RBEs meet the criteria for a successful private enterprise. In particular, they meet the criteria for the kinds of small and medium enterprises (SMEs) which the private sector strategic objective of the RCSA seeks to develop. Unlike many rural small enterprise initiatives, the RBEs do not simply supplement and stabilize subsistence incomes. They can be serious businesses which make serious money for their community shareholders -- on a sustained basis.
4. Once made, the breakthrough from subsistence to commercial use of natural capital potentially transforms the income and development paths available in rural Botswana. In addition to direct income benefits, it holds potential for downstream, commercially viable macroeconomic linkages (processing, transportation, tourism related services, etc.). The key to exploiting this potential is in capitalizing on Botswana's comparative advantages within the regional market.
5. For the RCSA private sector strategic objectives, these RBEs help prove the validity of the SME concept, and provide concrete examples of enterprise approaches for which USAID can legitimately take credit. For the regional economy, they provide specific models which may be replicable (or adaptable) in other parts of the region with similar resource endowments. Because they leverage a major, existing economic asset (the environment) they also offer the prospect of significant macroeconomic impact.
6. The RBEs also break important new ground in other areas of direct interest to USAID's regional SME objective. Innovative mechanisms for community enterprise ownership can increase "local ownership of productive economic assets". If successful, they can directly result in significant job creation which is spread through many parts of the country, rather than concentrated in the urban centers. Equally important, they would create sustainable incomes for many more rural households than they employ directly, because the entire communities will be shareholders -- in the full economic sense. Finally, this ownership structure offers promise of wider income distribution than for most small and medium private enterprises.

7. The RBEs also "push the envelope" on strategic governance issues, as do many NRM programs. They bring the resource base into the property ownership and control framework, defining ownership rights and providing secure access to both resources and the returns from resource use. One important by-product of defining where community property and management rights begin is the clarification of where public management and control ends. These and associated local governance changes being developed can provide the local victories on which the effort to strengthen "civil society" will be built, in Botswana and elsewhere in the region.
8. To make the RBEs legally viable entities, and to provide a framework for advancing local governance, NRMP has facilitated precedent-setting changes in public policy. These concrete and working examples of policy change can provide a wedge for interest groups, NGOs and communities elsewhere in the region to leverage other national policy dialogues.
9. The advances which now seem possible under the Botswana component of the NRMP can help tie together many of the threads which run through USAID NRM programs all around Africa. NRMP has benefited from many of the lessons learned elsewhere in 20 years of field implementation -- on financial incentives, on local governance and on the policy framework. There are unique regional economic and market opportunities in Botswana. These are allowing NRMP to develop and advance new approaches which could prove of significant value for other USAID projects. The greatest agency-wide benefits will come from the hypothesis testing, learning and feedback which can take place once the RBEs are ready for field implementation.
10. Finally, the exciting initiatives being made under NRMP will not realize their potential if the associated changes needed to let them succeed are not addressed. Important unfinished business remains, in operationalizing local resource conservation incentives, in the logistics of veldt product marketing and distribution, in the institutional capacity when project technical assistants leave, and in the local implementation of national policy changes and policy commitments. Some of these changes are not easy. Many take time, particularly for local understanding and sense of ownership to deepen. Time is a scarce commodity right now -- for Botswana's environment, for project life and for seizing currently available market opportunities. It would be unfortunate if the time constraint alone determined what is consolidated and what is lost, now that NRMP seems at the threshold of a long-term breakthrough.

# 1. INTRODUCTION

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## 1.1 Objectives

The terms of reference<sup>1</sup> of this report call for two principal outputs:

- analysis of main linkages between the Botswana NRMP and the strategic objectives of the Regional Center for Southern Africa (RCSA).
- identification of key issues which should be considered in the Botswana NRMP end-of-project evaluation.

To meet these terms of reference, this report is necessarily forward-looking and substantive. Specifically, it focuses on the *future potential* of the *most promising implementation approaches* of NRMP, and on how they relate to the RCSA strategic objectives. That is, it assesses the project primarily at the level of the *project hypothesis*. The report is not an evaluation, directly or indirectly, of project performance. Therefore, it has not looked for, nor does it discuss, the process of trial and error which may have generated the promising initiatives being considered, nor has it directly investigated the data or findings reported in the literature and interviews (which included both project and non-project sources).

## 1.2 Methodology

Examining the relationship between specific local activities and the broader regional dynamic requires an approach ("methodology") which assesses linkages across economic sectors, across strategic objectives and over time. In essence, a Results Framework attempts to do just that: it is a development hypothesis which sees activities (or projects) not just as independent contributions to well-being, but also as a means of making new things possible tomorrow.

As a frame of reference for understanding linkages over time, the report uses what has come to be known as the "dynamic linkages framework" (DLF -- also referred to as "nexus").<sup>2</sup> DLF is an approach which begins by identifying underlying macro trends which are likely to influence the choices and incentives economic actors face over the next twenty years. The premise of the DLF is that programs are more likely to have sustainable impact if the approaches they promote are consistent with the most important on-going and future changes in the macro environment. DLF is particularly relevant to policy formulation in a market economy, where public policy can only influence the incentives which the private economy creates, but cannot direct outcomes. In the absence of a complete DLF assessment, it is used here more as a "mindset" than a formal methodology. Reengineering philosophy -- and particularly the concept of an integrative Results Framework -- also significantly influences the mindset of this analysis.

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<sup>1</sup> complete terms of reference are contained in Annex D

<sup>2</sup> See Shaikh, et. al., 1993; Shaikh, Reardon, Clay and DeCosse, 1995; and Reardon and Shaikh, 1995.

### 1.3 Principal Sources of Information

Key information used for the analysis includes the following: (i) review of relevant Agency and regional program documents on core values, strategic objectives and reengineering philosophy, complemented by recent reengineering workshops which the author has either attended or presented; (ii) review of project documents (from design to implementation experience), and interviews with as many project implementors and stakeholders as was practical during the time available<sup>3</sup>; (iii) particular attention to the review of information on the macroeconomic prospects and opportunities in the Southern Africa region and (iv) review of demographic data and information on Botswana and Southern Africa. A list of people contacted and of documents consulted is contained in Annexes A and B, respectively.

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<sup>3</sup> A number of sophisticated observers have made and reported on visits to project field activities. Therefore, while field visits were not possible during this short mission, the report has probably not suffered appreciably as a result, although the author's personal learning undoubtedly has.

## 2. WHAT ARE BOTSWANA'S DEVELOPMENT OPTIONS?

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### 2.1 The Rapidly Changing Context

#### 2.1.1 *Structural changes across the region*

The dramatic political, economic and social changes in the region form the context for the RCSA program. These changes are well known, and need not be restated in here. The RCSA's emphasis on trade and investment, transport, telecommunications and indigenous private sector development recognizes that the "opening" of South Africa fundamentally alters regional opportunities for trade, investment and market integration. Building capacity to take advantage of regional opportunities (transport, communications, private sector) and facilitating economic interaction (trade, investment, communication) can contribute more to economic success than can isolated development projects.

#### 2.1.2 *Demographic trends*

Demographic trends will have an important influence on Botswana's future comparative advantages in the regional economy of Southern Africa. Clearly, the relative economic performance of urban and rural areas will also influence rates of urbanization, unemployment, underemployment, social dislocation, crime and instability. The changing mix between population, resources and economic activity must be an important part of strategic thinking.

Between the 1981 and 1991 censuses, total population grew at an annual rate of 3.5% -- close to the highest growth rate in the world. However, fertility rates are declining (total fertility rate of 5.3 in 1991 vs. 7.1 in 1981), suggesting that peak growth rates may have passed, even though the very young age structure of the population (42.8% under 15 years old) means that there is still considerable population growth momentum. Future growth scenarios face significant uncertainties. Excluding the impact of AIDS, average annual growth over the next twenty five years is expected to be in the range of 2-2.3%, implying a 2020 population of approximately 2.4 million. As Table 1 shows, both urban and rural populations are likely to grow sharply in both the medium and high urbanization scenarios.

The continued spread of HIV is a major wildcard for population growth scenarios and, more importantly, for human and social welfare. Botswana currently has the second highest rate of HIV seroprevalence in Africa, averaging 33% of the active population, and as high as 39% in some districts. While the base data used for comparison are not always reliable, surveys suggest that rates have doubled in five years. Recent analysis of the demographic impact of HIV<sup>4</sup> suggests that Botswana could face negative population growth rates by the year 2010.

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<sup>4</sup> Unclassified State Department Cable 45236 (March 1996)

**Table 1**  
**Population Scenarios with High and Low Urbanization Rates**

Category	1991 Census	1995	2020 Medium Urbanization	2020 High Urbanization
Total Population	1,327,000	1,501,000	2,586,000	2,586,000
Rural Population	747,100	825,800	1,293,000	1,034,400
Urban Population	579,900	675,200	1,293,000	1,551,600
Total Percent Increase From 1991	--	13.1%	94.8%	94.8%
Rural Percent Increase From 1991	--	10.5%	73%	38.5%
Urban Percent Increase From 1991	--	16.4%	123%	167.6%

Assumes 2.5% average growth from 1991-95, and 2.2% average growth from 1996-2020.

### **2.1.3 Demographic and environmental interactions**

The issue of changing demographic pressures is too often debated in terms of how much population pressure the resource base can withstand. From a Dynamic Linkages Framework perspective, that debate misses the point<sup>5</sup>. The more relevant issue is how demographic trends will alter Botswana's comparative advantages, and *how this, in turn, should affect Botswana's economic and resource management strategy today*. The specifics of Botswana's demographic transition suggest that we should be very cautious in assuming that either urbanization or the terrible potential impact of AIDS will decrease pressure on rural resources:

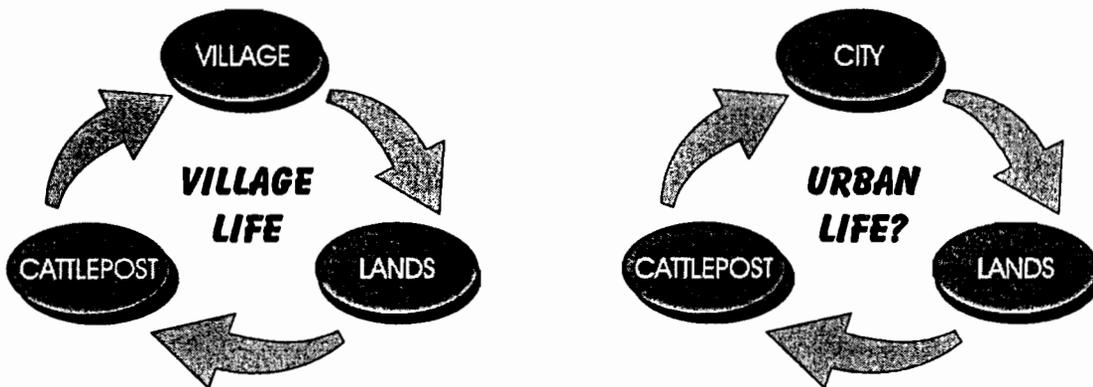
- There is, of course, little historical basis for guessing at the impact of increased AIDS-related mortality. It is likely, however, to hit the active age population (between 15 and 45) the hardest. This is the age group most likely to migrate to cities, so future urbanization rates are quite uncertain. Disproportionate impacts on the working age population is also likely to deepen rural poverty, and poverty is a major contributor to resource degradation.
- Urban populations may continue to draw on rural resources (such as for fuelwood and charcoal). Botswana's rich coal resources and relatively good access to electricity lessen urban reliance on woodfuels. However, the urban poor, particularly in secondary towns,

<sup>5</sup> While the discussion is valuable in helping understand the issues, it sheds limited light on what to do about them, since (a) it begs the question of whether current land use practices will remain fixed and (b) it focuses on what will not change ("land") vs on what will change (economic opportunities).

continue to use wood as a primary energy source. Charcoal use (largely an urban phenomenon) multiplies resource consumption as much as ten-fold.

- Urban populations may also continue to be rural economic actors. City dwellers often use cash income to acquire livestock in their family homes. Growth in livestock herds may in fact be accelerated by urbanization. Additionally, for much of Botswana's population, *being "urban" does not imply ceasing to be "rural"*. It has been noted<sup>6</sup> that rural populations are typically migrant in the course of the year, moving between lands, cattleposts and villages. For many, "urbanization" simply substitutes the city for the village stop in that rotation (Figure 1).

Figure 1: An Alternative Understanding of Urbanization in Botswana



In sum, it is premature to conclude that pressure on rural resources will do any less than to approximately double in the next twenty five years, irrespective of urbanization rates.

## 2.2 The Mix of Resources and Opportunities in Rural Botswana

The mix of resources and opportunities for sustainable resource management in Botswana is structurally different than for any other country in Africa:

- A very large land area and a small population;
- A weak agricultural base and relatively low potential for expanded agricultural incomes;
- Widespread livestock activity (although cattle is not a significant generator of rural employment);

<sup>6</sup> Professor Molamu, University of Botswana; Mr. Moemi Batshabang, Conservation Education Officer, Department of Wildlife and National Parks

- Highly uneven income distribution, even in rural areas. A sharp distinction between high income, modern sector herding and farming, vs. the subsistence living earned by the majority;
- Presence of local products (phane worm, marula, etc.) with strong and undersupplied local and/or export markets which are relatively accessible;
- Large and often "charismatic" wildlife populations;
- Proximity to South Africa, and possessing the potential to attract South African and other foreign investment because of Botswana's political stability and relatively prosperous national economy, and
- Proximity to important tourist destinations to the North (Zimbabwe) and South (South Africa), and to other commercially exploitable tourism resources in neighboring countries.

In short, unlike many countries, Botswana does not have a strong agricultural base on which to build. But it does have certain assets (wildlife, natural areas, unique local products) which the rest of the world is willing to pay for, and a regional economy with the skills and capital to develop those assets. Finally, Botswana has a local political and economic environment which makes it an attractive place to invest when the rates of return are good, or to visit when the attractions warrant.

### 2.3 A Vision of a Prosperous Future

The "standard" development image of stable subsistence agriculture assuring the well-being of rural populations is, quite clearly, not an accurate image for Botswana. In some parts of the country, a *rural production system* consisting of a mix of livestock, agricultural production, hunting and gathering provided stable subsistence. In large areas, hunting and gathering of veldt products has, for generations, been the primary means of livelihood. But even this image no longer holds everywhere that it once did. In the Western Districts, for example, what changed, twenty years ago, was that wildlife started to disappear, and a degraded resource base no longer met the needs of a growing population. Without government assistance, these areas may have ceased to be economically viable, even in good years.<sup>7</sup>

There are, to be sure, prosperous areas in Northeastern Botswana which can sustain significant cattle production and farming, and produce a surplus over local needs. However, ownership of these relatively productive assets is unevenly distributed. For the remainder of the population, in the absence of being able to feed itself through subsistence production, it must have tradable products or assets in order to purchase what it needs for survival, or must depend on public assistance.

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<sup>7</sup> Among the many individuals and documents confirming this picture, Mr. Gaogakwe Phorano, General Manager of Thusano Lefatsheng (an NGO specialising in work in the Western Districts) was the most articulate on this point.

To paraphrase Professor Molamu, Head of the Sociology Department of the University of Botswana<sup>8</sup> :

*The vision of a prosperous economic future for most of rural Botswana is one in which local populations are able to use the rural environment to generate sustainable income from marketable assets. These assets may be wildlife or scenery, where the assets themselves and tourism markets justify; they may be veldt products where it is economically feasible to collect and commercialize them and where markets will support it.*

*A prosperous future for rural Botswana is not a future of subsistence production. In the prosperous cattle and farming areas, they are beyond subsistence and already well into commercial production. In the degraded areas, subsistence production is no longer possible, if it ever was. In areas like Okavango, Chobe and Sankuyo, subsistence livelihood (hunting and gathering, more than production) would be at the expense of much higher value uses of the existing resource base.*

## **2.4 Comparative Advantage and Opportunity Cost**

What emerges from this vision of a prosperous future for rural Botswana is a keen understanding of two key issues for Botswana's economic future and for linking USAID regional development strategy with the specific opportunities in the Botswana piece of the regional puzzle: comparative advantage and opportunity costs.

From the standpoint of the RCSA regional development strategy, to understand Botswana's environmental predicament is to understand one of its core development challenges. Environment in Botswana is not simply a "separate" strategic objective for the benefit of conservationists. The rural environment is the largest productive asset in the macroeconomy. In the context of a regional economic strategy, it can make a strong and positive contribution to growth as a high value commercial asset. Without this transition, however, its continued erosion is likely to offset whatever hard-won gains are made in other sectors.

### **2.4.1 Comparative advantage**

The strength of regional economic potential (markets, investment sources, etc.) make the comparative advantages of the smaller economies more relevant than ever to their own development strategies. Botswana, for example, is unlikely to be able to compete with many South African industries, but it can capitalize on new opportunities in areas where it has unique advantages. By definition, comparative advantages are specific to each economy, even if they lie within the same generic sector (small and medium enterprises, for example).

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<sup>8</sup> this citation is made with Professor Molamu's permission

What works for Botswana will not necessarily make sense for Malawi, Zambia or Mozambique.<sup>9</sup>

In many parts of rural Botswana, the comparative advantage lies in marketing its rural resource base in ways which generate much higher levels of income than would subsistence use of the same resources. Wildlife and veldt products may still allow northern populations to eke out a subsistence living, at least until demographic pressures make it unsustainable. However, these same resources have much higher value for tourism than for subsistence.

The new regional economy in Southern Africa fundamentally alters the potential returns on Botswana's stock of natural capital. High value commercial uses (both consumptive and non-consumptive) offer real alternatives to subsistence, and low value uses. Therefore, the best economic strategy for rural Botswana is a regionally-oriented strategy which capitalizes on Botswana's comparative advantages in that market.

#### **2.4.2 Opportunity costs**

Opportunity costs create important hurdles in the transition to higher incomes and a better environment in rural Botswana. The issue is this: a number of actors in the rural economy must *give something up in the short run* in order to capture the long-term benefits of a more sustainable future:

- Rural populations must give up the way of life they have practiced for generations. The land cannot simultaneously support traditional land management practices *and* the higher value, commercial uses implicit in the wildlife-based tourism, phane worm, marula fruit and similar initiatives.
- Policy-makers and monied interests must give up the continued expansion of cattle herding in rural areas. Even when livestock do not graze all of the same land needed for wildlife (which they may), fencing alone severely disrupts wildlife migrations and access to water. The spread of livestock has been a major contributor to declining wildlife populations.

Incentives, perceptions, uncertainty, competition and time all complicate a smooth transition from *what is* to *what might be*:

***Incentives.*** Raising the returns on natural capital can give rural communities a financial stake in sustainable resource management, by generating the increased revenues that can ~~make~~ giving up current practices worthwhile. Without sizable, short-term returns from the NRMP-proposed initiatives, it will be difficult to alter current incentives, which favor resource mining to maintain short-term income.

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<sup>9</sup> In making this point, we must beware of "linear thinking". Does the fact that comparative advantages are specific to each setting mean that ~~what~~ NRM is doing is not replicable? Of course not. For example, every private business must succeed in very specific ways: specific products or services for specific market niches, specific contacts and marketing approaches, etc. Yet it would be simplistic to say that "private enterprise" is not a replicable concept. It is even possible that exactly the same mix of products and approaches is replicable, as long as it fits the specific comparative advantages in a new application. Finally, individual aspects of any initiative may be replicable, even if the combination of features is less so.

**Perceptions and uncertainty.** Whatever outsiders believe to be the sustainable benefits from improved resource use, local populations must perceive the benefits as well, particularly in order to give up the security of what they know for new ways which are still seen as uncertain. This is a persistent problem in NRM programs. Donor and government theories have frequently proved wrong, and something more than a promising cost-benefit analysis will be required to cause widespread behavioral change. The fact that some communities (such as in Chobe and Sankuyo) are already earning sizable revenues for concession rights will be a major plus in demonstrating that *claimed* benefits are in fact *real*.

**Competition.** Commercial livestock interests *compete* for rural resources. For them, the opportunity costs may be very high: they must give up a very lucrative activity, but the benefits from new activities go primarily to others. This creates a difficult dilemma for policy-makers in Gaborone, who must confront the fact that implementing policy declarations about wildlife protection may be incompatible with continuing to grant concessions for the expansion of livestock. For policy-makers, the *opportunity cost* will be to incur the political wrath of powerful interest groups.

**Time.** The preceding issues argue for a transition period during which the momentum for change builds. However, time is a severe constraint. Because subsistence resource use tends to degrade the environment, *the window of opportunity for a transition is closing*. The coming decade is critical.<sup>10</sup> If the integration into regional markets -- as a means of increasing the returns on natural capital -- is not well-established in the next ten to fifteen years, the resource base may no longer be good enough for tourism, marketing of veldt products and other high value uses. The window of opportunity may close, even as the disequilibrium between shrinking resources and a growing population worsens.

The transition period from current to future forms of resource exploitation poses something of a "chicken and egg" dilemma. At the local level, the challenge is to lower the real and perceived opportunity costs until new income sources are widely seen to be real and secure. Local level communication and sensitization, and local demonstration effects will be critical. In addition, careful financial analysis from the rural households' perspective can increase our understanding of what households lose, then they lose it, and of when and how new revenues can replace it. At the policy level, it is not yet obvious if decision-makers perceive that livestock expansion is incompatible with sustainable environmental management. The economic benefits of improved NRM are also not well-understood, and are often *thought to be* lower than the macroeconomic returns from livestock, even though they are not. Here again, careful and thorough economic analysis, aimed at policy-makers -- and in the economic terms which matter to them -- seems both important and urgent.

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<sup>10</sup> most notably, Mr. Jan Broekhuis, Senior Wildlife Officer, Department of Wildlife and National Parks.

### 3. UNDERSTANDING THE BOTSWANA NRMP

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#### 3.1 Overview

A very useful schematic representation of the relationships between NRMP and the RCSA strategic objectives was recently prepared by Febig and McGahuey (Figure 2). The analysis in this and the following sections does not attempt to duplicate that work. It focuses instead on understanding key linkages at one level deeper than what the diagrams portray.

Because the term "natural resources management" is overused, fundamentally different projects and strategies funded by USAID throughout the world may all share the same name, and may conjure up the same image in the minds of outside observers. In a different time, or if sponsored by a different office, the Botswana NRMP may just as easily have been called something like the "Program for Investment Promotion & Enterprise Development" (PIPED)<sup>11</sup>.

To be sure, the NRMP is also very much a NRM project, which directly works towards the goals of rural income enhancement and more sustainable resource use by rural populations. What is different, then, is not what the Botswana NRMP set out to do, but rather that the unique mix of resources and opportunities in Botswana has led to very "non-traditional" solutions for a NRM project.

The logic of Reengineering is precisely that (a) some of the best opportunities are those not anticipated in program designs, and (b) compartmentalized sectoral thinking should not become an obstacle to understanding the important cross-linkages which can spur self-sustaining economic growth. Therefore, the logic of Reengineering compels us to at least examine the value of what NRMP is doing in terms of other RCSA strategic objectives. For readers outside Botswana and the Southern Africa USAID Mission, an overview of NRMP activities is contained in Annex E. The discussion below assumes that the reader has familiarity with the project at least at the level of that overview.

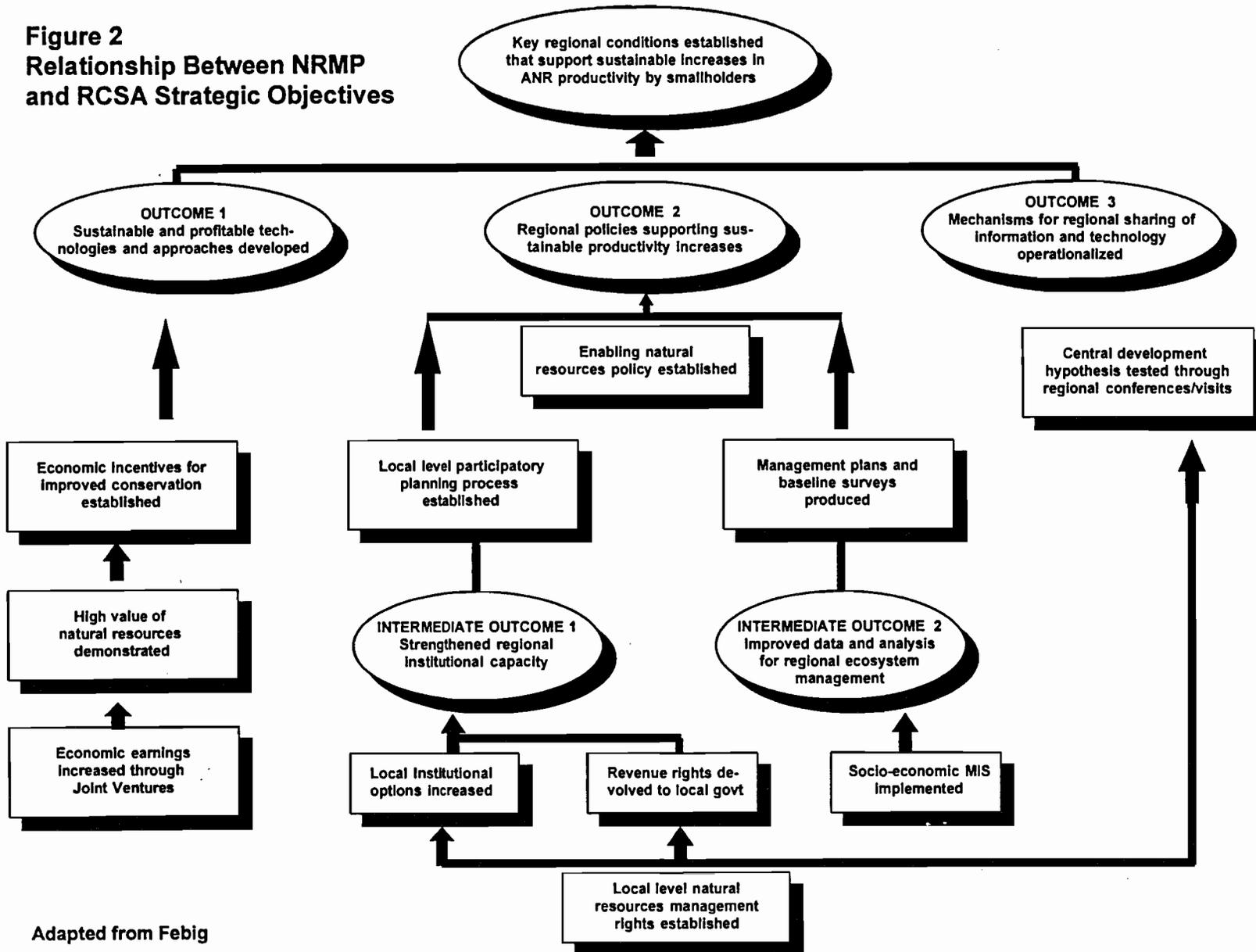
#### 3.2 Where the Opportunities Have Led

The mix of resources and opportunities in rural Botswana have led the NRMP towards "non-traditional" *market-oriented* resource management initiatives, which also empower local communities and can generate substantial local income. This shift occurred more by necessity than by design, because traditional subsistence NRM models failed three critical tests of feasibility in Botswana: first, the resource base is often inadequate to meet subsistence needs (for agriculture, forest products, wood, etc.), or to allow income growth for a growing population; second, without visible potential for short-term income enhancement, short-term incentives for resource mining substantially outweigh long-term incentives for resource conservation; third, the higher value resources in rural Botswana

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<sup>11</sup> The overuse of "NRMP" is not all negative. The upside is that it avoids the kind of catchy titles -- like "PIPED" -- which are currently in vogue.

**Figure 2**  
**Relationship Between NRMP**  
**and RCSA Strategic Objectives**



Adapted from Febig

(wildlife, marketable tourist assets, marketable local products) only have high value if they can be marketed -- i.e. through development of non-subsistence activities.

The *non-traditional* approaches the project is developing overcome these obstacles by using high value **natural** assets to generate commercial revenues. Potential revenues are sufficient to increase rural incomes vastly, and therefore to provide powerful local incentives to conserve the resources base on which prosperity depends.

However, the absence of viable alternatives does not by itself prove that the non-traditional approaches are feasible. That conclusion depends on analysis of each approach: Is there a real market armed with purchasing power? Does what Botswana offers have a comparative advantage relative to market alternatives? Is it realistic to develop the related infrastructure, human resources and market presence? Are the critical assumptions -- most notably that rural populations can and will act to effectively protect the resource base if they have the right incentives -- really workable? Are there specific market intermediaries (tourism developers, supermarket chains, food processors, etc.) who are serious enough to bring real money to the table? These questions are being addressed by the project. There are a number of issues on which more detailed information and analysis is still needed. However, from the documents reviewed during this assignment, from interviews with project staff who have directly **investigated** these questions and from the past experience of an informed observer, *there is reason to believe that solid potential does exist*. Indeed, the potential seems large enough that it deserves careful consideration for its potential macroeconomic contributions.

### 3.3 What Relevant Approaches Has NRMP Developed?

NRMP has searched for initiatives which simultaneously (a) provide strong incentives to conserve the natural environment and (b) offer the prospect of increasing rural incomes and welfare. This search has led to three activities of particular interest to the RCSA strategy:

- The development of wildlife-based tourism in the Chobe Enclave and Sankuyo.
- The organized collection, market intermediation, commercial sale and potential ~~storage~~ processing of phane worm.
- The collection, "production", marketing and processing of marula fruit.

The substance of these initiatives is briefly summarized in Table 2: "Resource-Based Private Enterprises". Each combines:

- ~~Sust~~ainable community-based environmental conservation incentives.

- Major potential for increasing incomes through commercial activities (a total of 50,000 people would be directly benefited, without counting replication in other areas, or multiplier impacts of the income generated).
- Very substantial foreign exchange earning potential and, for phane worm, domestic market expansion.
- Commercially viable enterprises with high rates of return, with little or no public input after startup, and with the public sector role limited to areas of its traditional strength: provision of infrastructure and a permissive policy environment).
- Strong potential to attract foreign direct investment.
- Potential for downstream processing (phane worm and marula fruit) and therefore for increasing the domestic value-added in export products.
- Sizable potential (Chobe, Sankuyo) for secondary income through tourism.

**Table 2**  
**Resource-Based Private Enterprises Developed Under NRMP**  
**Representative Examples**

<b>CHOBE ENCLAVE CONSERVATION TRUST</b>	
<b>Commercial Premise</b>	That managing the land for conservation and wildlife protection can allow significant income generation through wildlife-based tourism; that tourism developers will be willing to invest; that revenues from leases (concession rights) and joint ventures can provide more income to local populations than can subsistence activities; that the tourism industry can also generate jobs for local populations.
<b>Potential and Accomplishments</b>	Commercial leases for joint ventures have been signed, with annual revenues to surrounding villages expected to reach P 300,000 (US \$100,000) in 1996. Distributed over the households in the area, this amount significantly exceeds current per capita income.
<b>SANKUYO TSHWARAGANO MANAGEMENT TRUST</b>	
<b>Commercial Premise</b>	That managing the land for conservation and wildlife protection can allow significant income generation through wildlife-based tourism; that tourism developers will be willing to invest; that revenues from leases (concession rights) and joint ventures can provide more income to local populations than can subsistence activities; that the tourism industry can also generate jobs for local populations.
<b>Potential and Accomplishments</b>	In its first full year of operation, has signed a joint venture with a safari company which assures the Sankuyo community revenues of P 285,000 to be shared by the 38 households in the community. This corresponds to a household share of P 7,500 (US \$2,500) per year, vastly in excess of normal subsistence income.
<b>TSWAPONG HILLS</b>	
<b>Commercial Premise</b>	That the collection, marketing and processing of Mopane caterpillar (locally known as <i>Phane</i> ) -- for sale in domestic and South African markets -- can provide high and sustainable incomes to local communities.
<b>Potential and Accomplishments</b>	In 1996, the estimated amount of harvested loose <i>Phane</i> is 600 tonnes. This would yield a short-term income of P 4.2 million if effectively marketed. The project proposes that 20% of the harvested <i>Phane</i> be stored. This will be sold later in the year when prices are higher, to achieve a potential total annual income of P 4.55 million. In future years, profits will increase as the percentage of harvest being stored rises, and through increased access to retail markets in South Africa.
<b>GWETZOTSHAA NATURAL RESOURCES TRUST (GNRT)</b>	
<b>Commercial Premise</b>	That a combination of local resources (photographic areas for tourism, development of local water resources for bottled spring water for domestic and regional markets, harvesting and marketing of marula fruit) can create substantial and sustainable income for local communities.
<b>Potential and Accomplishments</b>	Based on an order for 12,000 tonnes of Marula, an economic study commissioned by NRMP estimated that the full potential revenues generated by the GNRT could be P 3-5 million per annum from the Marula activity alone. In addition, the project is now negotiating with South African producers about possible establishment of a local processing plant, which would increase local profits by reducing transport costs and providing valuable by-products for local use.

## 4. LINKAGES BETWEEN NRMP AND BROADER RCSA STRATEGIC OBJECTIVES

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### 4.1 Linkages Between NRMP Initiatives and the RCSA Agriculture and Natural Resources Objectives

The linkages to this strategic objective -- the one under which NRMP operates -- are obvious, so it seems best not to belabor the point. NRMP directly works to increase the productivity of natural resources use, to enhance rural incomes, to conserve the resource base (including wildlife and biological diversity) and to help create the enabling conditions (policy, incentives, linkages) which promote sustainable management of the rural environment.

### 4.2 Linkages Between NRMP Initiatives and RCSA Private Enterprise Objectives

#### 4.2.1 *The core linkage*

NRMP's resource-based private enterprises are a subset of the kinds of private businesses which the RCSA strategic objective on Small and Medium Enterprises (SMEs) seeks to develop. The SME objective promotes viable private economic activity which capitalizes on market incentives, creates jobs and income for the poorer segments of society and "accelerates indigenous ownership of productive assets"<sup>12</sup>. This initiative is tied to an overall strategy which sees market-driven SMEs as a major source of jobs and of stimulus to the overall market-based economic growth of the region.

The regional SME effort recognizes that some of the best opportunities for viable enterprises in the region may be generated by efforts which have been brought to the threshold of success within USAID's bilateral programs<sup>13</sup>. It further recognizes that, by the nature of successful business enterprises, they may exist in any sector -- such food processing, tourism, urban services, transport, and others -- depending of where there are business opportunities. What count are the investment and feasibility criteria by which any business is judged. Between the strategic objective and its realization, therefore, lies the need for individual businesses, perhaps in a thousand different market niches, which have or can develop a *competitive advantage* in providing what real, commercial markets are willing to purchase.

Based on available information, NRMP's resource-based enterprises appear to meet all the necessary tests of feasibility. In addition, the legal mechanisms through which they have become possible (the Joint Venture regulations, for example) particularly enhance the RCSA goals of job-creation and of accelerating "indigenous ownership of productive assets", by making large numbers of rural households into shareholder-managers. If successful, they can directly result in significant job creation which is spread through many parts of the country, rather than concentrated in the urban centers. Equally important, they would create

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<sup>12</sup> quoted from the Initiative for Southern Africa summary report

<sup>13</sup> interview with Talbott Penner, RCSA Private Enterprise Coordinator

sustainable incomes for many more rural households than they employ directly, because the entire communities will be shareholders -- in the full economic sense. Finally, this ownership structure offers promise of wider income distribution than for most SMEs.

Until the concept of resource-based enterprises (RBEs) is established and working, however, it will continue to require different forms of support than would be needed for more traditional enterprises. The current phase is very much one of "proof of concept", including for the potential rural entrepreneurs themselves (rural populations). In the first instance, outside assistance will be needed (and is being provided by the project) in bringing together buyers and sellers. Finally, making the concept work will require a "people-friendly" strategy that can work out complex community management issues, and is different, in this sense, from the normal technical and management assistance typically needed by SMEs.

#### ***4.2.2 Overlapping interests and opportunity in SME and NRM***

The resource-based enterprises developed by NRMP are a means of conserving the resource base by using natural resources to create sustainable rural incomes. But for this genesis, however, they would more likely be viewed as tourism and food products enterprises. It is therefore instructive to trace the path taken by many SME programs, and to find that, without conservation motives, they often arrive at the same points as the NRMP initiatives.

##### ***Where are the typical opportunities for SMEs?***

In economies similar to Botswana's, where have SME programs traditionally found viable business opportunities to exist? While certainly not exhaustive, the following list is representative:

- Food processing
- Market crop production
- Handicrafts
- Small to medium scale non-food industrial processing
- Trade and market intermediation
- Services
- Tourism
- Export promotion

Larger scale industry is seldom a viable option, certainly not for small and medium scale enterprises. Full manufacturing, even at an intermediate scale, is often constrained by market size and low competitiveness with imports (both of which are particularly important in Botswana).

Table 3 takes this illustration one step further, by graphically illustrating what are probably self-evident areas of convergence and complementarity between the two sector strategies.

*What are the typical criteria for viable SMEs?*

Table 4 maps the RBEs against typical criteria used in judging small and medium private enterprises. Not only is there a very strong fit, there are certain criteria (market with a "+" which the RBEs satisfy better than the majority of SMEs, particularly those located in urban areas.

<b>Table 3</b> <b>Overlapping Interests and Opportunity</b> <b>in SME and NRM</b>			<b>NRMP</b>		
			The search for viable activities which (a) provide incentives for resource conservation and (b) sustainably increase rural incomes		
<b>S</b>  <b>M</b>  <b>E</b>	The search for viable SMEs which  (a) capitalize on market-driven competitive advantage and  (b) contribute to long-term macroeconomic vitality in a market-based economy		Wildlife-based Tourism Initiatives	Phane Worm Initiative	Marula Fruit Initiative
		Food processing		■	■
		Market crop production		■	■
		Handicrafts	●		
		Small to medium scale non-food industrial processing	●		
		Trade and market intermediation	■	■	■
		Services	■		
		Tourism	■		
		Export promotion	■	■	■

■ Direct impact      ● Downstream potential

Table 4 Resource-Based Enterprises and SME Criteria		NRMP INITIATIVES		
		Wildlife- Based Tourism Initiative	Phane Worm Initiative	Marula Fruit Initiative
<b>SME CRITERIA</b>	Job creation	■	■	■
	Income generation +	■	■	■
	Income diversification	■	■	■
	Skills development +	■	■	■
	Economic/market linkages	■	■	■
	Indigenous ownership of productive assets +	■	■	■
	Benefits to the economically disadvantaged +	■	■	■
	Replicability potential	■	■	■
	Export / foreign exchange earning	■	■	■
	Environmentally benign +	■	■	■

### 4.3 Linkages Between NRMP Initiatives and RCSA Democracy and Governance Objectives

As Tables 3 and 4 suggest, NRMP's resource-based enterprises would be perfectly acceptable as *mainstream* SME activities. In contrast, the Democracy and Governance initiative operates at more than one level: elections, policy, communication, legislation, interest groups, governance. The relevance of NRMP to the D&G initiative is, therefore, more nuanced.

#### 4.3.1 *Is democracy just a "political" issue?*

Democratization efforts throughout the Third World have discovered that democracy is not just a "political" issue in the long run. Democratic elections, even when free and fair, have often failed to create a democratic society, as has been so often demonstrated in Africa. In Nigeria, Azikwe and Tafawa Bulewa and Shegu Shagari were all elected, as was El Mahdi in Sudan, Moi in Kenya and recent governments in Niger, Burundi, Benin and elsewhere -- to say nothing of Ayub Khan in Pakistan, Begum Zia in Bangladesh and Mrs. Bandaranayike in Sri Lanka. South Africa today is still working hard to establish a democratic society, even with visionary leadership and open elections.

The practice of democracy goes beyond voting in national elections. Democratic habits must be formed through a network of institutions and rights, and widespread belief in democracy rests squarely on the credibility of local rules and adjudication processes. Hence the increasing emphasis on democracy and governance.

A second problem has been that democracy in the political arena has remained unstable. The majority of democratically-elected governments in Africa have subsequently been overthrown by force. Even more troubling, the coups have often enjoyed popular support, at least initially. In other instances, the majority may not have wanted the coup, but it did not feel it had a strong stake in fighting to maintain the democratic government, either (Niger, The Gambia, Niger in 1996 and 1994, respectively). Hence the increasing emphasis in D&G programs on the development of what has come to be called civil society.

#### 4.3.2 *NRMP and local governance*

When do you "have" democracy -- especially a potentially stable democracy? Probably when there is a broad consensus that democratic methods, all things considered, are the best way to solve problems and to take common action. When there is consensus, to use Churchill's phrase, that "Democracy is the worst form of government in the world, except for all the others". This consensus has to be recreated through daily experiences, with the sum of the good experiences being sufficient to overcome the undemocratic impulses of the bad days.

What NRMP is doing contributes only a piece of this puzzle. But it is an important piece. In many parts of Africa, traditional social systems were rural, and governance systems were built around local communities. This is not to suggest that "African Democracy" should be "communal democracy", a concept which has been used in many ways, and often misused. It simply recognizes that national democratic principles have not always penetrated communal

governance, with the added overlay of relatively intrusive public sector philosophies since Independence.

NRM programs have been at the cutting edge of defining the local "rules of the game" for property-rights, control over productive assets, participation of the disadvantaged (women, the landless, minorities) and resolution of disputes (farmer-herder conflicts, water rights, access to common property, etc.). This was not always the case, since many early NRM programs emphasized protection and in fact did more to decrease local rights than to increase them<sup>14</sup>. The realization that the environment is a decentralized resource which neither can be controlled nor managed by central authority, has compelled NRM programs to empower local communities, and subsequently to champion better local governance.

This pragmatic realization gradually merged with the broader theoretical understanding that government ownership over all productive rural assets was not just an environmental issue, but was also a governance issue: what is the proper role of the state in a free-market economy? what systems, laws and institutional structures are needed for the development of a *civil society*? who has what rights over local finance and revenue generation from local resources? Some of the earliest decentralization and governance programs in Africa grew out of NRM projects. Successful community-based natural resources management (CBNRM) "develops the capacity for democratic behavior"<sup>15</sup>, and for the responsible exercise of private property rights.

One important by-product of this process is improved resource tenure. The RCSA program correctly treats resource tenure as a D&G issue. NRMP has made advances at the policy level which recognize community management rights over resources. The joint venture regulations go a step farther, allowing communities to establish productive commercial partnerships for land management. These policy changes are not yet operational, however, and considerable work remains to be done for them to be so.

However, this recognition of "ownership" by itself changes the dynamic of property rights. Land is the most important productive economic asset in most African countries, and laws asserting government ownership over land have typically reflected the most "statist" interpretations of the role of the public sector. Until recently, in most of Africa, all land not privately held was declared State-Owned land. Even customary rights on areas traditionally managed by villages have not always enjoyed secure legal treatment. In general, the state has even more aggressively asserted its ownership over trees and vegetation than over the land itself. Therefore, a second important by-product of defining where private ownership and management rights begin, is the clarification of where public management and control ends.

A third important by-product is improved tenure security. While linked to simply having tenure, it has an added dimension as well. Whatever the tenural system in place, perceived insecurity of tenure -- and lack of clarity of property rights in general -- has been a major impediment to private initiative and to longer term management and investment decisions. Every NRM program has found that secure access to the land is an essential ingredient for

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<sup>14</sup> paramilitary forestry (or wildlife) agents have come to symbolize this approach

<sup>15</sup> the phrase is from Donald Voth, Professor of Rural Sociology, University of Arkansas

conserving the resources on that land. In this respect, it is particularly important that NRMP go the next step by publicizing policy changes to communities and local authorities.

While the community resource management aspects of NRMP do not directly address all of the D&G objectives in Southern Africa, they are probably a necessary component for developing a deep and stable framework for a democratic society. What NRMP contributes to D&G objectives is a concrete set of cases in which the new relationships between the state and civil society can be worked out in, quite literally, down-to-earth terms.

The stakes for resolving this NRM governance issue are heightened for a number of reasons. First, the productive asset in question is the single most important economic resource in the country, and directly affects the livelihood of more people than any other resource. Second, independent of the technical environmental measures tested, the governance accommodations worked out through NRMP are relevant to all parts of the country where people live on land. Third, and perhaps most importantly, success on the NRM-related governance issues is clearly within reach, even if environmental success is sometimes more elusive. In other African countries, breakthroughs from this sector have provided important impetus to progress in other democracy and governance areas (legal status for community-based organizations and NGOs, local taxation authority, election of village representatives, resource ownership rights for women, etc.)

#### 4.4 Linkages Between NRMP Policy Reforms and the RCSA Strategy

NRMP has facilitated new policy initiatives which are directly relevant to RCSA strategies for private enterprise development and for democracy and governance. The most interesting of these reforms appears to be the policy-level approval of the concept of Joint Ventures between local communities and external investors.

The concept itself breaks new ground in the legal status it accords to community resource management rights and control. Moreover, by creating a legal vehicle for entering into commercial relationships around locally-controlled natural resources, it facilitates formation of resource-based private enterprises and brings Botswana's principal economic asset (the **productive rural** resource base) into the commercial economy.

The resource-based Joint Venture concept also opens an important chapter in local governance. Throughout the world, secure property rights have been recognized as a key element in the development of Civil Society, and a key precondition for the expansion of a market economy. The implications of legalized resource-based Joint Ventures can potentially be as sweeping as land reform in Latin America and Asia<sup>16</sup>, or as recognition of private ownership of the land in the former socialist states.

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<sup>16</sup> Land reform in Africa has long been a thorny issue, because traditional systems have generally not allowed individual land ownership, which can sometimes also be inconsistent with the shifting cultivation necessitated in low-input, fallow-based production systems. Joint Ventures represent an innovative approach to this issue, and appear to fit Botswana's situation particularly well, in that (a) the highest value economic uses of the land may not be through individual production and (b) potential commercial uses of the resources make substantial joint ventures a serious possibility -- which would not, for example, be the case in Sudan, Mali, Somalia or Senegal.

Positive policy changes have a strategic impact which goes beyond any specific RCSA strategic objective, such as for SMEs or for D&G. The prospects of a vibrant, linked regional economic system depend on creating a policy environment which facilitates mutually-beneficial market interactions. Some of the needed changes will be relatively generic (banking sector laws, trade laws, etc.). Others, such as the Joint Venture regulation in Botswana, may be very specific to local opportunities or constraints. In the end, specific, opportunity-driven reforms must complement more generic ones in order to "prime the pump" for investment, trade and market integration.

#### 4.5 Linkages to the Regional Nature of the RCSA

One of the most interesting issues being addressed as the RCSA moves towards fully establishing its program is of how to define "regional" in operational terms. There are few precedents from which to draw. "Regional" development banks, for example (Asian, African, Inter-American, etc.) are regional only in their geographic coverage. Within their regions, programs are primarily national. The Club du Sahel (OECD), CILSS (the regional organization of Sahelian states) and SADC provide parallels, but only to a limited extent. The balance to be struck is to retain a regional focus without becoming less relevant to national and local concerns. As the RCSA refines its own approaches, it is useful to consider how, and if, a "local" effort like NRMP is relevant to the regional mandate. The following observations are not offered as findings, but rather as further thoughts on conversations begun with several members of the RCSA staff.

Current NRMP strategies are heavily dependent on developments within the regional economy. Without the regional prospects (current and future), the potential for "raising the returns on natural capital", for creating local incentives to conserve resources and for altering long-term land use patterns become much less bright. If rural Botswana remained an economic enclave, then the highest value use of resources would likely be for subsistence. Within a limited opening to regional and international markets, cattle raising offers higher returns, although at the expense of other uses and often in direct competition with subsistence users. The potential for wildlife-based tourism, for marketing marula and phane worm rests on the strength of regional markets. For phane worm, there is also a domestic market, but without the price and quantity impact of South African demand, it may be much less compelling a proposition. For ecotourism, there is a high value international tourism market. Here again, however, the regional market can provide a base load which makes "viable" ventures into dynamic options. Regional pulling power also can add Botswana as an additional destination on the itinerary of tourists who might not otherwise travel 6,000 miles just to visit Okavango and Gaborone.

What is probably of greatest regional concern in this linkage is that it provides a less than self-evident example of how the regional economy can positively influence local options. Replicability, in this instance, may not just be limited to duplicating ecotourism or veldt products marketing. It may also involve looking for other ways in which a broader and more diverse market base *alters relative factor prices* within each economy.

A related issue of regional concern -- for which the NRMP experience only serves as an example -- has to do with information. As discussed elsewhere in this report, NRMP provides two kinds of information useful at the regional level:

- First, information on replicable approaches. It is most likely to be useful to other local actors in the region who can apply or adapt similar approaches, or use the Botswana success for leverage in national dialogues. As a consumer of information, the RCSA benefits from feedback on successful local cases to animate regional information exchanges.
- Second, information on how the regional economy positively affects local options. It is most useful to RCSA in its role as a producer of information, especially for monitoring and reporting on impacts. Regional decision-makers and, presumably, USAID itself, have an important stake in such feedback.

The linkages between NRMP and this "regional" aspect of the RCSA partially depend on the extent to which the consumption, production and exchange of local information is seen as part of the RCSA strategy. If it does become part of the regional strategy, then a series of downstream issues come into play: how should local developments of regional concern be monitored? How should relevant information be exchanged? In the context of reengineering and the emphasis on impact (results), will evidence of *local impacts* be necessary to establish the success of the regional program? Depending on how the regional program itself evolves, these issues are best judged by the RCSA as and when they appear relevant to it.

#### 4.6 Relevance of NRMP to USAID Agency-Wide Objectives

Many of the linkages to agency-wide objectives in environment, in economic growth and democracy & governance parallel what has already been discussed with respect to the regional program in Southern Africa, and will therefore not be repeated here. Readers interested primarily in relationships to the overall USAID mandate will find that the base information for their purpose is contained in Sections 4.1 to 4.5 of this report.

There are some differences in nuance and substance. While they do not require elaboration, they are worth noting:

- First, the discussion in the preceding sections has highlighted NRMP's relevance as a model which can serve in other parts of the region. This is important to the overall Agency as well. However, the Agency is also concerned with the direct impact in Botswana that NRMP may realize, which is not a primary issue for the RCSA program.
- Second, broad Agency objectives in economic growth are not explicitly covered above. However, the linkages between the project's Resource-Based Enterprises and the regional private enterprise objective also reflect NRMP's potential contribution to economic growth through increasing rural incomes, raising the returns on natural capital, developing trade and exports, and changing the dynamic of the rural economy.
- Finally, the Agency has a greater interest in NRMP's role in *testing the hypotheses* underlying Africa Bureau's approaches to natural resources management and rural

development. NRMP is helping *validate* lessons developed in other programs. The *differences* in the Botswana program may be of even greater interest, however. As discussed elsewhere in this report, Botswana is part of a strong regional economy, has a unique mix of natural assets and a relatively prosperous and stable economy. A central hypothesis being tested throughout Africa is that (a) communities must have control over resources and a financial self-interest in conservation in order to manage resources in a more sustainable way, and (b) if they have these things, coupled with the necessary enabling conditions, then improved NRM can succeed.

In Botswana, the potential for income generation and conservation incentives clearly exists. Many of the difficult policy decisions have been made, and many, if not all, of the enabling conditions are in place. In addition, the project has been in place for many years, and has benefited from substantial resources, with up to eleven full-time expatriate advisors in a country with a relatively small population. In short, Botswana provides a *particularly good test* of the hypothesis. The lessons learned here -- good and bad -- are of immense importance to the sizable USAID investment in environment, agriculture and natural resources, biodiversity, wildlife protection and rural development.

## 5. CAPITALIZING ON THE ACCOMPLISHMENTS OF NRMP

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### 5.1 What is At Stake

In rural Botswana, and particularly for marginal production zones, NRMP is developing viable alternatives for sustainable income growth. In many instances, the approaches offer clear prospect of great prosperity for thousands of rural households. This income is tied to the continued presence of marketable natural assets. Therefore, it allows a consistent, viable and market-driven incentives framework for communities to practice natural resources conservation.

In the macroeconomy, incomes not generated in rural areas will become jobs which must be created in urban centers. Given comparative advantages, there may be stronger market impetus to develop income in the countryside and in provincial towns -- using rural economic assets (such as scenery, wildlife, veldt products) coupled with regional and international demand -- than to develop comparable incomes in the cities.

NRMP approaches for Resource-Based Private Enterprises provide directly relevant models for other countries, particularly for Botswana, Zambia and Zimbabwe. *Relative to the other NRMP projects in the region (Campfire, Admade), NRMP has gone further in developing market-based financial incentives for natural resources management.* In the process, it has identified a new arena for the widespread development of small and medium enterprises.

What is at stake, therefore, is the economic dynamism of the productive resource base, the potential for creating jobs, for trade and investment, for hypothesis testing and for field learning on approaches which lie very much within the desired "solution set".

### 5.2 Issues Still to be Resolved

NRMP appears to have solved many of the most difficult problems in NRM projects: developing field approaches which meet the quadruple challenge of being income generating, resource conserving, consistent with market directions and consistent with policy directions. Lessons from elsewhere in Africa suggest that this combination is difficult to develop, yet vital to success. Few countries outside the Southern Africa region can match Botswana's combination of rich, marketable natural assets and proximity to regional markets and regional "pulling power". NRMP, to its credit, has seen these comparative advantages, and appears to be capitalizing on them.

However, NRMP faces several challenges to consolidate its accomplishments. *The remaining agenda does not simply involve doing more of what has already been done.* This section briefly addresses six priority areas for the transition beyond NRMP project closeout.

**Building community resource conservation habits and skills.** Communities can realize (and in Chobe, Sankuyo and elsewhere, are already realizing) substantial income from natural assets. Considerable work remains to be done in converting this positive incentive into sustainable day-to-day habits for resource conservation. The challenges are technical, behavioral and financial. Communities can clearly see the income they gain from tourism or

veldt products. However, will they see the importance of changing resource degrading practices today in order to sustain that income? How will the community enforce communal self-interest and prevent the "free rider" problem? A number of specific approaches need to be worked out and tested at the community level. However good the solutions worked out, it also takes time for them to take hold. Changing household perceptions, decision-making and behavior is not something outsiders can implement. Given the time needed, ideally, work at the community level would have been longer-established than it is. Progress has been made, but the loop is not yet closed.

**Communication and training messages aimed at the community level.** This point is a complement to the preceding one. Policy change does little good if people do not know about it, understand it and use the opportunities it opens. At this stage, it seems fair to say, most rural communities and local authorities don't even know about it. NRMP has not yet developed a comprehensive communications and education strategy aimed at this level, and has therefore still to begin implementing one.

The NRMP project appears to be following a "logical sequence" in implementing its communications strategy, starting with local Wildlife Department staff so as to have an intermediate group of trainers who can take the message to the local level. While the approach makes good sense -- and there may not be a better alternative -- there is an important drawback as well: it can take a great deal of time for messages to take root at the local level. The training of trainers has been underway for 18 months. There is a case to be made that some level of communications and education aimed at local communities should have begun concurrently. Whatever the merits of that case, it is clearly urgent to begin this effort now.

**Detailed cost-benefit analysis and incentives from the user perspective.** The transition from current resource uses to sustainable alternatives is particularly important. Quite naturally, communities will be reluctant (and/or, unable) to forego their current livelihood until they perceive a secure and better living through alternatives. However, even in the medium term (ten years) the security of income alternatives may be undercut if current resource use patterns do not change. How best to make this transition? What should extension, field support, communication, enforcement and policy do to facilitate it? To date, neither NRMP nor the major NGOs interviewed has undertaken detailed cost-benefit analysis from the resource user (household, community) perspective. In the opinion of this observer, such analyses (perhaps coupled with household surveys, which have also not been done) would shed light on what incentives, policy signals and other mechanisms are necessary to success.

**Institutionalizing project capacity.** Today, if NRMP were to walk away from the structures which have been built and from the valuable assets accumulated, the "institutional door" would not yet be padlocked. Two key problem areas appear to remain: first, and most obvious, Wildlife Department counterpart staff is not yet in place for each relevant forward skill area; second, and equally important, there is a need for an institutional transition period during which counterpart staff take on direct implementation and management responsibility. A long history of institutional lessons learned suggests that transfer of responsibility only after the advisory team has departed is unfair to counterparts, and invites failure. Ideally, there would be a transition period (at least in key functions) of at least one

year. With only 15 months of project life remaining, and with key counterparts not yet in place, this no longer seems feasible.

While virtually everyone interviewed during this assignment had positive views of the project and what it could achieve, institutional sustainability was the most frequently expressed concern. Many have commented on the fact that high level (and apparently very serious) policy commitment has not been matched by institutional follow-through. Some, however, have pointed out<sup>17</sup> that the problem is not unique to the Wildlife Department. Every project of every donor is built on the expectation that after three or five years, national counterparts will take over from expatriate TA. The problem, of course, is that the sum of these expectations cannot necessarily be met.

Exploration of the same problem in the Gambia<sup>18</sup> revealed a second problem. Outside consultants typically have many years of experience in the field, and are selected through a competitive process from a much larger pool of candidates with similar experience and skills. Expectations that their functions can be fully taken over by qualified national staff who do not yet have similar years of experience (often national staff are asked to take over key functions immediately upon returning from degree training) may create unrealistic and unfair expectations. Indeed, in domestic agencies of the developed countries, there continues to be a regular need for outside specialists. The difference is that those specialists are, by and large, not expatriates. In the absence of a well-developed national consulting sector, the "institutional transfer" model being applied in most development projects cuts the corner, combining the transfer from "expatriate" to "national" with the transfer from "private" to "public".

There may not be a viable alternative to the current model at this time. That does not, however, make it easier to implement. The institutional issue looms as an important challenge for NRMP, particularly since its innovative approaches will require a vigorous institutional follow-through. It clearly deserves priority attention during the remaining life of the project.

**Building policy and decision-maker consensus.** The project has made some important **policy breakthroughs** (such as the Joint Venture regulation), the long-term importance of which should **not** be underestimated. A key segment of the policy-making community has been involved, and those involved appear to be committed. However, NRMP has not yet achieved broad recognition in the decision-making community. Its accomplishments are not necessarily well-known, its lessons/approaches are not necessarily factored in to broader policy-making with respect to resource use and economic growth strategies. This is not unusual for **NRM** programs, and the barriers to applying lessons learned in the environment are **both political** and informational. Nevertheless, outside the direct interventions of the Wildlife Department and other actors (NRMP, NGOs, etc.), an enabling and positive policy environment is probably the greatest potential contributor to the spread of positive approaches.

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<sup>17</sup> most insightfully, Mr. Gaseitsitswe, Chief Planning Officer of the Ministry of Commerce and Industry.  
<sup>18</sup> under the USAID-funded Agriculture and Natural Resources project, implemented by IRG

Even where high level decision-makers are mobilized, implementing policy change requires a networking and communication effort at various intermediate levels as well. For example, the Joint Venture law represents a high level policy change. The project has initially focused on training local Wildlife Department representatives about this and other developments. Earlier sections of this report have stressed the need to bring the same messages to local communities. But there is a concurrent need to bring the messages to local administrators, courts, political leaders, etc.

**Hypothesis testing.** As discussed in earlier sections of this report, hypothesis testing and field feedback are among the most important contributions which NRMP can make to the regional and Africa-wide programs of USAID. NRMP's hypothesis testing function is not yet complete. If project approaches had proved to be failures, hypothesis testing may have been accomplished sooner (it is valid and useful feedback that "the hypothesis tested proved false"<sup>19</sup>). The success of the project to date (in developing income-generating approaches which can conserve the environment) allow it to test new hypotheses about how to create widespread behavioral change. Few other NRM projects in Africa have progressed far enough to provide feedback on the range of measures needed to translate a viable hypothesis into sustainable impact.

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<sup>19</sup> although having to provide such feedback is not the highest aspiration of a field project...

## 6. ISSUES TO BE CONSIDERED IN THE NRMP EVALUATION

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### 6.1 Relationship Between Evaluation and Reengineering Philosophy

A persistent problem in evaluating long-term implementation projects is that original project design documents seldom provide an adequate benchmark against which to judge success or failure. In the design phase, we know the least about what will actually work in the field. Project design is simply a well-developed hypothesis. Maximum learning and feedback occurs during field implementation. Most USAID projects have, therefore, willingly adjusted goals and terms of reference periodically as field learning has warranted. At the same time, program managers have a legitimate interest in maintaining accountability for key results and activities. While the most thoughtful evaluations have successfully balanced the importance of accountability against the need for responsiveness, it is a difficult balance to strike.

Reengineering philosophy recognizes this tension, and tries to provide strategic planning tools which help find the right balance. Properly done, a Results Framework is simply a development hypothesis which articulates the set of linked changes which are believed necessary to desired final results. Accountability is maintained at the level of results. Flexibility, responsiveness and, indeed, even inventiveness, are allowed at the level of means.

If the term "results" framework emphasizes one important underpinning of reengineering philosophy -- accountability for final impact -- then the term development "hypothesis" emphasizes an equally important underpinning: recognition that designs and plans are hypotheses which must be tested, verified, updated or amended. An important corollary of reengineering philosophy is, therefore, a strong emphasis on the continuous process of learning from field experience -- of hypothesis testing. When we remain accountable for final impact, what we learn can sometimes be as important as what we do.

### 6.2 Lessons Learned in 20 Years' of NRM Programs in Africa

Because a results-orientation places a premium on understanding and on information, it is valuable to review some of the relevant "lessons learned" from NRM implementation experience throughout Africa. From a potentially long list, five findings seem particularly important as background for the NRMP evaluation.

- People degrade resources primarily to meet economic needs. They are unlikely to conserve them unless they can be better off by doing so, either through higher incomes or lower risks. For this to happen, conservation strategies must increase the return on natural capital, or there will be no increment with which to make people better off. People must perceive that the returns are not themselves uncertain, and that they will begin to flow in the relatively near term. Finally, to succeed, natural resources conservation must also compare favorably to alternative income sources (to the opportunity costs).

- Improved natural resources management is rarely separable from the broader economic transformation of the rural economy, or from the transformation of local governance systems. Indeed, it has typically been at the cutting edge of both.
- The best contribution of public policy is to (i) discern where broader trends are leading local choices and incentives (ii) learn what works (technically, financially, institutionally) at the implementation level (iii) understand what enabling conditions are needed to facilitate broadly-based local success, and (iv) create a policy environment which leverages what is possible towards what is desirable.
- When the goal is broad-based change in local resource management behavior<sup>20</sup>, field implementation makes four vital contributions to broader objectives: (i) hypothesis testing (ii) information and feedback to guide strategy/policy development (iii) local learning and credibility building, and (iv) demonstration effects.
- The greatest credibility for local initiatives comes from a local sense of "ownership". By definition, allocation of effort and final selection of approaches must be guided by what is learned about local needs, local decision-making and feasibility in the specific local context.

These "lessons learned" are an important part of the larger hypothesis which currently guides many NRM efforts in Africa. They provide legitimate "benchmarks" against which the project may be judged, given what it seeks to accomplish, given lessons learned elsewhere, and given broader desired results. By and large, these are the lessons which the Botswana NRMP has had to learn, or -- if its experience suggests different lessons -- against which its experience may be evaluated.

### 6.3 Suggested Parameters for the NRMP Evaluation

To capture these lessons, and to reflect a results orientation, this section suggests nine parameters for the NRMP end-of-project evaluation. It should be noted that what is suggested here only relates to the substantive assessment of project strategies and field experience, not to the legitimate management, performance and financial aspects of any evaluation, which are outside the scope of this report.

1. What new information has the project learned about the core hypothesis of the project design:
  - with respect to what people want and need?
  - with respect to what is technically and economically feasible?
  - with respect to what enabling conditions are needed?

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<sup>20</sup> as opposed to situations where direct outside intervention simply puts infrastructure in place -- building a road, for example.

2. Has the project adjusted its strategy to reflect what has been learned? Alternatively, have any changes in project strategy since design been consistent with documented feedback from field experience? By what processes did the project evaluate and/or adjust the design hypothesis against this feedback?
3. Has the project successfully identified and evaluated field-based approaches which appear capable of solving the problems it set out to solve?
4. Has the project successfully led to implementation of any of the feasible approaches identified, such as through positive field demonstration or pilot programs, changes in policies or enabling conditions, human resources development or capacity building or other intermediate impacts?
5. Do project-promoted approaches and project initiatives meet broader developmental goals through:
  - combining conservation and income enhancement (financial incentive)?
  - consistency with local comparative advantages and opportunity costs?
  - consistency with long-term macro trends?
  - consistency with policy directions and broader policy goals?<sup>21</sup>
6. What progress has the project made in institutionalizing the processes and dynamic it has set in motion: at the local level (credibility) ? at the decision-maker level (policy commitment)? What further steps are needed?
7. Has the project documented lessons learned from field feedback and hypothesis testing in ways which permit on-going learning, testing and implementation?
8. To what extent do "lessons learned" from this project offer promising models for the rest of the Southern Africa region?
9. **How do** the approaches developed in the Botswana component of the NRMP **compare**, in terms of furthering the broader NRM hypothesis, to the approaches developed in the other components of the regional NRMP (Zambia, Zimbabwe)?

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<sup>21</sup> There is a symbiotic relationship here which is important to any sectoral policy discussion. On the one hand, it is valuable to help bring about a policy environment which is favorable to the goals being promoted in a project. For example, policy change which enhances decentralization and local resource control. On the other hand, it can be a serious mistake to fine tune policies to meet sectoral objectives in ways which are inconsistent with broader development policy needs. For example, if viewed purely from a sectoral perspective, some forms of price control (or tariff barrier, etc.) may be seen as maximizing a sectoral strategy. However, this may be inconsistent with the broader policy principle of economic liberalization. The optimum policy mix may not be one which yields maximum sectoral results.

## **ANNEX A: PERSONS CONTACTED**

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### **Botswana Natural Resources Management Project**

Gary Clark, Human Resources Advisor  
Esther Collyer, Project Assistant  
Jonathan Habarad, Sociology Advisor, Community Development  
Richard Hartley, Resource Economist  
John Hazam, Extension Officer (Conservation International)  
Michael Hickey, Deputy Chief of Party  
Maureen Hirschfeld, Administration  
Michael Painter, Sociology Advisor, Monitoring and Evaluation  
Wilfred Slade, Non-formal Education Advisor  
Nicholas Winer, Chief of Party

### **Department of Wildlife and National Parks**

Moemi Batshabang, Conservation Education Officer  
Jan Broekhuis, Senior Wildlife Planner  
Sedia Modise, Deputy Director

### **Ministry of Commerce and Industry**

Mr. Gaseitsiwe, Chief Planning Officer

### **U.S. Agency for International Development, RCSA Office**

Paul Bartel, Agriculture and Natural Resources Office  
Robert McCollough, Agriculture and Natural Resources Office  
Peter Olson, Head, Democracy and Governance Program  
Tolbert Penner, Head, Private Enterprise Program  
Donna Stauffer, Head, Agriculture and Natural Resources Program  
Scott Stewart, Health and Population Advisor  
Wendy Stickel, Deputy Director

### **Forum on Sustainable Agriculture (FONSAG)**

Richard Kashweeka, Co-ordinating Secretary  
Grace Masinyi, Director of Communications

### **Kalahari Conservation Society**

Joanne Addy, Chief Executive Officer  
Keith Leggett, Conservation Officer

**Thusano Lefatsheng**

G.G. Phorano, Director

**University of Botswana**

Professor Louis Molamu, Head, Department of Sociology

**PACT, Botswana**

Daniel Waltz, Director

**U.S. Agency for International Development, Africa Bureau**

Michael McGahuey

Anthony Pryor

**Chemonics International, Washington DC**

David Gibson

**World Resources Institute**

Christine Elias

## **ANNEX B: DOCUMENTS CONSULTED**

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Febig, William, Development of the Botswana NRMP Review of Results Report and Draft Results Framework, March 1996

USAID, The Agency's Strategic Framework and Indicators, (Main Report) 1995-1996

Management Systems Inc., Reengineering Training Handbook and associated documents, 1996

Natural Resources Management Project, Annual Workplan, 1996

Painter, Michael, An Approach for Monitoring and Evaluating Community-Based Natural Resources Management Activities Implemented by the Department of Wildlife and National Parks and the Natural Resources Management Project, 1995

USAID, Strategic Start-Up Framework for the Initiative for Southern Africa (Main Report and Annexes), 1995

Thusano Lefatsheng, National Workshop on Community-Based Natural Resources Management Institutional Building, 1994

USAID Regional NRMP, The Commons Without the Tragedy? Strategies for Community Based Natural Resources Management in Southern Africa, 1995

Department of Wildlife and National Parks (and NRMP), Botswana Wildlife Training Institute Curriculum

Department of Wildlife and National Parks (and NRMP), Training Needs Analysis, 1995

Okavango Community Consultants, Management Plans for Controlled Hunting Areas Allocated to Communities in Ngamiland WMAs, 1995

Natural Resources Management Project and Department of Wildlife and National Parks, Consultancy Report: Skills and Knowledge Training and Development at Botswana Wildlife Training Institute, 1995

Voth, Donald, Private communication to Bob McColaugh, March 1996

Central Statistics Office, 1991 Population and Housing Census

USAID, Results Report for the Regional Center for Southern Africa, 1996

USAID, Project Paper (and related documents) for the Natural Resources Management Project

Botswana Natural Resources Management Project, "A Quick Summary of Achievements to Date", 1996

Matengu, Godfrey, "The Chobe Enclave Conservation Trust: An Introduction", 1995

Winer, Nicholas, "Community Natural Resources Management Project: Good or Bad?", 1995

Winer, Nicholas, "Conservation Through Community Action", 1995

Department of Wildlife and National Parks, Various Maps

Natural Resources Management Project, Briefing Notes, 1995

USAID, Assessment of Program Impact, USAID/Botswana: Fiscal Year 1994, February, 1995

Permanent Secretary, Ministry of Commerce and Industry, and Permanent Secretary, Ministry of Local Government, Lands and Housing, Communication to District, Council, Landboard and Tribal Authorities on "Community tourism and hunting development activities", 1995

State Department cable (unclassified) 45236 on Demographic Impact of HIV in Africa

Stewart, Scott, miscellaneous papers and data on population

Shaikh, Asif and Snrech, Serge, *et. al.*, Managing Change: The Population, Environment and Development Nexus in the Sahel, IRG/OECD-Club du Sahel, 1993

Shaikh, A., Reardon, T., Clay D. and DeCosse, P., "Dynamic Linkages in Population, Environment and Development in Madagascar", IRG and Michigan State University for USAID, 1995

Reardon, T. and Shaikh, A., "Links Between Environment and Agriculture in Africa: Implications for Economic Growth and Policy", Natural Resources Policy Consultative Group for Africa, USAID and World Resources Institute, 1995

## **ANNEX C: TRIP REPORT**

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### **Preparation**

After briefings with WRI, Africa Bureau and Chemonics, preliminary review of project documents was conducted in Washington, DC, as was detailed analysis of the terms of reference requirements.

### **Travel**

Arrival in Gaborone from Johannesburg at 10:00 am on Monday, March 18, 1996.

Departure from Gaborone to Johannesburg at 9:30 am on Sunday, March 31, 1996.

### **Activities in Gaborone**

Monday, March 18: Extended meetings with Nicholas Winer and Paul Bartel immediately upon arrival, followed by meetings with USAID and the NGO community on the same day.

Week of March 18: (Through March 22): Intensive round of meetings, gathering and reading documents, and structuring the report. Report outline and initial chapter drafts prepared on Saturday and Sunday, March 23 and 24.

Week of March 25: Continued meetings, but with more emphasis on document review and report preparation. First draft of completed report presented to Bartel and Winer on the morning of Wednesday, March 27. Detailed review of document. Comments and feedback provided on the same day. Remainder of Wednesday and morning of Thursday spent preparing and producing Main Findings summary, continuing report writing, and preparing USAID briefing on Thursday, March 28. Thursday evening, Friday and Saturday morning spent preparing draft final report, and annexes. Draft report delivered to Paul Bartel on Saturday, March 30.

## ANNEX D: TERMS OF REFERENCE FOR THIS REPORT

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## **Terms of Reference for Analysis of Strategic Objective Linkages for the Botswana component of NRMP**

### **Background**

The USAID Regional Natural Resource Management Program (NRMP) was designed to facilitate regional cooperation through bilateral activities in Namibia, Zambia, Zimbabwe and Botswana as well as a regional coordination element located in Malawi. This program will assist community based wildlife utilization projects that promote the conservation and sustainability of the local natural resource base as well as providing economic or nutritional enhancement. To do this the project will support training, technical assistance, special studies and community pilot demonstration programs. The goal of the project is to improve the social and economic well-being of residents in areas which are marginal for crop and livestock production by implementing sustainable community based wildlife and other natural resource conservation and utilization programs.

Outputs of the \$19.9 million Botswana project will promote two purposes. The first is to demonstrate, through practical examples, the technical, social, economic and ecological viability and replicability of community based natural resource management and utilization programs on marginal lands for increasing household and community incomes while sustaining natural resources. The second is to improve national and local capabilities to ensure the maintenance of the natural resource base through training, education, protection, communication and technology transfer. The key implementation agency is the Department of Wildlife and National Parks (DWNP).

The Outputs of the Project are:

- A. **Demonstration** projects in community based resource utilization which are predicated on defining the resource base as a community asset. community based projects supported are based on wildlife utilization through tourism, hunting, processing and marketing of animal products, and the sustainable utilization of veld and forest products.
- B. **Planning and applied** research which supports the development of management plans for the northern national parks and reserves, and for the national network of Wildlife Management Areas (WMAs). Socio-economic studies guiding the design and evaluation of activities are carried out. The impact of project activities is monitored under this component.
- C. **Environmental** education activities to increase public awareness of environmental issues through curriculum development, teacher training and non-formal education.
- D. **Personnel** planning and training to strengthen staff training and career development for employees of the Department of Wildlife and National Parks (DWNP).

- E. Regional Communication to provide a way to share experiences through exchange visits, workshops, seminars and the establishment of a SADC regional data base.

The strategy for achieving this is through the provision of long term and short term technical assistance to the DWNP in each of the above areas via an institutional contract with Chemonics International. A cooperative agreement has been signed with Pact to provide capacity-building support to local NGOs and to manage the subgranting mechanism for community demonstration projects.

Employing this strategy should have the following results:

- Demonstrate that sustainable natural resource utilization is a profitable and viable development option for rural communities.
- Increase local employment and incomes through diversifying employment opportunities in the sustainable utilization of natural resources.
- Strengthen local institutional decision making and management units.
- Improve the participation and role of women in natural resource management, thereby improving their incomes.
- Strengthen staff training and career development for employees of DWNP.

The NRMP was initiated in 1989, with activities in Botswana only becoming operational in 1991. A study of DWNP in 1992 resulted in an addition of \$4.4 million to the project to implement a personnel planning and training component which became operational in late 1993. A mid-term evaluation of the Project in July, 1993, acknowledged the positive gains made by the Project but pointed out several deficiencies in the original Project design; i.e., overly optimistic views of the capabilities of local NGOs and of the extent to which tested and replicable models already existed for community-level wildlife projects. To build on the promising base developed under the Project to date, it recommended several mid-course corrections involving additional technical assistance and project time to strengthen the Government's implementation capabilities, to give more attention to NGOs, to expand community-focused educational and promotional activities, and to test and document alternative models of community-level projects. After considerable scrutiny by USAID/Washington, an additional \$5.5 million was obligated to implement the Institutional Reinforcement for Community Empowerment (IRCE) component which resulted in placing a monitoring and evaluation advisor at DWNP, provision of policy support to Government, and bringing in an international NGO to provide capacity-building support to local NGOs.

Progress in project implementation has continued. To date, two community demonstrations, one in wildlife utilization and another in veld product utilization, are implemented. Three other communities, one in wildlife utilization and two in veld product utilization will begin in the next quarter. WMA plans have been completed and the Government has accepted, as regulations,

joint venture guidelines to assure equitable relationships between communities and private operators in managing community hunting quotas. Considerable effort and significant, though slow, progress has been achieved in personnel planning and training. Pact is reaching out to NGOs in an **effort to build** their capacity. By all indications, the Project is a success.

### Problem

The Natural Resources Management Project was designed prior to the establishment of Agency and Mission strategic objectives as well as pre-dating current re-engineering philosophy. The Project has learned lessons which can be of value to the re-engineered USAID, and cross-cutting project impacts and results need to be linked to the strategic objectives of USAID and RCSA. Additionally, experiences from project implementation can be used by USAID as practical examples reflecting the "core values" of the re-engineered agency. These linkages can be used to establish a "customer service plan" for the Project itself. Finally, given that the evaluation will be carried out toward the end of 1996, parameters should be developed and tested which will guide the scope of work for the evaluation team.

### Strategy

A 18-day consultancy will be used to look at progress toward implementing the recommendations of the mid-term evaluation as well as its reflection of current re-engineering philosophies and policies of the Agency. This analysis will require the review of project documentation and reports as background to the effort. Six days will be allowed for a desk-top study of documentation at the Chemonics headquarters in Washington, DC. This document review will be followed by a two-week visit to project sites and interviews with stakeholders. Six-day work weeks will be allowed.

### Results

1. Description of project results with regional impact, particularly in community based natural resources management;
2. Description of project results which serve RCSA and USAID strategic objectives;
3. Description of how project implementation reflects the "core values" of the re-engineered USAID;
4. Identification of results which will be incomplete or which will have progressed as far as practical by PACD;
5. Identification of results with a high likelihood of success and the time required for fruition;
6. Tested parameters for the final evaluation in late 1996 which identify specific evaluation issues.

## Outputs

1. Upon completion of the field work, the consultant will brief Mission staff on initial findings from the study. A draft report will be left with the Project Manager for comments.
2. A final report of findings, including parameters for the final evaluation of the project will be supplied to the NRMP Project Manger within ten days of completion of the field visit. This report, at a minimum, will contain the following:
  - Executive summary
  - Methodology followed
  - Analysis of NRMP linkages to strategic objectives of USAID
  - Analysis of NRMP linkages to strategic objectives of RCSA
  - Analysis of the reflection of Agency core values in implementing NRMP
  - Issues arising from the analyses
  - Parameters for the final evaluation
  - Recommended next steps
  - Trip report of the consultant including persons contacted

## **ANNEX E: SUMMARY OF NRMP PROJECT ACTIVITIES**

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# THE NATURAL RESOURCES MANAGEMENT PROJECT

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## INTRODUCTION

This USAID funded project of assistance to the Government of Botswana is part of a SADC regional program which aims to promote sustainable, conservation-based development on lands that are marginal for crop production and domestic livestock. It is designed:

1. Through demonstration projects in community based resource utilization which are predicated on defining the resource base as a community asset, to show:
  - that sustainable natural resource utilization is a profitable and viable development option for rural communities,
  - that such projects can increase local employment and incomes through diversifying benefits derived from the sustainable utilization of natural resources,
  - that in the process local institutional decision making and management capacities are greatly strengthened, as will be the participation, and role of, women in resource management programs, thereby improving their incomes.
2. Through a planning and applied research component to support those areas which will determine to a great degree the long-term success of the Government of Botswana's plans for a de-centralized management of wildlife. New management plans for the northern national parks and reserves, which give greater emphasis to community inter-actions with protected areas, are being drawn up. Management plans for the Wildlife Management Areas (WMAs) which cover 22% of Botswana are also being drawn up to provide guidelines for natural resource based development activities. The impact of project activities will also be monitored and evaluated under this component. To ensure the long term capacity of the Department of Wildlife and National Parks (DWNP) to continue to monitor the impact of its programs, an enhanced monitoring and evaluation capacity is being developed within the Department. The project has also reviewed the extension structure that the DWNP will need to support its community wildlife utilization program.
3. Through an expansion of the NRMP, after a review by Chemonics of the training requirements of the DWNP and the capacity of the Botswana Wildlife Training Institute (BWTI), to provide for a personnel planning and training component. This allows for the refurbishment of the institute and the re-design of its certificate course to put more emphasis on practical skills and modular learning to ensure that the trainees receive appropriate training. To support the proper career development of staff who have been through BWTI, technical advice is being given to the department to establish personnel systems appropriate to proper career tracking and development.

4. Through the development of an environmental education component that will increase public awareness of environmental issues through curriculum development, teacher training, and non-formal education a broader national understanding of the key issues involved will be established.

## DEMONSTRATION PROJECTS IN COMMUNITY BASED RESOURCE UTILIZATION

### 1. Starting up the project.

The DWNP, in 1991, requested that the project review the direction its community wildlife utilisation program appeared to be taking, to comment on this and to either support the direction or develop a viable alternative strategy. Two project reviews and a consultancy were instrumental in broadening the debate about the types of utilization that would be biologically, socially and economically sustainable. The project was expected to function as a technical clearing house for community natural resource utilization projects. These would be submitted by NGOs or local government groups on behalf of the communities with whom they were working. This presumed an existing network of NGOs and other local groupings already working with communities to develop projects that could be submitted to the Government and the NRMP for appraisal.

The Western Ngwaketse Wildlife Utilization Project in Mabutsane, Southern District, and the proposed Bere Wildlife Utilization Project in Ghanzi District were both extensively researched. These two projects focussed on the harvesting of surplus game animals and the distribution of revenue from the sale of meat and skins. The Consultancy on Game Ranching requested by the Ministry of Local Government, Lands and Housing, reviewed the game ranching potential of eight Controlled Hunting Areas and indicated only very limited potential for commercial game ranching unless tied to existing livestock ranches with appropriate levels of sunk capital costs.

These reviews provided the first indications that the design of the project had seriously ~~over-estimated~~ wildlife populations. Much of the original thinking behind the community based approach assumed that there were sufficient wildlife populations to justify harvesting through hunting. The economic benefits from such a direct consumption of wildlife are relatively low and require high levels of harvesting to sustain incomes. There was a need to look at forms of wildlife utilization that would not threaten an already fragile resource base.

The project also revealed a weakness in the assumption that local NGOs had strong enough community links to build good conservation based development proposals, whether based on harvesting or not. Many NGOs were already fully stretched with existing commitments and were not ready to expand into new areas of activity. They therefore did not have the portfolio of projects to take forward for NRMP technical support and funding. Local government was more concerned with digesting the import of the Government's Wildlife Conservation and Tourism policies than with actively implementing them.

In 1993 the project underwent a mid-term evaluation which supported the analysis of design problems and recommended more time and money for the project (See section 3f) to allow it reach its stated objectives.

## 2 Project development.

a. | The Chohe Enclave in the north east of the country is surrounded by protected areas and an international border. Rich in wildlife, it provides a great tourist venue but generates costs to farming families in terms of crop and livestock losses as well as a threat to life. Three people lost their lives to elephants during 1994. It was considered an area ripe for testing theories regarding the benefits available to communities to offset the costs already being borne.

In the absence of an NGO with strong community experience, NRMP took on an operational role and followed up on a district wildlife utilization proposal. With DWNP's community liaison office, the project engaged Enclave villages in a series of Village Development Committee, Kgotla and seminar meetings, designed to achieve a community based understanding of, and participation in, integrated community based projects. These centered initially around the management of the wildlife quota. The management of the wildlife quota by the Enclave communities was the first such community based wildlife activity to take advantage of the Wildlife Conservation and National Parks Act (1992).

Each village in the Enclave has selected a Village Trust Committee (VTC). Each committee elected two of its members to form the board of the Chohe Enclave Conservation Trust (CECT). The board was, in 1993, given the first community wildlife quota by DWNP under its new policy. The Board tendered its quota and selected a safari company to manage it for that year. The Land Board facilitated a lease for the company and the project received its first revenue of 25,000 Pula. The tender for the 1994 season was more successful and over 65,000 Pula were earned. The tender let for 1995 was a three year tender from which the community expects to receive up to 200,000 Pula per annum. In 1996 elephant sport hunting is to be re-introduced which will further increase community revenues, possibly by 100%. Only about 15% of any income from a project remains with CECT. The balance is to be passed on to the participating village committees. The CECT has now written its constitution, registered itself as a Trust and is developing a broad ranging project proposal to support its institutional development.

Whilst the process of establishing the project was intensely consultative, its early implementation phases were marked, on the part of the representative committee structure, by a tendency to elitism. Two processes are being used to re-instill in people the understanding that this is their project and that they have right to see it becoming accountable to them and their needs. The sociology office of the Department of Wildlife spent about three months at the end of the 1994 hunting season in the Chohe Enclave conducting Participatory Rural Appraisal (PRA) exercises with the villages of Kachikau, Kavimba and Parakarungu. These involved residents in detailed discussions about their land, their use of it and access to its resources; about their relationships as a community, with local government and the officials responsible for the Park that surrounds them. Through these debates an agenda for development, or community action plan, emerged.

The CECT then requested the NRMP to support the coordinators selected by each village to be responsible for facilitating the implementation of the community action plans. Secondly a follow up survey is being conducted in late 1995 to augment the socio-economic baseline survey conducted there in 1992. This survey will be able to track the decisions that have been made following the distribution of revenues to the individual villages earlier in the year.

b.] Khwai, Mababe & Sankuyo border the Okavango delta in Ngamiland. Work there began with a natural resources inventory of Khwai and Mababe. This was followed in 1994 by the initiation of two PRA exercises to help open up a dialogue with the two communities. The exercises demonstrated that there are some deep misgivings about the Government and its intention amongst the residents of the area. The communities are close to the Moremi Game Reserve and to the tourist center of Maun. The residents feel that they have lost access to a considerable number of resources and gained little in recompense. The DWNP recognizes that the communities feel strongly about these issues and hopes that the offer to take control of the management of the wildlife quota will go a long way towards establishing a new partnership.

Considerable work with the community at Sankuyo has also taken place. The community formed a wildlife quota management committee in 1995 and applied to the DWNP for a quota. However due to the management planning exercises under way within Wildlife Management Areas no leases for resource use based on wildlife quota management were granted in the 1995 hunting season. This delay provided an opportunity for further discussions with the community who have re-applied for a quota for 1996. The quota for their area also includes 6 elephants. Being a small community the financial returns from quota management will markedly increase household incomes. The community has also had time to debate a constitution and begin the formation of a legally recognised Trust for the management of their local natural resources.

With both Chobe and Sankuyo having established themselves as autonomous management entities able to earn and distribute considerable revenues the viability of wildlife management as a local level community development activity is being more widely understood and talked about. The experience of the Chobe Enclave in particular has stimulated a number of exchange visits from officials and others wishing to investigate the relevance of their activities to their Districts. Much of the impetus for new activities in Ghanzi and Kgalagadi has come from visits that have revolved around sharing experiences with the Enclave's representatives.

c.] XaiXai is a small, and very remote community of Basarwa and Herero, in western Ngamiland which, through discussions with local officials, has decided to voluntarily enter into a landuse planning exercise. The NRMP, together with regional DWNP staff, were requested by the Village Development Committee (VDC) to visit the area. The Dutch development agency, SNV, having then expressed an interest in working in the area on community wildlife quota management issues has gained the approval of DWNP, the Tawana Land Board and Council to place someone with the community. With the arrival of their natural resources advisor work on developing a consensus on land use options has begun.

d.] In Northern Kgalagadi a number of in-depth visits have been made to the area and ideas for the community management of the wildlife quota and of veld products are being discussed. SNV has also expressed an interest in supporting the project here, as well as in XaiXai. As a result they have completed a socio-economic survey of the area as a preliminary to making recommendations for resource management activities. The general socio-economic survey is complemented by an in-depth socio-economic baseline study of the community at Zutshwa that was undertaken by the University of Botswana with DWNP and NRMP's support in 1995. This provides the data against which change can be measured as resource management options are undertaken in line with the management plan for the area.

Taking the management plan forward will be the key to ensuring a consensus between cattle and wildlife interests in the area. The basic precepts of the wildlife management area concept are now accepted in the District and this will enhance DWNP's capacity to facilitate community wildlife management. However, there are still controversies over the alignment of the boundaries of the WMAs which may yet delay implementation. A group of councilors, district officers, Chiefs, Headmen and Land Board officials visited the Chobe Enclave in September 1995 and this is expected to further stimulate debate within the District.

e.] Next door in Ghanzi District there has also been District generated interest in community wildlife projects. The NRMP review of the Council's original proposal for Bere was not favorable but did recommend that the chosen community be assisted with some form of natural resource based development activity. It had been hoped that PRA would provide a tool for bringing the community at Bere together with local extension officers and NGOs to begin this process. As in Kgalagadi local officials acted with caution and, while welcoming training in PRA, did not feel able to support its practical community based application until they understood its implications further. As a result of exchange visits with the Chobe Enclave the District has now formally endorsed community based natural resources utilisation and is planning activities in the Okwa Wildlife Management Area.

Where veld products, rather than wildlife are involved, questions of access and benefit are less contentious. A grant of \$300,000 has been made to the Kuru Development Trust of D'Kar in Ghanzi for their work in the Ghanzi settlements. The grant will allow the trust to fund cochineal dye and veld products development projects in 9 settlements in support of 230 Bushmen families. Cochineal is an insect that feeds off the prickly pear cactus (*Opuntia sp.*). Its crushed and dried body produces a natural food colorant. The project is an innovative one with the potential to generate significant foreign exchange earnings. Its success will be partly dependent upon the vigor of the extension support Kuru provides to the settlements.

f.] The project supported a major consultancy by the University of Botswana on behalf of the local NGO Thusano Lefatsheng which covered four districts of western Botswana. This NGO specializes in veld product development, marketing a range of teas and herbal remedies. A plant of particular value as a herbal remedy is the grapple plant or devil's claw (*Harpagophytum procumbens*) which is a protected plant only harvestable under

licence. In order to better manage its purchasing program and ensure the most equitable distribution of benefits, the University of Botswana has researched the physical availability of the plant and the socio-economic impact of its harvesting. A series of management guidelines have now been produced. These were presented to representatives of 38 settlements from the four Districts covered by the University at a week long meeting at Kang in November, 1994. As a result of this activity the settlement of Molengwane which wishes to fence and irrigate mixed crops and veld products in northern Kweneng District has been supported with a PRA exercise funded by NRMP and carried out by Thusano Lefatsheng and the Botswana Orientation Centre (BOC). Thusano Lefatsheng has begun negotiations with SNV and with the NRMP's sister project on Institutional Reinforcement for Community Empowerment (IRCE) for support to work with communities in northern Kgalagadi (KD1).

g.] At Gweta, which lies on the road from Maun to Nata in the center of the country, the NRMP has been involved in discussions with the community since late 1993. The discussions were initiated by a local tourism entrepreneur who was seeking a joint venture business activity with the community. At the resulting public meetings the community expressed real interest in becoming involved in tourism, but in their own right and not necessarily through a joint venture arrangement. The community have now selected an interim natural resources management committee. The NRMP has, in support of them, developed a major report on the natural resources of the Gweta area with suggestions for their management and utilisation. The interim committee has developed a constitution for the formation of a Trust to be called the Gwezotshaa Natural Resources Trust to represent the communities of Gweta, Zoroga and Tsokatshaa. Through a consultancy viable options to develop value added from the local Marula (*Sclerocaya birrea*) harvest and from spring water are being investigated along with options for photo-tourism ventures.

h.] The same consultancy has reviewed the potential of the Mopane caterpillar (*Gonimbrasia belina*) as a valuable resource for the residents of the Tswapong Hills Conservation Area, which development is being supported by the Kalahari Conservation Society.

### 3. Supporting project implementation.

a.] Extension Service. As part of the 1992 work-planning process, a temporary structure for the department's Management and Utilization Division's extension capacity was proposed. A report followed, discussing the 'strengthening of DWNP's extension role and capacity', which developed this structure into a departmental one. It has been reviewed and accepted by the DWNP. The report looks at the organizational structure, skills, training and staffing required in order to bring the extension function to full capacity. Implementation is being supported by the Personnel Planning and Training component reviewed in a later section.

b.] Guidelines. A booklet, in the form of guidelines, has been drawn up to promote a fuller understanding of both the opportunities and difficulties that communities may face in attempting to develop economically sustainable management systems for their local natural resources. The guidelines, approved by the Ministry of Commerce and Industry,

and adopted by the Ministry of Local Government Lands and Housing, provide basic guidance to communities, local officials and interested entrepreneurs on the essential steps to take in entering into an agreement, that will be fair to all parties, and provide sufficient time to reflect on the implications of such agreements. The guidelines have become the basis for local authorities to approve joint ventures between communities and the private sector in the sphere of natural resource management.

A second set of guidelines are presently being drawn up to guide communities and local officials to more fully understand the technical issues that must be considered by communities wishing to take on the management of their wildlife quota through the community utilisation program.

c.] Participatory Rural Appraisal. DWNP seeks to use PRA as a working methodology for its community liaison and sociology officers. To this end fourteen government staff have been for training to Egerton University in Kenya. A large course has been held at Lesoma in Chobe District for a selected group from DWMP/MOA/NGOs and local officials in 1993 and in 1994 a seminar was held in Gaborone for selected government and NGO officials. This seminar was followed by two regional seminars for extension agents in Kgalagadi and Ghanzi Districts. PRA is now being used by the Department in support of its community utilisation program. To ensure the sustainability of participatory extension tools the project has worked with the Botswana Orientation Centre to help it become a recognised center for training, information storage and the implementation of participatory extension techniques. The need for this role has been formally recognised by the Ministry of Finance and Development Planning's Rural Development Division. The Division is now field testing PRA, through the BOC, with the aim of determining the role that PRA could play in the development of district development plans.

d.] Problem Animal Control. One of the keys to the public's perception of DWNP, and therefore their interest in its community program, is the ability of the DWNP to respond to the problems created by wildlife for arable and livestock farmers. Training courses are being held to train DWNP staff and develop a core group of trainers for the department. A manual for PAC staff and a teaching module for BWTI have been developed.

e.] Mid-term evaluation. This evaluation in 1993 concurred with the NRMP team that the project suffered from a number of design faults or flawed assumptions that meant that the NRMP needed more resources in order to fulfil its original objectives. Its main recommendations were, *inter alia*, that:

- All existing positions except the Environmental Education Advisor to be extended to the project's regional completion date (PACD) in 1997,
- A second sociologist, a non-formal education specialist and a policy advisor should be recruited,
- A component be added valued at \$950,000 to strengthen NGO capacity.

These recommendations have been accepted by the Government of Botswana and USAID and appropriate steps have been taken to implement them. USAID tendered the NGO component and attached to it the monies held for funding demonstration projects. The

contract to implement this component has been awarded to Private Agencies Collaborating Together (PACT). PACT will work closely with the NRMP, but will have responsibility for providing a training program to boost NGO capacity in natural resource management, community and institutional development. It will provide and monitor grant monies to those NGOs that become 'grantworthy' as a result of the training undertaken. This component is designed to ensure that a core of NGOs are capable of implementing community based natural resource management activities by the end of the project in August, 1997. The second sociologist and non-formal education advisor have been recruited and the proposed policy position has been converted into short term technical assistance to be provided to the Government on a request basis.

## PLANNING AND APPLIED RESEARCH

### 1. Wildlife Management Areas (WMAs) and Land Use Planning:

Following a detailed consultancy, terms of reference for WMA management plans in 7 Districts were drawn up with district consultation and circulated to them for their formal approval. Following the approval of the terms of reference by the Districts of Ghanzi, Kgalagadi and Ngamiland contracts for all three were awarded and the plans completed in 1995. The DWNP has created the post of Wildlife Planning Officer to oversee the implementation of the WMA plans and to work on related land use issues affecting the wildlife resource. Due to the complex land use planning situation in, and around, the Okavango Delta an additional consultancy was funded to look at traditional natural resource utilization there. The study provided vital information to decision makers involved in reviewing applications for concession leases for tourism in the area by defining the traditional rights of access and usufruct of local communities.

### 2. Protected Areas:

The Moremi Game Reserve Management Plan was completed in August, 1991, the Chobe National Park Management Plan was delivered in October 1993 and the Nxai Pan and Makgadikgadi plan together with the plan for their surrounding WMA areas (CHA numbers: NG49/50, CT10/11) was completed in September, 1995. These plans are now in the hands of the EC funded support to the DWNP which will oversee the implementation of their key recommendations.

### 3. Monitoring and Evaluation:

The impact on households of projects funded through NRMP will be monitored during the life of the project, in order to measure changes in household income and attitudes to wildlife brought about by enhanced employment, and revenues from wildlife resources or other income-generating activities. A baseline monitoring system was field tested in the Chobe Enclave in 1992. This is being revisited in late 1995 to monitor changes since the implementation of the community wildlife quota management program there. A second baseline study was undertaken during 1995 at Zutshwa in northern Kgalagadi. In order for DWNP to inherit an affordable monitoring and evaluation system that it can use after

the project, a framework for longer term monitoring and evaluation has been established. The implementation of this framework will establish the working procedures for DWNP's sociology office.

## PERSONNEL PLANNING AND TRAINING

In order to ensure the long term viability of the institutional changes that would come from the NRMP, Chemonics International was asked to carry out an assessment of the Botswana Wildlife Training Institute in 1991, making recommendations to the DWNP and USAID. Based on this assessment, and the Department's acceptance of its recommendations, an additional project component was developed to reorganize the BWTI, as well as DWNP's capacity to recruit, train and manage its personnel. As a result the Institute has been refurbished, additional houses and offices built and teaching facilities and equipment upgraded. An improved manpower training program supports the critically important development of a functioning, field based, community focussed DWNP.

### 1. Personnel and Training:

The current status of the DWNP's staff has been reviewed with the aim of ensuring a better understanding of how staff are deployed and where key vacancies still exist. This has been supported by a report on the overall manpower needs of the Department. A training needs analysis has been produced and is supported by a consultancy that is helping the department structure and develop its training plans. The department's personnel records have also been computerized. Six wildlife officers have been sent to the USA. Two have gone for bachelor degree training and four for Masters degree training. A further four officers have gone to Mweka College in Tanzania for diploma training. DWNP officers are attending a series of assessment and evaluation courses designed to define a baseline for the guidance of BWTI and the Human Resources Development Unit. The first 163 officers to go through these courses formed the basis for the training needs analysis. The department has agreed to establish a Human Resources Development Unit to support the new emphasis on personnel support.

### 2. Curriculum development:

In May, 1994 a meeting was held at BWTI which brought together staff from throughout the DWNP to review with them the needs of the department and their expectations of the new training component. The results of this meeting have formed the basis upon which a new modular curriculum has been prepared for the certificate in wildlife management. The new, more practically oriented, curriculum is expected to begin in January, 1996. A program of Basic and Induction training has been established which concentrates on new recruits to the department.

## ENVIRONMENTAL EDUCATION

The project's environmental education advisor completed his contract in March, 1995. The Ministry of Education has appointed an environmental education specialist who will take on responsibility for the activities begun under the project. A series of 3 consultancies have been designed to support the specialist in the period up to August 1997. As a direct result of the recommendations of the mid-term evaluation a advisor has been recruited to support the Conservation education Division of the DWNP in order to improve the department's capacity to reach a national audience with materials that will increase understanding of the department's policies and practices.

### 1. Environmental Education Needs Assessment:

A needs assessment has been completed for all school levels in the formal education sector and the findings reported to Ministry of Education curriculum leaders, teacher training college lectures and University of Botswana Faculty of Education staff members. A list of recommendations were made which prioritized activities for the year. The needs assessment for the non-formal sector has been completed and a composite report compiled. Draft copies have been circulated to the Environmental Education Reference Committee and to the Department of Non-formal Education as the first step in the review process.

### 2. Teacher Education:

Teacher education workshops have been held with selected groups of teachers and teacher trainees. The Teacher Training and Development Department in-service education officers have met with the Curriculum Development Division's personnel to set up a plan for in-service environmental education workshops for all teacher trainers and education officers. Teacher training college and college of education staff have continued their environmental education curriculum review. Subject leaders from the Primary Teacher Training Colleges have nearly completed their review of syllabi and other curriculum materials associated with environmental education.

### 3. Curriculum Materials:

The final editing and layout of A Teacher's Resource Handbook for Environmental Education is almost completed and the handbook will be published soon. A group of student-generated environmental stories, poems and drama have been edited and will be printed by the Teaching Aids Production Division of the Department.

### 4. Conservation Education and the Development of Educational Materials:

A need was foreseen during the early annual work-planning meetings to provide materials that would support DWNP's efforts to adequately inform officials and citizens about its new policies and programs. The Conservation Education Division has worked with the NRMP and a private company to develop materials that the department can use at meetings throughout the country, thus ensuring that it provides a consistent message,

regardless of who takes the lead in discussing the department's new responsibilities. These are a series of large scale colour posters supplemented by a series of booklets, produced for national distribution, which explain wildlife quotas, Controlled Hunting Areas (CHAs) and Wildlife Management Areas (WMAs). 59 DWNP officers have been trained in the use of the posters. In order to more effectively use these materials and to be able to develop and disseminate information of its own a NRMP advisor has recently joined the Conservation Education Division.

5. Environmental Education, Audio-visual:

The Curriculum Development Division/Television Trust for the Environment project to produce videos that support Botswana's National Conservation Strategy is nearing completion. Rough cuts of five learning videos have been completed and a model set of teachers' notes written. A bibliography of Environmental Education publications' teaching materials and video tapes has been initiated and a trial set of materials have been purchased for evaluation and eventual distribution to schools and teacher training institution libraries.

6. Conferences and Workshops:

NRMP co-funded a major national environmental education planning conference in 1991. The recommendations from this conference have served as the foundation for EE development plans throughout the Ministry of Education. Six other, more specialized, training workshops were held in 1992-4 at the Gaborone Game Reserve for primary school teachers and DWNP game scouts which prepared the participants to more effectively use the Reserve with school children. Most recently, the workshops have focused on the use of environmental topics in project methods teaching and the use of the Educational Guide to Gaborone Game Reserve. The latest such workshop was held in June 1995.