

# Nature, Wealth, and Power

## Emerging Best Practice for Revitalizing Rural Africa

*While the fate of Africa's natural resources cannot be separated from the broader context of economic and development challenges, neither can Africa's economic and development future be separated from the management of its natural resources.*

*Building on lessons learned from more than 20 years of natural resource-based development in rural Africa, this document presents principles and action steps that can serve as a guide to investment there.*



in  
collaboration  
with



# Acknowledgements and an Invitation to Comment

The development of this discussion paper was initially facilitated by the USAID Africa Bureau and is now coordinated by the Land Resources Management Team of the Economic Growth, Agriculture and Trade Bureau of USAID under its multi-disciplinary programs of analytical and empirical work.

The project concept was discussed with African colleagues at a meeting in Capetown, South Africa in February 2002 (the FRAME Contact Group—see [www.frameweb.org](http://www.frameweb.org)). It was decided to move forward with the development of two products: a presentation of the key elements of the nature, wealth, and power (NWP) framework in the form of the discussion paper, and a longer, more detailed and more negotiated work with supporting case material and documentation. Since the Capetown meeting, many people have contributed to moving this process forward—this has been a joint, iterative process. Under the overall leadership of Jon Anderson, the main contributors have been Asif Shaikh, Chris Barrett, and Christine Moser (economics), Peter Veit and Jesse Ribot (governance), and Bob Winterbottom, Mike McGahuey and Roy Hagen (natural resources).

Important contributions have been made by Bruce Campbell, Kadi Warner, Marilyn Hoskins, Pam Cubberly, Alex Serrano and George Taylor. An NWP Steering Committee has reviewed each draft and provided valuable suggestions and guidance to the overall effort. A dozen outside reviewers spread around the globe have challenged us with their comments and greatly strengthened the draft. Thanks to each of you who have been involved so far!

NWP is intended as the opening statement in a dialogue on rural Africa, a dialogue that will take place over the next few years with African partners and others interested in this topic. In addition, NWP is exploring moving beyond the Africa region. Your comments on this document are warmly welcomed. Please send them to the address indicated below.

A French version of this document can be obtained from:

Jon Anderson  
Natural Resource Policy Advisor  
USAID/EGAT/LRMT  
1325 G Street, NW, Suite 400  
Washington, DC 20005 USA  
Email: [janderson@afr-sd.org](mailto:janderson@afr-sd.org)

Support for the preparation of this document has been provided by the International Resources Group (IRG) under the Environmental Policy and Institutional Strengthening Indefinite Quantity (EPIQ) Contract No. PCE-I-00-96-00002-00. First published in 2002; reprinted in 2004.

This document is a discussion draft and does not necessarily reflect the official positions of the organizations involved in its preparation.

# Nature, Wealth, and Power in Africa



## Contents

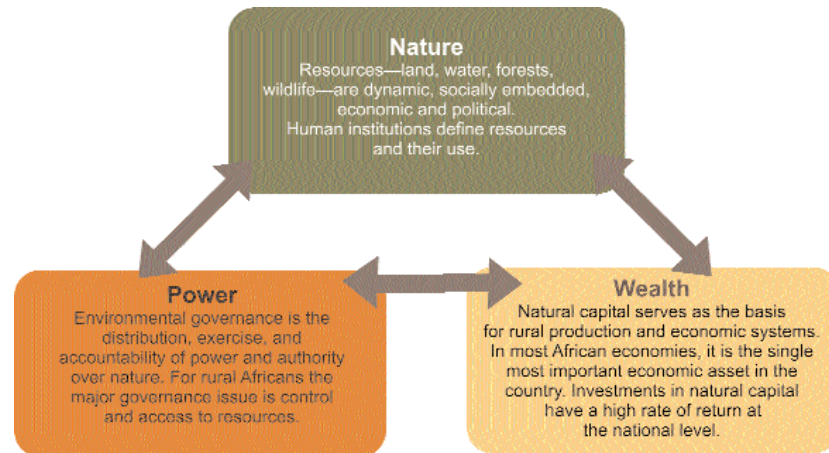
Opening the Debate	5
Principles to Guide NRM Investments in Africa	6
Resources	7
Nature, Wealth, and Power in Namibia	13
Economics	15
Nature, Wealth, and Power in Madagascar	23
Governance	25
Nature, Wealth, and Power in Mali	32
Looking to the Future	34

Natural resources are a major source of wealth and power in Africa; they are also a key to rural development and good governance. Natural resources—land, minerals, forests, wildlife, and water—are central to the livelihoods of 70 percent of the population and dominate some African economies. The continent has a rich natural resource endowment, but its industrial and service sectors are just emerging. To some extent, natural resources in Africa are significantly underutilized, and in many cases, the full potential is not even known, let alone realized. Natural resources will continue to drive Africa's economies for decades to come. Access and control over resources is the major governance issue, especially for rural people, and it is the bread and butter issue on which democracy must deliver. Natural resource management (NRM) is central to good governance and increasing enfranchisement of rural peoples.

In spite of this potential, many rural Africans remain mired in poverty, resources are often mismanaged, and rural people largely disenfranchised. These three challenges are closely related.

This document—*Nature, Wealth, and Power* (NWP)—is about rural development in Africa. It is a preliminary statement of lessons learned from more than 20 years of natural resource–based development in rural Africa. Twenty years ago, natural resource man-

## Nature Wealth, and Power—Definitions and Links



*Building a rural renaissance in Africa depends on choices and actions by Africans; the policies and decisions needed are within their reach.*

agement programs took a predominantly technical approach to getting rural development moving and responding to perceived environmental crises. The limitations of this approach were subsequently revealed as projects failed to meet their objectives and be sustainable. This led to development of economically more realistic approaches. These were more successful, but inequities and inefficiencies still existed. More recently, it has become clear that the governance aspects of rural development are also key.

Consideration of the resource, economic, and governance dimensions of natural resource management is critical for success. Natural resource management rests on the interaction of resource characteristics, policies, institutions, skills, and economic signals. Experience demonstrates that programs that integrate **nature** (environmental management), **wealth** (economic concerns), and **power** (good governance) have promising results. Today, several cases and proven strategies demonstrate where the management of natural resources has *simultaneously*:

- Led to increases in the productivity of the resource base and conserved biodiversity;
- Provided dramatic economic growth for local communities and national accounts;
- Helped move rural people along the path from subject to citizen, leading the way toward a more democratic, decentralized, and vibrant society.

This experience has generated a set of **principles**—summarized below and detailed in this booklet as **action steps**—that can serve as a *guide* to investment in rural Africa. The three case studies presented—Namibia, Madagascar, and Mali—illustrate the effectiveness of the integration of all three dimensions and the various principles and actions recommended under each dimension.

Building a rural renaissance in Africa depends on choices and actions by Africans; the policies and decisions needed are within their reach. NWP is but an opening statement in a dialogue on rural Africa, one to be undertaken in the next few years together with African partners and within the framework of the New Partnership for Africa's Development (NEPAD). The aim is to provoke a debate and generate an integrated view of rural development and practical “best bets” for decision and policy makers. Nature, wealth, and power form a flexible framework for looking at the relationship among (a) sound natural resource management, (b) economic growth and poverty alleviation, and (c) empowerment and enfranchisement. Knowing what has worked in the *past*, however, is only a first step. To have a significant impact, the dialogue should cover how to make *future* programs and investments in Africa more effective and efficient.

# Opening the Debate



*Recognizing the natural, economic, and governance dimensions of resources is critical to developing appropriate management systems.*

This document's discussion of principles and action steps must begin with a re-examination of the nature of resources and drivers of sustainability:

## What Are Natural Resources?

Resources are not static biophysical entities. They are dynamic, socially embedded, and political. Human institutions (in a broad sense including economic and management systems, social networks, and so on) define resources and their use. Biophysical resources are political as well as economic commodities. Recognizing the natural, economic, and governance dimensions of resources is critical to developing appropriate management systems.

## Questioning Drivers of Sustainable Resource Management

Field experience shows that a number of **assumed drivers** of sustainable resource management need urgently to be questioned and refined:

■ Perceptions of environmental **collapse and crisis** have often driven environmental investments in Africa. Although in some areas, degradation is a real and serious problem, crisis management of the environment has tended to obscure the economic and governance rationale for investment in the sector.

■ It is often assumed that Africa is awash in a sea of **rampant environmental degradation**. However, examples of environmental recovery are on the increase. Some estimates of degradation have been exaggerated and are based on simplistic understandings of both ecological and social dynamics. For example, large programs to fight erosion have been developed and implemented in a number of Africa countries, even when it appears that erosion is not a serious problem.

■ **Urbanization** is often seen as a positive driver and sign of development. In Africa, however, urbanization has often resulted in centers of consumption, bureaucracy, and political-economic control rather than centers of production, administration, and political representation. Prospects for a successful agricultural transformation and for viable macro-economic performance depend on creating a more positive urban/rural dynamic.

■ **Population growth** is often said to drive degradation; however, examples abound where populations have increased dramatically, while degradation has decreased. It is how people are organized and what governance/management systems are in place that has a greater effect on the status of the resource base than the numbers of people.

## Principles to Guide NRM Investments in Africa

### **Nature:**

- ◆ Improve information and knowledge management systems
- ◆ Promote local land use planning and appropriate resource tenure systems
- ◆ Foster innovation, social learning, and adaptive management
- ◆ Build capacity and invest in human resources
- ◆ Promote cost-effective technical advisory and intermediary services

### **Wealth:**

- ◆ Be strategic about the economics of natural resource management
- ◆ Strengthen markets and NRM market incentives
- ◆ Invest in rural organizations
- ◆ Create a framework for better NRM choices
- ◆ Assure that local resource managers have secure access to NRM means and benefits

### **Power:**

- ◆ Strengthen environmental procedural rights for rural people
- ◆ Improve rural input into public decisions and policy
- ◆ Redistribute natural resource authority and functions
- ◆ Transfer powers, rights, and responsibilities to representative and accountable authorities
- ◆ Explore a minimum environmental standards approach
- ◆ Promote platforms that allow for continuous and inclusive consultations

■ Links between **poverty** and resource degradation are often simplified on all sides of the debate. The poor often lack resources, control, and the “margins of subsistence” needed to manage the environment successfully. However, much empirical evidence points to the resourcefulness of poor people and their ability to manage under the right conditions. Moreover, the rich and powerful also contribute significantly to mismanagement and degradation. Sustained efforts to reduce poverty are an excellent investment.

■ In many instances, **agriculture** is seen as central to rural development, the major economic driver, the hub of rural activities, and a permanent estate. Agriculture, however, is also a dynamic subset of natural resource management and, in some cases, is neither the optimum land use nor the most important economic sector. In Africa, some 81 percent of the soils are classified as “problematic” from an agricultural point of view—acidic, poor water

retention, steep slopes, and so on. Agriculture has to be seen in the larger context of land use and resource management and not as an automatic response to rural economic growth and poverty alleviation. In fact, many rural production systems blur the lines among agriculture, forestry, animal husbandry, and other forms of land use and count on integration for optimization. NRM practices get the most from “marginal areas” and can contribute to raised agricultural productivity.

Identification of drivers of and approaches to sustainable natural resource management needs constant reconsideration and refinement. The **NWP framework** may be useful in developing a more realistic and field-oriented approach.

In the next few sections, principles and action steps are detailed for each of the dimensions of nature, wealth, and power.

# NATURE Resources



This section presents the more technical aspects of NRM. It cannot, however, cover in detail the management of specific biophysical resources. Instead, it deals mainly with the knowledge and information sys-

tems, capacity, and program cycle elements of resource management. Five principles help to organize specific action recommendations:

## Nature: Principles and Action Recommendations

### 1 Improve information and knowledge management systems

- Improve information use and linkages between techniques
- Develop networks and communities of practice
- Develop monitoring and evaluation systems
- Use science as a support tool
- Capitalize on field experience
- Increase transparency and information access
- Promote research, extension, and education linkages

### 2 Promote local land use planning and appropriate resource tenure systems

- Negotiate clear limits
- Recognize the need to partition use
- Promote participatory approaches that include gender and user groups
- Make procedures simple, straightforward, and understandable
- Promote optimal agriculture/NRM integration

Promote risk management and contingency planning

Act locally, but promote an ecosystem vision

### 3 Foster social learning, innovation, and adaptive management

- Encourage social learning
- Foster innovation and experimentation
- Promote adaptive management

### 4 Build capacity and invest in human resources

- Train rural staff
- Build flexible local capacity

### 5 Promote cost-effective technical advisory and intermediary services

- Work with skilled partners
- Facilitate farmer-to-farmer and group approaches
- Strive for cost-effectiveness
- Promote new approaches to organizing knowledge support

# 1 Improve information and knowledge management systems

*Knowledge is critical for sound natural resource management. All phases of NRM are knowledge intensive.*

Knowledge is critical for sound natural resource management. All phases of NRM—planning, implementation, monitoring, and decision making—are knowledge intensive. In many cases, knowledge, more than financial resources, is key to getting rural development going. There are new methods and tools for knowledge management that can increase the effectiveness and efficiency of NRM.

## **Improve data and information use and support the use of new techniques and linkages to classical and local informational tools.**

Powerful new information tools—remote sensing, geographic information systems, decision support tools, and so on—should be utilized for better information, decision making, and action on the resource base and its use. These techniques should be carefully integrated with classical techniques (inventories and ground surveys) and with local monitoring. It is often the case, however, that information and data already available are not well used. Data use should be improved before additional investments in collection are made, as should links between data and decision making. For example, too many inventories are done without a clear answer to the question “why?” This results in huge wastes of resources. Inventories must be done to respond to specific management and decisional needs.

## **Develop networks and communities of practice.**

These techniques have proved to be powerful tools, not only for sharing experience and capitalizing on empirical data, but for economies of scale in capacity building and lobbying. Tacit knowledge is the most important for developmental impact and not fully utilized or captured. A major challenge is to give attention to this kind of knowledge. Developing communities of practice and engaging facilitators to bring out tacit knowledge has proved useful. Environmental Information Systems-Africa (EIS-Africa), a network of 3,000 environmental practitioners throughout Africa, and the *Reseau Gestion Decentralisée des Ressources Naturelles Mopti*, a subnational network in Mali, are two examples of dynamic networks that are making a difference.

## **Develop monitoring and evaluation systems at all levels.**

Monitoring and feedback is essential for good management and planning. Many programs put too much emphasis on planning and not enough on monitoring. The different types of monitoring, such as performance and ecological monitoring, need to be clarified and have appropriate approaches. Monitoring should be of sufficient depth to capture information needed for adaptive management and social learning.



The tendency to amass huge volumes of data of little relevance to decision making should be avoided.

The community-based NRM program in Namibia is a good case of the importance of local monitoring and its impact on economic returns.

### **Use science as a support tool and to set limits—not for the setting of objectives.**

The biophysical sciences are powerful tools for natural resource management, particularly for setting biophysical limits and for defining the possibilities. They are not appropriate, however, for setting objectives, which is a social process. For example, thinning regimes have sometimes been recommended on technical grounds, when in reality no demand exists either for the by-products of thinning or for the product that the thinning is supposed to enhance.

### **Capitalize on field experience.**

A wealth of field experience exists in Africa from which to learn lessons and capitalize. Many of these experiences and results are unexpected and, therefore, escape traditional evaluation methodologies. However, techniques such as Tracker, a tool for learning from local resource management initiatives in Africa ([www.nrmtracker.org](http://www.nrmtracker.org)), are emerging to try to help capture this experience. Much of the future of natural resource management in Africa should be built on both positive and negative experiences to date.

### **Increase transparency and access to information.**

The availability of information is critical to sound planning and monitoring and effective management of resources. For example, the work of Global Forest Watch in publishing data on logging concessions and protected areas in the Congo Basin, thereby making them widely available, has helped improve concession siting and licensing. Access is needed not only for technical, but also economic and legal/policy information.

### **Promote linkages among extension, education, and research, and promote farmer-oriented policy and research design.**

Forming strong links among research, extension, and education in Africa has been very difficult. New models of rural knowledge and information systems (RKIS), however, are having some success in creating synergies, particularly by putting the farmer at the center of RKIS policy and research.

*A wealth of field experience exists in Africa from which to learn lessons and capitalize. Many of these experiences and results are unexpected and, therefore, escape traditional evaluation methodologies.*

## **What Is Knowledge Management?**

Natural resource management has grown through the transfer and sharing of expertise, lessons learned, and hypotheses about what works and why. But this effort is limited in scale and highly idiosyncratic, depending on the wisdom and memories of a small number of practitioners.

Knowledge management at its heart is an attempt to support more systematically the transfer, exchange, and synthesis of that wisdom, not just through compilation of facts and “best practices,” but through bringing together those with expertise and experience into a broader community, a community that can share information and evaluate its utility organically without requiring a major donor investment. This approach has worked in other sectors, most notably in AIDS research and agricultural research and can be central to improving NRM programs in Africa.

## 2 Promote local land use planning and appropriate resource tenure systems

*The participation and empowerment of women has proved to be key in successful natural resource management in Africa.*

*Policies, guidelines, and regulations should be accessible to and understandable by local people and organizations.*

The ability of local communities to undertake land use planning and enforce zoning decisions is key to sustainable management. Not all uses are compatible and not all users are responsible. Identifying and enforcing rules about use is critical. This has implications for tenure arrangements, as discussed later.

### **Negotiate clearly defined, agreed on limits.**

The ability to exclude free riders and illegitimate uses and users is essential to sustainable management. Clearly defined and agreed-on limits in space and time are necessary. Participatory mapping has proven a useful tool for defining spatial limits. Formalization of limits, however, comes with transaction costs; the benefits of formalization must outweigh these costs.

### **Recognize the need to partition use.**

Not every single hectare can provide for the diversity of human needs; some uses conflict. Some type of separation, rotation, and partitioning of resource use is necessary. Local land use planning is a step toward locally enforceable separation and optimization of use.

### **Promote participatory approaches that include gender components and all user groups.**

The participation and empowerment of women has proved to be key in successful natural resource management in Africa. The return on investment in women's groups is high. All user groups should have the opportunity for meaningful participation, *especially* if some uses and users are subsequently excluded. Inclusive land use planning is a potential conflict prevention tool.

### **Make procedures simple, straightforward, and understandable.**

Too often, management plans, regulations, procedures, and other NRM elements are unduly complex,

complicated, and obtuse. Procedures must be understood by those who use them. Policies, guidelines, and regulation should be accessible to and understandable by local people and organizations.

### **Promote agriculture/NRM interaction and integration and the optimal use of growing space.**

It is difficult to draw a distinct line between agriculture and NRM, as they overlap broadly; in many senses, agriculture is a subset of NRM. The Mali case (page 32) shows clearly how NRM contributes to the more efficient and effective use of agricultural inputs and that improved agriculture benefits forestland and other natural resources. Natural resource management systems that take maximum advantage of available light, water, space, and nutrients tend to be more productive. Systems such as agroforestry, for example, allow deeply rooted trees such as *Faidherbia albida* growing in cultivated fields, to tap mineral elements in the subsoil that are unavailable to annual crops such as millet.

### **Promote risk management and contingency planning.**

Natural resource management programs must deal with dynamic biophysical conditions. Land use planning should accommodate levels of risk.

### **Act locally, but promote an ecosystem vision.**

Environmental change depends on millions of individual choices, decisions, and actions by people in Africa. These choices, however, must be seen in an integrated way; assessment and planning for impacts on neighbors, watersheds, and migratory animals must take place.

# 3 Foster social learning, innovation, and adaptive management

In a dynamic world, the ability to adapt and be flexible is critical.

## Encourage social learning.

Social learning in natural resource management refers to an inclusive process of continuous dialogue and deliberation among “stakeholders,” including scientists, planners, managers, and users to explore issues and propose approaches; it is about the collective process of accumulating new knowledge.

## Foster innovation and experimentation.

Improvements in NRM systems depend on experimentation and innovation. NRM programs are often long term and essentially experimental; we can estimate final impacts and develop proxies for short-term performance, but NRM innovation requires a long time horizon. When fostered, innovation hap-

pens spontaneously at several different levels from farmers to communities to government ministry and nongovernmental organization (NGO) staff. An important corollary to this is allowing space for mistakes—by both communities and staff.

## Promote adaptive management.

The field of adaptive management in NRM has grown significantly in the past 10 years. It emphasizes learning, rather than “blueprints” (or learning by doing, rather than following prescriptions); accepts mistakes as part of the experimental process; and comprises an inclusive process of consultations using a wide range of tools to generate knowledge to keep pace with ecosystem and socioeconomic change. This approach to management has shown promise in the pluralistic and dynamic settings that characterize much of Africa today.

*The field of adaptive management in NRM has grown significantly in the past 10 years. It emphasizes learning, rather than “blueprints” . . . This approach to management has shown promise in the pluralistic and dynamic settings that characterize much of Africa today.*

# 4 Build capacity and invest in human resources

## Train staff working in rural areas in extension and participation.

Government staff often have good technical skills, but need capacity in communication, facilitation, extension, and participation. This may be particularly true of the para-military resource services trying to make the transition from command and control models to more participatory and devolved approaches.

## Build flexible capacity at local levels.

Past efforts have tended to emphasize technical skills (nursery techniques, grafting, and so on) at the local

level. Given changes in socioeconomic conditions, however, this may in effect train people for yesterday’s, not tomorrow’s, activities. Commodity-focused training leaves people vulnerable to boom and bust cycles and with narrow skills in a dynamic world. The good payoff that comes from basic skills such as numeracy and literacy can be applied broadly. In addition, economic skills (business development, marketing, accounting, and so on) and legal skills are fundamental for adaptable local organizations.

## 5 Promote cost-effective technical advisory and intermediary services

Local groups and producers need technical advice and intermediate services to increase growth and sustainability and exercise their rights. A single organization, governmental or otherwise, lacks the broad breadth of expertise and service delivery needed. A partnership approach to service provision, which taps the strengths of a variety of organizations, is necessary.

*Most farmers learn new ideas from other farmers, not from organized extension services.*

### **Work with partners skilled in providing advisory and other services.**

In many countries, NGOs and the private sector have the capacity to support local development and bring to the table particular skills. The Namibian Association of CBNRM Support Organizations (NACSO), a community support organization, is a good example of a platform for coordination of and collaboration among a range of service providers.

### **Facilitate farmer-to-farmer and group approaches.**

Most farmers learn new ideas from other farmers, not from organized extension services. These processes can be optimized and adapted. Group

approaches facilitate learning and promote economies of scale.

### **Strive for cost-effectiveness and cost recovery, and privatize services where appropriate.**

To the extent possible, services should be provided on a cost-sharing and cost recovery basis. (This is true to a greater extent than often realized, as local communities' ability to pay is often greater than claimed.) This not only encourages financial sustainability, but also helps to improve quality and promote accountability. Services can also be contracted out to the private sector or privatized.

### **Promote new ways of organizing research, education, and extension.**

Along with new models of RKIS, there are also innovations in organizing research, education, and extension. In Mali and Uganda, for example, block grants are provided to community-based organizations and farmer associations, which in turn contract for specific research, training, and extension services.

# Nature, Wealth, and Power in Namibia and Botswana

In the past decade, both Namibia and Botswana have developed programs and approaches for extending the economic benefits of ecotourism development to lower income households in communal areas, while working with good results to meet environmental conservation objectives. Both countries implemented programs that moved NRM away from state ownership and centralized control toward a system that supports community-based organizations and local rights.

Namibia chose to support:

- ♦ **Conservancies**—legally recognized and democratically governed associations of community members living in a designated area with specific, devolved rights to benefit directly from natural resources and responsibilities for their sustainable use and management.
- ♦ **Decentralized participatory NRM systems** with locally defined, enforceable controls on resource access, agreed-on limitations on land use, tools to ensure sustainable use and regeneration of resources, and transparent, accountable procedures to allocate benefits.

A landmark policy on conservancies enacted by Namibia in 1996 and subsequent policy and legislative reforms and guidelines have established a relatively straightforward, transparent process for local communities in communal areas to:

- ♦ Mobilize and register interested community members;
- ♦ Adopt a constitution and by-laws;
- ♦ Identify boundaries of management areas;
- ♦ Commit to a plan for sustained yield management of their natural resources;
- ♦ Organize resource monitoring and planned harvesting;
- ♦ Agree on a plan for distribution of benefits.

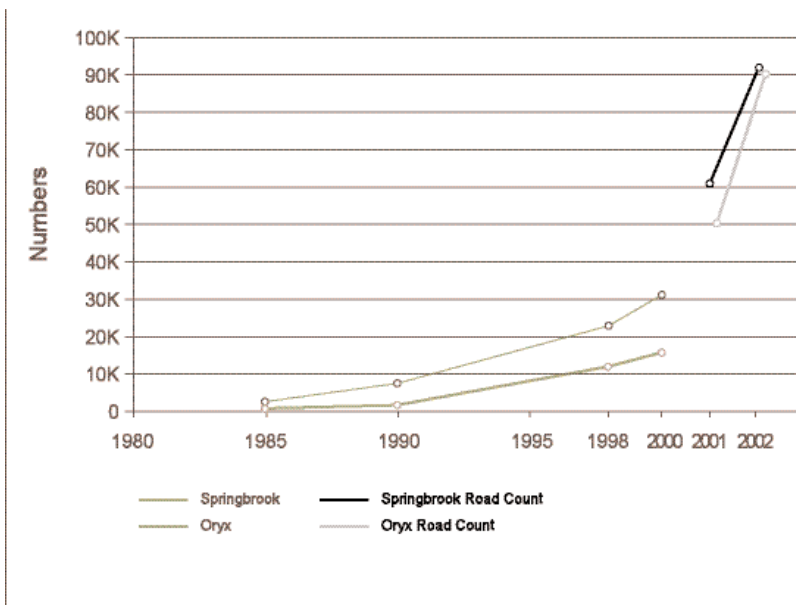
The conservancy is then legalized and entitled to obtain the rights and benefits of managing wildlife and other natural resources within its area. These communities also agree on approaches to improve land use and receive support on negotiating joint ventures with private sector investors on various economic activities.

In the past decade, overall impacts have been significant:

- ♦ **Greatly increased wildlife populations.** Annual harvestable value of wildlife to landholders in North West Namibia (assuming all policy limitations are removed) has increased roughly from US\$65,000 in 1980 to US\$2 million in 2000, and key populations have increased dramatically. (See figure 1.)

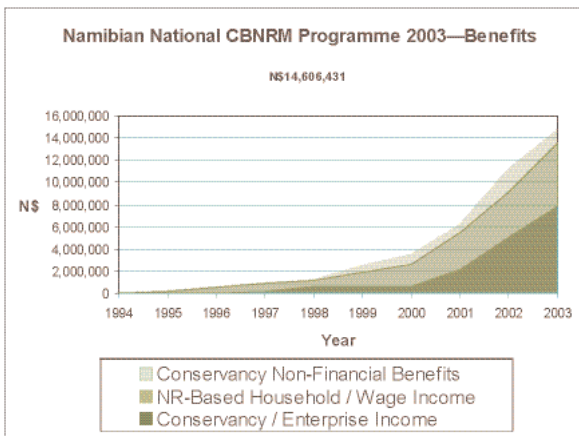
**Figure 1: Nature—Environmental Benefits  
Increasing Wildlife Populations**

Springbok and Oryx numbers in northwest Namibia

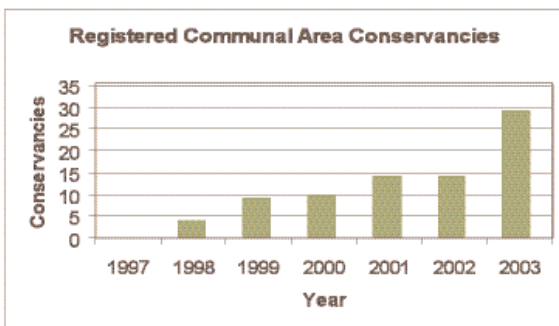


**Figure 2: Wealth—Economic Benefits to Communities**

(Conservancies began to be legally recognized in 1998.)



**Figure 3: Power—Increases in Participation**



- ◆ **Set the stage for significant expansion of major wildlife-based tourism.** The industry is roughly valued at US\$10 million a year; community benefit is still restricted to wages (US\$1 million a year). With careful investment and prioritization, largely in business and institutional capacity, tourism in conservancy areas could earn US\$35–40 million a year. If US\$3–4 million in user fees accrue to conservancies and a similar amount is paid in wages, per capita income of the 60,000 people living in viable conservancies will rise by \$115, doubling the average annual income for a rural Namibian from \$100 to \$215. Already, communities have benefited greatly since the 1996 policy. Income has gone from about 500,000 Namibian dollars in 1996 to more than 14 million in 2003. (See figure 2.)

- ◆ **Empowered communities through organization of conservancies.** Almost 30 conservancies are now registered. More than 35 additional community conservancies are in formation. With support from the Ministry of Environment and Tourism, NGOs, and others and a dramatically recovered resource base, conservancies have begun to benefit directly from game hunting and community-based tourism and are moving toward financial viability. (See figure 3.)

- ◆ **Supported institutional reforms, training, and development of ten functioning NGOs and support organizations.** Half of these are headed by previously disadvantaged Namibians. Increasing numbers of NGOs and other support organizations are joining and strengthening partnerships to promote CBNRM. The Namibian Association of CBNRM Support Organizations (NACSO), which includes the Ministry of Environment and Tourism, established a secretariat, won funding, fostered working groups to address key issues, organized a planning conference, and developed a strategic vision for itself and the national CBNRM program. The Ministry of Environment and Tourism is poised to expand its role by staffing a CBNRM Support Unit with 29 field officers.

A similar story can be told for Botswana. Supported by the USAID Botswana Natural Resources Management Program (BNRMP), in the mid-1980s, its government established legally recognized community-based “trusts” that could enter into contracts. The government also passed the Joint Venture Law allowing trusts to negotiate directly with operators on establishing wildlife-based enterprises. BNRMP provided the trusts with business and organizational training and legal assistance, as well as training on dealing with problem animals and doing animal censuses. The Department of Wildlife and National Parks began supporting and collaborating with the trusts on censuses and reducing poaching. The program continues without direct USAID support.

In both the Namibia and Botswana programs, local groups now participate more actively in decisions affecting their livelihoods. In some cases, they are moving toward integrated land use planning. In other cases, they are participating in the supply of social services and holding local government more accountable. In Botswana, the national federation of community-based organizations (BOCOBONET), with some 50 community trusts as members, not only provides membership services but has contributed to rural and natural resource management policy development and has advocated for community rights. Communities are becoming more enfranchised.

# WEALTH

## Economics



Africa is in transition. Ongoing changes imply a structurally different economy and society. In economic terms, they are leading to a different ratio of land to labor and to the inevitability of new production systems if income is to be maintained. The stakes for resource access and control are rising, as evidenced in struggles over resource tenure throughout Africa. In

socioeconomic terms, there are both winners and losers. Production systems have often failed to adjust to growing pressure, and individuals, households, and communities are facing new economic realities, both good and bad. Five principles help to organize specific action recommendations:

### Wealth: Principles and Action Recommendations

#### 1 Be strategic about the economics of natural resource management

- Coordinate NRM resource allocation appropriately
- Plan and invest at national, regional, local, and micro levels
- Focus on changing tomorrow's economy
- Encourage an enabling environment
- Support alternative income strategies

#### 2 Strengthen markets and make market incentives a more important part of NRM strategies

- Help build competitive rural markets
- Promote and/or facilitate joint ventures

#### 3 Invest in rural organizations as the long-term "building blocks" of rural development

- Promote self-reliance
- Promote and fund local credit schemes
- Emphasize transparency and financial sustainability
- Create systems that facilitate market participation

Promote establishment of robust rural groups and federations

#### 4 Create a framework in which people can make better NRM choices in their own self-interest

- Promote NRM solutions that make financial sense and foster economic opportunity
- Apply design and operational principles and undertake economic analysis
- Assure that strategic plans address tenure arrangements

- Explore ways of assuring payments for environmental services

#### 5 Assure that resource managers have—and perceive themselves to have—secure access to the means of production and the benefits of their NRM investments

- Plan for how changing production requirements interact with land tenure systems.
- Foster clear, stable, legitimate and democratic, common property management
- Encourage and protect clear tenure and property rights systems

# 1

## Be strategic about the economics of natural resource management

*African countries need to affect the problem as a whole, so the negative impacts of environmental mismanagement will not engulf them.*

Most African countries have very limited budgetary resources, even with the help of donors. Donor assistance, itself, is too often focused in specific areas with only a few beneficiaries using defined programs with goals that are likely to be achieved. Money and other resources are lacking, however, to manage the environment “one project at a time,” particularly when incentives that reward people for mismanagement are built into the system.

One of the greatest dangers is the syndrome: “I don’t have the money to save the patient’s life, so I’ll focus my resources on fixing his broken leg.” But dead men don’t walk, and someone must be responsible for providing life-saving help. To be effective, natural resource strategies must recognize that African countries need to affect the problem as a whole, so the negative impacts of environmental mismanagement will not engulf them.

### **Coordinate the allocation of limited resources for NRM in ways that are appropriate to the scale of the problem.**

Countries need to decide whether a given activity is the best use of scarce financial and institutional resources. They need to encourage donors to address agreed-on priorities and improve their coordination with one another, particularly at the level of programming assistance.

### **Plan and invest at national, regional, and local levels, in addition to micro levels.**

Strengthen the government’s ability to program resources, analyze budgets, and assess needs. Focus on assuring that programs respond to the emerging and changing incentive structures that small producers face. Include “trend analysis” as part of the core analytical framework for making programming decisions.

### **Current Outlook**

Convincing and pervasive evidence from Africa supports the value of being strategic in allocating resources to manage natural resources:

Many of the most successful and innovative initiatives to manage natural resources documented in the past two decades took place in zones where people are responding to new opportunities associated with local “growth poles,” that is where population increase has supported economic growth. Many cases of this have been documented in Niger and Mali. Reports on the potential for regional economic integration in Southern Africa provide a number of examples where increased economic growth has improved the return on NRM investments. One of the most striking comes from the growth of managed wildlife zones as part of ecotourism promotion.

Studies throughout Africa consistently show that villages within urban “zones of market influence” (with a 100–150 kilometer radius) have been able to invest in improved NRM that capitalizes on urban market demand. More broadly, both scientific and economic studies suggest subsistence production can no longer meet the consumption needs of today’s population levels, because natural regeneration alone cannot replace the soil nutrients being used up annually in production. This in turn suggests that the future of rural production—and, hence, of rural NRM—will be driven by what is changing, not by the past.



## Focus on changing tomorrow's economy, not yesterday's.

Capitalize on underlying trends that are driving the economy and peoples' lives, because these trends will determine other choices people make. Instill an understanding in field staff, NGOs, and donors that (a) many of the most promising NRM activities are economic activities that should take place where economic opportunity exists and (b) tomorrow's economy will look a lot like those areas.

## Encourage an enabling environment for solving environmental problems.

Focus programs and, in particular, donor assistance on creating building blocks, including a sound and enforced policy framework, rural organizations, core

market infrastructure, and programs and infrastructure that are coordinated with other sectors, including health, education, and agriculture.

## Support alternative income strategies in times of drought, conflict, and other emergencies.

Coordinate (or even integrate) NRM strategies better with those for disaster management and economic development. Often the best NRM investments are in labor or financial markets unrelated to natural resources. Safety nets based on public works programs, rainfall insurance, and the like sometimes provide new investment (e.g., reforestation), but, more important, they can almost always defend against temporary resource overexploitation in times of stress.

# 2 Strengthen markets and make market incentives a more important part of NRM strategies

Sound NRM strategies must rely on sound economic policies and principles. Maintaining rural productive potential in the face of growing demographic and structural pressure will require the widespread use of external inputs. This in turn will require increased cash income to purchase such inputs. The move from subsistence to managed production systems depends on the degree to which markets send appropriate signals and can generate sufficient income to finance resource management investments.

The poorest and most at-risk populations will often require outside assistance to build skills and con-

fidence for investing in natural resource management. For those closest to the margin of subsistence, any change—even one that potentially increases income—may also carry an unacceptable level of risk. In these instances, market incentives alone will not be sufficient to bring about the desired change. Nevertheless, “lending a hand” to vulnerable populations can and should be done in ways that do not distort markets, undercut efficiency, or create long-term dependency. A great deal has been learned about how to do this, and a number of viable approaches have been tested and proven in the field in the past two decades.

*Rural populations are not just custodians of the land, but also “shareholders” in it.*

### **Promote efficiency by helping build competitive rural markets that promote rural development.**

Base resource management strategies on sound economic principles, especially with respect to markets and subsidies. Pay attention to developing roads and communications infrastructure so as to encourage competition among buyers and reduce costs of internal and external trade. Use accessible and reliable market information to help rural producers get fair market prices. Current price structures based on a small number of buyers depress farmer prices and remove much of the incentive for rural investments.

### **Promote and/or facilitate joint ventures between rural communities and private businesses.**

Emphasize that rural populations are not just custodians of the land, but also “shareholders” in it; this has promoted better overall stewardship of resources throughout East and Southern Africa. As “shareholders,” rural people can enter into contracts to enhance the value of their resources and vastly increase the revenue generated from them.

#### **Current Outlook**

Several sub-Saharan African countries have experienced rapid and robust economic growth and rural investment because of market-oriented policy reforms. Mozambique and Botswana provide excellent current examples. On the negative side, price controls, restrictive regulatory frameworks, and other vestiges of “command and control” economics have left a legacy of both economic stagnation and resource depletion.

In the wildlife zones of East and Southern Africa, including in Botswana, Zimbabwe, Kenya, Namibia, and South Africa, innovative joint ventures between local communities and private tourism investors have brought professional international tourism skills to bear, while giving local communities a significant income and ownership stake in environmental and wildlife conservation.

# 3 Invest in rural organizations as the long-term “building blocks” of rural development

Beyond the obvious social, governance, technical, political, and cultural benefits of development with reduced dependency, important economic reasons exist for investing in rural organizations:

- The evidence is clear that rural organizations can help mobilize substantial local savings.
- Well-managed and locally controlled rural organizations create economies of scale and contribute to higher economic returns for the rural poor.
- Models built on local credit and local savings are much more cost-effective and far more replicable than those relying on external financing.
- The vast majority of money goes directly where it is intended to go: repayment rates for locally managed credit programs are astonishingly high (often more than 95 percent), and overhead expenses stay within the community.
- Most important, “local ownership” of the process unleashes powerful incentives for cost control and program efficiency, whereas external funding often sets up the opposite dynamic.

Trust and credibility (social capital) are key to the successful operation of rural organizations. The best guarantee of “sustainability” is people’s choice over what makes the most financial sense for them. Transparency and a sense of ownership in rural organizations are critical for keeping them responsive to both individual and market needs.

## Promote self-reliance by building a development framework that recognizes, values, and builds on rural smallholders’ existing capacity to mobilize their own savings and resources.

Examples include rural credit cooperatives, and remittances. Credit and savings cooperatives have proved low cost and highly effective. They build self-reliance; have an excellent record for targeting women, who are often left out of project schemes; and show outstanding repayment rates. Most important, appropriate and accessible credit makes a major contribution to NRM investments as well as to overall economic growth.

## Promote and fund local credit schemes.

Build on and replicate successful models, sponsor visits to communities where successful credit schemes are operating, and assure that the legal and regulatory framework provides the right incentives—and does not create hindrances—for locally managed credit programs.

## Emphasize transparency and financial sustainability.

Do so from the outset within the rural organizational structures that take the lead on credit, marketing, and common property management.

## Create systems that help small farmers actively and fairly participate in markets for rural goods and services.

The most important of these measures will be to help smallholders create and manage rural economic organizations such as marketing cooperatives. Rural popula-

*The best guarantee of “sustainability” is people’s choice over what makes the most financial sense for them.*

*By themselves, rural groups have limited influence on policies and markets; confederations, however, produce economies of scale, critical mass, and advocacy effectiveness.*

tions are often so poor that they cannot intervene efficiently in markets. As individuals, farmers are also at a severe disadvantage in negotiating with market intermediaries. Invest in information systems and approaches to improve farmer/cooperative competitiveness.

### **Promote the development of business-based, well-governed rural groups and their confederation.**

Focus project/program assistance resources on helping rural communities establish and manage local organizations. Invest in developing practical guidelines that can be applied widely. Invest in local language tools, information, and training modules. Pay particular attention to assuring that organizations are not “hijacked” by local power elites. Encourage groups to be representative in their selection of members and officers so that they ensure open par-

ticipation and that the best people hold key positions. Provide adult literacy and numeracy to a large percentage of members and provide organizational, negotiation, and enterprise management skills to key personnel. By themselves, rural groups have limited influence on policies and markets; confederations, however, produce economies of scale, critical mass, and advocacy effectiveness. Examples include federations such as farmer cooperatives, as well as groups that are more focused on local natural resource management needs, such as the Botswana Community-Based Organizations Network (BOCOBONET) and Community Organizations Regional Network (CORN based in South Africa). Such groups have the legitimacy and credibility to speak on behalf of the rural people and community-based organizations that make up their constituency.

## **4 Create a framework in which people can make better NRM choices in their own self-interest.**

Effective strategies for improved NRM, economic growth, and better governance all lead to the same conclusion: to achieve the efficient and competitive economy needed, what people do—and how they do it—must be driven by real economic choices that make sense in local situations. Many projects have failed and millions of dollars of precious resources have been squandered when project designers failed to see the world from the perspective of the intended beneficiaries.

Everywhere people live and work, they respond to different local opportunities, constraints, and habits. Wildlife-based ecotourism makes less sense in Mali than in Kenya. Community-based NRM may not be the best approach for private farmlands, but may be essential for managing the commons. It should not be surprising that rural households respond like households everywhere: if resource management options do not improve people’s welfare in the near term, widespread adoption is much less likely and, hence, “scaled-up” impact is highly unlikely.

*Smallholders are investing in improved resource management in response to necessity and market opportunity. This farmer in Burkina Faso has systematically protected natural regeneration in his fields.*



Evidence from throughout the continent shows that small farmers respond to market incentives. Marketing cooperatives and other ways in which farmers improve their market access and leverage capital dominate organizational needs for on-farm NRM. Common property management, on the other hand, requires other forms of social and economic organization and new legal frameworks that allow villages to take ownership of communal lands and create rules for access and allocation of benefits.

**Pay close attention to whether improved NRM solutions make financial sense to those who will adopt and implement them. Focus meaningful effort on helping people create cash income and economic opportunity through improved NRM.**

Understand NRM as an economic activity for which people must use their time and energy and from which they expect a return. Promote NRM options that generate cash income, and be careful about proposing solutions that increase work burdens—especially for women—during peak agricultural seasons. This will necessarily focus attention on localized market-driven opportunities where they are appropriate and will yield a richer, more complex, and more meaningful menu of options to fit real life needs.

**Systematically apply certain design and operational principles and undertake economic analysis.**

Apply cost-benefit analysis systematically from the user perspective (for both internal and external funding), including looking at different gender perspectives. Support thoughtful and in-depth interviews and “market analysis” for planned programs. Analyze markets, trade links, and emerging demand carefully.

**Assure that strategic plans address the range of tenure arrangements, including common property resource management and improved on-farm NRM.**

Both are vital and roughly coequal contributors to environmental status; yet the incentives, organizational structures, technologies, and public investments needed to improve management of common property resources may be somewhat different from those needed to improve on-farm NRM.

**Explore ways of assuring payments for environmental services.**

Rural people assure many environmental services, such as watershed management and carbon sequestration, but compensation methods are inadequate or just emerging. Exploring ways to value and compensate for environmental services will increase the attractiveness of good management.

*If resource management options do not improve people's welfare in the near term, widespread adoption is much less likely.*

# 5 Assure that resource managers have—and perceive themselves to have—secure access to the means of production and the benefits of their NRM investments.

*Tenurial systems that depend on resource allocation by political leadership become prone to insecurity and exclusionary practices.*

NRM often involves long-term investments. Customary resource tenure systems function well in stable communities and where land/labor ratios are high. As pressure increases on the land and communities become more complex, tenurial systems that depend on resource allocation by political leadership become prone to insecurity and exclusionary practices that undermine investment incentives and displace the weakest members of society. It will require support from the highest political levels and may involve important political tradeoffs to reach the desired agreements. The effort will benefit from the backing of donors as well.

## Plan for interventions based on the interaction of production requirements with land tenure systems.

Traditional production systems typically rely on rain-fed agriculture with little or no use of commercial

inputs. Maintaining soil fertility at current levels of population density will require increasing levels of intensification, including application of fertilizer, managed water/irrigation systems, and a degree of physical infrastructure (both man-made and natural) on the land. As farmers make these investments, they build the “natural capital”

of specific parcels of land and the importance of secure, long-term tenure over that specific parcel of land sharply increases. Some traditional tenure systems have adapted to respond to these new circumstances; others have not. Plan around these sets of relationships—which may differ among locations and cultures, because they often drive financial viability of NRM investments.

## For common property management, couple community management rights with internal management systems that are seen as clear, stable, legitimate, and democratic.

If we are to move successfully from project-specific to more generalized schemes for community management, the generalized “rules of the game” will require considerable clarification and strengthening. The complexity of this task, however, should not be underestimated, because local circumstances, traditions, resource endowments, and institutional capacities vary greatly. The challenge will be to find policies that provide across-the-board incentives, while maintaining the flexibility to respond to local needs.

## Establish or reinforce clear systems of secure tenure and property rights and protect those rights against illegal asset seizure or destruction.

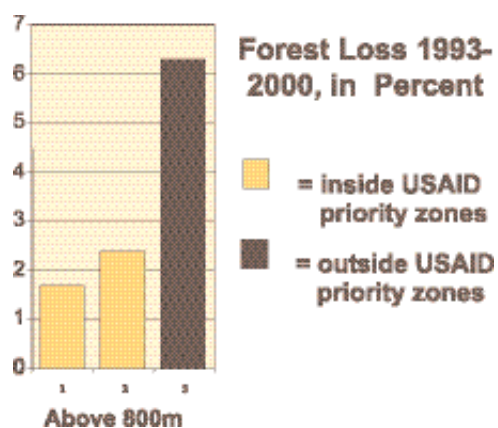
No one will invest in maintaining, much less improving, resources over which they do not know they have secure, long-term claims. The need exists to eliminate open access areas (which must not be confused with common property areas).

### Current Outlook

Improved NRM on farmlands is an issue everywhere, particularly where resource degradation threatens agricultural yields. Evidence from Kenya, Ghana, Madagascar, and Rwanda, among others emphasizes the importance of secure property rights in stimulating the planting of trees, construction of soil and water conservation structures, terracing, and other NRM investments. Traditional systems remain effective in stable communities. Where economic transitions are sharp or in-migration considerable, however, rapidly increasing land conflicts need quick, clear, and just resolution guaranteeing long-term access.

# Nature, Wealth, and Power in Madagascar

**Figure 1: Nature—Percent Forest Loss, 1993–2000, in Forests above 800 m**



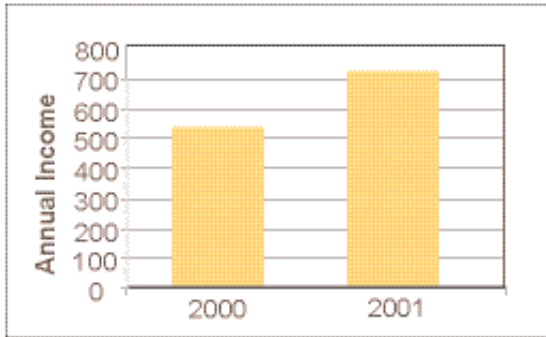
In the past four years, program investments in rural areas of Madagascar designed to conserve biodiversity and improve management of forests and other natural resources, while reducing poverty have begun to yield impressive results. Dependence on slash-and-burn agriculture has decreased, while farmer incomes have risen by an average of 37%. (See figure 2.) Average yields in targeted groups have increased for rice (from 1.06 T/ha to 3.27T/ha), potatoes (from 1.5T/ha to 10.5T/ha), maize (from 0.55T/ha to 2.19T/ha), and beans (from 0.46 T/ha to 0.87 T/ha). Deforestation rates in zones targeted for environmental conservation and economic development have significantly decreased—in 1993–2000, from 6.7% in control areas to 2.2% and 3.8% in targeted corridors. (See figure 1.) Protection and management of adjacent national parks has also improved, and revenues from park visitation and eco-tourism are now benefiting adjacent communities.

After a decade of substantial investments to reduce slash-and-burn farming—a major cause of environmental degradation—and conserve the country’s biodiversity and natural resources, Madagascar now focuses on reinforcing synergies among agricultural intensification and food security, economic growth and poverty alleviation, and environmental sustainability. Program investments have focused on local farmers and their communities as the common element in all these desired conditions.

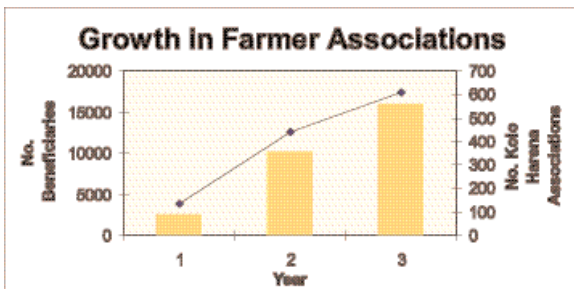
Madagascar’s National Environmental Action Program (NEAP) concentrated activities in its first phase around priority protected areas using an ICDP (integrated conservation and development project) approach. International NGOs implemented community-centered activities limited to a 5-km “buffer zone” around protected areas. One major lesson was that economic, social, and infrastructure conditions well outside the “buffer zones” were causing substantial pressure on priority ecosystems. In addition, costly and time-consuming preparations of management plans for remaining areas of natural forest did not significantly reduce forest loss or improve socioeconomic well-being among communities living around forests targeted for management.

The program addressed these lessons in its second phase. Investments shifted to community-centered interventions to reduce slash-and-burn agriculture; a much larger eco-regional approach that acknowledged regional-level economic, social, and infrastructure development concerns; and a major emphasis on developing the capacity of local NGOs and farmer groups to prepare them to address the social, economic, and infrastructure needs necessary to reduce slash-and-burn agriculture, while protecting natural resources. A number of pilot community-based forest

**Figure 2: Wealth—Increases in Farmer Income**



**Figure 3: Power—Growth in Farmer Associations**



management efforts have also begun to transfer forest management rights to local communities and empower them to undertake sustained yield harvesting of forest products.

The USAID-funded Landscape Development Interventions (LDI) program, developed in 1998, is encouraging farmers to adopt a farming systems approach that is more sustainable and profitable than slash and burn. The program emphasizes empowering farmers by developing producer groups and a farmer-to-farmer information-sharing system.

USAID also funded the Environmental Management Support Project (Projet d’Appui a la Gestion de l’Environnement or PAGE) to address environmental policy, legislative, and institutional constraints and opportunities in environmental impact assessment, sustainable financing, ecological monitoring, forest governance, and communication.

Some keys to the impressive results achieved through Madagascar’s NEAP and associated investments include:

- ◆ Training in forest rights at the community level motivating communities to mobilize support for community-based forest management and related NRM and rural development activities. Training and communications have used puppet shows, theatre presentations, and local language summaries of key policy and legislative principles. Communities and associations trained in forest rights increased from 50 in 1999 to more than 400 in 2002.
- ◆ Formation of farmer associations—focal points for extension activities, mobilization of credit, improved access to markets, and training in support of crop diversification and intensification—to extend a farming systems approach. More than 600 associations with more than 16,000 members now exist. (See figure 3.)
- ◆ Maintenance of rural feeder roads and assurance of continued operation of critically important railway links between farms and markets.

The net effect has been to provide a range of alternatives for income-generating and economic opportunities not tied to continued slash-and-burn farming in shrinking forest zones. The stage is now set as well for significant expansion of small- and medium-sized forest-based enterprises, based on sustainable production of a variety of products from community-based forest management areas.



# POWER

## Governance



*Good governance has been shown to be a key to managing natural resources and promoting economic growth.*

Governance reforms affecting natural resource management are sweeping much of Africa. These reforms have profound implications on which individuals and institutions will be empowered to decide on using and managing natural resources.

Environmental management is political. Access to resources and distribution of their benefits are often politically charged and contentious. Underdevelopment, environmental degradation, poverty, and famine result not so much from a lack of natural wealth, but from decisions and systems, often political in nature, on the distribution of resource wealth and relevant citizen

rights. Mismanagement of these resources can contribute to and exacerbate conflict and corruption. Good governance is key to managing natural resources and promoting economic growth successfully in Africa.

Environmental governance is embedded in larger governance concerns. Good governance in general terms is needed for development writ large. Better governance of natural resources is only one aspect of this equation—although an important one. This section concentrates not on the larger governance issues, but on those that more directly affect NRM. Six principles help to organize specific action recommendations:

## Power: Principles and Action Recommendations

### 1 Strengthen procedural rights for rural people

Promote understanding of and access to procedural rights

Assure that rights include information access, decision-making, and environmental recourse

Assure rights of association, speech, movement, and access to government institutions

Strengthen environmental legislation

### 2 Improve rural representation and amplify rural voices in public decisions that affect their lives and well being

Build and strengthen independent organizations that represent rural views

Contribute to performance of government officials and institutions with rural representation

### 3 Distribute environmental authority and functions to institutions best positioned to exercise them

Encourage inclusive national-level debate to guide restructuring of natural resource governance

Shift the role of central state authorities from command and control toward technical support and legal oversight

### 4 Transfer environmental powers to authorities representative of and accountable to local populations

Transfer discretionary decisions before obligations

Make transfers in the form of secure rights

Transfer powers even before capacity is demonstrated

### 5 Explore a minimum environmental standards approach

### 6 Encourage checks and balances, pluralistic approaches, and conflict management

Create or modify forums for NRM discussion

Recognize that NRM conflicts can present learning opportunities and facilitate conflict management

Promote social approaches that do not depend on consensus and help identify losers and problems

# 1 Strengthen environmental procedural rights for rural people

*Citizen vigilance allows environmental problems to be identified and addressed at an early stage and complements government inspection and enforcement efforts.*

A positive development in the past decade has been the granting to citizens of substantive environmental rights by most new constitutions and new national environmental management statutes in Africa, often supported by multilateral environmental agreements. Most constitutions also place duties on citizens to protect the environment and manage natural resources wisely.

To realize these environmental rights—including, in particular, property rights over land and natural resources—and fulfill constitutional obligations to safeguard the environment, citizens and their associations need effective guarantees of certain civil liberties and procedural rights. For example, citizens must be empowered to hold individuals and institutions with environmental rights, roles, and responsibilities and, indeed, all resource users—large and small, public and private—accountable for their decisions and actions.

## **Promote understanding and access to constitutional, legal, and regulatory rights and environmental procedural rights.**

Many countries (including Mali and Mozambique) have made significant efforts to translate and diffuse appropriate NRM legislation to make it more understandable and accessible to local people. Some coun-

tries, such as Madagascar, have organized training programs not only to inform people, but also to build capacity to exercise their rights.

## **Assure that rights include, but are not limited to, three procedural rights: access to information, decision-making processes, and recourse in environmental matters.**

Adequate access to information fosters the public's awareness of environmental issues and its capacity to develop alternative policy proposals. Citizen vigilance allows environmental problems to be identified and addressed at an early stage and complements government inspection and enforcement efforts. By participating in administrative review processes and making use of the courts, citizens can also foster compliance with national laws and ensure fair distribution of environmental goods and compensation (as well as costs) for environmental injuries.

## **Assure environmentally related rights of association, speech, and movement and access to government institutions with environmental roles and responsibilities.**

Government institutions with NRM roles include the cabinet, legislature, national environmental protection agency, and local governments. Examples of important liberties include the right to file a petition, submit a private bill, provide testimony (including in a parliamentary hearing), attend parliamentary sessions, and access the parliament library and documents. These rights are more often articulated in parliamentary rules of procedures, than in national legislation. The importance of rights of association for NRM groups and their ability to be legally recognized is illustrated in the boxes on Namibia, Madagascar and Mali (see pages 13, 23, and 32.)

## **Rio Declaration on Environment and Development, 1992**

*Principle 10: Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.*

**Strengthen environmental legislation on procedural rights, including companion regulations; repeal contradictory legislation; and remove loopholes, such as “claw-back” clauses.**

Language in legislation should clarify the specifics and reduce administrative discretion and official arbi-

trariness inconsistent with the spirit of sound environmental management.

In Namibia, legislation on wildlife management was followed up with clear accompanying regulations, which facilitated the formation of conservancies—community-based organizations with wildlife management responsibilities (see page 13).

## **2 Improve rural representation, facilitate organizational development, and amplify rural voices in public decisions that affect their lives and well being**

Central government decisions need to be made with the participation of local people and state recognition of rural needs. Recent trends in this direction need to be reinforced. National policy and government actions increasingly address the environmental views of the rural majority in general or natural resource interests of specific communities in particular. Governments are increasingly addressing environmental matters, trying to balance broad national interests, global environmental concerns of the international community, private interests of the powerful interest groups, and rural concerns. This balancing act is not easy, but the boxes on Namibia, Madagascar, and Mali (see pages 13, 23, 32) describe examples where the interests of rural people and—given their nature-based economies—their local livelihoods, human welfare, and social well-being are being integrated at the national level.

Reforms supporting political liberalization and democratization have in some countries begun to devolve responsibilities and authority over natural resources to local leaders to enable them to address the needs of

rural people adequately. In general, local governments lack the autonomy to be downwardly accountable to their constituency. It is, therefore, critical to amplify the voices of the rural majority in public decisions that affect their lives and well-being as well as improve rural representation in central government.

**Build and strengthen independent civil society organizations that represent rural views and positions.**

Many African countries have seen a virtual explosion in the numbers of local NGOs and civil society organizations. Although some of these organizations are weak and confusion exists on their mandates, many are providing important checks and balances, oversight, and development functions. Civil society organizations are helping to draft environmental policies and legislation in a number of countries, such as Uganda and Mali, and are performing valuable advocacy and lobbying functions on behalf of rural people. Federations such as BOCOBONET and CORN are particularly valuable.

*Central government decisions need to be made with the participation of local people and state recognition of rural needs.*

### Contribute to the performance of government officials and institutions with rural representation responsibilities.

Of the three branches of central government, the legislature (principally parliaments in Africa) serves as a main bridge between citizens and the state. Legislators

are well positioned to represent the interests of their electors in public decision making. Actions can include reforming electoral laws to strengthen legislator/elector links, creating more space between politicians and their political party, and better protecting the parliament from executive-derived political pressure.

## 3 Distribute environmental authority and functions to institutions best positioned to exercise them

Recently, there has been a strong call for the reallocation of powers among different levels of the political-administrative hierarchies of government and between government and private actors. Decisions that can be made by citizens without any regulation should be established within the domain of citizen rights. Decisions that can be made by representative local

government or local nonstate actors without jeopardizing social and ecological well-being should be retained at that level.

### Encourage inclusive national-level debate on the appropriate distribution of powers among different levels of governance to guide the restructuring of natural resource governance successfully.

Principles are needed to guide the selection and location of powers among levels of government and between public and private spheres concerning all powers over natural resources. These powers include executive (decision making, implementation, and enforcement), legislative (rule making), and judiciary (dispute resolution and recourse) powers. This highly charged political task requires an inclusive national-level debate in an enabling environment that allows rural and other voices to weigh into decisions. Participation or the involvement of elected representatives may slow the process of designing and implementing conservation or sustainable use policies. It may, however, also be the best way for institutionalizing participation and creating an enduring management process.

#### Current Outlook

In the past decade or so, several countries in Africa have enacted legislation to establish new or strengthen existing apex, national-level environmental protection agencies, such as the National Environment Management Authorities in Kenya and Uganda and the Environmental Protection Agency in Ghana. In many cases, these agencies have been given the mandates and authority to perform tasks deemed appropriate for a central agency. For example, many have responsibilities for developing national environmental management legislation, including:

- ♦ Environmental impact assessment regulations
- ♦ Setting minimum environmental standards and assuring local input into the setting of standards so that they are adapted to local contexts
- ♦ Regulating the use of public and private natural resource use
- ♦ Leading national efforts in support of global environmental issues
- ♦ Coordinating and advising on environmental matters across sectoral ministries up to regional bodies and down to local governments.

Equally important, they lack implementation and service provision roles or powers to use natural resources directly for commercial purposes (such as government logging), as many central environmental ministries inappropriately had in the past and some continue to have.

Many powers and decisions should be located with central government. These often include, among others, the establishment of a legal enabling environment and the making and implementation of national policies concerning foreign policy, defense, monetary policy, and standards for health, education, welfare, poverty reduction, and the environment.

For the environmental sector, these powers would include, among others, establishing a broad legal framework in which the public can hold national decision-making bodies accountable, setting national environmental priorities, setting minimum environmental standards, and assuring implementation and enforcement of these laws.

**As powers are decentralized to local authorities and minimum environmental standards are developed, make a parallel shift in the role of central state authorities from command and control toward technical support and legal oversight.**

Rather than designing and implementing projects that exercise direct resource-use law enforcement and oversight, the roles of central agencies should be to assure that appropriate skills and information are available to local people and that local decentralized authorities and institutions are acting within the guidelines and standards of the law.

*Principles are needed to guide the selection and location of powers among levels of government and between public and private spheres concerning all powers over natural resources.*

## 4 Transfer environmental powers to authorities representative of and accountable to local populations

Many natural resource experts and managers have advocated decentralization for improving management efficiency as well as equity and justice for local people. Significant power transfers and accountable, representative local institutions are necessary elements of effective decentralization. The powers over natural resources that central governments and environmental ministries have allocated to local authorities are often limited and highly controlled through oversight and overbearing management-planning requirements. The local institutions and authorities that receive these powers may also not be downwardly accountable to local populations.

To deliver the benefits of participation, it is essential that decentralization place meaningful discretionary powers in the hands of locally accountable representative authorities. It is a matter of establish-

ing the necessary institutional infrastructure—empowered representative local authorities—across national territories. In the absence of other accountability mechanisms, elected bodies are preferred to appointed, self-selected (NGOs or private bodies) or hereditary institutions (customary).

**Transfer discretionary decisions before obligations.**

One of the priorities and a defining characteristic of decentralization is the creation of a “domain” of local discretion in decision making. Given local autonomy or local discretionary powers, local authorities are more likely to be respected, viewed as legitimate in the local arena, and serve as channels of communication and action around which civil society can form.

*It is essential that decentralization place meaningful discretionary powers in the hands of locally accountable representative authorities.*

### **Make transfers in the form of secure rights, not retractable privileges.**

The degree to which the transfer is secure helps to determine the degree of independence that local authorities have in exercising powers. It also reflects the degree to which governments are serious about creating a domain of local discretionary power, which is basic to effective decentralization.

### **Transfer powers even before capacity is demonstrated.**

Central governments are often reluctant to devolve powers before technical and managerial capacities have been demonstrated. Local authorities, however, need powers to gain the experience necessary for building capacity. In addition, many local natural resource decisions do not require special capacities.

## **5 Explore a minimum environmental standards approach**

*Minimum environmental standards allow for innovation and initiative as well as responsibility to be developed at the local level.*

This approach can serve as an alternative to the current trend toward micromanagement through elaborate and detailed rules and plans. Conditionalities, overbearing approval processes, and excessive oversight represent “claw-back,” minimize transfers, and limit discretionary powers, including over nature. For example, management plans are commonly overly complex, restrictive, and/or prescriptive and require extensive and multiple levels of government approval. These overly complex management planning requirements make it difficult, if not impossible, for local communities to use or manage natural resources with any degree of independence.

An alternative, more effective approach is to set minimum standards, specify goals, set targets, and establish restrictions and guidelines for environmental use and management. Any government agency, private institution, or individual operating within those restrictions and meeting goals/targets needs no approval from a government or management plan to use or manage resources. This allows for innovation and initiative as well as responsibility to be developed at the local level.

## 6 Promote platforms that encourage checks and balances, pluralistic approaches, and conflict management

Failure to manage natural resources effectively and equitably contributes to conflict—at the regional, national, and local levels. Addressing the wealth and power aspects of natural resources can mitigate some of these conflicts. Many of Africa’s larger and more brutal conflicts concern or are fueled by natural resources. Numerous lower-level conflicts over resources also exist. Ongoing democratization and decentralization processes have made the pluralism of local areas more apparent and more concrete; a number of autonomous and independent groups with fundamentally different values, perceptions, and objectives are demanding a role in decision making about natural resource management.

This is a positive development, because it encourages an increasingly robust system of institutional checks and balances. These checks and balances can reduce abuses and errors and provide the “gyroscope” that keeps NRM on track. Governments can no longer totally control this phenomenon. The risk sometimes exists, however, that this pluralism can become so contentious and so time and resource consuming that NRM decisions and actions are delayed or made in suboptimal ways. It is essential to find ways of positively influencing these processes.

**Create or modify existing forums at all levels, but particularly at the local level, where the plurality of actors can assemble and discuss natural resource management issues.**

Several countries are attempting to form platforms at the local level so that the various stakeholders around certain resources can meet and discuss their needs,

vision, and objectives. In many common property situations, it is evident that communication is essential for better management and control of free riders. Providing these forums is an important step toward better management.

**Recognize that NRM can be contentious and conflicts can present learning opportunities. Facilitate process and mechanisms for conflict management.**

Different groups are likely to disagree about issues of substance such as natural resource management. This disagreement, if handled correctly and openly, presents learning opportunities in which diverse viewpoints enrich debates and force new ideas. Support to nonformal conflict management processes can help diffuse conflicts and maximize learning from them.

**Promote social approaches that do not depend on consensus and help identify losers and problems.**

Consensual approaches to natural resource management are intuitively attractive, but present major obstacles. Consensus is positive when freely given and adequately informed, but this is rarely the case. In addition, consensus, even if reached, can impede creativity and productive effort. Other approaches are needed that respect diversity, recognize restrained dissonance or bounded conflict, and respect the autonomy of others.

*These checks and balances can reduce abuses and errors and provide the “gyroscope” that keeps NRM on track.*

# Nature, Wealth, and Power in Mali

Farmers in the upper Niger River Valley region of Mali, despite good agricultural potential, have traditionally practiced subsistence cropping supplemented by some livestock and forest-based activities. Extensive agriculture, over the years, was steadily encroaching on forest cover and forest areas steadily decreased. Land degradation also became an issue as investments in land husbandry did not have good returns from a farmer's perspective.

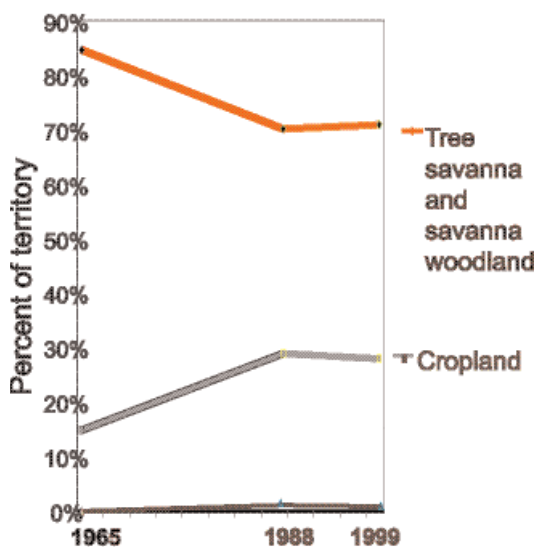
In the late 1970s, to promote rural development in the area, the Malian government initiated Operation Haute Vallee (OHVN), a parastatal in charge of agricultural development and extension for the zone. USAID support also started around this time. Initially a fairly centralized approach was used and government dominated input supply, marketing, prices, extension and a whole range of other functions. However over the past 20 years the organization and the enabling environment have evolved. Especially since 1990 prices have been liberalized, the government has divested itself of many functions in favor of the private sector (including input supply and marketing), strong local organizations have been formed and new techniques have been introduced. The program has brought results: Today, in spite of population increases, many farmers have substantially increased crop yields, stabilized production, and diversified household economies. The majority of communities appear to have reduced or even reversed forest cover loss, while improving their general welfare.

Although there was a wide range of policy and other reforms, a key element to the progress of this area was the development of business-based, well-governed village associations (VAs). Well-managed and locally controlled rural organizations create economies of scale and contribute to higher economic returns for the rural poor. For example, these groups were able to access commercial credit, obtain more favorable prices, reduce marketing and input costs and facilitate extension work. The groups also became active in natural resource management—adopting conservation techniques and controlling free riders. This provided them with more authority and responsibility over local natural resources.

A recent study of seven OHVN-supported communities, along with data and information from two previous surveys (USGS and OHVN), revealed that project progress derived from a synergy of the various programs rather than from any single activity or reform. This research showed that the OHVN program (a) increased revenue-generating activities and markets for communities, (b) extended improved, affordable technologies that increase productivity, and (c) increased numbers of farmers trained in the literacy, numeracy, and management skills needed to function as effective commercial farmers, both independently and in associations. The impacts can be summarized as follows:

- ◆ Farmers in the zone began treating farming as a business—by investing and diversifying. Management training by the Cooperative League of the USA (CLUSA) helped a broad range of communities form VAs. Having both legal

Figure 1: Nature—Evolution of Forest and Farm Cover from 1965 to 1999: Village of Sanambélé



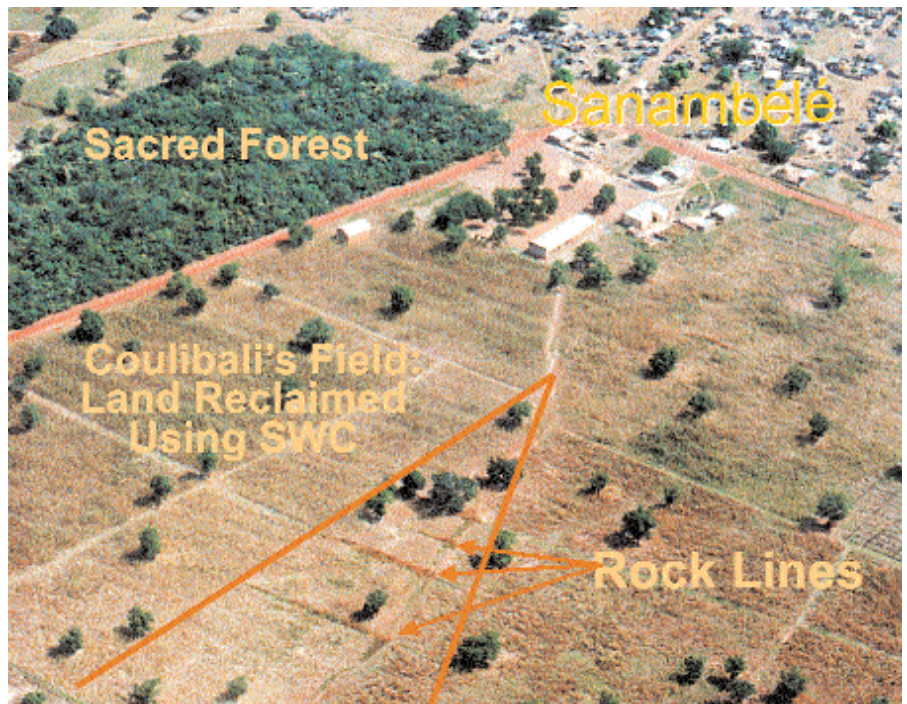


stature and business skills, the VAs successfully obtained and repaid loans with commercial banks, countering the perception that rural people are poor business partners.

- ◆ Policy reforms increased incentives to invest in both farm and forest land. Farmers intensified their farming by adopting one or more NRM practices developed by the program. In about 12 years, producers investing in rock lines (see photo), windbreaks, composting, rotations, agroforestry, animal parks, and so on rose from 2,000 to more than 33,000. Many of these producers increased yields (many by 50% or more), and about 17% reclaimed previously degraded lands and put it back into production. Reductions in soil erosion and increases in soil organic matter led to reports of increased fertilizer-use efficiencies, effectively reducing fertilizer costs and risks. NRM-based agricultural intensification also reduced pressure on community forest lands and the environmental services they provide.
- ◆ Organizational development helped give rural people a voice and increase their ability to obtain rights and services. Communities gained experience and confidence in negotiation, making business transactions and in dealing as peers (active citizens and not passive subjects) with outsiders and government services. Although initially focused on agriculture, the VAs also applied these skills to other areas. The skills and institutional capacity helped them protect forests proactively. A dozen OHVN-trained communities negotiated agreements with the forest service so that the forest service would no longer issue permits to commercial firewood cutters to cut on community lands (a common practice in the past). In return, the communities agreed to implement management plans limiting cutting of living trees. Some communities also organized periodic patrols of forests to keep illicit cutting to a minimum.

A recent USGS study of nine OHVN-supported communities assessed land use changes over time. All nine communities appear to have lost substantial forest cover between 1965–88, corresponding to increased area under agriculture. Since 1988, however, the rate of loss slowed in eight of the nine, and forest cover in two actually increased from 1988 to 1999, even with increased population. Although there are many reasons for these trends, it appears that improved agriculture and stronger local organizations have played a major role. These trends show that rural populations, if given the opportunity, will manage in a careful and balanced way the rural landscape. Figure 1 graphically shows the relationship between agriculture and forest area in typical OHVN community lands. It should be noted that fully 70% of village lands remain in types of forests—a significant resource for local people.

Figure 2: Aerial View of Part of the Village Lands of Sanambélé



# Looking to the Future



*With some notable exceptions, the stronger the democracy, the better the environmental management.*

In the past 20 years, enormous transitions have taken place in Africa—in terms of social aspirations, mobility, communications, the breakdown of traditional authority systems, the role of the state, roles of youth and women, economic and technology options, new ideas, and new forms of political organization. In governance terms, the scale and pace of change is creating tremendous ambiguities that can become either obstacles to or catalysts for investment, economic growth, and improved resource management. Change is likely to be even more rapid, more profound, and more widespread in the next 20 years.

The fate of Africa's natural resources cannot be separated from the broader context of the economic and development challenges Africans face. Successful natural resource management strategies must take into account and leverage the broader economic dynamic that is shaping peoples' lives and choices in Africa.

Environmental management is increasingly linked to national development, social equity, and governance. The relationship between governance and environment is complex. However, with some notable exceptions, the stronger the democracy, the better the environmental management. Although the relationship clearly depends on a range of factors, democratic principles, such as transparency, participation, and accountability, are fundamental for sound environmental and natural

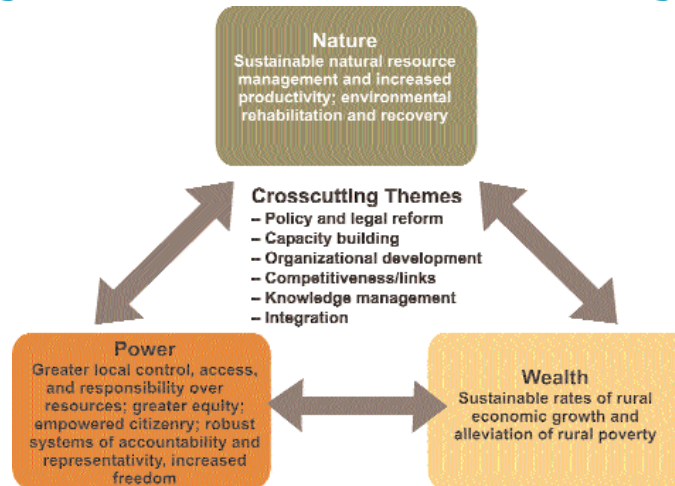
resource management. For effective environmental management, economic development, and social well-being in Africa, investing in democracy and good governance is a sound strategy.

Getting rural development moving is a complex and daunting task. It is important, however, to accept the complexity and avoid “one size fits all” solutions. No single approach—whether export agriculture, community-based NRM, ecotourism, “biodiversity enterprises,” or anything else—is a solution for everything. Although natural resource management has to be seen in a broad development context and will not solve all problems, it is a unique entry point for economic and political development in rural Africa.

The **NWP framework** reveals a number of cross-cutting themes that are common to nature, wealth, and power. These include:

- **Knowledge management.** Transparent and good quality information and knowledge is necessary for good economic, governance, and environmental decisions and outcomes.
- **Capacity building.** Capacity building—investing in human resources—is critical for natural resource management. Capacity has to be built in the environmental, economic (marketing, business skills, and so on) and governance (rights, management of organizations, and so on) arenas.

## Moving Forward—Outcomes and Crosscutting Themes



- **Organizational development and arrangements.** Organizations have to be built and reinforced at many levels, but especially at the rural level. Technical, economic, and management organizations are needed. It is important to build partnerships and coalitions.
- **Competitiveness and efficiencies.** Whether in the technical, economic, or governance realms, the need for efficiency and competitiveness is increasing clear.
- **Policy and legal reform.** African countries have undertaken many positive legal and policy reforms. However, whether it is in the domain of resources, economics, or governance, the reform agenda is often unfinished and application requires continued effort.
- **Integration.** Policies and legislation in different sectors are sometimes contradictory and confusing; this can constrain investment in NRM. The need exists for coordination across sectors and integration of the nature, wealth, and power dimensions of resources in management. The “best bets” listed here represent a package; efforts to concentrate on just one action or dimension will likely be unsuccessful. Integrated action across a range of sectors and scales and capture of technical, economic, and governance issues are needed in any

single program action.

The best bets presented here resulted from years of experience and analysis. They are, however, but the opening statement in a pluralistic and spirited debate that has to take place under trees in villages, in district council offices, ministry conference rooms, and university classrooms around Africa.

Bringing the rural areas of Africa into the mainstream of economic growth and good governance is not a luxury. It is the economic and governance issue of the day for Africa. Although it will not be easy, it is also not a mystery. Best practices and innovations are emerging around the continent. Many of these represent an upsurge of bottom-up, unscripted efforts. Although changes are required and these changes threaten some interest groups and some governments, the benefits for the majority of Africans far outweigh the costs.

The fate of Africa’s natural resources cannot be separated from the broader context of the economic and development challenges Africans face. Conversely, Africa’s economic and development future cannot be separated from the management of its natural resources.

*Natural resource management is a unique entry point for economic and political development in rural Africa.*

*Bringing the rural areas of Africa into the mainstream of economic growth and good governance is not a luxury. It is the economic and governance issue of the day for Africa.*



*AFRICA VIEWED FROM SPACE*