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A Guide to Strengthening Non-Governmental Organization Effectiveness in Natural Resources Management

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INTRODUCTION

The role that non-governmental organizations (NGOs) have played in natural resources management (NRM) and other areas of development work in Africa and elsewhere in the developing world has changed considerably over the last decade. NGOs, once perceived by major donors and governments as suspect contributors in the development process, have become, in many cases, center stage performers. Expectations about what NGOs can and must contribute to development have thus changed dramatically. Whereas previously NGOs had to fight to gain a seat at the policy-making table, today NGOs are *de rigueur* participants in all aspects of development programming from a donor, and increasingly, a national government perspective. While skepticism remains firm in a number of governments as to what NGOs can truly contribute, as of 1996 most African governments and donor partners are anticipating major NGO roles in promoting sustainable development.

While from a general NGO perspective this change in donor and government attitudes is long overdue and laudable, it carries risks as well as opportunities. NGOs increasingly will be given the chance to participate in planning and implementing development and resources management activities. Critics, however, may challenge the credibility of NGOs to the extent that those organizations are unprepared to address the myriad challenges habitually posed in development and NRM work.

This Guide provides NGOs working in NRM with a broad overview of fundamental institutional and technical issues relevant to successful NRM work in Africa. It is thus meant to help prepare NGOs to address challenges as well as increasing opportunities in Africa particularly, and elsewhere throughout the developing world.

The three organizations collaborating on production of the Guide — the PVO-NGO/NRMS Project (a consortium of World Learning Inc., CARE, and World Wildlife Fund, funded primarily by the U.S. Agency for International Development [USAID]), InterAction (the American Council for Voluntary International Action, comprised of 150 private voluntary organizations, or PVOs), and the United States Department of Agriculture (USDA) Forest Service/ International Forestry Division — conceived the idea for this Guide in 1994. All three partners have worked with NGOs worldwide for many years. All three organizations take seriously the opportunities facing NGOs and PVOs, but are equally aware that the capacities of these organizations will need considerable strengthening if they are to become even more effective in implementing NRM and related development activities in coming years.

The question of the capacities of the NGO sector in Africa is sensitive and sometimes controversial. Opinions on the capacity of both expatriate and African national NGOs vary depending on the observer. The consensus seems to be that NGOs are quite strong at promoting local participation, fairly strong in certain sectoral work or aspects of sectoral work, but relatively weak in complex, multiple component projects. These projects require significant institutional and technical capacity akin to integrated rural development efforts of the 1970s and early 1980s, or today's integrated conservation and development activities. Some NGOs are effective at lobbying and/or policy advocacy. Other NGOs —

arguably the majority of NGOs to appear on the African NGO scene over the past five years — are fairly weak in both technical and institutional aspects of program/project planning and implementation. What appears likely, however, particularly in the context of increasing contraction of government sector services in rural areas, is that NGOs with broad-based technical and institutional skills will be much solicited.

This Guide reviews all the topics NGOs must be familiar with (and preferably master) to promote sustainable NRM in Africa. There is likely to be something in this Guide for every reader, regardless of one's NGO's mandate and portfolio. While the Guide focuses on Africa, its intent is to be generic and thus applicable to NGOs operating in developing countries around the world. This Guide is just a start, not a definitive document. A more in-depth text covering institutional issues and the need for technical NRM may emerge based on feedback on this Guide, as well as from future assessments of changing NGO needs.

The target audience for the Guide is first and foremost African NGOs. Thus the Guide covers the most fundamental technical and institutional issues related to NRM. While these topics are likely to be familiar to many American or European NGOs, they may nevertheless find the Guide of interest, as some of the points made reflect the most recent thinking on various topics. The Guide attempts to be comprehensive, putting into a single document a broad array of subjects, and thus it may be useful to international NGOs as a source of specific "modules" for reference or application.

We also hope that donors will benefit from the Guide. Donors can use the Guide directly in support of activities they are promoting with NGOs, or as a reference work in its own right.

Acknowledgments are due to a number of people. Mark Buccowich of USDA's Forest Service and Lisa Freund-Rosenblatt of InterAction were instrumental in mobilizing their organizations' tangible support for this project. USAID/Washington's Africa Bureau provided funding for both InterAction and PVO-NGO/NRMS.

William Booth and Kristine Dreuilhe put in considerable time over the early months of this project, soliciting input from colleagues around the world. Their efforts in the early phase ensured that a sufficient base of initial material was available.

Mary Ann Zimmerman contributed significant editing and updating of the institutional chapter of the Guide, while Roy Hagen did the same for the technical NRM chapters. John Waugh and Michael Arquin of the World Conservation Union (IUCN) provided the early draft of the resources chapter, which André McCloskey expanded and updated. Bonnie Ricci's help in organizing and shaping both the resources and the institutional sections was crucial. JoEllen McGann, Program Associate on the PVO-NGO/NRMS Project, reviewed text, pulled together the final document, and coordinated the logistics of producing the Guide. The project turned out to be far more challenging than we originally envisioned, demanding extra effort on JoEllen's part. Gary Clark translated the French articles into English. Jonathan Adams and Diana Myers edited the final text and were essential in finding the text's overall "voice." Special thanks also to Joerg Balsiger, World Wildlife Fund-US (WWF-US) Intern, and Tom Walsh, PVO-NGO/NRMS Intern, for their research on the resources chapter.

All the contributors to the Guide are due enormous gratitude, as all original contributions and many subsequent ones were made on a pro bono basis. A number of people in Africa and elsewhere contributed in the first phase write-up of the Guide. As the Guide evolved, many changes were made. To those who are disappointed to find that their articles are no longer present in this final draft, we offer our sincerest thanks for your contributions and regrets that not all the material we received could be used. While it had been our intention from the outset to solicit as much African input into the Guide as possible, we found ourselves opening up over time to

whatever sources could provide us with timely and quality work, African or otherwise. To all contributors, again our thanks.

Our intent also was to make the Guide as short as possible. Over time this, too, proved difficult, as certain sections required a minimum amount of information which went beyond simple, tightly edited text. Insofar as many sections can be read independently, each section provides the minimum overview necessary to enable NGOs to identify what they need to know and to act upon to be more effective in NRM. Finally, the Guide does not cover all topics that we would have liked. Gender issues, for example, deserve considerably more focus.

The Guide is organized into three sections: institutional issues, NRM issues, and resources. While the sections are meant to be as independent and free-standing as possible, there is some overlap between and across sections; for example, reference to institutional factors in some of the technical NRM articles is common. The hope of the sponsors is that this Guide in its final form will help all those NGOs who use it to reach their full potential and thus contribute to sustainable development in Africa. Be it in combating desertification in drylands, conserving biodiversity in humid tropical forests or wetlands, or promoting democratic processes in all lands, we hope readers will find useful some (or hopefully all!) of what is presented. Finally, the sponsors hope that this Guide will be the first in a series, and that follow-up documents that cover in greater depth the gamut of technical and institutional issues surveyed here will follow in coming years. This is not meant to be the final word on NGO capacity building in NRM. Your feedback on the Guide, in its present and potential follow-up incarnations, is most welcome.

Michael Brown
Washington, DC
June 1996

CHAPTER I

GUIDELINES FOR DEVELOPING NGO CAPACITY

As pressures upon governments worldwide increase in both scope and complexity, demands outstrip their capacity to respond. The economic base of many countries, especially in the developing world, is insufficient to assure the availability of many basic services.

The need to strengthen the capacity of non-governmental organizations (NGOs) to fill this void and to better serve the needs of their clienteles is thus readily apparent. Many NGOs, while striving to provide quality services, find themselves lacking the skills required to function in a rapidly changing political, social, economic, and physical environment. They often also lack the financial resources to redress any institutional shortcomings. Demands for inclusion of all stakeholders in effecting the development of a country, a region, or a small rural village organization stretch NGOs, private enterprises, and governments alike to adopt new approaches to achieving their missions. New development approaches, however, require even greater capacities.

This chapter looks at three aspects of capacity building: 1) the NGO community as a major sector in society; 2) the individual NGO as an organization; and 3) the provision of support by those within and outside the NGO community for capacity building.

A. THE NGO COMMUNITY AS A SECTOR IN SOCIETY

In many countries, the NGO community is in its infancy. There is confusion as to what an NGO is and how it differs from for-profit organizations. There may not be an adequate legal framework defining NGO rights and responsibilities. There may be conflicting images of NGOs that exist on paper only, in briefcases, or postal box numbers. Such "NGOs" are often managed by self-serving individuals and are perceived as taking money for their own benefit, compared with others that are actually influencing national opinions, or are working to improve conditions for rural and urban communities. Coordination among NGOs is often poor, particularly in developing countries, further constraining capacity building.

This section provides a look at how organizations and projects in several locations have addressed contextual issues that affect NGO development — an NGO definition and typology, a national legal structure, a code of NGO conduct, and regionally based information systems.

1. **NGO DEFINITION AND TYPOLOGY,** adapted from *Working With NGOs: A Practical Guide to Operational Collaboration Between The World Bank and Non-Governmental Organizations,* by Carmen Malena, The World Bank, USA

The term *NGO* can be applied to any non-profit organization which is independent from government. NGOs are typically value-based organizations which depend, in whole or in part, on charitable donations and voluntary service. Although the NGO sector has become increasingly professional over the last two decades, principles of altruism and voluntarism remain key defining characteristics.

The term *NGO* encompasses many different types of organizations. Development NGOs range from large, Northern charities to community-based, self-help groups in the South. They also include research institutes, churches, professional associations, and lobby groups. Two main categories of NGOs are: 1) operational NGOs, the primary purpose of which is to design and implement development projects, and 2) advocacy NGOs, the primary purpose of which is to defend or promote a specific cause.

Operational NGOs vary enormously according to their purpose, philosophy, sectoral expertise, and scope of activities. A number of NGO typologies exist. For example, NGOs have been classified

according to whether they are more relief or development oriented; whether they are religious or secular; whether they stress service delivery or participation; and whether they are more public or private oriented.

Operational NGOs can be further classified into three groups: 1) community-based organizations (CBOs), which serve a specific population in a narrow geographic area; 2) national organizations, which operate in individual developing countries; and 3) international organizations, which are typically headquartered in developed countries and carry out operations in one or more developing countries.

CBOs (also referred to as grassroots organizations or peoples' organizations) are distinct in nature and purpose. While national and international organizations are "intermediary" NGOs formed to serve others, CBOs are normally "membership" organizations made up of individuals who have joined together to further their own interests (e.g., women's groups, credit circles, youth clubs, cooperatives, and farmer associations).

2. DRAFT STATUTE ON NGOS WORKING IN DEVELOPMENT AND THE ENVIRONMENT, by the Malagasy Council of NGOs for Development and the Environment (Conseil Malgache des ONG pour le Développement et l'Environnement [COMODE]), Madagascar

In Madagascar, the existence of a legal void regarding development NGOs is an undeniable and recognized fact. The following text illustrates how Madagascar's NGO community responded to the lack of enabling legislation for NGO work in NRM. This analysis should be useful as a model for how NGOs might consider policy advocacy regarding NGO status in their respective countries.

Provisions relating to freedom of association in Madagascar are derived from the basic French law of July 1, 1901, which is the statutory foundation for NGOs in much of francophone Africa. The new Ordinance was drafted to replace this statute and create legislation specific to Madagascar. But its provisions are only slightly different from those of the French law, which it simply adapts to local contingencies and makes more explicit certain points. The Ordinance regulating associations, including NGOs, fails to keep up with developments and allows for numerous interpretations, resulting in a proliferation of organizations with unclear goals and objectives which now refer to themselves as NGOs.

In 1993, COMODE proposed a draft statute specific to NGOs working in development and the environment (NGODEs). The response of the NGO community varied, with differences centering more on the approach and the strategy of dissemination adopted by COMODE than on the substance of the draft. The basic purpose of the draft was to achieve agreement on the legal framework governing the development of NGOs. That framework includes: general provisions on association status; a bill on the status, formation, and organization of NGOs; administrative orders to implement the bill on NGO status; and provisions on custom duties, taxation, rules of incorporation, standard bylaws, and the definition of NGOs.

COMODE adopted a participatory approach to disseminating the draft statute, involving all the actors, particularly NGOs, without neglecting government ministry stakeholders and donors. The draft statute is based on three principles:

- State divestiture (clarification of the partnership between NGOs and the government) in no sense implying a state of anarchy;
- Effective decentralization; and
- Increased accountability on the part of target populations, which implies increased accountability on the part of NGOs as well as greater professionalism in their activities, toward the goal of sustainable development.

The objective of the COMODE commission's work was to have a well-organized, legally valid statement that reflects Malagasy realities and NGODE experience. The democratic process was a success, despite budgetary constraints, because NGODE representatives from all regions of Madagascar were consulted about the draft's major themes. COMODE conducted regional seminars at district seats, and held extensive consultations with donor agencies and partners to ratify the philosophical approach that was selected.

Before holding a national seminar to develop the final draft statute on NGODEs, which was based on the consensus of all represented parties (NGOs, donors, partners, government institutions), the draft was presented to high-level governmental bodies that work with NGODEs. After the seminar, a committee was set up to disseminate the draft and ulti-

mately present it to the National Assembly of Madagascar. [1]

3. **A CODE OF PRACTICE FOR THE NGO SECTOR IN AFRICA**, by the African NGO Self-Reliance and Development Advocacy Group (ASDAG), Ethiopia

A major constraint to the development of the NGO sector in Africa is its overdependence on international finance and assistance. The competition among African NGOs for international funds greatly erodes their capacity and commitment to mobilize collaboratively and achieve consensus around issues of common interest.

Closely linked with this is the tendency of voluntary sector groups in the region to place a high priority on their external links. This external orientation undermines the mission of local NGOs as co-actors in the struggle of Africa's peoples and grassroots communities for effective empowerment and participation, and for sustainable development.

Moreover, as a sectoral interest group, African NGOs remain institutionally weak. This compromises the potential for sustainability in their programs. The external pressures which often characterize their search for project funds, and the difficulty which many of them experience dealing with their own governments, are partly a result of the non-cohesive community of African NGOs and their limited capacity for advocacy. For example, even in their own countries, Africa's voluntary groups are rarely able to use the mass media to draw attention to their contribution to national development, or to articulate a position on policy issues relevant to their work.

Guiding Principles of ASDAG, Initiators of the Code

ASDAG, the initiator of this Code, believes that a concrete process is needed to enable Africa's voluntary sector to reduce its overdependence on external partners and agencies. While the group is aware of the contributions of external agencies, NGOs, and donors to Africa's development, it is equally conscious of the need for the region's voluntary groups to become more self-reliant. Without such capacity, they will be ill prepared to enhance the process of empowerment at the grassroots, and to support the efforts of Africa's most vulnerable populations in meeting the development challenges of the 1990s and beyond.

Definition of the Code

This Code of Practice is a statement of institutional principles and ethics, designed as a reference document for all African NGOs to enhance their work at both intraorganizational and interorganizational levels, and to encourage qualitative improvements in their relationships with their local constituencies, and external development partners.

Objectives of the Code

- To contribute to ongoing efforts by African NGOs and village development organizations (VDOs) towards greater self-reliance and commitment to the use of local resources.
- To encourage Africa's non-governmental groups to develop a collective capacity for advocacy, so as to articulate the needs of the constituencies they serve.
- To serve as a guide for improving the partnership between Africa's voluntary sector and its external development collaborators, by setting out institutional modalities aimed at eliminating the present pattern of money-dominated relationships as quickly as possible.
- To back up the establishment and operation of an effective process of institutional strengthening and horizontal linkages among African NGOs, VDOs, and people's organizations.
- To foster a genuine commitment on the part of African NGOs and their external partners to a locally driven approach to the challenges of African development, and to focus the attention and development resources of Africa's voluntary sector on the needs of its grassroots constituencies.

[1] As of late 1995, despite COMODE's efforts, NGOs and the government have failed to reach any agreement on the NGO legislation. Therefore, Malagasy statutes are still based on French law in 1901. Even a well-developed advocacy campaign may not succeed if the political environment is not propitious, as the Madagascar case illustrates.

Code

Addressed to African NGOs and VDOs

1.1. At their formation, African groups must clearly set out in their constitutions and other background documents the immediate and medium-term development objectives of their organizations. Existing groups must endeavor to insert such statements into their relevant documents if goals are not already explicit. Statements must be precise about the reasons for a group's formation: in particular, the group must present in everyday language how it has defined the problems and concerns that led to its formation.

1.2. In operational and background documents, African groups must state their commitment to empowerment at the grassroots or community level, and mention some of the areas in which their work will increase self-reliance, including how this may be done. African groups must treat the following as priority activities in their work: support of people-to-people exchanges at the grassroots level; mobilization and management of community-level thrift potentials; assistance in establishing flexible and realistic credit schemes; promotion of literacy programs; and provision of empowering and usable information through effective and locally accessible channels.

1.3. In their internal operations, African NGOs must endeavor to promote participation and, as much as efficiently possible, must establish a democratic process for in-house decision-making on programs and projects.

1.4. African groups must actively support all collaborative efforts possible for the establishment of an NGO Capital Fund in their respective countries. With increasing realization that current piecemeal and ad hoc fund-raising alone cannot ensure the sector's long-term capacity for self-reliance, it is incumbent on African NGOs to make vigorous efforts to secure, as soon as possible, a strong financial base to match the increased role they are now playing and will continue to play in the region's development.

1.5. As a first step in promoting self-assertion and upholding its own development vision and objectives when dealing with external agencies, every African group must decide on institutional goals and values which must be nonnegotiable in any financial or program partnership. Acceptance and respect of such principles by external partners must be the starting point of negotiations and agreement on any funding or technical assistance.

1.6. African NGOs must exercise caution in entering into funding relationships with external partners. Contracts must be studied in detail, and the implications of every condition weighed carefully against the recipient's own objectives. In particular, African NGOs must avoid opportunistic funding; although such funds may provide short-term gains, they may also compromise the recipient's autonomy and institutional development in the long term. Where the implications of any donor requirements are not clear to them, NGOs should seek the opinion of other local groups with more experience or seek technical assistance through channels set up by their national consortia.

1.7. NGOs must discuss with their prospective external partners, and agree on, appropriate mechanisms for mutually monitoring the effectiveness, orientation, and long-term objective of the collaboration. Such assessments can be undertaken once every two years, or in accordance with any other timetable agreed on by the parties.

1.8. In their project and program proposals, African NGOs must include covering funding needs for manpower and institutional development. While this may not be appropriate in all cases (for example, in requests for funding one-time events like meetings, travel, etc.), whenever it is feasible, NGOs must negotiate to use some donor project and program funding to systematically reduce their institutional and operational dependence through training and other organizational strengthening.

1.9. In their requirements for technical assistance or other input of a specialized nature, African groups must place priority on using local expert resources, with recourse to outside technical assistance only after exhaustive, unsuccessful efforts to use national or regional expertise.

1.10. African groups must insist on having a full understanding of the following: the origin, and political and development objectives, of the external organization or donor; the external agency's views on local self-reliance and how it intends to contribute to that process through its prospective partnership with the African group(s); how the donor or external agency raises or derives its funds, and the home constituencies or structures to which it is

accountable; and, where applicable, evidence of development work which the external organization has undertaken to alleviate inner-city and other poverty-related problems in its home country or elsewhere outside Africa.

1.11. African groups must at all times seek local mediation channels for interorganizational or personality conflicts arising in the course of their work. They must totally refrain from disseminating rumors or misinformation capable of bringing disrepute to the African NGO sector. In particular, African NGO practitioners must resist any temptation to seek special favors with external agencies by disseminating rumors or misinformation designed to defame or reduce the credibility of any African group. Where grounds exist for complaints about any other African group/groups or particular individuals, such complaints must be lodged through national or regional NGO channels, as appropriate.

1.12. To safeguard their sector's credibility with its partners within and outside Africa, and command greater respect for the cause of self-reliance, African NGOs must work to attain increased institutional efficiency and clarity in designing, managing, and determining the course of their operations. Also, NGOs must demonstrate a practical commitment to prudence, modesty, and honesty in financial matters, both institutionally and individually.

Addressed to National African NGO Consortia or Umbrella Bodies

2.1. In addition to their other important functions, national NGO consortia must carry out regular advocacy activities on behalf of their members. The establishment of a special NGO Advocacy Committee is strongly advised at the national level.

2.2. National NGO umbrella bodies must actively promote and publicize the work of their members. They must produce an annual report to document in detail the positive contributions made by the NGO sector to national development. For such publicity materials, they should use images and facts and figures from projects in different parts of their country. In all cases, national media outlets should be used for materials dissemination.

2.3. National consortia must promote the NGO sector as a channel for supplementing official development efforts, and not as an antagonist or competitor with government. To do that, they must engage in advocacy and dialogue with appropriate national authorities to secure NGO access to the media. Such access is vital for publicizing the sector's contributions to national development and promoting its image as a useful partner of government.

In particular, NGO consortia must advocate the adoption of one day in the year as Voluntary Sector Day, when all the national media will focus attention on the sector's contributions to national development, as well as on the constraints NGOs face in their work.

2.4. National consortia must play the leading role in ensuring the establishment of an NGO Capital Fund in their countries. They must work to mobilize funds and other resources from national, subregional, and regional institutions, including private sector bodies like banks, businesses, and rich individuals. (It is noted that funds from private sources form part of the support mobilized by most external NGOs operating in Africa.)

The establishment of NGO Capital Funds is a necessary tool for promoting a culture of self-reliance among African groups. The locally oriented content and strategies of African NGO initiatives are too often compromised or modified to suit the funding requirements of external partners.

This experience can be particularly disruptive and disenabling in the case of new NGOs, which are often compelled by financial dependence to compromise locally defined objectives originally intended as the basis of their mission.

One key advantage of a Capital Fund is its use in assisting deserving new groups (through "start off" credit and grant schemes) to establish a program base on their own terms, before entering into any significant funding relationships with external sources. Such funds can also help finance NGO activities or initiatives of a strategic nature, which, though they do not have immediate tangible outputs, are crucial to the long-term institutional and sectoral development of African NGOs. Donors are generally reluctant to back such initiatives.

After national NGO Capital Funds are established — through mobilization of in-country and regional finance — these facilities should be augmented without condition by supportive and willing international agencies.

2.5. National umbrella bodies must work to establish functional links between the technical assistance needs of member NGOs and the technical expertise available within their countries. In addition, NGO consortia must develop their own technical assistance capacity, or otherwise be able to assist in locally mobilizing technical input on behalf of members when required.

2.6. In consultation with their membership, national consortia must establish appropriate mechanisms for resolving inter-NGO conflicts. All consortia members, including NGO networks and prominent individuals in the sector, should be encouraged to use such conflict resolution channels.

2.7. As part of their advocacy responsibility, national NGO consortia should initiate a dialogue with the external organizations operating in their countries, with a view to addressing the unbalanced and sometimes demeaning representation of development realities in Africa.

Specifically, Northern organizations which raise part of their funds by using images from the region in the North's media must be required to ensure that such images portray balanced information about Africa's development experience.

2.8. In consultation with their membership and external NGOs working in their countries, umbrella bodies must work to regularly produce balanced and well-presented media materials (pictures, short video documentaries, press articles, etc.) reflecting their countries' development problems, along with initiatives being carried out by local NGOs and communities to respond to them. External agencies should be encouraged to acquire and utilize these materials for fund-raising purposes.

2.9. To reinforce measures taken by African NGOs to secure comprehensive information on their Northern partners, national umbrella bodies must establish a standard, accessible procedure for compiling information on external groups in their countries, as well as for keeping records of their collaborative activities with local groups.

In particular, before any new external organization begins work in an African country, the national consortium must require it to seek endorsements by three international NGO references from their home countries. National consortia must compile — with their members' input — a list of external organizations with good track records among African NGOs, which could be given responsibility for this vetting function.

2.10. On the domestic political front, national consortia must mobilize their membership to construct the emerging agenda for democratic and pluralistic governance in the region. National consortia should lead the voluntary sector in defining its role in the regional political process. They should similarly work to enhance the capacity of NGOs to become effective advocates of the rights of local communities to qualitative participation in that process.

2.11. All national consortia must endeavor to establish appropriate fora for voluntary sector representatives and leaders to discuss prevailing economic and social policies, programs affecting their work, and the constituencies they serve. An agreed mechanism must be put in place to mobilize leaders and representatives of NGOs, VDOs, and peoples' organizations to engage in periodic discussions and analysis of the impacts of current adjustment and debt payment crises in our countries.

Views emanating from such discussions must be clearly articulated by national consortia, and communicated to governments, bilateral and multilateral agencies, and especially to the Bretton Woods institutions in our countries.

Monitoring Observance of the Code of Practice

3.1. While it is expected that inter-NGO communication and other informal channels will play a role in highlighting cases of persistent failure to observe the above Code, all national consortia are strongly advised to establish their own monitoring mechanisms as appropriate.

3.2. A channel specifically recommended for monitoring observance of the code is the annual report on the NGO sector. If published regularly, the report can highlight proven cases of disregard of the Code by NGOs during any year. It will also be useful to promote observance of the Code through periodic evaluations of NGOs and how they are contributing to the goal of NGO self-reliance, and by highlighting groups that have been observing the Code.

3.3. Finally, as indicated in the preamble, the purpose of this Code is to enable African NGOs and VDOs to achieve a systematic reduction in their

present overdependence on external partners, and to help them in the challenge of building a strong and sustainable foundation for their institutional development.

Needless to say, the most crucial factor in making the Code serve its intended objective will be the positive commitment to it of all African NGOs and their umbrella bodies. To that end, African NGOs and their consortia are invited to work for and defend the principles of the Code. That effort will ultimately be in their own interest.

4. **THE SAHEL INFORMATION SYSTEM (SIS) NETWORK: A MEANS OF COMMUNICATION FOR NGOS IN AFRICA**, by the CONGAD Information and Documentation Center, Senegal

Information sharing and networking is strengthening NGO capacities in West Africa. The Sahel Information System (SIS), for example, was established in four West African countries in 1986 at the initiative of a partnership among the private sector, the United Nations system, and national NGOs. Six NGO groups in Senegal, Mali, Burkina Faso, Niger, Chad, and The Gambia direct the project.

SIS is an open network; all members receive the same level of information. They can exchange information among themselves without passing through a central conduit, although one of the members (currently, the Permanent Secretariat of Non-governmental Organizations [*Secrétariat Permanent des Organisations Non-Gouvernementales: SPONG*] of Burkina Faso) functions as the secretariat. Responsibilities for coordination and operations rotate among NGO member groups. Coordinating activities include replying to all correspondence, following up on documents produced by or for the network, or sent to the various members of the network, and making contacts with external partners and other networks.

A distinction should be drawn between the databases common to all members of the network and those created by individual groups in response to specific needs. CONGAD (Senegal), for example, has a database on refugees which is distinct from the databases shared among the network members.

The network's shared databases include:

- The TECHTONG database, which focuses on appropriate technologies, particularly those related to managing natural resources. It contains descriptive and analytic information concerning technologies of interest to NGOs and grassroots groups in the Sahel. This database supplies information in hard copy, using GRET and VITA forms, along with forms from some other NGO group members.

- NGO and project databases, which represent the permanent record of the activities of network member groups and allow rapid and interconnected access to information. These databases are used by NGOs, development agencies, grassroots associations, state services, international agencies, researchers, and students. The NGO database contains identification files on NGO group members. The project database contains a description of each project managed by NGO group members and approximately thirty data categories (implementing agencies, fields of operation, target populations, government and donor involvement, difficulties encountered, etc.).

SIS members use several mechanisms to disseminate the information contained in the databases. CONGAD, for example, uses the annual Index of NGO Members, which includes primary information on NGOs and their activities. The Index is distributed to the NGO members and may be obtained by any interested party. This Index is an important tool for coordinating NGO activities because it allows users to identify unproductive situations of competition and repetition in activities. CONGAD publishes a bulletin and a catalog which describe the data available from the databases.

It is increasingly urgent that SIS data dissemination be diversified and that, in parallel, its data be enriched in order to develop the network's capacity to respond with greater precision to the needs of its users. SIS products are intended for both local and network-wide use.

The importance of the network has been demonstrated despite continuing problems. To allow for communication and data exchange with other networks, and in order to train/retrain information system officers, the network has acquired new software. SIS members have decided to equip the network with an electronic communication system (FIDONET), enabling SIS to develop internal and external communication strategies. FIDONET also strengthens the network at local and regional levels by facilitating the movement of information among national NGO groups and their members. (The need to create telecommunication links between some

NGOs and their national group still remains.) With this foundation, SIS access to other sources of information (international conferences, Northern databases) and information exchange with other African networks is a growing priority.

The experience of the SIS network deserves particular attention among NGOs in Africa. It may be imperfect but SIS is nonetheless a model of dynamic subregional cooperation, an information tool that should spread to other regions on the continent.

5. **ARID LANDS INFORMATION NETWORK (ALIN or RÉSEAU D'INFORMATION DES TERRES ARIDES [RITA])**, by Ced Hesse, Coordinator, ALIN, Senegal

The mandate of the Arid Lands Information Network (ALIN) is to improve development practices by strengthening the skills and motivation of a category of critical actors in the success or failure of projects: male and female field-workers working directly with communities or holding key positions in the areas of community development, outreach, extension, or training.

ALIN supports communities active in rural development in Africa, for example, participatory development agents, government extension workers, and members of NGO projects. These individuals, who are in direct contact with local communities, often determine the level of success of projects because they represent the link between decision-makers (project directors) and beneficiaries (local populations).

ALIN carries out various activities for its members, such as disseminating information and experience through *Baobab* magazine, published three times yearly, as well as producing booklets on particular themes and supporting training in the form of exchange visits and local seminars and workshops. These activities enable the network to respond to the problem of peoples' lack of access to the relevant experiences of others.

One anecdote demonstrates how NGO institutional and technical capacities can be strengthened through information sharing. Aboubacrine Hamet Ly, a Mauritanian community development agent who has lived in France, describes in a letter to ALIN how his involvement with ALIN has helped his community:

No more anxiety about construction in the future....

My village, founded in 1870 by the great warrior Ibrahima Lih, is called Loboudou, which means a corner or angle in the Pulaar language. The name comes from its strategic position at a bend in the Senegal River. To the east, it is hidden by the great forest of Téguédi and, to the northwest, by the Dakhlé classified forest, a virtual peninsula surrounded by a branch of the Diou River and fed by the Konndo River.

In the past, these two forests represented a tremendous resource for the local population: wild fruit to be gathered, gum, gonakié fruit (for tanning), timber, pasture lands for herds, shelter for some rare animals. Today, the two forests have been seriously affected by the process of environmental degradation and both natural and man-made calamities (charcoal production, significant agricultural encroachment). In recent years, the population of Loboudou has expressed its anxiety about future home construction because wood is becoming scarce. The majority of villagers have limited income for purchasing construction materials should there be no more local timber.

Through ALIN, I am managing to solve problems in my village from abroad, without even traveling.

While reading Baobab magazine, I was delighted to discover an article on the Wood-Free Construction Program, which I found very interesting. The description of the experiences of projects located in Niger and Mali led me to write to the project study unit in France. As if by pure coincidence, I was informed that the first construction training and demonstration site was to open the following month at Diawling National Park in Mauritania. Also by coincidence, I met the representative of this project, called PCSB, when I was visiting the offices of Oxfam UK, of which I am a partner.

Following our conversation, we decided to introduce a project to construct a test building in Loboudou and to sign an agreement between PCSB and Loboudou.

Once the contract was signed, I took responsibility for informing and educating the village community and, after four days of discussions, we sent our two masons for training and began making bricks, which we produced ahead of the 21-day schedule cited in the agreement. We are now awaiting the return of the two mason trainees and the entire community is impatiently looking forward to implementing this new technique, which will solve the problem of construction at the local level.

Some of the village elders often tell me that we must thank God and the persons who developed this technique, because now there will be no anxiety about construction in the future....

Personally, I thank ALIN, which allowed me to make this discovery, and I also thank PCSB for its concern in protecting both people and the environment. Finally, I thank the people of my village for their understanding, their solidarity, their volunteer spirit and, in short, their conviction.

6. THE INTERNATIONAL NGO NETWORK ON DESERTIFICATION, by Edit Tuboly, Coordinator Sustainable Land Use, Both ENDS, The Netherlands

During the negotiations of the Convention to Combat Desertification (CCD)[2], something very interesting happened with NGOs. In the beginning of the CCD process, only a small group of NGO representatives participated. At the fourth negotiation session in March 1994, NGOs gathered for the first time to discuss how to organize cooperation. The result was an NGO task force responsible for preparing a proposal. Following extensive consultations, NGOs reached consensus on a structure and plan of action for an organized network in November 1994.

This network, called RIOD (Réseau International des ONG sur la Désertification), is a mechanism for NGOs to share information about work they are undertaking in their respective countries to promote action to combat desertification. The network gives CBOs and NGOs a concrete role in the preparation, implementation, and review of national action plans.

It has not been an easy task to initiate the network. Different interests and languages, inadequate communication tools, and limited opportunities to meet have been some of the obstacles that have had to be overcome. In the process, we learned how to organize ourselves, how to communicate more effectively, and how to collaborate better with governments and donors. RIOD is thus facilitating a process of understanding and capacity building for NGOs and other partners in the CCD.

The RIOD network is unique in its objective to bridge the gap between a convention negotiated at the intergovernmental level and the people at the community level who will be expected to play a key role in implementing it. Communities began combating desertification long before negotiations on the convention started, and they will continue to do so regardless of whether or not their governments sign the convention. In fact, most communities are not even aware of the convention. However, the NGOs involved in the negotiation process believe that the convention can strengthen communities in their efforts. Through the network and the plan of action, NGOs aim to inform communities and to create avenues that ensure that affected communities benefit from the convention.

Highlights of the RIOD plan of action are:

- Organizing NGO/CBO consultations and representation at the national level;
- Informing people in affected communities about the convention and developing methods for consulting them about actions to be taken;
- Raising awareness about desertification processes and causes, and in donor countries, about the convention to combat it;
- Promoting women's involvement in the implementation of the convention; and
- Building a communication system that interlinks the network actors at all levels.

It is obvious that more work remains to be done in combating desertification, but NGOs finally have a role to play in raising awareness and establishing innovative, collaborative relationships (not only for disaster mitigation) with other stakeholders.[3] RIOD is a tool in the effort, not an end in itself. Achieving results will only be possible with collaborative effort: politicians should acknowledge the importance of desertification and place it higher on national agendas; the media should pay more attention to the realities of people living in drylands and should provide coverage of successful projects which present more balanced images of development cooperation; NGOs should test and the media should disseminate information on potentially replicable NRM approaches; and donors should coordinate their projects and supply the financial means for new initiatives, especially to support the participation of local populations.

[2]The United Nation's Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (CCD), is the context for this article. The CCD addresses issues regarding degradation in arid, semi-arid, and dry sub-humid areas caused by human activities and climatic variation, and seeks innovative solutions through local programs and supportive international partnerships. NGOs figure prominently in the strategy identified by the CCD text, which has been signed by over 100 governments and is in the process of being ratified as of November 1995.

[3]See chapter 4 for a complete listing of RIOD contacts.

B. NGOS AS INSTITUTIONS[4]

A strong, effective, and ultimately sustainable NGO has certain identifiable characteristics. These can be categorized into six functional areas of organizational life:

1. Governance (board, mission, leadership);
2. Operations and management systems (planning; administration; operating procedures);
3. Human resources (staff competence, development, and diversity; work organization, personnel systems, communications);
4. Financial resources (financial, accounting systems and procedures; funds management; resource base);
5. Service delivery (impact, sectoral expertise, community ownership); and
6. External relations (public and constituency relations, government and NGO collaboration).

The six functional areas cover key aspects of the NGO as it operates both formally and informally. The NGO is also part of its larger environment and must adapt to the forces and changes in this environment by changing its structure and internal operations.

NGOs exist to meet the needs, developmental or otherwise, of their members or the constituency they serve. In some cases, the boundaries between staff and constituents are unclear, and sometimes they may even overlap, at least in part. Truly sustainable institutional development must incorporate approaches that NGO members and constituents can plan with, manage, and control. Staff and costituents need to be involved in determining the objectives and policies of the NGO and in carrying them out.

The sustainability of an organization depends on the interrelationships among these six functional areas. These determine whether an NGO is programmatically sustainable (providing needed and effective services), as well as organizationally sustainable (with strong leadership and the necessary management systems and procedures); whether it has sufficient human and financial resources and utilizes them well; and finally whether the external political, economic, and social environment and the NGO's interactions with this environment is sufficiently stable and predictable.

The emphasis in the discussions that follow is on the internal qualities of an NGO necessary to assure that its externally focused services become not only effective, but also flexible enough to meet the changing needs of the NGO's constituents. Chapter 3 contains approaches to help organizations strengthen their service delivery, with emphasis in the area of NRM.

Governance

NGO governance includes providing leadership and direction to an organization. Leadership, which articulates and maintains the direction of an NGO, consists of its management and a board of directors or equivalent governing body.

The board provides overall policy direction to the NGO, and independent oversight of its management. It customarily performs fund-raising and public relations functions and can bring additional professional and technical expertise to the NGO. In addition to providing direction, in well-functioning NGOs the board ensures that effective organizational planning takes place and monitors the functioning of the organization in relation to that plan or the policy direction the board has set.

Management is responsible for the day-to-day operation of the institution and for monitoring the external environment to sense changes in advance. It is also responsible for ensuring that necessary capabilities exist within the organization to achieve its mission and strategic plan. In addition to having the skills necessary to monitor and direct the institution, management should help develop the values that are the foundation of the organization's vision of its future.

This section on Governance addresses three issues. The first article deals with steps to create a legally recognized NGO structure. The second describes various leadership styles and their potential impact on an NGO's effectiveness. The third lays out ten basic responsibilities of nonprofit boards of directors.

1. **LEGAL FRAMEWORK AND PROCESS FOR CREATING AN NGO**, by Karla W. Simon, Executive Director, International Center for Not-for-Profit Law, USA

[4]All of the introductory and background material in this section are taken from World Learning's framework for NGO capacity building.

As the articles in this chapter by COMODE and ASDAG concerning NGO formation have demonstrated, the legal framework within which NGOs in Africa must operate is complicated and specific to each country. This article offers general guidelines about the legal requirements for operating an NGO. There is no substitute, however, for legal advice obtained from a qualified, local lawyer who is familiar with the intricacies of the law in a particular country.

Service-providing NGOs must obtain formal recognition under the laws of the country in which they operate. Formal recognition defines the NGO's rights and responsibilities, its privileges and immunities, and its relationship with the government and the people it serves. Formal recognition facilitates access to government funds directly, through contracts and grants, and indirectly, through tax exemptions and deductions for donations. Legal status is usually required to open bank accounts. Such organizational legitimacy is crucial to attract funds from private and international donors.

Laws concerning registration or incorporation vary. In some countries, it is sufficient to register with the level of local government nearest to the NGO. In other countries, an NGO must register with the Ministry of Interior and may have to undergo a period of supervision by that Ministry before being granted legal status.

Steps in Achieving Legal Status

- The NGO must draw up a set of bylaws (also called statutes, articles of incorporation, or a charter).
- The bylaws must contain whatever information is required by the law in a given country. Most countries require the names and addresses of the founders, the purposes of the NGO, the address where the NGO will operate, the kinds of governing bodies the NGO will have, how the NGO's assets will be disposed of if it ceases to exist, and the stipulation that members or founders may not receive any distribution of profits.
- If the organization is a membership organization, it must state the rights and duties of the members.
- If the organization is a foundation, any minimum endowment requirement must be met and proven in the manner required by the law.
- The bylaws must be delivered to the proper registry body, where they will be reviewed.
- All required registration fees must be paid.
- If there are no objections to the registration, the new NGO will be entered in the appropriate register and thereby become a juridical person.
- In some countries, NGOs operating in the public interest also may be required to obtain a Certificate of Public Interest from the appropriate regulatory body. Tax-exempt status and the eligibility to compete for certain grants and contracts may depend upon obtaining this certificate.

Accountability to the State

After being registered, an NGO will be required to file certain forms with appropriate government agencies. It is important to learn what forms must be filed when, so that any fines and penalties for late filing or failure to file can be avoided. Typical government bodies that may require reports from NGOs include:

- Local courts;
- Local/county/provincial offices of the Ministry of Justice or the Ministry of Interior;
- The Registrar of Companies; and
- A ministry that serves in the field or fields in which the NGO is working (e.g., the Ministry of Education, for a private school).

Other Laws Which Must Be Considered

NGOs will have to comply with all labor and other employment laws, and ordinarily they will be required to pay social taxes for their employees.

NGOs will have to comply with all laws that apply to their dealings with others (e.g., landlords, contractors, suppliers).

A country or a province may have specific fund-raising legislation that will require an NGO to register, use certain forms for receipts, and make special reports.

Wherever NGOs are permitted to use lotteries for fund-raising, special rules will apply.

NGOs that operate in certain social spheres, like education or elder care, may be required to have special licenses.

NGOs that have rallies and large public meetings may be required to obtain special permits for those gatherings.

2. **LEADERSHIP STYLES AND NGO EFFECTIVENESS,** based on an article by Scott J. Josiah, Department of Forest Resources, University of Minnesota, USA

Effective leadership is essential for NGO success. Leadership is not a static, one-way process. It is a complex, interactive relationship between the leader, the members of the organization, and the environment in which the organization operates. There are many styles of leadership, each of which may be appropriate for a particular situation. As an NGO grows and matures, its leadership needs may change. Effective leaders recognize these needs and adapt their styles accordingly.

Characteristics of Good NGO Leaders

A good leader provides direction, articulates the organization's mission and vision, links the past to the future, and inspires trust in staff and/or members. Characteristics like creativity, charisma, courage, stamina, persistence, and tenacity are commonly used to describe the leaders of successful NGOs. Such leaders know key people, seize appropriate opportunities, exercise astute political judgment, and present the needs of their constituencies in a convincing manner to governments and donors.

Leaders must be able to take criticism, to make difficult decisions, and to understand the identity, motivations, and concerns of the organization's members and beneficiaries. Effective NGO executives communicate regularly with the organization's board, track the long-range strategic objectives, and inspire staff to do the best job they can.

Strong leaders look for highly qualified, deeply motivated individuals, within and outside the organization, in order to develop *their* leadership potential through special attention, training, and gradually increasing levels of responsibility.

Leadership Styles

There are three basic leadership styles:

1) An **authoritarian** leader makes all the decisions and tells members what to do. Some authoritarian leaders see no need to justify their decisions. Others provide a rationale and may ask for questions of clarification before expecting full compliance with the decision. Authoritarian leaders are the only spokespersons for their organizations and may insist that details of the day-to-day operations, like incoming mail or faxes, go through them first for review and delegation.

Authoritarian leadership is often (though not always) the style of the founder(s) of an organization or movement. In the formative stages of an organization, a charismatic leader with a strong, decisive personality and a clear vision can articulate the aspirations of the group and delineate clearly how they will be achieved. However, continued dependence on a single powerful personality will weaken the sustainability of an organization and its programs.

In some cases, authoritarian leadership can be found in a board of directors, who are not involved in the day-to-day operations of the NGO. An autocratic and inaccessible board causes distrust and dissatisfaction among staff. Commitment to the organization's goals and programs wanes in such situations, and staff become employees who simply put in time for their paychecks and/or other benefits.

Authoritarian leadership may be appropriate in a time of crisis, when the survival of an organization is in jeopardy. When faced with a threat to survival (such as the termination of funding or the loss of office space or the chaos resulting from the eruption of war), an NGO leader may have to be authoritarian about the process used to confront the threat.

2) In **consultative** leadership, a leader may do one of three things: a) present a tentative decision which can be changed after discussion; b) present the situation, get input from others, and then make a decision; c) call on others to make a decision but retain veto power if the leader considers it unacceptable.

Organizations that have been in existence for some time often evolve naturally into consultative leadership at various levels of their operations. Roles and responsibilities need to be clarified regularly, and good communication among staff is imperative. In the consultative mode, however, an organization still relies heavily on the insight and initiative of the leader.

3) **Enabling/Facilitating** leadership situates the leader at the center of a shared planning and decision-making process. Initiative for change can come from any staff member and is directed to the appropriate leadership level. The enabling leader provides members with the givens of a situation (financial limitations, time parameters, and the like) and then facilitates a decision by the staff. The enabling leader may also facilitate a process through which the staff themselves identify the situation and its limits, explore alternatives, and make a decision based on consensus. Enabling leadership is aware of the expertise of individual staff members and offers them opportunities to contribute that expertise to the achievement of organizational goals and strategies.

Management vs. Leadership

The distinction between management and leadership is often blurred. Leadership is concerned with the overall mission and vision, strategic planning, articulation of goals and policy, and general morale of the organization. Management is more focused on the details of implementation: staffing and delegation, information sharing, standard operating procedures, reporting to appropriate decision makers, administration of space and equipment, and keeping accurate financial records of income and expenditures.

Like any organization, as the size and complexity of an NGO grows it will require a shift from the visionary "entrepreneur" to the pragmatic "business" manager(s). Leaders and managers of maturing organizations must develop linkages with other organizations, standardize their operating procedures, and train staff.

3. **TEN BASIC RESPONSIBILITIES OF NON-PROFIT BOARDS**, by Richard T. Ingram, President, Association of Governing Boards of Universities and Colleges, USA

Board and board member responsibilities are fundamentally the same for all organizations, although nearly everyone feels that his or her organization is unique and special. While there is no generic model of board size, composition, or organization that has proven viable in all circumstances, this article describes an ideal/typical model of the structure and function of NGO boards.

How boards and board members actually fulfill their responsibilities will vary, depending upon whether the agency is membership or non-membership, whether its budget and staffing levels are modest or substantial, and whether it is newly formed or has a long history of growth and development.

All organizations undergo a metamorphosis over time that calls for periodic review, fine-tuning, and sometimes major overhaul of their governance structures. Organizational performance, like human performance, is cyclical in effectiveness, and needs renewal as it evolves.

The ten governing board responsibilities below can be adapted by NGOs in various countries for inclusion in bylaws as a job description for board members. These responsibilities also can become criteria against which to review performance and ensure a measure of accountability.

1. **Determine the organization's mission and purposes.** The board's fundamental responsibility is to satisfy itself that everyone understands the organization's reasons for existing — its mission. In addition to ensuring that the organization has a current mission statement, the board should periodically review the validity of the statement. Although the board may not have exclusive domain over the process of writing or revising the mission statement, it is the board's responsibility to adopt it.

2. **Select the executive.** This responsibility has the greatest impact on the organization's development and effectiveness. While this function may also be shared with others who have a stake in the outcome, the final decision is the board's to make.

3. **Support the executive and review his/her performance.** The chief executive relies on the board for moral and substantive support. The board as a whole, or through its top elected officer or an executive committee, should provide this support.

With regard to formal and informal performance reviews for the chief executive, the board and executive should agree on the purposes, processes, and timing of the reviews. The basic objective is to help the executive to perform more effectively. Successful boards and executives understand that they are interdependent.

4. **Ensure effective organizational planning.** It is the role of the board to ensure that comprehensive

organizational planning is done well. The key questions for both board and staff are: Who should do the planning? and How can busy volunteer board members be meaningfully involved in the process?

The board has a special responsibility to see that strategic planning takes place. They must be involved in this planning process if they are to assume proper ownership of the plan and help to implement it. Board members should ask good questions and expect good answers, while serving as resources in areas of personal and professional expertise. Once the consultation and revision have taken place, the board should formally and enthusiastically approve the plan.

5. **Ensure adequate resources.** An organization is only as effective as the resources it has to meet its purposes. Providing adequate resources is first and foremost a board responsibility.

The performance of the board, executive, and director of development is intimately linked to the board's membership and its ability to open doors, influence potentially large donors, and otherwise monitor and guide fund-raising initiatives. Effective fund-raising is one measure of the board's capabilities, commitment, and influence.

6. **Manage resources effectively.** An important part of serving the public trust is protecting accumulated assets and ensuring that current income is managed properly. Because nonprofit organizations are incorporated (or registered) and granted tax-exempt status according to the laws of the country, the board's obligations go well beyond the organization's members, constituents, or beneficiaries.

Boards traditionally exercise their responsibility by helping to develop, approve, and monitor the annual budget. The board should insist on an annual audit by an independent certified public accountant or accounting firm.

7. **Determine and monitor the organization's programs.** The board's fundamental role begins with the question of whether current and proposed programs are consistent with the organization's stated mission and purposes. Given limited resources and unlimited demands on them, the board must decide among competing priorities. Financial and programmatic decisions should not be made independently.

The board should have a good sense of its monitoring and oversight role by seeking a balance between the board's responsibility to ensure quality, cost-effective programs and the staff's responsibility to initiate and conduct them creatively. Board and staff roles in this regard can become confused, particularly when board members also volunteer to manage programs. Candor, openness, and explicit job descriptions go a long way toward negotiating an accommodation satisfactory to everyone.

8. **Enhance the organization's public image.** Government leaders, the media, and current and potential funding sources call for an ambitious and effective public relations program to ensure a healthy public image for the organization.

One of the most important decisions to be made by the executive and the board's top elected leader is who should be the organization's spokesperson. There are advantages to having an especially articulate board chairperson or volunteer president fill this important function. Boards, however, should guard against the overzealous board member who may take inappropriate and unilateral initiatives without specific authorization.

9. **Serve as a court of appeal.** One of the marks of an effectively managed and governed organization is its ability to avoid having its board adjudicate personnel issues except in the rarest of circumstances. Nevertheless, the time may come when the executive's judgment will be challenged. The wise executive knows when to consult with the board and to ask for its judgment regarding disputes not otherwise manageable within the executive's prerogatives.

10. **Assess its own performance.** Every three to five years, the board and its executive should reflect on how the board is meeting its responsibilities. This process should include a look at how its membership composition, member selection process, structure, and overall performance can be strengthened.

Other Board Responsibilities

There are other board responsibilities. Assuring compliance with local and countrywide laws and regulations, questioning unreasonable governmental intrusion, adhering to the highest ethical

and moral standards of organizational behavior, and selecting its own successors are a few that deserve mention.

Responsibilities of Individual Board Members

Board service carries considerable obligations. They extend well beyond the basic expectations of attending meetings and participating in fund-raising initiatives.

A clear statement of individual board member responsibilities adapted to the organization's needs and circumstances can serve at least two purposes: it can help with the process of recruiting new board members by clarifying expectations before candidates accept nomination; and it can provide criteria by which the committee responsible for nominations can review the performance of incumbents who are eligible for re-election or re-appointment.

Operations and Management Systems

Operations and management systems are the mechanisms intended to coordinate activities and facilitate processes within the organization. The basic set of system requirements usually includes:

- Strategic and operational planning;
- Administrative systems, including personnel, procurement, and inventory;
- Management information systems; and
- Financial and accounting systems.

Strategic planning refers to the process of refining a vision and mission for the NGO and determining the long-term approaches it will follow to achieve that mission. Operational planning is the translation of those longer-term strategies into objectives and activities for a given time period such as a program or financial year. Program or project plans are more effective if they include management plans that determine technical assistance, financial, logistical, and human resource needs, and budgets and schedules for delivery of those inputs.

An NGO requires operating mechanisms to support these and other management functions. The most fundamental address the administration of offices and office services, records, cash, equipment and materials, and personnel information. An NGO will also benefit from a management information system, whether electronic or not, for collecting and analyzing data and for integrating the resulting information into operational planning and decision making, as well as into the program monitoring and evaluation system.

Financial accounting systems are discussed under *Financial Resources* later in this chapter.

The next article looks at NGO strategic planning and operations, and discusses the need for and differences among policies, procedures, and regulations.

1. **ORGANIZATIONAL STRENGTHENING THROUGH STRATEGIC PLANNING,** adapted from *Are We Doing the Right Thing: Strategic Planning by Development Organizations*, by Trina Laya-Sensenig and Mary Ann Zimmerman, USA

Organizations are groups of people who work together to accomplish something. What an organization does is determined by the people the organization serves: its beneficiaries or target population. To be effective, an organization must be clear on several things:

- What its purpose is;
- Whom it serves;
- How it wants to get things done;
- What steps it will follow to accomplish things; and
- What ways it has to measure progress and success.

In the broadest sense, an effective organization plans well and acts in a way that closely follows this plan, but constantly reflects on how well it is doing and how it can improve.

Strategic planning recognizes two important realities. First, change is constant, and understanding and dealing effectively with change is important for the survival of organizations and communities. Second, resources are scarce, so it is necessary to make careful choices. Strategic planning is a methodology which can help organizations and communities manage change, using scarce resources wisely, to make decisions about the most important issues affecting their future.

The approach to strategic planning described below requires a shared vision of where and what the orga-

nization will be in the long term. It requires collecting information at the beginning of and at various points during the planning process. It also requires a strong commitment from the organization throughout the exercise.

There are eight main elements in the strategic planning process:

1. Clarify organizational and individual values.
2. Define the organization's mission.
3. Analyze the environment in which the organization works, both internally and outside the organization.
4. Create a shared vision of what and where the organization will be at a certain point in the future.
5. Analyze the organization's current operations.
6. Develop strategies to achieve the organization's vision for the future, in the short and long term.
7. Formulate action plans at different levels of the organization.
8. Prepare to implement and periodically review the plan.

Strategic planning is a continuing process that keeps the organization alert and responsive to its constituents. The plan is a working document that should be reviewed and adjusted from time to time because conditions have changed. This might be as often as six months for the action plans, and perhaps annually for the other components. The yearly strategic review should be timed so that it feeds into the budget development and approval process. Over time, the strategic plan might be integrated into other organizational systems, such as the staff performance appraisal system. In this example, individual job performance is seen as contributing to reaching the organization's vision and goal.

Strategic planning is different from both long-term planning and program/project planning. Long-term planning assumes the current mission and goals and creates plans for the future based on what the organization is currently doing. Program/project planning applies the already articulated mission and goals to concrete objectives and actions in order to meet specific needs. As mentioned, NGO boards and their leaders, together with managers, have a key role to play in strategic planning.

2. **THE FIVE MOST IMPORTANT QUESTIONS YOU WILL EVER ASK YOUR NONPROFIT ORGANIZATION: A SELF-EVALUATION GUIDE FOR NGOS,** excerpted with permission from Peter F. Drucker, *The Five Most Important Questions You Will Ever Ask About Your Non-Profit Organization.*[5]

1. **What is our mission?** The first series of questions has to do with the pertinence of our mission. It urges us to clarify the purpose of our work and to see the extent to which this purpose is still up-to-date or should be reviewed. *What is the rationale behind our existence? What are we trying to accomplish? What are our strong and weak points since the beginning of our activities? Are they in line with our mission? Should we review our mission?*

2. **Who are our clients? Who are our targets?** The term *client,* which is more common among businesses than nonprofit organizations, is deliberately used here to arouse in us a less condescending attitude towards the beneficiaries of our services. All those who benefit from our services are important, be they donors, voluntary workers, needy people — they still are our clients. They have the choice of accepting or declining our services in favor of a competing entity, which affects the very rationale behind our structure. *Do we know our clients well? What are their needs and expectations? Since we started serving them, have they changed? In what way? Do we have to try and understand them better? What do we have to do to that effect?*

3. **What is important for our clients?** The notion of value is closely related to that of the satisfaction of a need. The client never buys a product, he/she pays for the satisfaction of a desire. It then becomes of utmost importance to know precisely what the needs of our clients are and to try and know the extent to which we are succeeding in meeting them. *To what extent are we providing them with what they consider as important? How do we integrate our clients' preoccupations in order to be more efficient?*

4. **What are our results?** Performance is the ultimate test for any institution. The results achieved

[5] This summary was written by Oumou Wane of the West Africa Rural Foundation, Senegal.

within the framework of our mission make our existence legitimate. If it is true that, unlike a business concern, the performance of an NGO is difficult to measure beyond or below a given threshold, one is strongly tempted not to take the results into serious consideration. Most of the results, however, must at least be identifiable and quantifiable. *How do we define the results to be achieved? To what extent have we achieved them? Did we efficiently use our resources?*

5. **What is our plan of action?** This is the stage where our mission should be translated into objectives, each of which comes under a specific strategy and responds to a specific category of clients. *What have we learned to date and what are our conclusions? Where do we have to concentrate our efforts? What do we have to do in a different way? What is our work program to achieve the results assigned to our group or our area of competence? What is our plan to reach the objectives of the organization?*

Human Resources

An NGO's human resources include its governing board, staff (paid and volunteer), and members (if a membership organization). These human resources need to have the skills, motivation, and opportunities to contribute to the NGO according to their capabilities and the NGO's requirements. They also need to be organized and to relate to each other in ways conducive to productive outcomes. How these human resources make decisions, resolve conflicts, communicate, and conduct meetings is as important as how the work is designed, how jobs are organized in relation to each other, and how the work is allocated.

An NGO should periodically review the functions necessary to achieve its mission and define these in the form of job descriptions or task assignments. It should also determine the number of people needed to perform each of these jobs and where, when, and how these people will be provided. The positions that are created need to relate to each other to ensure coordination, communication, and smooth work flow. The NGO should aim to optimize the match between the human resources, their skills and expertise, and the tasks they are assigned. In addition, it is desirable to have mechanisms for upgrading their skills or developing new ones as the work requires.

No single thing motivates people to work in an organization. It could be money, a sense of service, the opportunity to utilize or maximize particular skills or interests, religious calling, social status, security, the prospect of travel, power, opportunities for advancement, or a combination of any of the above. An organization must agree on and offer a variety of incentives to reward or censure performance. Rewards are more effective if linked to the motivational factors above and, if staff see them as fairly administered. In order to attract and retain the type of workers it needs, an NGO also must be competitive with other organizations in its field or in the job market generally.

An NGO needs to ensure that it uses all of the skills and experience of its members and staff. One way to encourage the maximum contribution of everyone is to pay attention to the values of the NGO. These values determine how an organization learns to perceive and respond to situations affecting its purpose, program, and the way it is run. When the board, members, and staff feel and act in similar ways and hold common assumptions, these shared patterns of thoughts and behavior give meaning and stability to the organization. This atmosphere is conducive to high performance, and is cultivated by recruiting staff who share similar values, as well as through their orientation to and training in the organization's way of doing things. While this does not mean that everyone within an NGO must or should think the same way, it highlights the importance of a minimum of common values and assumptions.

The following article describes some of the steps in developing two elements of an NGO's structure: its organizational chart and job descriptions.

1. **ORGANIZATIONAL STRUCTURE,** summarized from *La Gestion des Petites et Moyennes Organisations Africaines (The Management of Small and Medium African Organizations)*, Gestion Norsud, Canada

An organizational chart is a schematic representation of the various services or positions within an organization. Whether simple or complex, depending on the size and scope of the organization, this chart highlights the responsibilities and hierarchical relationships that exist. The chart should be revised whenever changes occur in order to represent accurately the reality of the organization.

Elements of the Organizational Chart

In preparing an organizational chart, the following should be kept in mind:

- The design of the organizational chart is independent of the individuals who are to occupy the positions on the chart.
- The chart is prepared in accordance with the organization's mission, its objectives, the available resources, and the activities to be undertaken.
- The environment in which the organization operates must be taken into consideration (favorable or unfavorable social, economic, and political conditions).
- The organizational chart of a large organization is more elaborate and more complex.
- From a general organizational chart, one can derive a more detailed organizational chart relating to a specific service, unit, or project.
- The organizational chart should indicate the relationship between superiors and subordinates, and among subordinates (in a collaborative relationship). Hierarchical links may be indicated by a solid line and collaborative links by a dotted line.

Description of Positions

A position is a cluster of several tasks contributing to the accomplishment of a given piece of work, which may ultimately result in a product or a service. A task is a unit of work that combines several activities to produce a product or service.

In describing a position, the following factors should be taken into account:

- The activities for which the designated person will be responsible, that is, the primary tasks and subtasks that this person must accomplish.
- The techniques that will be utilized.
- The qualifications, skills, and knowledge that the designated person must possess.
- The links between this position and others. Such links may be hierarchical or collaborative.

In small organizations, relationships are not based on grades or levels and, as a result, there are no positions, properly speaking, but rather a distribution of tasks. Furthermore, there are no employees, because the work is often accomplished voluntarily or the members simply work for themselves.

Financial Resources

What an organization can achieve depends in part on its resources and how they are managed. In addition to the systems described above in *Operations and Management Systems*, a viable NGO will have systems and procedures to plan to meet financial needs, ensure that it has on hand the funds to purchase necessary goods and services, record financial transactions, and monitor and report on its financial status. It will be well served if it has simple mechanisms for organizing cash disbursements and receipts, maintaining journals/ledgers and bank accounts, and meeting payroll, petty cash, transport, and procurement needs.

In addition to having adequate resources and the necessary cash flow, an NGO should have a sufficiently diverse financial base and plans for meeting its long-terms needs. Continuing reliance on one or a few funders can result in the NGO being unable to replace these sources should funding availability change — thereby seriously harming the NGO's overall operations and program services, and thus its sustainability. An NGO is more secure if it has a one- to three-year projection of fund availability, if it has a variety of funding sources, and if it can identify alternative ways of meeting program commitments and cash needs. It is less vulnerable financially if it can find means to recover some of its costs from fees and charges to constituents, or if it can generate other forms of support such as in-kind contributions or revenue from income generation activities.

This section opens with a discussion of approaches for intermediary NGOs to develop more financial stability. It alludes to the notion of revenue generation, which is particularly contentious in some African countries. The second article looks at proposal writing and fund-raising strategies for NGOs. An explanation of financial management, based on the findings from a review of the financial operations of NGOs in Senegal, follows. Insights into developing transparent financial systems and differentiating between direct and indirect costs are presented by two authors. The final article discusses the potential for capital endowments for NGOs.

1. **NGO SUSTAINABILITY AND FINANCIAL AUTONOMY**, by Saliou Diouf, Program Officer, Réseau Africain pour le Développement Intégré (RADI), Senegal

Developing lasting institutional capacity is one of the major preoccupations of all voluntary sector organizations, particularly NGOs and VDOs. Financial capacity is a necessary element of achieving autonomy and self-reliance.

The birth and growth of an organization reflect a complex dynamic. Through our accumulated experience and long sessions with external consultants, we have identified the basic requirements for viable, financially autonomous organizations:

- Executing productive projects;
- Balancing reinvestments between the organization's social portfolio (i.e., schools and clinics) and productive sectors (i.e., agricultural projects);
- Protecting revenue generating activities in order to minimize reliance on partners;
- Having staff who are able to meet the competition and protect autonomous structures from socioeconomic difficulties;
- Reducing the risks associated with the organization's primary activities through diversification into appropriate subsectors;
- Having and adhering to clear and consistent objectives;
- Maintaining control over institutional growth by keeping a balance between the expansion of activities and available material, financial, and human resources (through social and organizational management, a system of monitoring and evaluation, and accounting procedures);
- Sustaining an equitable partnership through the participation of constituent representatives, and a democratic mode of operation; and
- Promoting the autonomy of groups that play a critical role in managing the VDO's overall affairs.

With respect to the internal structures of an individual NGO, the competitive nature of the environment in which it operates calls for attention. It is important that these structures be based on sound skills and provide the capacity to support all partners. Structures must also reconcile the objectives of working for the social good of the membership and generating revenues to reinvest in development actions. The autonomous structures created by NGOs must avoid the risk of repeating the socioeconomic problems that they are seeking to overcome.

Economic activities are uncertain, so it would be risky for a production NGO to depend on one activity alone. Conversely, if activities are diversified, then the organization has a choice. These two types of situations will have a major impact on an NGO's autonomy in relation to the various economic forces with which it interacts.

When an organization experiences rapid growth without taking the time to define its objectives, it risks wasting its time and losing its autonomy of thought and strategy. A good understanding of objectives and firm adherence to them can facilitate an unswerving commitment to those objectives on the part of partners. If objectives are clear and precise, errors of judgment during implementation also can be minimized.

Such precautions strengthen mutual trust among NGO partners and enable them to work together without strict controls. A true commitment makes it possible to avoid the risks of influence peddling, along with material and political vicissitudes.

A rise in the volume of an NGO's activities and an increase in the number of its internal units reflect the growth of an organization. This process generally entails the creation of greater and greater needs. Based on the quality of NGO's the activities, more and more human and financial resources are essential. Potential resources and the resource management system must be monitored and adapted at each step of the development of the organization and its projects.

For example, an organization involved in a two- or three-year program should not recruit staff for an indefinite period. A dispute could arise if the NGO is tied to its staff by contracts of indefinite length, while the project on which the staff works will terminate at a known time. Given the employment legislation in some countries, the NGO would not be able to release its staff easily even though it could no longer pay them. Organizational management raises the issue of monitoring and accounting procedures. This situation is all the more complex because organizations seek to adapt to their changing environments. The monitoring and evaluation system remains a determining factor in obtaining the trust of partner organizations. The more effective this system is, the more an NGO's partners are inclined to authorize autonomous management. (See chapter 3 for information on monitoring and evaluation.)

The justification of an NGO is the need to support the village associations that it serves. Some NGOs

engage in inequitable partnerships in order to stifle autonomy on the part of local groups, which would end the reason for the NGOs' existence. The autonomy of NGOs thus depends on the autonomy of grassroots organizations. The more such organizations depend on NGOs and external partners, the less they are likely to achieve true autonomy.

Promoting local involvement and working against the idea of individuals perpetually requiring assistance are fundamental factors in the autonomy of NGOs. Each target group must play a pivotal role in decentralized management. Training provided through outreach activities must equip the target group with a solid foundation of skills and knowledge that will permit, from the outset, a certain autonomy in technical follow-up. This transfer of knowledge should continue and eventually enable the group to function with a minimum of external assistance.

2. **FUND-RAISING AND PROPOSAL WRITING FOR NGOS**, by Danyelle O'Hara and Tim Peterson, World Wildlife Fund-US[6]

Introduction

This article introduces basic concepts relevant to fund-raising and proposal writing. Specifically, it focuses on how NGOs can make fund-raising and proposal writing part of an organization's overall strategy and use a project proposal in the context of fund-raising, planning, decision making, and monitoring. Briefly, this article emphasizes the importance of fund-raising and proposal writing in the "big picture," and how these processes are elements of an integrated effort to achieve an organization's strategic mission.

Fund-raising and proposal writing (and the subthemes within each) could constitute a book in and of themselves. Therefore, the concepts introduced here should be seen as entry points for further exploration by the reader.

Readers should consider their own experiences in fund-raising and proposal writing in comparison with what we propose. What have been your objectives in undertaking these activities? How have you approached them? What have you expected to achieve? What has worked and what has not worked for you? Reflecting on these points will help to put the information here into a context that is relevant for you.

Purpose of Fund-raising

What is the purpose of fund-raising? The obvious response to this question is found in the word itself, *to raise funds*. However, fund-raising is an activity that produces more than money. **Fund-raising is the process of developing relationships that leads to the support of an organization's mission.**

Fund-raising can be used as a tool for networking — simply becoming aware of, getting exposed to, and making contact with donors and people who are interested in and/or doing work similar to that of your organization. Fund-raising is also an opportunity to create awareness and provide information about your organization and what it does.

Building strong relationships with potential donors is essential to fund-raising. Cultivating relationships requires time and an initial investment, as well as a commitment to maintaining the relationship after funding has been received. This builds a constituency for your organization and its mission. Activities that are formulated in the context of your strategic plan are the means by which this mission is attained. An organization's fund-raising efforts should place a high priority on familiarizing potential donors with the organizational mission, as well as its activities, since the organization's constituency should be built around its mission statement.

Developing a Fund-raising Strategy

Now that we know the orientation our fund-raising strategy should take, let's think about developing the strategy itself. Eleven principles can be followed:

- Have staff and resources;
- Involve board of directors or trustees;
- Communicate your needs and explain your programs;
- Be selective and focused;
- Know what you need and be specific;
- Be persistent;
- Be professional;
- Be consistent;

[6]This article draws on WWF-US's publications *A Guide to Financial Resource Development* and *A Guide to Designing Effective Proposals*. More information about these publications is in chapter 4. WWF-US's *WWF Training for Decentralization Manual*, an internal resource, was also used.

- Ask;
- Say "thank you"; and
- Evaluate before you start.

As you develop your strategy, ask yourself the following questions:

- Is the strategy appropriate and feasible given your operating environment and other factors?
- Does the strategy build on your organization's experience and expertise?
- Does the strategy capitalize on the physical, human, and financial resources available to your organization?
- What additional resources will be needed to undertake your fund-raising?
- Where are the best opportunities for fund-raising?

By focusing on these questions, in conjunction with the eleven principles, you should be able to develop a fund-raising strategy that works.

Foundations

There are various sources from which to solicit funds, including:

- Local and international foundations;
- Businesses and corporations;
- Individuals; and
- Governments.

While there are many sources for raising funds, the focus of this text is foundations. Foundations are generally established as nonprofit organizations funded by individuals or corporations for the purpose of supporting charitable activities. Each foundation has its own particular funding interests. The following steps are involved in procuring foundation grants.

Investigate who is out there. Identify the foundations most appropriate for your program's funding interests. You can contact other local NGOs in your countries, international NGOs, and foreign embassies to start.

After identifying possible foundations, you will need to do some **research** on them, including:

- Funding interests;
- Funding cycles and deadlines;
- Types of projects funded in the past;
- Approval time;
- Expenses covered/not covered;
- Reporting requirements; and
- Special international requirements.

After you have acquired the necessary information, you should **initiate contact** with someone from the foundation, either by letter or telephone. An introductory letter or telephone conversation should:

- Be short, to the point, and positive;
- Ask for proposal guidelines, areas of interest/funding, and any other needed information;
- Mention names of any individuals associated with the foundation who are acquainted with your organization and its programs; and
- Be personal, addressing the interests and concerns of the foundation (no form letters!).

You now will be ready to **request a meeting** with a foundation representative to allow you to more fully explain your organization and its programs as they relate to the foundation's funding interests. You should view this as an opportunity to familiarize the representative with your organization's mission statement and orientation, as well as its activities.

The next step in the process will be to **develop a project proposal.**

Proposal Writing for Fund-raising

Proposals are one of the major vehicles used by organizations for raising funds. Foundations almost always require a written proposal, as may other funding sources such as the government. It is important to remember that, no matter how good the proposal, any proposal has a better chance of being accepted if the organization submitting it has invested in building a relationship with the donor.

The basis of a good proposal is an "important" project — that is, one that is both appropriate and feasible. A well-written proposal is a pleasure to read, but good writing alone will rarely sell a project that does not have at minimum a clear and compelling purpose, sound objectives, a plan for accomplishing the objectives, and a specific request for support. Good writing and clear presentation should embellish a project of substance and quality. Good writing should never be used to substitute or disguise a substantively weak, inappropriate, or unfeasible project.

The following is a checklist of things you and your organization should consider in developing a project proposal:

- **Know the requirements or preferences of your prospective donor.** Most often, when you are asked directly by a donor to prepare a proposal, the donor will indicate what it wants. You should also have collected this information when you were investigating donors. If the donor to which you are submitting a proposal has specific guidelines, follow them as closely as you can.

- **Identify the problem.** Articulate the problem your proposal will address. People within the proposing organization are often well aware of the problem and the need to address it; however, it is important not to assume that your donor has the same understanding. You need plainly and distinctly to make your donor aware of the problem, and why you are capable of solving it.

- **Crystallize your request.** For yourself, frame one sentence summarizing what you want the proposal to do. This will orient you and help you keep your own goals in perspective as you develop the proposal.

- **Decide whether you will open with a compelling example of success or need, or with a straightforward statement.** The first paragraph of the proposal should either explicitly state the project's purpose, or compellingly demonstrate — for example, through a quotation — a problem or need that leads to a statement of the project's purpose as a solution.

- **Move efficiently through background and into objectives.** In establishing the project's pur pose, you will almost always need a section on the background of or need for a project. However, it is important not to go into too much detail. Say only what is needed to provide the reader with a context, and then get back to the project itself. You have stated the project's purpose: now say what objectives will be pursued to achieve this goal.

- **Next say what your organization plans to do.** There are several names for this section: work-plan, proposed activities, project implementation plan. Be as specific as possible about each part of the project without tying yourself too tightly. Say what the activity will involve (for instance, travel, workshops, consultants, surveys, etc.), how much time it is expected to take, and what the expected outputs will be. (Sometimes you may want, or be required, to have a separate section for outputs or products, and/or a separate section for your schedule.) The activity section should be explicit enough for the reader to see clearly how the activities will translate into the expenses detailed in the budget. Remember to focus on what genuinely needs to be done.

- **Say who or what the project will benefit.** Many foundations ask for a section explaining how you will evaluate the project when it is complete, and some ask for specific evaluation criteria. Even if there is no such requirement, it is helpful to reiterate in closing how the project will benefit its recipients and how you will know if it has. You also want to clarify every participant/actor's role and responsibilities.

- **Close by asking for the donor's partnership in your important cause.** Sometimes you will be asking for full support for a project, sometimes for partial support. Most of the time, you will include the amount of your request in the last paragraph and refer to an attached budget.

- **Bring the project back to your mission statement.** Make it clear that this project is one part of a larger program to bring your organization closer to achieving its overall mission. Explain how this link is made.

- **Provide a clear and simple budget.** The best advice for a budget is that it should be as simple as possible, unless the prospective donor has a required budget format. For internal purposes, you might want to work out a detailed budget, but resist the urge to put it in your proposal. A typical and perfectly acceptable budget might include categories like: personnel costs, consultants, travel, conferences and workshops, action grants, communications (phone, fax, electronic mail, postage), equipment and materials, and publications.

Again, focus only on what is really needed to achieve your objective and goal.

After Funding

Once a check comes in the mail, there often is a tendency to forget the donor. Remember that **fund-raising and donor relations are long-term propositions that require input and maintenance.** After the proposal is written, submitted, and approved, your organization's relationship with the donor is just beginning. It is important to keep the donor up to date with project progress through periodic reports, letters, invitations to visit the project site, and telephone calls. An organization should consider reporting as another opportunity to strengthen relations with the donor. Certain donors may have a prescribed format for the organization and content of a report. If so, you should follow it, but a good progress report always incorporates the following:

- **An introduction** that names and acknowledges the donor and identifies the grant and project. The introduction should also provide an outline for the remainder of the report.
- **A logical format** that reflects the project's scope of work as it was outlined in the original proposal.
- **Assessments of each project component** that are straightforward and tell the donor how progress has or has not met expectations. Written or visual products (photos, videos, audio cassettes, etc.) from the project are very helpful for the donor and should be included as attachments when possible.
- **A section identifying significant problems or delays** that might require an extension of time for the project or reprogramming of funds. Discuss how you plan to resolve these problems.
- **A section describing your anticipation of future project opportunities and needs.**
- **A conclusion** that thanks the donor and introduces the financial report.
- **A financial report** that clearly matches the narrative report.

Other Uses of a Project Proposal

A proposal has many uses beyond fund-raising. The basis of a good proposal is an important project with a good, solid design. Unfortunately, it is often the case that well-written, glossy proposals are not backed up with well-thought-out, well-planned activities in the field. Often as we get caught up in the demands of our donors and the time-intensive process of proposal writing, we may not pay adequate attention to the reason we are developing a proposal — the project itself. It is the project that should drive the proposal, not the reverse.

The process of developing the different components of a proposal may be used as a tool for more than just fund-raising. For example, proposal preparation requires that you think through things such as:

- **Identifying the Problem:** The first step in designing a project is to define the problem. This involves performing a situational assessment together with a needs assessment long before the project is actually ever designed. A situational assessment can be done using rapid appraisal techniques. A rapid rural appraisal (RRA) may, for instance, establish that a number of project possibilities exist. A participatory rural appraisal (PRA) may then follow, in which the proposed beneficiaries themselves assume the lead in identifying opportunities, constraints, and needs.

The needs assessment will involve collecting socioeconomic and biological information, facilitating discussions among different stakeholders about their perceived needs, and assessing your own organization's capacity vis-à-vis those needs. All of this information will provide you with a picture of what the problem is and enable you to articulate it clearly, together with a goal and an action plan for how your organization will address the problem.

- **Setting the Objective:** You will need to define and set objectives to address the identified problem. Objectives should be time bound, specific, measurable, and realistic. They should give you a clear idea of what you want to do and when, and permit you to determine when you have actually done what you set out to do.

- **Developing a Strategy:** Appropriate strategies will allow you to achieve the objectives you have articulated. Strategies should be linked to the problem and objectives, and should outline the time and resources necessary for implementing them. This, in essence, is your action plan.

- **Developing a Monitoring Plan:** A monitoring plan not only allows you to collect information on your project's progress relative to its objectives in a systematic way in order to report to your donors,

but also provides the data you need to manage and refine your objectives to best achieve your goal. Ultimately, a good monitoring system should allow you to determine if your organization is achieving the broad goal reflected in its mission statement.

More information on topics relevant to project design can be found in C.5 in this chapter (determining project feasibility); and chapter 2, B.2 (designing integrated conservation and development projects); and chapter 3 (monitoring and evaluation).

3. FINANCIAL MANAGEMENT OF NGOS,

by Seni Diop, Chief Administrator, Association Conseil pour l'Action (Council for Action Association), Senegal

Before examining, step by step, the operations and procedures of an NGO, it is important to begin with financial management and the difficulties NGOs encounter. NGOs have only recently recognized that financial management, long considered a routine activity, is a key to the success of development projects. Among NGOs, financial management has become all the more important because the funds they receive finance development projects that constitute cooperative activities insofar as they involve the participation of at least two organizations.

Financial management is a group of activities including acquiring funds, allocating financial resources, and monitoring performance. The account books no doubt represent the most concise expression of performance from a financial management perspective, and draw the most attention from managers and decision makers who seek a certain assurance that funds are indeed being used for a previously defined purpose. This guarantee is particularly important when several organizations, each managed in accordance with strict rules, are collaborating with the NGO.

The two principal functions of financial management are financial accounting and management accounting.

Financial accounting answers the question, What happened? Based on generally accepted accounting principles, financial accounting provides a record of financial transactions. The emphasis is on precision, consistency, and the existence of procedures for monitoring operations. This allows the NGO to satisfy the fiscal and legal requirements imposed by the organizations with which it collaborates.

Management accounting is a useful concept for describing the allocation and monitoring of funds. It includes the preparation of financial projections and watching performance and budgets. This requires minimal reference to the historic data provided by financial accounting. Unlike financial accounting, management accounting is primarily oriented toward the future.

Despite their differences, financial and management accounting are interdependent. Traditionally, financial accounting has been the most dominant aspect of financial management. Account books and financial reports are supposed to give managers and decision makers the assurance that all goes well.

Management accounting is of wider scope. Good management accounting cannot take place in the absence of proper financial accounting. Management accounting includes the functions of general accounting but emphasizes using accounting information in the decision-making process. By receiving timely data, the donor agencies and officers of the NGO can determine what resources have been committed, how they are allocated to which activities and phases of the program, whether they are being used in an effective manner, and how much will be needed in the future.

Reports produced after financial accounting (audit) reviews conducted over the last few years in over twenty NGOs in Senegal highlighted problems of financial management. These problems can be classified as related to either management accounting or financial accounting.

The roles of management accounting and of accountants are often poorly understood by NGOs, which may see financial reports as necessary for obtaining additional funding or as a management tool. Most NGO officials consider the accounting staff as technicians who record operations rather than as members of the management team. As a result, reports that are of some importance in managing the NGO are typically prepared late, if at all, and usually ignored. Since the accounting office is not perceived to be a necessary or important element of management, internal controls are rarely applied. Frequently, an individual will receive cash to purchase supplies, carry out business, or make small loans to participating artisans or farmers. The

most serious problems are the lack of invoices and receipts, and checks cashed with only one signature. The lack of separation between the responsibilities for collecting and monitoring funds increases the risk of embezzlement. Further, different functions are often spread among several activity sites, with no point of convergence for financial data, which complicates the work of managers who must seek out information at different locations.

Problems in this area stem from a lack of appropriate records, reports, and procedures enabling the NGO to follow the flow of funds and its partners to monitor the operations. A minimum of records and reports would include a cash book, a bank book, a commitments book, bank statements, and a financial report.

4. SETTING UP FINANCIAL SYSTEMS FOR NGOS, by Barbara A. Howald, USA

Transparent financial systems contribute to maintaining trust between an NGO and all of its stakeholders. A transparent system has a purpose and logic apparent to all who are required to use it, and it provides the information that all stakeholders need. Such a system permits easy cross-referencing between accounts and calculations, offering clear indications of where receipts are found and in what form, employing categories/codes that are simple and consistent, and using standardized report formats throughout.

Setting up a financial system begins with the NGO management determining what the financial information needs are for all of the stakeholders involved. This exercise is essential. An NGO should not attempt to set up accounts without having analyzed and verified what reports they should produce. Table 1 can serve as a starting point for the types of information to gather.

The major users of this information are the management and boards of directors of the organizations who have primary responsibility for the NGO's success. They want to be able to track all of the flows of funds into and out of the NGO, between it and its creditors and debtors, as well as the movement of funds within the organization. This is accounting. The accounting function within any organization, be it a multinational corporation or a neighborhood club, follows these flows of cash. And the best ones do it transparently.

The smaller the organization, the simpler the accounting — all cash goes into and out of one pocket, no matter the source of the funds. This becomes complicated the minute any one funding source requires that its funds be used for special purposes. Think of when a child is shopping for some friends, each one giving exact change for what he/she wants to be purchased. The child needs to remember who's buying what, and how much she can spend for it, though all the coins are in one pocket.

One of the most frustrating tasks for NGOs is to be able to respond to differing donor requirements for accounting that clearly justifies donor disbursements, when several donors may have contributed to a single activity or item. It is possible, however, to divide and attribute costs between projects and donors. The way in which donors earmark funds helps. NGO donors usually fund organizations in two ways: (a) expenses by category (e.g., staff costs, a vehicle, or a commodity); and (b) expenses by project (partial or full costs, direct or fully burdened costs of a project).

In the first case, success will be judged by what the organization has been able to produce with the resources provided, either against a certain pre-agreed standard, or against previous performance. Therefore, there is a need to identify and track what the funded items go toward producing (e.g., personnel costs per number of people fed, miles covered per villages reached, miles of pipe purchased and laid).

In the second case, success will be judged by the achievement of project objectives as stated in the grant agreement. Therefore, there is a need to identify and track all resources used to produce the listed project targets.

Budget and project codes are simply categories of expenses. Once created, the list of categories should only rarely be updated. The key to keeping track of the various codes is to assign each expense a double duty code, which identifies it by both the *category* of expense (e.g., personnel, vehicles) and the *project, task, or job* (e.g., nursery in village A, nursery in village B) for which it was used. Codes should have a clear, written explanation kept in an easily accessible place, so that questions about ascribing codes can be quickly answered. (See table 2.)

An additional set of descriptors can further detail activities. Again, each organization has complete flexibility in the conventions it uses. Some organiza-

Table 1. Sample Information Needed by Stakeholders in an NGO.
(organized by what the organization is owed, its internal flow of funds, and what it owes)

RECEIVABLES	STOCKS LIQUIDITIES REAL PROPERTY	DEBTS
Management/Board Members • Verify how much is owed to the NGO • Calculate how much NGO can attract • Plan the cash flow • Identify potential non-receivables • Identify good and bad risks • Analyze and make policy on credit extended by the NGO *Borrowers & Donors* • Verify what's owed to the NGO (e.g., salary advances) and what is in each donor's pipeline *The NGO's Lenders* • Get an idea of the receivables situation, in contrast with the debts owed by the NGO to lenders *Government* • Determine the level of assistance provided to the country through NGOs *Consulting Firms, Auditors* • Determine the level of support to the sector, for future feasibility studies	STOCKS *Management/Board Members* • Know the cost of stocks (e.g., project materials) and the movement of these materials in order to plan for purchases and distribution • Analyze stocks management capabilities and external factors for better planning *The NGO's Donors & Lenders* • Evaluate stocks management capabilities for current and future loan requests LIQUIDITIES *Management/Board Members* • Prepare calendars for purchases and the payment of debts • Judge the solvency of the NGO • Determine whether to adjust project activity and donor funds transfer schedules *The NGO's Donors & Lenders* • Judge the solvency of the NGO • Judge the cash management capacities of the NGO REAL PROPERTY *Management/Board Members* • Manage real property maintenance and its costs, including projections for remodeling or new construction • Prepare investment plan for real property *Government* • Control the movements of real property between owners *Commercial Lenders* • Determine the value of real property as loan collateral	*Management/Board Members* • Verify how much the NGO owes others • Establish accounts payable schedules • Establish cash flow projections • Analyze and make policy on credit to be carried by the NGO (credit risk to support) *Government* • Aggregate the indebtedness of local organizations • Track risk level of the NGO sector *The NGO's Donors & Lenders* • Determine the solvency of the organization • Judge the risk level the organization is willing to run

Table 2. Sample Budget Codes.

CATEGORY	SUBCATEGORY
01: Personnel	0101 Base salary 0102 Social security 0103 Insurance 0104 Lodging allowance 0105 Sick leave 0106 Holidays 0107 Overtime 0108 Staff training
02: Personal services (consultants, contracts)	0201 Consultant fees 0202 Consultant miscellaneous expenses
03: Office Space	0301 Utilities 0302 Rent 0303 Mortgage 0304 Cleaning/maintenance/repairs 0305 Construction (materials) 0306 Construction (labor) 0307 Insurance
04: Equipment/Furniture	0401 Office furniture 0402 Other furniture (e.g., staff housing) 0403 Office equipment 0404 Office equipment/furniture maintenance/repairs 0405 Project-specific equipment 0406 Project-specific equipment maintenance/repairs 0407 Depreciation
05: Vehicles	0501 Vehicle purchase 0502 Vehicle rental 0503 Fuel/maintenance 0504 Repair 0505 Insurance 0506 Taxes/tariffs 0507 Depreciation
06: Supplies	0601 Office supplies 0602 Program supplies
07: Travel	0701 Transport/international 0702 Transport/local 0703 Per diem 0704 Travel documents
08: Communication	0801 Telephone/fax/telex/e-mail 0802 Postage/delivery services
09: Miscellaneous	0901 Other insurance 0902 Interest 0903 Professional fees 0904 Memberships/legal registration 0905 Other local/federal taxes 0906 Charitable contributions

tions use a series of letters to denote countries or regions of activity, while others use acronyms for the major technical sectors in the NGO's portfolio. Some use a two-digit code to denote the year when the project started, followed by a chronological number, or else a number code for the donor along with a number code for the activity. The key should be short and transparent so that your personnel (and auditors) can quickly learn and use the code.

These codes are extremely useful in manual systems, and are required in computerized systems. Encoding manual systems now will make it much easier to make the switch to a computerized system later, since all accounting programs use coded data in calculating, comparing, and analyzing an NGO's financial performance.

5. **FINANCIAL FRAMEWORK FOR NGOS: DISTINGUISHING BETWEEN DIRECT AND INDIRECT COSTS**, by Frank Lusby, The Action Consulting Association, USA

A grant generally covers two areas: (a) the direct costs associated with the grant and (b) the indirect costs which support the execution of the grant.

Direct costs are line items in your budget directly related to the implementation of your program. They might include purchasing a vehicle, paying trainers, or buying medicine for a pharmacy, trees to plant, or books for a library.

Indirect costs are the costs of supporting the general operation of the NGO. These include salaries for secretaries and accountants, rent, utilities, and other administrative expenses. It is important to differentiate between direct and indirect costs.

Direct costs usually cannot be changed. For example, if the proposal includes buying 1,000 trees, then 1,000 trees are supposed to be bought. This money cannot be used for other purposes. The funding organization will be looking for those trees. The costs of the trees need to be identified independently from the operational costs of the organization. A risk in not doing so is that the funds might be used for other purposes, causing the funder, the NGO, and the NGO's constituency potential problems.

Indirect costs are a different matter: NGOs have some discretion here. As long as the project is executed successfully and all of the direct-cost items have been procured, the funding organization usually doesn't require reports on how indirect costs are managed. The NGO manager can decide to hire or fire staff, rent a more expensive office, reduce electricity bills, or work more days than planned on a project. In these areas, the NGO is generally not controlled by the terms of a grant or contract in (unless the funds are to support the overall organization, rather than a specific activity).

It is important for an NGO to have a financial management system that can separate and monitor the direct and indirect costs of its activities. This separation helps ensure that funds for direct costs are spent as agreed. It also facilitates the production of reports (as described in the previous article) for each grant or contract. Differentiating between direct and indirect costs helps NGOs better manage both grant activities and their own organizations. It also helps them to develop accurate cost proposals for their programs or services.

Funding organizations have different practices and philosophies when it comes to paying for some or all of an NGO's indirect costs. These include:

- Not accepting indirect costs;
- Funding indirect costs if they are specified as line items (for example, twenty percent salary of a secretary, thirty percent use of a vehicle, rent of two offices in the NGO's building, etc.);
- Funding indirect costs as a percentage (typically five to twenty percent) of the total program budget, or as a percentage of the salaries of personnel who are working on the program; or
- Funding indirect costs that are built-in to fees. Fees usually relate to the number of person-days that an NGO's staff work on the program, and often include the salaries of the staff plus an amount for indirect costs.

The procedures for identifying and budgeting the direct costs for a grant/contract are:

- Review all the execution phases of the program.
- For each phase, identify and estimate the costs that are directly related to program execution (and are not part of the NGO's general operating costs).
- Group these costs together by category (equipment purchase, training workshop, etc.).
- Identify and estimate expenses that are directly related to program execution, but do not fall under a specific category. Group these

expenses in a category called "Miscellaneous".
- Add up the total of each category to determine the direct cost of the program.

An NGO should create a budget for its indirect costs on a yearly basis (at least). The procedures for developing these costs are:

- Determine the budgetary period (e.g., six months, one year, etc.).
- List all the operational costs of the NGO. This can be done by thinking about (a) past expenditures and (b) new investments or developments you want to undertake (e.g., installing a telephone, hiring a secretary, etc.).
- Group costs by budget category. For example, administrative salaries, medical expenses, and transport costs for personnel could be grouped in a category called "Personnel".
- Estimate the cost of each category for the chosen time period.
- Calculate the budget total by adding up the different categories.

It is important for an NGO to monitor the contributions that its grants or contracts make to indirect costs. Only in this way will it know if there are sufficient revenues to meet the operational costs it has budgeted. If contributions to indirect costs are low, the NGO will need to adjust its expenses accordingly. This may mean renting a more affordable office, cutting back on staff, or reducing expenditures in general.

6. **THE ROLE OF ENDOWMENTS IN AFRICAN DEVELOPMENT**, by Paul Weatherly, based on information used by the Special Program for African Agriculture and Research, USA

While governmental and non-governmental institutions supporting economic and social development in Africa have faced many challenges since independence, until now they have been able to count on continued, if somewhat variable, donor support. Reduced donor presence in many countries is demonstrating an urgent problem that must be addressed by African governments and populations. That problem is, How will countries meet long-term development goals and supply services on a sustainable basis?

In this climate of uncertainty, African countries and international donor institutions are searching for new funding, and for mechanisms to utilize present funding, to establish long-term partnerships with program-implementing institutions.

This article discusses endowments — financing mechanisms in which assets are invested to earn income to support a defined purpose — as vehicles that could be useful to NGOs working toward sustainable development. In certain situations, endowments are an effective means for donors and governments to use to help support NGO programs. Not only do endowments insulate institutions and programs from fluctuations in government and donor funding levels, they also help organizations develop more mature management capability and systems. Carefully managed endowments can lead to improved NGO capacity to create more effective programs.

Experience in a number of countries in Africa and elsewhere has shown that a capital endowment, while not the only way to broaden a funding base, is central for an institution to achieve financial stability. An endowment requires an organization to have a certain capacity just to manage this new financial resource, since it supplies income indefinitely and demands more sophisticated oversight.

The process of building management capacity, while it may be a daunting task, will enable institutions to conceive and implement other innovations that can help secure steadier funding. Possibilities include, for example, voluntary levies on producers, special user fees, royalties from commercialization of new technologies or crops, and partnerships with governments that would allow creation of special tax districts to support agricultural or environmental programs.

In light of current donor regulations, the process of creating an endowment is most likely to have two tracks: (a) the financial (legal, trust) track, which plans for an income flow for an organization or group of organizations active in a particular sector; and (b) the institutional (management, accountability) track, which builds the capacity of an organization to plan and use the income effectively over a number of years. The two tracks converge when the organization has matured sufficiently to assume control of the endowment. Achieving this level of maturity is as important for sustainability as the steady income from the endowment.

Endowments meet two fundamental needs of sustainable development. One need is for a greater variety of indigenous funding sources based on

partnerships of mutual interest. The second is to assist institutions in managing their affairs independent of traditional foreign aid donors.

Endowments create a dilemma for institutions and donors. Endowments require mature beneficiary institutions that can manage and account for the funds the endowment provides, but at the same time the incentive of access to an endowment (and through it other sources of funding) cannot itself bring about the process of maturation. Donor influence may be more important than financial assistance in this process, although money, of course, is needed. Donors can provide a position around which stakeholders can coalesce that will help financial innovation, institutional upgrading, or both.

Establishing an endowment requires:

- A coalition composed of all stakeholders;
- A vision of what the endowment is for and what it is not for;
- A mandate from the partners and/or beneficiaries to establish such a fund, and checks and balances on how funds are managed;
- A regulatory framework for overseeing the activities of the endowment and endowed institutions;
- Innovation in programs and fund-raising for the long-term sustainability of the endowed institutions; and
- Broad scope rather than narrow focus in order to be able to precipitate qualitative change.

Service Delivery

Service delivery is the most important element of the success and effectiveness of an NGO. An NGO may have excellent systems and administrative procedures, a highly skilled staff, and a committed governing body, but it must above all utilize these resources to deliver quality services to its constituents. On the other hand, an NGO may deliver excellent services and have profound, positive, near-term impacts on the communities it serves but have little in the way of systems and procedures that ensure these impacts will continue. So in addition to being able to deliver quality services in cost-effective ways, the NGO has to ensure that they are sustained. Sustainability may involve the NGO's continuing as the service provider, or the transfer of responsibility for service delivery to others in the community being served.

The first element that assures good service delivery is expertise in the program sector. Beyond simple concern for a particular group of people and a desire to set the world right, the NGO must offer technical know-how. This expertise includes updated information about sectoral theories, methods, and techniques; skill in applying the information; and, when necessary, access to specialized assistance.

The second element of service quality is customer, community, and constituency ownership of and participation in the program and satisfaction with the services that are being provided. This comes about by encouraging and enabling community input to the definition of problems and the design of solutions, by utilizing appropriate methods, and by working with the community as a partner in the process.

The third element is the capacity to measure the impact of the program and adjust the program according to the information received about impact. This requires baseline data on the conditions and situations that the program is attempting to address, measurable objectives, and clear indicators of the progress being made toward these objectives.

Fourth, and finally, the NGO's program and services have to be meeting a real need as determined through operational steps that involve the community in planning and decision making. Services must be seen as having real value to the community and resulting in a real return on investment for the community served. Achieving a certain level of cost recovery and community-derived support indicates that recipients really value what is being delivered.

Questions that an NGO can ask itself about how it is doing in the service delivery area include:

- What are the valid measures of our performance and impact?
- How are we performing according to those measures?
- How are we performing in comparison with other, similar NGOs?
- Do we have mechanisms for integrating results of program evaluation into our planning process and for adapting and changing program direction and approach in response to information we receive?
- To what extent do we recognize the need for our own institutional development?
- What measures are there of technical/sectoral expertise?

- How are we performing according to these measures?
- What demand is there for expansion or extension of our program to new areas?
- To what extent do we serve as an advocate for our constituency?
- Do participants in our projects contribute to the design, management, and evaluation of the projects?
- To what extent do mutually developed plans exist for community/constituency assumption of management responsibility for service delivery?
- Is there a realizable plan for long-term financial support of the program?
- What percentage of costs are we recovering from the community/constituency, or what level of in-kind support do we receive?
- What institutional and individual capacity building are we providing to the community/constituency to ensure its ability to assume management and financial responsibility for service delivery?

Chapter 3, "Evolving Approaches and Tools for NGOs Working in NRM," discusses key methodologies that will assist NGOs in strengthening their NRM-related program activities. Chapter 4 lists other resources to guide NGOs.

External Relations

To be effective, an NGO has to manage relationships across its boundaries. The organization must note and respond appropriately to the social, political, ecological, economic, and other forces and events around it.

It is also essential, strategically, for the organization to build up collaborative and support relationships. These are based on the NGO becoming known within pertinent communities and establishing an image and track record that reflect it and its achievements. The organization has to make itself known as widely as possible outside the range of its direct collaborators and present a competent public profile. These relationships will enable it to widen its impact through partnerships and collaboration with the government and other agencies and NGOs active in the same sectors and geographic areas. It also has to maintain successful relationships with its donor network.

The three articles in this section address more effective communications with the community an NGO serves, the factors affecting NGO-government relations, and the opportunities created by computer communications for information dissemination and networking.

1. **PARTICIPATORY COMMUNICATION: THE CASE OF FM RADIO,** by Joachim Ariste, Entreprise de Diffusion des Techniques de l'Electronique (EDITEL) (Enterprise for the Dissemination of Electronic Technologies), Burkina Faso

NGOs must analyze situations, design models to solve problems, and stimulate action in the field. Thus, they require tools that will contribute simultaneously to transmitting information, taking action in the field, and receiving feedback. Such tools all fall within the parameters of communication.

The objective of an NGO is to solve a specific problem linked to a complex set of data affecting human society: the objective may be social, cultural, economic, or environmental. Whatever the objective, its resolution will not lead to an enhancement of the target community unless all data are taken into account. The objective can best be achieved through what is known as *participatory communication.*

Participatory communication incorporates the following:

- Messages from the NGO to the community that represent a quest for dialogue and are intended to provide the community with a voice;
- Gathering information from the community on all aspects of the phenomenon in question (historical and physical aspects and their consequences);
- The study of data at a local resource center by NGOs and local experts;
- Messages from the community to the NGO expressing its needs and a general approach to solving them; and
- A message from the NGO to the community in the form of a plan of action or proposed project that spells out what actions should be taken next, while respecting the community's identity.

This process of establishing and operating systems of participatory communication is not valid in emergency situations such as epidemics or war.

In what fundamental mode should basic communication take place? How can we create communica-

tion that is both horizontal (among members of the same community) and vertical (between communities and the NGOs operating within them) at the local level? Several systems for such communication can be identified. Our present goal is to examine local FM radio as a means for participatory communication in rural settings.

How can we use the one-way communication offered by radio for promoting social and community development and positively influencing the welfare of the community? Radio is simply a forum that allows human beings to speak with other human beings about everything that concerns them. Similarly, local, participatory radio operates as a tool of community development, reaching the individual and the entire community with programs designed to improve their well-being. We must recognize, however, that the community exists before the radio; the community is the soul that gives life to local radio and is the center of interest for all local radio activities.

FM radio is a basic technology that could serve as the foundation for a worldwide system. Collectively, the radio stations of a country theoretically constitute the necessary local resource center within the system. But it is important to weigh the following factors before setting up an FM radio station in a community:

- How the radio station will be used, and for what purposes;
- The vitality and entrepreneurship of the community and the potential paternalism of NGOs;
- What benefits are derived from community initiatives; and
- An evaluation of the desire to share and open up in a way that will make problems, solutions, visions, and debate a matter of common cause — and hopefully lead to an improvement in general well-being.

2. **THE STATE AND THE VOLUNTARY SECTOR,** adapted from a paper by John Clark, USA

A healthy government-NGO relationship is only conceivable when both parties share common objectives. If the government's commitment to poverty reduction and NRM is weak, NGOs will find dialogue and collaboration frustrating or even counterproductive. Likewise, repressive governments will be wary of NGOs that represent the poor or victimized or stand on the opposing side on all issues. In such situations, NGOs will probably prefer to chart their own courses, distinguishing themselves as much as possible from the state and its structures.

Where the government or even individual ministries have a positive social agenda, and where NGOs are effective, the potential exists for a strong, collaborative relationship. Such relations are currently rare, however, even when these conditions are met. Governments fear that NGOs erode their political power or threaten national security. NGOs mistrust the motivation of the government and its officials.

A review of numerous articles on this issue identified several major factors which impair the relationship between governments and NGOs. These negative factors include:

- A highly political policy environment;
- NGOs' preference for working independently, leading to an unwillingness to conduct a dialogue with government, and even poor coordination among NGOs themselves;
- Jealousy of civil servants towards the NGOs' access to resources;
- Pressure on successful NGOs from major donors to accept more funds (whether absorptive capacity exists or not), leading to a decline in NGO performance;
- The NGOs' constituency, which may be narrow and considered by government as too selective when considering the common good;
- NGOs' lack of capacity;
- Limited public sector capacity;
- Political jealousy (governments may not want to foster a healthier NGO sector for fear of bolstering political opposition); and
- NGO dependence on foreign donors and/or an NGO sector dominated by foreign or international NGOs.

A conducive policy environment can address some of these issues in whole or in part. NGOs themselves must deal with the others.

Several "best practices" have been identified as elements of an enabling policy environment:

- "Good governance," which promotes social policies encouraging a healthy civil society and public accountability of state institutions;
- Regulations designed to encourage NGO growth, root out corruption, foster sound

management discipline, and eliminate restrictive laws and procedures;
- Taxation policies that provide incentives for activities that conform with state development priorities and encourage indigenous philanthropy and income generation;
- Project implementation through state collaboration with proven NGOs in a way that allows the NGOs to remain true to their agenda and accountable to members of their traditional constituency;
- A policy environment that includes: provision of information on policy formulation to NGOs for dissemination to their constituencies; a role for NGOs in public consultations; and invitations to NGO leaders to serve on official commissions;
- Coordination in which the government fosters but does not dominate NGOs; and
- Official support, meaning that the government provides funds, contracts, and training opportunities to give special encouragement to NGO activities in priority areas without undermining NGOs' autonomy and independence.

Computer communications are increasingly seen as an economical means of accessing and disseminating information for NGOs in both developing and developed countries. NGOs, however, must have a certain level of equipment, capacity, and resources before they are able to use the technology. The following summary presents some basic information about computer communications. For more information, see chapter 4.

3. **COMPUTER COMMUNICATIONS FOR NGOS**, adapted from *@t Ease with E-Mail: A Handbook on Using Electronic Mail for NGOs in Developing Countries*, by Jagdish Parikh, Inter-AsPac, and Duncan Pruett, the Friedrich Ebert Foundation, for the United Nations Non-Governmental Liaison Service (NGLS).

Computer communications refers to the exchange of messages and information, as well as access to data sources irrespective of physical distance, using computers and telecommunications devices such as telephones and modems. There are three main types of computer communications: (a) electronic mail (e-mail), (b) computer conferencing, and (c) online databases.

Electronic mail (e-mail), an electronic equivalent of conventional paper mail, is one of the most frequent applications of computer communications. Using e-mail, people can send messages to one recipient or several simultaneously. Delivery times range from a few seconds to over a day in some cases, depending on which service is used. E-mail can be sent extremely cheaply. It can be sent locally, or to e-mail addresses in other cities and countries. One can send text-based material (known as ASCII files), such as letters, notes, memos, and documents; formatted text; data files; or software programs.

Computer conferencing involves a group of people who share information and have conversations by "posting" messages and information to a host computer. A computer conference may be known as a *bulletin board*, a *Usenet newsgroup*, a *forum*, or an *e-mail mailing list*. Conferences:

- Facilitate discussion on issues of common concern;
- Allow information sharing among members of a work team or interest group;
- Can be private or public;
- Are one of the most popular means of reaching a large readership at little expense;
- Already exist on thousands of topics;
- Are used by NGOs to share information, discuss issues of common concern, organize campaigns on a particular issue, or coordinate meetings among participants living around the world; and
- Are often distributed internationally.

Online databases are computerized stores of information accessed through a host computer. Sometimes they may also be accessed across computer networks, if they are not located at the host computer. They contain structured information on specific subjects, and though they vary greatly in format, all online databases are designed for remote retrieval of information. Online databases are:

- Generally compiled and updated by information providers;
- Remotely accessible using any computer equipped with a modem;
- Searchable for specific items via keywords; and
- Useful for research, as they allow for efficient, economical access to information.

Computer networks are important for NGOs in developing countries because they enable access to and exchange of a wide array of information on the global network. There are networks based in devel-

oping countries that specifically focus on NGO needs and are sometimes referred to as *not-for-profit social change networks.* They link national and regional networks serving people and organizations working on social issues. By offering e-mail, computer conferencing, and online databases, networks facilitate communication on issues such as peace, environment, social justice, international development, health, and education.

The Internet, a term which is often heard associated with computer networks, is a network that joins other networks together. It links networks in academic and government institutes, schools, libraries, corporations, and NGOs. It is available in over 150 countries and has over thirty million users. Unfortunately, NGOs may find it difficult to gain direct access to the Internet or Internet tools, due to high costs or the policies of the Internet providers. NGOs thus may need to justify their requests for access to communications resources available via the Internet. Some points worth raising with a provider are:

- NGOs are considered essential organizations in developing countries because they help governments implement policies at the grassroots level;
- NGOs are accepted by the United Nations as partners in developing policies at the international level; and
- NGO activities include research and analysis on a wide range of development, social justice, environment, and other issues.

There are some U.N. agencies and programs directly or indirectly involved with building Internet links: UNDP, UNDP's Sustainable Development Network, the United Nations Volunteers South-links Program, the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations University, and the International Telecommunications Union (see chapter 4 for details).

C. SUPPORT FOR CAPACITY BUILDING

World Learning defines institutional development as the strengthening of organizational capacities to effectively provide services to constituents, including the development of systems to maintain this capacity. Institutional development is a dynamic process, as NGOs become learning organizations capable of influencing and adapting to a continually changing environment. This process promotes the establishment of a thriving community of local development institutions and also helps local institutions become more effective, viable, autonomous, and legitimate. Institutional development is most effective when it is a participatory process whereby the members or constituents of an organization become committed to improving the functioning of the organization based on needs they identify and interventions they implement.

This section includes articles on various aspects of institutional development or capacity building. The first summarizes key indicators one organization has found useful for assessing the capacity of NGO partners. Others analyze elements of partnerships be- tween Nothern and Southern NGOs: the results of a survey on the views of both Northern and Southern NGOs in Senegal; the results of a coalition of Canadian NGOs working in partnership with NGOs in Burkina Faso, Mali, and Niger; key elements of a successful transition of funding partners into a more equal relationship; and the experience of a country-wide grant program for NGO institutional strengthening and development. The next articles look at gender issues, describing how to integrate gender concerns within an organization to improve partnerships with women, and outlining some of the constraints faced by women in NRM projects. The final two articles discuss approaches used in Cameroon and Senegal to implement capacity-building aspects of NRM projects.

1. INSTITUTIONAL DIAGNOSIS AND THE METHODOLOGY OF INSTITUTIONAL DEVELOPMENT: THE EXPERIENCE OF THE NGO SUPPORT PROJECT IN SENEGAL, by Awa Gueye, Director, and Massamba Dieng, Deputy Director, Institutional Development/Training Department, Umbrella Support Unit, Senegal

The primary objective of the NGO Support Project in Senegal, funded by the U.S. Agency for International Development (USAID), is to help local communities and the poorest segments of the population mobilize their own resources toward viable development activities. The project focuses on the institutional development of NGOs and village groups as an optimal way to ensure constructive participation in sustainable local development.

Two components were selected as the operational goals of the project: (a) providing grants for devel-

opment activities, and (b) financing the institutional development of NGOs through training and technical assistance.

Institutional Development Program and Subsidized NGOs

In addition to a grant program, the project has developed a program of institutional support to ensure the sustainability of project activities and participating organizations. The process known as *participatory institutional diagnosis (diagnostic institutionnel participatif* [DIP]) takes place within each selected organization and serves to promote a participatory approach and institutional development. The primary objective of the DIP is to examine, with the NGO staff, all of the relevant dimensions of their organization in order to assess the NGO's institutional capacity to manage the selected project and achieve its mission.

The instruction guide or checklist is used to provide a comprehensive account of seven major dimensions of the organization. A list of questions or information to be gathered is drawn up for each of the following areas:

- The identity of the organization;
- The mission of the organization;
- The internal and external environment;
- Management;
- Internal operations;
- Resources; and
- Services provided and results obtained.

The project strategy has made a distinction between two main branches of institutional development:

- Institutional support, which concerns NGOs in the process of being created and informal NGOs characterized by considerable organizational weakness. It also concerns NGOs that are passing through a development phase or that have acquired a certain level of experience in managing development activities, but that are not able to function on a sustainable basis.
- Institutional strengthening concerns NGOs that have considerable experience in planning and managing projects with multiple components, and that are already familiar with methods of administrative and financial management.

Institutional support is designed to develop and strengthen existing organizations that, although demonstrating a certain potential, have limited human, material, and financial resources at their disposal. This assistance may take the form of training workshops (project management, organizational management, growth management, etc.), technical assistance (setting up management systems), and financial assistance.

Institutional strengthening is intended to contribute to what might be called the *self-development phase* of mature NGOs. The form that such assistance takes depends on the results of the DIP, which is followed by NGO staff training in the methodology of preparing and implementing an institutional development plan. Institutional strengthening will encourage some organizations to become resource centers, providing support to members of the NGO community in specific areas of expertise.

NGOs that have reached the self-management phase sometimes have the objective of promoting the autonomy of those communities they have supported over an extended period of time, by proceeding with a transfer of skills and responsibilities.

Institutional Development Program and the NGO Community

To achieve the desired impact on the NGO community, in addition to the DIP, the NGO Support Project's institutional development program hasalso found it necessary to set other operational goals. For example:

- Returning the reports on the project's baseline studies (needs, networks, and partnerships) so that they can be validated by the participating NGOs;
- Setting up an advisory committee in order to receive advice from independent experts on all of the programs and projects undertaken in this area;
- Implementing a training program specific to the NGO community, with the participation of networks, consortia, and training institutions;
- Expanding the pool of consultants who are experts in the methodologies of project design and implementation, through training of trainers; and
- Funding partnership projects between NGOs from the North and local NGOs, which received particular attention in the design of the project.

A good portion of this support for the NGO community passes through other organizations,

such as networks and consortia or training institutions. The project thus defined selection criteria based on the level and relevance of the institutional support that such resources are capable of providing in return to the NGO community, both now and in the future.

2. **STUDY OF THE NGO PARTNERSHIP IN SENEGAL**, by Sidi Mohamed Seck, Yeshica Weerasekera, and Abdou El Mazide Ndiaye, Pan-African Agency for Research and Assistance (Agence Panafricaine des Etudes et Conseils), Senegal

Given their difficulties and the similarity of their missions to work with local populations, NGOs have developed multifaceted partnerships to promote mutual strengthening and build solidarity in the process of accomplishing their missions.

Partnership is the culmination of a gradual, three-step process. All partnership experiences begin with a formal or informal contact. The primary stimuli for such contacts emerge from the efforts of individual NGOs to seek funding and to organize or promote one-time encounters (seminars, meetings).

The initial contacts may lead to collaboration, the first stage of partnership, which is a relationship considered to be possible with any organization that agrees to contribute, at any level or time, to an activity, project, or program. This relationship is targeted and often superficial. Insofar as the project or program is the sole justification for the relationship, the two collaborating organizations accept only a minimumal level of reciprocal influence in terms of guiding principles, and they remain almost totally independent of each other (e.g., a relationship between an NGO and government or multilateral organization).

Partnership is perceived by seventy percent of Senegalese organizations, thirty percent of American organizations, and twenty-five percent of all others as being necessarily based on a common approach to development and development priorities. In other words, a partnership is based on compatible philosophies and visions, a strategy and a concerted program with tasks, responsibilities, and resources that are equitably shared in order to reach clearly understood objectives in a climate of trust and solidarity among allies.

Examples drawn from the survey make it possible to distinguish four types of partnership:

- Between NGOs from the North and NGOs from the South, to implement a specific program after a period of collaboration;
- Between an NGO and all of its donor agencies concerning a program that has been discussed and accepted, with the NGO serving as implementing agency;
- Between an NGO from the North and one from the South, to work together to identify a program and mobilize and manage resources for carrying it out; and
- A sustainable collaboration between an NGO and a public institution, particularly in the areas of research and outreach.

These partnerships operate primarily in the areas of policy and strategy, technical cooperation, human resource development, and financial cooperation. Any organization may thus be inclined to undertake a partnership with another, in all areas of its operations, once there is an agreement on principles.

NGO partnership relationships are still relatively recent and not yet highly developed; only one-third of the surveyed organizations had had a partnership experience. Analysis of the results allows us to underscore the difficulties encountered and to identify factors of success or failure, as well as the current limits and benefits of partnerships.

The survey highlights several constraints identified by Senegalese NGOs:

- Strategic and methodological differences with the partner in terms of approach;
- Excessive, quasi-bureaucratic requirements from the "dominant" partner (e.g., the large number of reports required); and
- The rejection, insufficiency, or inadequacy of funding and institutional support.

Foreign NGOs also identify difficulties based on the behavior of their partners:

- Noncompliance with commitments or unilateral modification of agreements reached together;
- Management problems;
- Insufficient skills and capacities on the part of local partners; and
- Problems of communication and dialogue.

For a partnership to succeed, thirty-two percent of the organizations surveyed believe that dialogue, discussion, debate, trust, and mutual respect are

necessary. For twenty-eight percent, the principal factors of success are the sharing of experience, the joint development of projects, and the exchange of information. With respect to failures, forty percent of the Northern NGOs attribute these to poor administration/management, a lack of mutual agreement, a lack of trust, and excessive personalization of the relationship. From the perspective of the Senegalese, failures stem primarily from a lack of openness between the parties, a misreading of the objectives, and the absence of mutual trust.

Despite all of these difficulties, NGOs that have developed successful partnerships have derived significant benefits. Thus, for example, partnerships have enabled certain Senegalese NGOs to achieve:

- Greater institutionalization of their organizations;
- A strengthening of their material resources and greater operational capacities; and
- A more professional and more rigorous level of performance.

Foreign NGOs emphasize the following advantages of partnerships:

- A better understanding of the reality of development in Senegal;
- Greater impact and more effective action due to a fuller appreciation of the realities;
- Greater credibility in their own country and wider access to resources for their activities in support of development; and
- The creation of networks of local experts and collaborators, allowing them to lower the costs of their local offices.

The concept of partnership appears to be better known and understood at the international level than at the local level in Africa. Many African NGOs still lack a thorough grasp of the responsibilities and commitments that a partnership introduces into a relationship. In their current form, partnerships are highly personalized, often limited to the management of the organizations, and only rarely accompanied by the institutionalization required for a partnership to be strong. The opportunities for contact and meeting places with potential partners are still relatively scarce at the national level. Building a partnership relationship implies making mutual concessions, which the Senegalese NGOs appear to be more inclined to accept than the Northern NGOs. Senegalese NGOs are still young and, for the most part, lack experience and resources. Because of their dependence on external funding and their institutional weaknesses, they are not always in a position to reject or choose their collaborators or partners.

3. SOLIDARITY CANADA-SAHEL (SOLIDARITE CANADA SAHEL [SCS]): THE HISTORY OF A PARTNERSHIP, by Rejean Pichet, Coordinator, SCS, Canada

The definitions and principles of a partnership have often given the impression that the partners areequals. This assumption creates misunderstandings because, in reality, such equality does not exist on several levels, particularly with respect to financial resources.

Although a partnership would appear to be a mechanism for producing development results, this outcome cannot be achieved without simultaneously investing in the quality of the partnership. Investing in the partnership requires financial resources and a great deal of energy in human terms. To to justify this investment, it must be placed within the context of strengthening the partner's capacities.

Solidarité Canada Sahel (Solidarity Canada-Sahel [SCS]) is a coalition of roughly thirty Canadian NGOs which was formed in 1983 within the Canadian Council for International Cooperation (Conseil Canadien pour la Coopération Internationale [CCCI]). The Canadian NGOs decided to undertake various studies to improve their knowledge of the Sahel, and to share their findings for the purpose of better coordinating their operations. The Canadian NGOs needed good contacts in the field and, collectively, the program was to develop field units in the Sahel. A number of national NGOs had already existed in Burkina Faso for about ten years; those in Mali were just beginning their operations; there were no NGOs in Niger.

SCS developed a strategy to support the development of an NGO movement in all three countries by providing Sahelian NGOs with institutional support along with the possibility of establishing partnerships with Canadian NGOs. The incipient national NGO groups could become interested partners at the overall program level. From the beginning, the intention of the Canadian NGOs was to promote the empowerment of Sahelian NGOs and associations. Indeed, African partners had a major influence in forming this coalition. The Sahelians played a criti-

cal role in determining its strategic orientations and organizational structure, as well as in implementing its activities.

One of the basic goals of the SCS program is to foster the emergence of a new type of partnership with Sahelian NGOs by involving them in all stages of the program to improve living conditions in the region. At the outset, the partnership was based on exchange of ideas; this exchange proved so powerful that most of the NGOs agreed to commit themselves to SCS's goals and to attempt to modify their organizational patterns and ways of doing business.

The seminar on "Partnership and Popular Participation in Managing Sahelian Natural Resources," in which some twenty representatives of Sahelian organizations participated, enabled NGOs from the North and the South to identify factors contributing to the success of a genuine partnership. These included:

- Mutual recognition among the partners;
- A climate of mutual trust;
- A clear definition of the relationship and the roles of each party;
- A sharing of information and open communication in a spirit of transparency;
- A long-term commitment; and
- A willingness to work together and share the same goal.

The main problem encountered by SCS centers on the issue of accountability. Through the program, Canadian NGOs are accountable both individually and collectively to their donor agencies and their government. Legally, their accountability cannot be delegated to a third party. In this context, it is therefore difficult to delegate responsibilities to Africans even though such a transfer is necessary to reach the objectives of self-reliance and self-development. There is constant tension between the desire to hand over responsibility, and the need to exert control in order to maintain accountability. Thus, even with a frank and innovative dialogue, fairly traditional North-South relations are the rule.

This conflict is not easily circumvented and, for the partners, the solution may come down to focusing together on the results to be obtained. Accountability extends beyond finances and management; it also encompasses the success of the activity. If the partners are able to define together the expected results of a project or program in terms of impact or effects, and if they make a mutual commitment to produce those results, then accountability can also be expressed by development results — for which the partners together will be responsible.

Thus, we find that a partnership is a challenge that goes well beyond definitions and roles. It is doubly important to leave space for dialogue and for frank discussion of problems and frustrations. A partnership requires a continuous investment, a willingness to constantly review the foundations on which it is built, and above all, the desire of each party to carry on, in spite of difficulties, the effort to achieve shared objectives.

4. **ORGANIZATIONAL STRUCTURES IN PARTNERSHIPS**, by Mark Foss, Partnership Africa Canada, Canada

The notion of partnership is central for Partnership Africa Canada (PAC). Created in 1986, PAC is a coalition of 135 Canadian NGOs that work with African NGOs to promote sustainable development in sub-Saharan Africa. While PAC is primarily a funding source for Canadian NGOs, it also conducts research and develops policy positions on partnerships with African NGOs.

PAC includes Africans in each of its decision-making bodies. In addition to four Africans who sit on the Program Committee and the Board of Directors, African representatives have participated in standing committees and working groups that focus on issues such as evaluation, gender and development, and policy. In September 1994, an African was appointed to the Executive Committee for the first time; she will serve as chairperson for 1995.

A PAC study probes one of the new issues affecting partnership relations — *planned disengagement*, a systematic and mutually-negotiated process involving the transformation of partnership arrangements to a higher level. It is not a withdrawal of the funding partner, and should not be perceived as such. The funding partner has to walk a delicate path, explaining the merits of this process to the African partner while recognizing the risks involved. The PAC study highlights a number of principles and procedures for successful planned disengagement:

- The constraints, opportunities, and risks involved in the process should be fully revealed to the African partner, and the parties should discuss frankly the objectives and options for carrying it out.
- The process starts as a planning and program-

ming exercise, itself involving a long-term commitment of the partners to achieve the objectives of planned disengagement. This is in sharp contrast to the tendency of some Northern NGOs simply to inform their African partners that funding and support will stop by a certain year and requiring the Africans "to adjust to the realities" over that time period.

- The direct benefits of autonomy should be demonstrated to the African partner through the prospect of increased, not reduced, resource commitments from other partners.
- Planned disengagement should be conceived and implemented by the two partners not as another project, but as a process involving:
  - Intensive planning;
  - Ongoing training and exchange of skills at all levels (both community and organizational);
  - Enhancing the legal status of the African partner; and
  - Diminishing the field presence of the Northern partner, to demonstrate the seriousness of the transformation.

The definition of partnership continues to evolve, both for policy work and project/program funding, and it has become crucial for Africans to participate in policy work. Such involvement adds depth to analyses by Northern NGOs and legitimizes their work in the eyes of decision makers. During Canada's foreign policy review, for example, the joint parliamentary committee was impressed that NGOs presented briefs with their Southern partners. In short, African participation in policy work strengthens their Northern partners.

At the same time, African NGOs and networks are requesting support from their Canadian partners for their own policy work and advocacy. Clearly, policy work presents opportunities for both partners to benefit — it strengthens both parties.

While the experience of partnership in policy development is still in its infancy, joint effort has long been considered an essential part of overseas programming. Still, there are obviously degrees of partnership and it would be a mistake to assume that a common definition exists. Indeed, as NGOs push the boundaries of partnership toward planned disengagement, the definition should expand as follows:

- Africans should participate in all decision-making fora, including the board of directors, standing committees, and annual general meetings.
- Northern NGOs should develop strategies to involve their African partners in their policy work, and recognize this as a way to strengthen both partners.
- Policy work should be seen as a means to expand partnership beyond a monetary relationship. However, in their attempts to strengthen their own work, Northern NGOs should recognize the financial, temporal, and human resource constraints of their partners, especially those working with more than one Northern partner.
- The partnership process must be constantly redefined.
- Partners should develop indicators to help them define their partnership and to measure and evaluate its past success and future direction.

5. PARTICIPATION, PARTNERSHIP, AND FEASIBILITY IN THE CONTEXT OF SUSTAINABLE NATURAL RESOURCES MANAGEMENT, by Michael Brown, Project Director, PVO-NGO/NRMS Project, USA

The PVO-NGO/NRMS Project hypothesis has been that strengthening NGO capacities by providing training, technical assistance, and information support services would lead to sustainable NRM. Strengthening NGO capacities, together with promoting the participation of key stakeholder groups implicated in NRM, has been fundamental to the Project, as it is our belief that sustainable development and NRM cannot be achieved without meaningful participation enabling partnerships to be sustained at all levels. While both participation and partnerships are vital, they are not sufficient in themselves to guarantee success in achieving sustainable development and NRM. Other factors are also crucial, including the capacity to design and implement technically feasible activities.

Participation is now referred to as the *sine qua non* of sustainable development. Overuse has trivialized the term, as few attempt to define it. For the purpose of this paper, genuine participation is characterized by a commitment to involve all of an activity's stakeholders as appropriate at a given time. Appropriateness must be objectively determined. That is, an assessment of who should be involved when in order for the activity to succeed must be part of the design and monitoring of any project activity.

The limits and quality of different stakeholders' participation will change over time, as objectives and assumptions are adapted to evolving circumstances. There are times when it is essential that participation be open and flexible. Conversely, there are situations when more structure is required. This will often depend on a community's capacity to restrict external participation so as to gain organizational and programming advantages. The essential element is a commitment on the involved NGO's part to promoting genuine participation among project beneficiaries.

Once identified, different stakeholders must be able to participate as appropriate in decision-making fora. Conventional wisdom is that the more horizontal the decision-making structure, the higher the probability that information will be shared, and informed and equitable decisions made. Also, the greater the transparency and the less stratification in decision making, the greater project effectiveness will be. Transparency and stakeholder roles must be negotiated.

There appears to be a positive correlation between transparency, participation, and effectiveness of the design and implementation of NRM activities from a sociocultural standpoint. On the other hand, there appears to be an inverse correlation between the degree to which assumptions guide programming, and program effectiveness. Where assumptions remain unexamined and communication systems are not transparent, the quality of work suffers even with a participatory decision-making process.

PVO-NGO/NRMS has found that maintaining contact with service-providing NGOs, resource-user groups, and government consistently over time is essential for initiating sustainable NRM processes. The intensity of this contact has varied, depending on what has been appropriate at a given time. In this sense, we have found that our ability to manage adaptively has been essential to our activity's success.

Partnerships cannot be developed without strong initial participation of all potential partners. Furthermore, one cannot speak of partnerships without credibility. The Project's approach to developing partnerships has been to reinforce the interplay between professionalism and friendship; colleagues respect one another, and empathize as well. Through this approach, the necessary degree of credibility has been obtained on all sides. PVO-NGO/NRMS has found that there is no way to move from participation to partnership unless professional and personal credibility exists. The personal level cannot dominate, however; professional relations must remain the primary point of reference.

Potential partners must know the importance of developing effective relations with their colleagues, in a manner that is compatible with each other's capacities and personalities. Hence, there is no detailed blueprint to follow *per se*, as each situation is unique and requires its own analysis and negotiation.

Feasibility and Sustainability in NRM: Where Partnerships/Participation Fit In

Feasibility refers to the appropriateness, from a number of perspectives, of a planned or ongoing activity. *Feasibility analysis* is the systematic attempt to determine if a proposed project can and should be carried out. This is a crucial step in justifying whether a project deserves to receive funding or not.

Determination of feasibility in a NRM activity involves, among others, biological, sociocultural, political, and logistical factors. In overseas development work, feasibility has been one of the most neglected aspects of project planning and implementation, often with devastating results.

Determining what can be done, and what is appropriate to do, are not simple tasks. They are, however, essential if projects, regardless of sector, are to succeed. It is possible that the failure of donors, governments, and NGOs to pay sufficient attention to what was feasible — versus what they hoped ideally to do — is at the root of many of the problems experienced in development and NRM work over the past thirty years.

The reason why feasibility is neglected in planning, by both Northern and Southern partners, is arguably because the importance of feasibility analysis has not been fully appreciated. At the same time, donors, governments, and local people impacted by development activities have not mandated that it be properly done, since all partners rarely hold the other accountable.

The points below provide a brief overview of the issues an NGO must address to determine if a potential activity is feasible. The points can be grouped under three rubrics: (a) positive characteristics of NRM feasibility, (b) thresholds of

NRM feasibility, and (c) negative determination of NRM feasibility.

a. Positive characteristics of NRM feasibility can be determined on the basis of: social issues/social soundness (positive economic return, social sustainability) and ecological issues (ecological systems processes and functions unimpaired, acceptable levels of resource degradation or negative impacts through resource use, appropriate and sustainable technical interventions).

b. Thresholds of feasibility include: the unlikelihood of conflict due to NRM activity and the potential to create consensus and collaboration where it did not exist before as a result of the activity.

c. Negative feasibility factors include: socioeconomic issues (high potential for conflict, poor economics, increased social or class stratification, exacerbates gender inequities, unclear mitigation measures) and ecological issues (impaired ecological systems functions, resource degradation or negative impacts through resource use).

Developing in-house capacity to undertake feasibility assessments will be challenging for many NGOs. Feasibility assessment is difficult for educated and experienced individuals in well-known organizations. Nonetheless, if NGOs are aware of the importance of feasibility issues, and of the approaches and tools available to address them, feasibility can be optimally judged and appropriate, doable projects can be developed and implemented.

Sustainability refers to a process through which appropriate (i.e., technically and socially sound) activities are implemented and adapted over time. Activities cannot be sustainable if they are not also feasible. Sustainability thus results from appropriate and feasible activities, which must be continually reviewed to ensure that appropriateness and feasibility are maintained.

For partnerships to engender sustainable development and NRM, partners must hold each other accountable. Partners may not achieve lasting results if one of them is set on undertaking an activity because its interest level is high, even though it may not know whether the activity is feasible. Sustainable NRM depends on partners forcing each other to be accountable at all levels of planning and implementation. Participation is maximized when all concerned are able to hold their colleagues accountable for their proclamations as well as their actions. This in turn indicates that genuine partnership may be achieved.

Successfully integrating women's and gender issues into development programming continues to prove challenging. While not usually referred to in partnership contexts, women must be key partners for the success of virtually any development activity. The following article lists measures that NGOs can take internally to promote gender integration and partnerships which include women. While some items may be geared more toward larger organizations, many items on the list are relevant to smaller or younger institutions.

6. **A CHECKLIST FOR GENDER INTEGRATION IN PROGRAMMING AND MANAGEMENT**, from *Gender Integration Practices and Policies: A Report of Fundings from a Survey of InterAction Member Agencies*, by Kari Hamerschlag, Annemarie Reerink, and Rakhee Goyle, InterAction's Commission on the Advancement on Women, USA

The key factors in promoting gender equity and effectively integrating gender equity into programming and management policies and practices are presented below as a checklist for quick assessment of an organization's success at gender integration.

<u>Gender Policies and Programming</u>

- Gender Policy Statement
  - Basic assessment of the problem
  - Description of values, principles, and mission that will guide the organization's policy
  - Intent for applying policy throughout different sections of the organization
- Staff and NGO Partner Organization Participation in Development of Gender Policy
- Demonstrated Commitment from Chief Executive Officer and Senior Management to Gender Policy

<u>Gender Integration in Programming</u>

- Program Planning and Project Design
  - Collection of gender-disaggregated data: time allocation and labor (productive,

reproductive, and community)
  - Gender analysis or gender needs assessment
    - Assess the participation of men and women in programs
    - Assess the impact of project interventions on men and women
    - Assess the different roles, responsibilities, and needs of men and women, including access to and control over resources and decision making at household and community levels
  - Consultation with local women's organizations
- Implementation
  - Refer to written procedures for incorporating gender concerns into projects
  - Ensure gender balance of local personnel, enhance participation of women, provide gender training, establish mechanisms for addressing male opposition to women's activities
- Monitoring and Evaluation
  - Measuring gender impact: women's welfare and participation; women in leadership positions; women's control over resources and decision making; changes in attitudes of men and women at household and community levels; enlistment of male participation, support, and consent
  - Monitoring and evaluating team should include a balance of men and women
- Centralized Department, Gender Unit, or Focal Point
  - Monitors gender practices, provides gender training and programmatic support
- Diffused Responsibility Within Different Departments, Linked to the Centralized Gender Unit or Focal Point
- Gender Integration Training
  - Training for gender awareness, sensitization, planning, and analysis
  - Follow up of training with tools and methodologies for application of gender equity principles and strategies for integrating gender concerns throughout the organization
- Gender and Recruitment
  - Formal equal opportunity policy
  - Gender awareness included in job descriptions and as recruitment and performance criteria
  - Representation of women in senior headquarters and field management positions
  - Proactive hiring strategies to recruit women into senior management positions
    - Advertising through channels likely to reach more women
    - Encouraging and providing training for women to move from mid-level to senior positions
- Family-Friendly Work Policies
  - Flexible working arrangements
    - Flextime and flexiplace
    - Part-time and job-sharing arrangements
    - Encouragement of men and women employees to take advantage of flexible work arrangements, including senior managers
  - Maternal and paternal leave policies
  - Childcare and dependent care leave and support

Women's increased involvement in NGO activities has raised the profile and understanding of the role that women play in promoting sustainable development. The following case study examines the constraints to women's participation in NRM projects, as discussed by women themselves in a series of workshops.

7. **CONSTRAINTS TO WOMEN'S PARTICIPATION**, *excerpted from Women and the Environment: Summary of Workshops in Mali and Cameroon With Recommendations for Future Workshops*, by Kamela Kern, Ada Ndeso-Atanga, and Norene Blair, for the USDA Forest Service/International Forestry Division

Women play a central role in managing natural resources, yet they are constrained by self-doubts, gender bias, and ill-conceived programs. Women also often lack education to make them more aware, assertive, and knowledgeable, so that they can more effectively participate in NRM.

Cultural Constraints

Cameroonian women cited several examples that inhibit their participation in NRM projects. Taboos exist against women cultivating certain crops, such as plantain, oil palm, raffia palm, coffee, and other cash crops. There is also a taboo against women owning animals, except for fowl — women are not allowed to rear cattle. There are even cultural barriers against women's organizations acquiring land.

The rapid migration of men to urban areas in search of work and income has caused changes in rural areas, leaving women with increased responsibilities for their families and their country's economy. Restrictive governmental land adjustment policies worsen the situation, because women with increased responsibilities do not have increased access to higher education, credit facilities, land ownership, agricultural extension services, appropriate technologies, and cooperatives.

Dealing with culture and tradition is difficult. Many practices have gone on for centuries, and change does not come quickly or easily. Workshop participants suggested that women's traditional groups go before their counterpart groups among men to articulate the problems and to try to overcome the obstacles that certain customary practices create for women's economic advancement. Participants also suggested that NGOs and donors work to help remove such cultural obstacles to NRM.

Economic Constraints

Cameroonian women lack credit facilities and viable income generating activities, which limits their participation in natural resource projects. They also lack skills for marketing the items they make or grow.

Workshop participants suggested that women's groups raise money and establish savings that would not end in consumption, but rather would be directed as much as possible toward tangible social and economic investments, demonstrating to society at large that women can be successful partners in NRM.

Education is another tool for overcoming these economic constraints. Women need to know that small grants are available from many sources — embassies, USAID, and some NGOs. To assist in disseminating this information, conference participants suggested developing a list of funding sources for women's groups interested in natural resource projects, including descriptions of and addresses for organizations, and contact names. Women must also be shown how to prepare proposals so that they can obtain and make use of grant monies.

On marketing, the women stressed the need to encourage NGOs, technicians, and extension agents to educate women in assessing the market situation for their goods and in marketing techniques.

Technical Constraints

Technical constraints range from lack of knowledge about crop varieties and seed multiplication sources, to lack of transportation infrastructure and the technical know-how needed to develop proper storage for crops that have been harvested but not yet marketed. There are few facilities for processing crops, and poor or seasonal roads, further limit or prevent transport of crops to market.

Cameroonian women interested in natural resource projects also need to improve their knowledge of:

- Which crops are scarce, which are overabundant, and which are of greatest nutritional value;
- How to manage livestock, fisheries, and certain crops;
- Improved livestock breeds and crop varieties, such as those that are disease tolerant and high in yield potential;
- Natural plant fertilizers and pesticides;
- New farming techniques; and
- Technologies for crop storage, particularly for crops that require long-term storage.

The solution to many of these problems is to educate rural women, encourage them to seek information, and/or make information available to them. The following steps might be taken:

- Gather data on crops and share them with rural women.
- Use formal or informal education (discussed in more depth below) to address the lack of general and technical knowledge about issues such as: new farming techniques, natural plant pesticides and fertilizers, improved breeds of livestock and varieties of plants and crops, and management of livestock, fisheries, and certain crops.
- Encourage women to avail themselves of services for improved crop production and seed multiplication provided by research and other institutions.
- Provide better extension services to rural women.
- Increase rural women's knowledge of processing crops, crop storage facilities, and other technical issues.
- Address the problem of deficient transportation, which can make it difficult or impossible for products to reach markets.
- Provide training, follow-up, and assistance to

women in acquiring skills and facilities in NRM.

Educational Constraints

Perhaps the greatest barrier for rural Cameroonian women is very limited, if any, access to education, either formal or informal. Informal schooling is probably most valuable to rural women. Lack of education leads to limited know-how in addressing issues such as energy conservation, effects of bush fires, and prevention of erosion, all of which significantly affect the environment.

Obstacles to the formal education of women in Cameroon include gender and cultural biases, traditions, and taboos. In some cases, early marriages and unexpected pregnancies cause high-school girls not to complete their formal education.

Informal schooling has its own set of problems. The flow of information is limited, and immediate benefits are not readily apparent to women or men. The vast majority of farming and natural resource projects are extremely male-dominated, an imbalance that seriously limits female farmers' access to agricultural and natural resource advice from extension workers and others. Extension personnel tend to visit farmers with more agricultural inputs and larger acreages and volumes of crops. Because women hold small parcels or no land at all, they may be sought out less by what few extension workers there are. Inadequate transportation or difficult access to rural areas may also make it physically challenging for extension agents to meet with the people most in need of their assistance and advice. Not only are extension workers needed, but their skills must be honed so that they listen and learn from the people with whom they are working. They must listen to rural women resource managers and pay attention to the needs they identify. There is a great need for front-line extension workers who are able to teach by example, the most effective method in reaching rural women. Future workshops and training should include extension personnel and their rural women clients.

8. **THE EVOLUTION OF PVO-NGO/NRMS IN SUB-SAHARAN AFRICA: THE CASE OF CAMEROON**, by Ada Ndeso-Atanga, National Coordinator, PVO-NGO/NRMS Project, Cameroon

Cameroon is a country at the crossroads of West and Central Africa. Its ecology captures Africa in miniature, as it possesses a dense forest zone in the south and a mountain zone gradually fading into the Sudano-Sahelian agro-ecological zone at the northern tip of the triangle-shaped nation.

The one-party political system that existed in Cameroon for over thirty years left missionaries and international NGOs as the only ones authorized to undertake development activities outside government. Following the advent of a multiparty system in 1990, the government enacted a law in December 1992 to guarantee freedom of association, allowing local people to organize into visible, functional groups. Today, more than 1,000 community-based organizations (CBOs) and 300 indigenous NGOs in the country are evidence of people's desire to organize to help themselves and their communities fight the economic and ecological crises facing Cameroon.

The characteristics of these nascent CBOs/NGOs in Cameroon include:

- Lack of experience on how to form organizations;
- Poor institutional capacity and capability;
- Inadequate human and financial resources;
- High degree of isolated and unrelated activities; and
- Little specialization of technical assistance, with most activities focusing on the social welfare of members.

PVO-NGO/NRMS began work in Cameroon in 1989, and its arrival was greeted enthusiastically by local and international NGOs. Since it intended to operate nationally and since there was no collective or umbrella organization for NGOs, the first task was to establish a Country Working Group (CWG) to facilitate its activities. PVO-NGO/NRMS has thus played a role in organizing and building NGO capacity since 1989.

After much deliberation among NGOs to determine the roles and responsibilities of the CWG, it was decided to limit membership to five international and ten indigenous NGOs. This decision was based on the belief that a small group could effectively manage program objectives, provide objective national representation, and act as an efficient decision-making body.

Within one year of constituting the CWG (which met every three months in the capital city) and undertaking a range of activities including seminar/workshops, conferences, and newsletters, the

CWG recommended that PVO-NGO/NRMS be restructured to reflect the country's demarcated agro-ecozones to be more effective in reaching the national territory and allow participants to become more involved in building a civil society.

The number of Cameroon's ecological zones varies according to the classification system used. Criteria are usually based on climate, vegetation, and topography. PVO-NGO/NRMS divided the country into three principal agro-ecological zones: the dense forest, the tropical highlands, and the Sudano-Sahelian. This approach facilitated the outreach strategy of the project, as these zones created the three CWG chapters. Natural resources mean different things to people depending on their circumstances and environment. The creation of three CWG chapters that correspond to the major agro-ecozones of Cameroon has enabled local organizations and NRM managers in each zone to better focus on relevant issues. The project has been committed to encouraging local residents to identify, review, and analyze the NRM issues in their respective areas.

Membership in CWG chapters was limited to a few NGOs/CBOs using the following institutional criteria: capacity, stability, consistency, and availability. Eligibility was determined by examining the capacity and capability to provide services to a target population.

It is worth noting that the capacity of national NGOs has been significantly improved through the unanticipated availability of highly qualified, experienced civil servants who were prematurely retired due to the 1994 devaluation of Cameroon's currency. NGOs/CBOs previously could not afford the services of qualified technocrats, but as these individuals became available NGOs were able to hire them at lower salaries.

A main criticism of newly created Cameroonian NGOs is that they are unstable. Terms such as "mushroom," "fly-by-night," and "briefcase" have been used to describe the instability of NGOs formed by former civil servants. This trend continues as more individuals or groups of unemployed people form their own NGOs.

Local communities form CBOs to address common problems, issues, and needs. Once set up, however, these associations are often faced with such problems as insufficient operating funds, leadership challenges, and sometimes a lack of tenacity to see their objectives implemented. In many instances, these organizations succumb to both external and internal pressures and fade out of existence.

Indeed, the development of CBOs/NGOs in Cameroon can be better understood within the political and economic evolution of the country since 1990. The liberalization of Cameroon's political system and the economic crisis, which have contributed to economic, administrative, and management decentralization, are working positively for the development of institutional and technical capacity in NGOs/CBOs. Most importantly, these changes have led Cameroonian society to recognize that its main strength is at the very base.

9. **THE AFRICA 2000 NETWORK PROJECT IN SENEGAL**, by Boubacar Fall, National Coordinator, Africa 2000 Network, UNDP/Dakar, Senegal

The Africa 2000 Network is a United Nations Development Programme (UNDP) initiative dedicated to protecting the environment and promoting sustainable development in Africa through NGOs and village development associations. The network is a community program and an African program, thus adhering to the basic principles of sustainable development. The network has set up organizational mechanisms to facilitate the continuing transition toward Africanization.

The two basic objectives of the program are to involve local populations in protecting their environment, and to promote fuller accountability on the part of various actors in managing their local activities. Implementation of this bottom-up approach raises certain problems insofar as some NGOs have difficulty in adhering consistently to the new orientation.

In Senegal, project implementation under Africa 2000 initially focused on developing analytic tools (criteria, selection grids) to promote the transfer of a relatively new approach at the field level. This work is carried out around the coordinator by a national selection committee, whose tripartite nature (NGO-Government-UNDP) is an important element in "democratizing" the choice of projects. The second aspect of this self-evaluation approach takes place some months after the beginning of a project and identifies problems encountered to date that could interfere with further operations if not corrected.

This evaluation is based on:

- The results of the NGO's activities and the opinion of the concerned populations;
- Site visits by members of the selection committee;
- Recommendations following the self evaluation, leading to project revisions if necessary;
- The need to involve all grassroots structures that are able to provide significant and lasting support in the training activities, and to make the training modules effective, as was highlighted in documents presented at the time of the request for funding; and
- The need to take womens' issues into account.

The Africa 2000 Network has enabled NGOs to take decisive steps toward establishing a functional network in the area of environmental protection. Nevertheless, there is still much to be done, including:

- Training:
  - Improve the network of contacts;
  - Improve the training of NGO and village association members in environmental protection;
  - Organize training activities linking small and large NGOs;
  - Strengthen the capacities of research and training institutions that can offer support to NGOs;
  - Activate exchanges, including visits; and
  - Train the leaders of local organizations in democratization processes.
- Information:
  - Strengthen scientific institutes so that they can develop innovative teaching techniques such as theater, storytelling, and songs;
  - Collect and disseminate data; and
  - Publish a bulletin accessible to the greatest possible number of people.

The preliminary results of the program indicate the need to set up training structures that are adapted to rural settings and compliment broader, more comprehensive programs.

When the network began to finance its first environmental projects, the national mood was hostile in the sense that NGOs contested any activity presenting only long-term benefits. They had to be convinced of the necessity of thinking in terms of development and the environment, rather than of productive activities alone, through a plan of action encompassing several stages:

1. An identification stage, the first phase of which involves obtaining information on the environmental status of a zone and which should lead to the development of well-adapted projects.

The next phase, called the consolidation phase, is divided into a series of steps, the first being to start up productive, regenerative activities. We recommended that grants be distributed in installments and insisted on not distributing the second installment until a self-evaluation of the first phase had been completed, in order to avoid any misuse of funds.

The first results obtained enabled us to:

- Better integrate the local populations;
- Evaluate the training; and
- See that the NGOs adhered to the commitments they had signed with networks and communities.

The final phase of this stage involves reformulating the project based on the preliminary results. Certain NGOs were hesitant about integrating comanagement as a dynamic aspect of the approach. All of the projects were thus reformulated by incorporating the following:

- Objectively inform partners about their roles and places within the project framework; and
- Involve the concerned populations in managing the funds intended for their use, once the NGO has deducted its institutional support.

2. The second stage involves setting up a fund to support the environment and development.

3. The third stage establishes a support and demonstration center for environment and development activities, the basic objective of which is to create local information points where people will be able to get concrete answers to their questions. NGOs will also be able to maximize their support to the community through training provided by the center's research and training professionals.

Thus, we recommend:

- The development of environmental programs consistent with action plans to facilitate

monitoring and evaluation (see chapter 3 for more information);
- Funds to ensure the sustainability of projects;
- Setting up productive activities with cropping patterns appropriate to the environmental context; and
- The establishment of community-based support and demonstration centers to facilitate the flow of information and training of concerned populations, as well as to foster democratic management mechanisms involving populations in all stages of the projects to be implemented.

D. DONORS' PERSPECTIVES

NGOs' expanded role in development over the last decade has resulted in increased efforts by donors to identify what their relationships with the NGO community should be, including the limitations to such relationships. Donors are unclear, for various reasons, how to work with NGOs. Relationships are continually evolving, as a result of changes within the NGO community. Additionally, each donor's perspective has grown out of its unique circumstances, including: past experience with NGOs (both positive and negative); commitment to NGOs (whether mandated or in response to development trends); and structure (existing mechanisms through which it can form partnerships with NGOs). Not all donors have mechanisms in place to facilitate working directly with NGOs.

The previous section discussed the importance of forging partnerships among all the actors involved in development — both horizontally at the NGO level and vertically with international partners and donors. It is increasingly important for NGOs not only to become aware of donors' perspectives on the role of NGOs in development, but also to take part in shaping these perspectives. The first of the two following articles advises NGOs on how to handle criticism from the international and donor community. The second provides insight into the perspectives of three donor organizations.

1. **DARE TO BE WHAT THEY THINK YOU ARE...AND MORE!**, by Dr. Marylin W. Hoskins, the United Nations Food and Agricultural Organization (FAO)/ Forestry Department, Italy

What are the complimentary generalizations most often made about NGOs? They are described as flexible and people-oriented, encouraging participatory approaches and building on indigenous knowledge. They are known to work within local traditions with local organizations. They are expected to advocate for equity and sound environmental policy. These are excellent qualities, much in demand among governments, donors, and international organizations.

Too often, however, NGOs do not believe in their own positive reputations. A case in point: The Forests, Trees and People Program (FTPP) of FAO was collaborating with local NGOs to design a method for participatory assessment, monitoring, and evaluation. But the initial interviews did not solicit input from a single farmer! The FTPP sent the team back to talk to farmers. Extensionists insisted that if the approach were to be truly participatory, they themselves should be evaluated by the farmers. NGO officials admitted they were afraid to try such a radical thing. The NGOs had not dared to be what the government officers, donors, and international organizations thought they were already — open to client critique and evaluation.

Many large organizations want to collaborate with groups that have independent and creative ideas, understand community needs, and support local initiatives to improve the condition of the poor, both women and men. These large organizations know they are not good at such an approach. They make the best proposals they can, but they expect NGOs to make these projects feasible and successful.

NGOs have to be faithful to their own positive image. They should not agree to participate in projects with predesigned strategies that do not fit community needs. Time has to be devoted to preparing plans with the local community, plans that are flexible, participatory, and results oriented.

NGOs must ensure that the poor and the powerless are at the center of the project. Costs in time, resources, and surrendered opportunities have to be measured against benefits and final results. Market studies must always precede production and sales in income generation projects, for example. People rely on NGOs to protect their rights and to explain clearly the risks they are taking.

NGOs are in the best position to refuse to participate in activities that treat rural women and men as if they were ignorant. Training should always focus on skills that are genuinely needed in the local com-

munity. Some conventional projects have actually proposed training to raise the consciousness of farmers about the usefulness of trees in areas where local people already risk fines or prison for harvesting products essential to their family's livelihood.

What are the negative generalizations made about NGOs, and what can be learned from them? NGOs are perceived as slow and erratic in achieving their goals. Their technical skills are seen as weak. NGOs do not measure, analyze, report, monitor, or evaluate. They are either nonanalytical critics or come with a preset agenda. These criticisms are serious and should be given careful attention to see if they are true in your NGO case. At the core of each criticism is a challenge to new growth. Whenever a criticism is true, the reasons for it must be identified before the issue can be addressed.

If an organization is slow and erratic in meeting its goals, it could mean that the goals are unrealistic, or poorly defined in relation to local realities, or lacking in flexibility. It could also mean that the organization is not managing itself well. In the same way, an organization may be technically weak because indigenous knowledge and simple technology are not being valued by those making the judgments, or because the NGO has no appropriate technical ideas and skills to offer in a given set of circumstances. These criticisms may require negotiation about goals or technical appropriateness, or they may require training for local staff in technology and management. Partnership with other organizations which possess the needed skills may be the solution.

If an NGO is not carrying out adequate assessment, reporting, monitoring, and evaluation, the systems in place or on paper may not be meaningful to the community and staff, or they may require too much input for the available human or financial resources. It is irresponsible not to carry out these functions in an appropriate manner. Hence, feasibility studies, baseline assessments, ongoing monitoring, and impact assessments are imperative to determine whether the benefits are worth the expenditures of time and resources by the local community. NGOs have the power and responsibility to negotiate for a participatory process, but outsider participants (governments and donors) have the right to the information they need to analyze the return on their investment. Successes and failures must be shared among participants and with donors and governments.

The accusation of being ill-informed critics having a preset agenda is the most frustrating. NGOs are advocates for the disempowered. This role is at the core of their positive reputation. When NGOs espouse a predetermined agenda that undermines the agenda of the local people, the NGO should not be supported. Urban groups have been presumed to plan for and collaborate with rural communities. NGOs involved in NRM have on occasion made decisions about the environment without taking the time to understand the livelihoods of the local population. It is inexcusable to be in any way responsible for the deaths of local forest dwellers, for example, by allocating land as game parks or forest preserves, even in the name of biodiversity and land tenure. That is, NGOs should not be co-opted by powerful outside interests.

It is not easy for NGOs to live up to their positive reputation. It is even more difficult to accept criticism and learn from it. But NGOs, conceived in adversity and born to be different, must dare to be the transforming agents they truly are.

2. **DONOR PERSPECTIVES: A SAMPLER,**
by JoEllen McGann, Program Associate,
PVO-NGO/NRMS Project, USA

While Dr. Hoskins presents the viewpoint of a staff person working at a large donor agency looking out at the NGO community, this article looks at three donors looking inward at their relationships with NGOs. The three donors — the International Fund for Agricultural Development (IFAD), the World Bank, and USAID — are by no means representative of the donor community as a whole. Nor are these excerpts representative of the entire process being undertaken within these organizations. What they do, however, is give examples of how the context for establishing closer ties with the NGO community differs from organization to organization — including the approaches taken, the mechanisms available for partnership, the level of self-assessment with regard to partnership with NGOs, and the perceptions of the degree of partnership necessary to implement sustainable development programs.

IFAD, the first example, shows how a large multilateral donor in the United Nations system has interpreted its mandate to collaborate with the NGO community in the countries where it is active. Of special interest to NGOs are the structures which IFAD has established, including the IFAD/NGO Extended Cooperation Program.

IFAD[7]

The Agreement establishing IFAD calls on the Fund to "cooperate closely with NGOs concerned with agricultural development." The Fund's focus on food production and rural poverty is particularly appropriate for interaction with the NGO community. NGOs, working at the grassroots level, play an important role in IFAD's search for ways to reach its target groups and efforts to mobilize beneficiaries in implementing projects, particularly since the institution has no field offices. In recent years, the participatory paradigm and group formation are increasingly featured in IFAD's projects, and NGOs, with their wealth of experience in participatory development, are invaluable partners.

Almost all the projects approved in 1995 have NGO involvement. The range of activities carried out by NGOs under IFAD projects includes: institutional strengthening; supporting rural communities; group formation and training; implementing rural credit and savings programs; production and asset-building programs, such as water resources development; crop production and environmental protection; livestock development; small-scale enterprise and marketing support; income generating activities; and women's activities promotion.

Another important instrument for IFAD-NGO collaboration is the IFAD-NGO Extended Cooperation Program (ECP), which was established in 1987 to enhance interaction with NGOs, especially those involved in assisting the rural poor, the landless, small-scale farmers, rural women, pastoralists, and other IFAD priority target groups. The ECP promotes pilot activities that can lay the groundwork for future IFAD investments or support ongoing projects. This Program provides grants of up to US$75,000.

Examples of grants approved in 1995 include: $75,000 to the Afro-Asian Rural Reconstruction Organization to initiate the pilot project From People to People, to promote closer collaboration and cross-fertilization between Asian and African rural producers at the grassroots level and enable them to exchange knowledge, experience, appropriate technology, and institutional approaches in agriculture and rural development.

Another example is a grant of $60,000 to the Fundacao Amilcar Cabral-Solidarity in Development Foundation in support of Pilot Village-Based Land Management Activities in Tombali, Guinea Bissau. The main purpose of this pilot effort is to introduce, develop, and test new methods and approaches for participatory village-based land management activities, rural extension/mobilization, and the creation of rural associations.

The ECP provided $50,000 to Africare for start-up activities in the framework of the IFAD-supported Zambia Smallholder Irrigation and Water Use Program. This project aims at ensuring community participation in decisions about irrigation and informal water use, to enhance food security for the rural poor. Africare will act as a national coordinating NGO, while other NGOs with experience in community development will be contracted to deliver community training and mobilization services.

The establishment of capacity-building and project implementation grants is seen as potentially the best mechanism for IFAD to fulfill its mandate of close collaboration with the NGO community. This example differs significantly from the process underway at the World Bank. Once again, this difference reflects the difference in the organizations' contexts for involving NGOs. While IFAD is required to involve NGOs in its operations, the World Bank is not. Rather, the Bank is responding to the trend of increased NGO involvement in development, as well as to pressure from NGOs to become more involved in Bank policymaking, especially in light of structural adjustment.

The World Bank[8]

During recent years the Bank's interaction with NGOs has expanded in operational collaboration and in substantive dialogue on policy issues. Two trends have emerged regarding NGO involvement. The first is the increasingly strong role of NGOs in reflecting the perspectives of local people in project design. Some NGOs have conducted surveys of local concerns that have influenced design; others have helped set up CBOs that work with project authorities to ensure that local views are reflected, or have trained existing popular organizations for such activities.

The second trend is NGO involvement in the supervision process at the local level to help

[7]Maria Teresa Rubin de Cervin, NGO Coordination Officer, IFAD, contributed this section.

[8]This excerpt is from the World Bank's publication *Making Development Sustainable: The World Bank Group and the Environment* (1994).

improve implementation. For example, in the Andhra Pradesh Forestry Project in India — a participatory project stressing the involvement of local people in joint forest management — NGOs will be represented on the forestry committees at local, ditrict, and state levels and will assist in capacity building for community organizations to ensure the smooth transition of the management of forest plantations to local communities. In a new initiative approved by the Global Environment Trust Fund, a project in the Philippines will go directly to a coalition of NGOs for implementation.

Bank-NGO dialogue in 1994 included an intensive two-day international consultation in Washington, DC, to discuss a draft review of forest policy implementation for presentation to the Board in fiscal 1995. The majority of the forty-seven non-Bank participants were from NGOs (representing all regions); academics and other specialists were also present. Similar, smaller meetings were held in London and Libreville, Gabon. This process substantially influenced the revision of the paper. During the year the Industry and Energy Department also initiated informal consultations with NGOs. These are expected to lead to more formal meetings with a broader range of NGOs on energy efficiency, the environment, and other issues of mutual interest.

Although much of the dialogue has been with NGOs in industrial countries, increased dialogue with developing country NGOs is a major objective. In Mexico, for example, the preparation of a resource conservation and forest sector review provided a unique opportunity to involve NGOs in the consultation workshops and in preparing some of the working papers. Dialogue with NGOs in both developing and industrial countries on specific, controversial high-profile projects...has been helpful.
The World Bank today is in the process of solidifying its commitment to promoting closer partnerships through the establishment of a formal policy. Although resistance in the Bank toward NGO partnerships has meant that the process is far behind that in other donor organizations, progress is being made. Another positive step is the World Bank's attempt to involve NGOs in the development of this policy.

The final example is USAID. Recently, the organization sent out a survey to evaluate its relationship with the NGO community. Unlike IFAD and the World Bank, USAID is a bilateral donor. Regulations concerning NGO involvement, especially at the local level, come out of the United States Government. This means that direct partnerships with local NGOs are difficult and heavily regulated. However, USAID has developed some mechanisms to increase NGO involvement, mostly through partnerships between US PVOs and local NGOs.

USAID[9]

In 1993-94, USAID's Center for Development Information and Evaluation assessed the Agency's working relationship with some of its key development partners — U.S. PVOs and indigenous NGOs. The study examined a number of management areas, such as registration, negotiation, and implementation, and developed options for improved USAID management.

The paper finds the biggest problem with the Agency's partnership with PVOs and NGOs to be inconsistent management of grants and cooperative agreements. The inconsistency is due primarily to the failure of USAID staff to apply partnership principles. Time and again during the interviews the assessment team heard the comment, "It depends on the project officer." USAID staff appear knowledgeable about the technical differences between grants, contracts, and cooperative agreements. In practice, though, the distinctions are blurred or ignored, often leading to the imposition of unnecessary or excessive controls.

To address the problems of inconsistent grant management, the study recommends that USAID staff work with PVOs and NGOs more as partners. USAID can take four steps in this regard:

- Model and communicate to staff management principles that reinforce the importance of collaboration with USAID's development partners;
- Develop an improved incentive system to recognize project officer excellence in working

[9]This excerpt is from USAID's Center for Development Information and Evaluation publication *USAID Evaluation Highlights No. 50: Strengthening the Public-Private Partnership: An Assessment of USAID's Management of PVO/NGO Activities* (June 1995).

in partnership with PVOs and NGOs;

- Offer more training for USAID staff to ensure consistent application of USAID regulations, procedures, and management principles; and
- Consider developing a project officer certification program to ensure that officers have the requisite knowledge and skills to manage PVO/NGO activities.

CHAPTER II

NATURAL RESOURCES MANAGEMENT TRENDS AND ISSUES IN AFRICA: THE CHALLENGE TO NGOS

This chapter outlines the major trends and issues that set the context for natural resources management (NRM) in Africa, along with the range of options available to NGOs. The purpose of this discussion is to provide enough information to enable NGOs working in NRM to better prepare themselves for the spectrum of challenges that lie ahead.

More than anywhere else on the planet, in Africa most people still rely directly on renewable natural resources for their livelihoods. Africa's natural resources, however, are under severe pressures that threaten to degrade or destroy their long-term productivity. Those who depend on natural resources include not only farmers and herders but also fishermen, woodcutters, and all those who harvest, process, and consume the myriad products that come from forest, bush, savannas, lakes, and streams. Africa's urban populations are also highly dependent on the resource base for their food and water, as well as many of their energy and construction needs.

Natural resources and their management in Africa cannot be understood independent of the social, political, and economic systems that affect them. Many political and economic systems are undergoing rapid change — some for the better, some for the worse. Some countries at present do not have functioning national governments. With the end of the cold war, lending institutions and major donors are imposing structural reform and democratization programs as conditions for continued loans and grants. Debt-burdened African governments often have little choice but to comply. Changes in the demands on economic and political systems in turn bring calls for changes in the control and use of natural resources. Local communities are demanding greater control of resources over which they claim legitimate stewardship rights. National regimes faced with civil service cutbacks and declining operational budgets are beginning to listen, as they see opportunities both to minimize budgetary costs through increasing the participation of local communities in NRM, and to improve the quality of development projects.

Centralized, state management of natural resources in Africa has proven largely ineffective. There is thus a great need and a real opportunity for African NGOs and CBOs to play a much more active role in NRM and natural resource policy reform. Development of NGO capacity to foster sustainable NRM is critical.

There are few NRM success stories on which to build. To be effective, NGOs must first understand the principal NRM trends and issues relevant to their specific work. This chapter identifies trends that have characterized the NRM sector over the past several decades and analyzes the core NRM issues in Africa today. An issue can be defined as a choice between alternatives, a dilemma. As we shall see, there is no shortage of dilemmas. Why are natural resources so important to Africans? How did centralized, state control of natural resources become the norm for African countries? Why has this worked so poorly? Why has much of the natural resource base been degraded so rapidly? How and why is centralized natural resource control starting to change? What roles are NGOs playing and how could these roles be expanded? All these questions are addressed in this chapter. Section B analyzes sectoral trends and issues in land and resource tenure, pastoralism, forest management, and conservation of biodiversity and protected areas. Section C discusses the evolving role of NGOs in the natural resource sector.

A. OVERVIEW

1. HISTORICAL PERSPECTIVE ON NATURAL RESOURCES MANAGEMENT IN AFRICA, by Roy Hagen, USA

Natural Resources and Sustainable Use

What Are Renewable Natural Resources?

The renewable natural resources that we are concerned with in this Guide are soil and water and the plants and animals they support. Plants and animals renew themselves through sexual or asexual reproduction. Most water resources are periodically renewed through natural weather cycles as rainfall. Soil is a partially renewable resource. The fertility of most depleted soils can be restored through good management or through natural processes, although either may take decades. Shallow soils lost through erosion, however, are lost permanently in that they are not renewable in a normal human life span.

Africa's natural forests, tree and shrub savannas and grasslands, and water bodies also are renewable natural resources. Fish and wildlife regenerate, as do the habitats where they live. Many species of plants and animals have been domesticated by man; over generations, people have selected plants and animals whose genetic makeup is beneficial to sustaining human life. This genetic information itself is a natural resource.

The natural diversity found in genes, species, and living communities of plants and animals has recently come to be called *biodiversity*. The biodiversity of Africa and of the planet is a natural resource that has taken hundreds of millions of years to develop. We have only a partial understanding of the value of biodiversity or, conversely, of the risks involved with its loss. As the biodiversity in an ecosystem diminishes, it is often less "buffered" against natural or man-made changes in the environment. The system becomes less resilient. In the same way, the loss of genetic diversity in domesticated plants and animals and in the wild stock from which they have been bred increases their susceptibility to continually evolving diseases and pests.

Other natural resources include the air we breathe and mineral resources like iron ore, gold, diamonds, petroleum, and coal. Many African countries are rich in mineral resources, which, however, are finite and nonrenewable. Many modern technologies have become highly dependent on nonrenewable fossil fuels. As fossil fuels are depleted, new technologies will have to rely on renewable energy sources such as biomass, wind, and solar, or on new technologies such as nuclear fusion. The conversion to renewable energy sources is one of the greatest challenges that man faces.

Many African countries have eagerly sought to exploit their mineral wealth. Autocratic governments have often done this for the benefit of a select few. Nonrenewable resources should be used cautiously and the revenues generated invested wisely.

Sustainable Natural Resource Use

Renewable natural resources have the remarkable ability to sustain certain uses indefinitely if managed wisely, because of their ability to replenish themselves. Sustainable use is perhaps the most basic principle of NRM, yet it begs a precise definition. Ecologically sustainable management means that one can continue indefinitely the production of goods and services for which the resource is managed, except as affected by natural environmental changes (such as climate change, volcanic eruptions, etc.). It implies conserving the biodiversity of the system and maintaining its ecological processes, such as recycling of nutrients, carbon, and water, and nitrogen fixation. Sustainable use of soils for agriculture must preserve fertility and productivity over time. If a natural resource is used or managed in such a way that future generations can continue to use it in the same way, then one can say that the resource is being used sustainably.

Some unsustainable resource uses are obvious. Farming practices that result in shallow soils being eroded down to bedrock are clearly unsustainable (unless one is willing to carry the soil back upslope, as some farmers do on the Dogon Plateau in Mali). Subsistence-level, slash-and-burn agriculture practiced with a continuously declining fallow period is one of the most widespread, unsustainable land uses in Africa. Exploitation of dry forests for urban charcoal markets around Mahajanga in western Madagascar is an example of unsustainable forest use that has resulted in the rapid, one-way conversion of forest to grassland where fires spread unchecked and native trees can no longer reproduce.

Other examples of unsustainable use are much more subtle. Fertile soils can sometimes support intensive

cropping for several decades before the depletion of soil nutrients and of soil organic matter result in sharp declines in crop yields. This is now occurring in many of the highlands of East Africa. The evident effects of unsustainable use also can have far-reaching, unforeseen consequences. The smothering of canopy trees by climbing vines in parts of the afro-montane Nyungwe rainforests in Rwanda, for example, may be the result of heavy poaching of the forest elephants and buffalo that previously fed on these vines. Many tree and other plant species rely on animals to disperse their seed. Many seeds will not germinate naturally without first passing through the digestive track of animals that feed on the fruit bearing the seeds. The ecological interactions between plants and animals in natural ecosystems, especially in humid natural forests, are highly complex, and more often than not poorly studied and poorly understood. NRM must take a broad perspective that goes far beyond any individual species.

Natural ecosystems are never static. Their species composition and the populations of their animals and plants are continually changing, even without man's influence. The dynamism of natural systems makes it particularly difficult to differentiate between naturally occurring changes, and changes that result from human activities. How best to define sustainable use of natural resources is thus an issue that continues to be debated, given that human-induced (anthropogenic) changes in landscapes are becoming more complex.

The productivity of natural systems and their usefulness for people also varies over time due to natural causes. Nowhere is this more dramatic than in the semi-arid and arid lands of Africa where the timing and the amount of rainfall is tremendously variable. The productivity of these lands for livestock or for rain-fed agriculture in years of above average rainfall, well-distributed throughout the rainy season, may be many times greater than that of drought years.

Ecologically sustainable natural resource use usually requires that those using the resource also control it. Ecological sustainability is therefore strongly dependent on the social, cultural, and economic systems of the people using the resources and on the level of development of NRM technologies. Socioeconomic factors are of greatest concern. Appropriate resource tenure systems in particular are probably the most crucial. While socioeconomic systems are extremely variable, in a simplified sense sustainable use usually requires that they clearly define the following:

- Ownership and access rights to the natural resources.
- Those who most directly control the resource (the stewards) must protect, care for, and manage the resource. They must limit or delay harvest in order to assure a sustainable yield. They often must make investments in labor or other inputs.
- Those who invest in the resource or who limit their use of the resource today must benefit from the future harvest of the resource. They need not be the sole beneficiaries, but they must benefit in a significant way so that they perceive a clear incentive to conserve. This represents a linkage between economic benefit and sustainable NRM.

Almost no one will invest in or otherwise care for a resource for someone else's benefit. A village will not protect or manage a forest in its traditional territory (or *terroir*, as it is called in the Sahel) if, for instance, the national forest service sells permits to merchants in the city to cut the forest for charcoal. The fishermen from one village will not limit the size of the mesh of their gill nets if the fishermen from an adjoining village can use a finer mesh in the same waters. Villagers around a national park will have little or no interest in protecting the park if they do not benefit from its existence. The definition of appropriate socioeconomic and tenure systems to create the necessary conditions for sustainable resource use are major policy issues.

Much natural resource use in Africa is characterized, unfortunately (some would say inevitably), by conflict between traditional and centralized, government-controlled tenure and management systems. Governments have supplanted traditional systems while only partially controlling the resource and generally lacking the means to manage the resource base. The result is the transformation of collectively owned and managed common property systems into open access systems over which there is no steward.

Historical Perspective on NRM in Africa

NRM Before and After Independence

Prior to the colonial period, most Africans lived as farmers, herders, fishermen, and hunters and gath-

erers, all directly dependent on natural resources. Empires, ethnic groups, clans, and villages developed different systems for controlling access to and defining conditions of use for these resources. These systems varied from the relatively simple to the complex. Some might argue that their success was a function of the ability of hierarchies to impose authority, oftentimes ruthlessly, over subject peoples (see ***Land and Resource Tenure***, in this chapter).

The advent of the colonial period brought enormous changes. Political boundaries were commonly drawn without regard to the traditional use and ownership rights of ethnic groups. The colonial powers instituted nondemocratic governments in which power was highly centralized. Natural resources fell under the control of these administrations. Technical services to manage these resources were developed in the image of those of the home country. In Europe, and in the temperate zone in general, agriculture, livestock production, and forest production are generally practiced on discrete parcels of land. The separation of technical services makes relatively good sense. In Africa, separation of technical services makes less sense, because food, livestock, and timber are often produced on the same land, either simultaneously or consecutively. Furthermore, ecological conditions in Africa are distinct from temperate zone ecologies.

The suitability of NRM technical services modeled after those of the temperate zone countries is an issue that has not received much attention. Land use and NRM systems that work well in temperate zones are rarely appropriate for the tropics. Colonial powers, African resource management specialists educated in the temperate zones, and donors from the temperate zones all tried to apply or impose unsuitable temperate zone technologies and land use systems in tropical Africa. Africans employed in these services were rarely trained above the technician level. Although colonial administrations often introduced notions of conservation and sustainable use, natural resources were, by and large, considered to be a source of raw materials for the enrichment of the home country.

African nations maintained the artificial colonial boundaries, along with the government administrations and the technical ministries, after gaining independence. The governments of newly independent African states largely took over the role formerly filled by colonial administrations, and preserved top-down control over natural resources.

Most African regimes have never made the investments necessary to maintain and expand the infrastructure, or to develop the human resources, that would be needed for centralized NRM systems to have a chance of working. Research in NRM has been totally inadequate. Determining the appropriate balance between centralized versus local control and management of natural resources is one of the most pressing NRM policy issues in Africa today.

Budget allocations for the operating expenses of technical ministries have been grossly inadequate. One encounters foresters at remote field posts (as in Madagascar) that do not even have a budget to purchase pencils and paper. Governments have been hard pressed just to pay salaries. In this situation, donor-funded NRM projects have become disproportionately important. Donor projects are often the only entities with operating budgets. But NRM projects, like all projects, are short-term phenomena. Host country institutions rarely continue project activities or maintain equipment and infrastructure following the end of a project. Developing and extending sustainable land use systems usually requires a long-term commitment, but donors rarely fund projects for more than three to five years.

Africa used to be known for its vast herds of wildlife. In the 1970s and 1980s, a new image emerged of drought, famine, eroded soils, and displaced people dependent on food relief. The extended drought in the Sahel from about 1967 to 1973 first focused the developed world's attention on these problems and on the degraded state of much of Africa's natural resource base. Donor funds followed. This was repeated with the even more severe drought that culminated in 1984.

Most of the donor assistance that followed the 1973 drought came from countries and organizations that had little experience in African rural development, let alone NRM issues. Most funds were directed to projects focused on technical interventions, and most tried to apply temperate zone technologies. Forestry projects focused on industrial-scale and village-level plantations of fast-growing exotic species. Savanna forests were bulldozed to be replaced by *eucalyptus*. Irrigated plantations were established to supply Niamey with fuelwood. Range management projects attempted to apply the North American ranching model to the arid and semi-arid zones of Africa, but the ranches were run by African government technical services. Agricultural projects focused on green revolution high-input/high-yield

technologies and large-scale irrigation perimeters on the one hand, and on physical soil and water conservation techniques on the other. Projects were designed by expatriate, temperate zone experts and implemented as bilateral efforts through technical ministries or directly by international PVOs.

Local communities and African NGOs generally had little voice in the design, implementation, and evaluation of these projects. Donors and African governments rarely questioned the basic legal, policy, and institutional framework governing the use of natural resources. Part of this was due to overriding cold war political concerns of the donors; sustainable development was not on the agenda. The overall track record of donor-funded NRM and rural development projects implemented in the 1970s and 1980s has thus been discouraging. Government NRM ministries have rarely risen to the challenge, and donor-funded NRM infrastructures lie in ruins across Africa.

Many forestry projects in Mali offer excellent examples of the inherent contradictions and ineffectiveness of NRM activities in the post-colonial period. Village woodlot, agroforestry, and social forestry projects attempted to use technicians of the government's Waters and Forest Service as extension agents. This same service was charged with enforcement of forest law and with levying fines against individuals and villages guilty of breaking the law. In fact, a significant percentage of every fine levied was divided between the field agent and his hierarchical supervisors all the way up to the head of the Waters and Forest Service. Field agents therefore had an incentive to serve as policemen — if not bounty hunters. They had little motivation to work as extension agents. Indeed, government foresters in many countries are feared, if not detested, by rural populations. Needless to say, the essential criteria of mutual respect and open dialogue needed between extension agent and villagers were not met.

These are the types of constraining historical precedents which all stakeholders to NRM in Africa must overcome if resources are to be sustainably managed. The next article portrays recent trends in Africa, and proposes how bottom-up processes which place Africans back in dialogue with their land must be the foundation upon which all future NRM occurs.

2. **RELEARNING THE LANGUAGES OF THE EARTH**, by François Millis, Association Echos Communication, Belgium

Protect the environment is literally untranslatable into many African languages, where words relating to the earth are often charged with a special significance linked to customs and traditions. The peoples of the earth have acquired different perceptions of nature and different insights as to how to manage nature in a way that ensures its productivity without destroying it, based on technological, social, economic, and cultural choices. In African cultures, the imagery used to describe the earth reflects the concept that the earth is not merely an input for production, but also a source of wealth and power; one speaks of the earth with love, desire, and respect, because it is also the resting place for spirits.

The crises facing our societies today can provide opportunities for sharing and exchange, rather than turning inward. Protecting the environment is not solely a technical challenge but, more fundamentally, a challenge to engage in intercultural dialogue. The environmental crisis should become a common quest among men and women of all cultures for a new relationship with their environment and an opportunity for cross-fertilization among cultures.

Over the centuries, human societies have developed in different ways. When travel was still a perilous adventure, since the planet was vast and the thirst for knowledge immense, the white man set out on a conquest. The West quickly proved to be efficient in appropriating products and know-how from across the globe. The needs were enormous: freedom from famine and disease, local autonomy and education for the masses, economic development. The results lived up to expectations and man was largely freed from the rigors of nature. In less than a century, agricultural productivity was multiplied by fifty or a hundred times, while epidemics and diseases became rare. In just a few decades, *progress* had become *truth* from the Western perspective, a type of religion shared by all, and its potential appeared to be limitless.

The concepts of *ecology* and *environmental protection* did not even exist; nature was perceived more as a great reservoir of inexhaustible resources. Since the West was in a better position to develop itself than the other regions of the world, whose resources it was quick to exploit, cooperation was introduced as a mechanism for bridging the gap between the "center" and the "periphery." Thus the notions of development assistance and collaboration were born, as transfers that did not

entail revising the patterns of unequal North-South trade and the overall dynamics of misdevelopment. In the 1990s, while progress is all the rage in the West, the search for power and knowledge continues in an atmosphere of crisis — a crisis of employment, a crisis of the environment, an economic and social crisis — amounting, in effect, to a crisis in values. Why produce more, in the case of Western agriculture, if to do so will harm employment within the industry or if overproduction will destroy the environment?

The South is also facing a crisis: development projects have not produced the anticipated results, production has increased to only a slight degree, and local self-reliance remains largely a dream, in spite of the many financial and technical North-South transfers. Within the overall dynamics of misdevelopment, the North has only rarely re-evaluated its economic and cultural relationship with the South. Technology has made people interdependent, but the approach that introduced technology and offered the promise of solving all problems is itself in a state of crisis, for lack of the depth of attachment that can only be achieved through a cultural approach restoring man to his rightful place, that is, as the creator of techniques rather than a slave to the techniques he himself creates.

For their part, the African countries that have now been independent for some thirty years have become, in many regions, a great cemetery for projects, with Western models of development generally ending in failure. Very often in the African countryside, one finds populations that are neither mobilized nor empowered, waiting for the white man who will bring knowledge and money.

In addition to conventional projects, there are many experiments now being conducted with the goal of understanding and identifying the necessary conditions for achieving sustainable development that is economically viable, ecologically sound and socially just. The fundamental goal of such projects is to promote the accountability of local actors. In the Sahel, more than sixty percent of the population is rural, and the majority of the rural population are farmers. Numerous reforestation projects have been implemented to stem the advance of the desert, but only rarely has the local population been involved in managing, funding, and scheduling the projects. Why would a farmer water a sapling when he has not had a role in choosing the species and thus in determining the form of future returns (fire wood, lumber, fruit), nor in selecting the site at which it was planted? There is a growing awareness that development projects can only succeed over time if they reflect the values, desires, and motivations of the local population and become socially embedded.

The essence of the development process is the tenet that populations appropriate more fully their tools of production, invest in managing their environments and their communities and acquire greater potential for self-expression through literacy education. Although such vitality and vision are far from universal, there is no land in Africa where some farmer or group hasn't experimented with a new technique for drawing water or new tools of production, set up a nursery, or thought of a new relationship to religion or to the social and ecological environment.

In brief, cooperation consists of cross-fertilization, a situation to which each party brings the richest and most polished aspects of his personal quest and convictions. This is why the agents of cooperation, instead of seeking to transfer their knowledge at any cost, would be better advised to first identify what people know how to do and seek to vitalize the potential for creativity and change in rural societies.

The difficulty for agents of cooperation lies in the fact that, in the field, the Westerner is partial to immediate results and will choose the quickest, best-performing, and most economical method, even if it is profoundly destructive of the way of life of populations and, in the long term, upsets the ecological balance. The clear trend in the world of development is to limit man to his basic needs.

Without cultural attachment or intercultural dialogue, the planet becomes asphyxiated and the environment smothered. Dialogue may bring about a reconciliation whereby economic development enables societies to achieve autonomy and accountability by actively participating in projects that are meaningful to members of the society.

The seeds for this intercultural dialogue could start with examples such as the farmers of the Casamance region of Senegal, who realized they were destroying their environment through inappropriate cropping methods. These included slash-and-burn techniques and letting their herds wander, practices that lead straight to desertification. After a village discussion, they decided to travel to Saint Louis (in northern Senegal) to visit lands that other

farmers had destroyed twenty years earlier through the same practices. They found bare, empty ground, dried-up wells, women burning manure because there was no more wood. The shock was so great that they collectively decided, once they returned to their village, to alter their relationship with their environment and abandon their former destructive practices.

In so doing, they renewed their relationship with a meaningful earth, an earth that bears the dreams of their ancestors, that is today considered sacred (which endows it with fertility), and that is pregnant with the society-based project that this group of persons is bringing forth. For them, the earth is much more than inanimate raw material. Desertification represents a loss of meaning: man no longer has a place in working his land, and so he flees. Land is devalued — destroyed in the South and reduced to a tool of production in the North. Between man and his land, the dialogue ends.

With respect to the Senegalese farmers who changed their relationship to the environment, even if their technical performance is not very impressive, do they not have something to teach to Western farmers who, for their part, are fortunate to enjoy a favorable climate, rich and fertile land, and yet destroy it all the same? Both the human desertification (outmigration of farmers) and the ecological desertification now occurring in the North and the South require new responses and a re-evaluation of our relationship to the environment. Such thoughts surface only rarely in the West and farmers who strive to practice agriculture in a way that is more respectful of the environment are left to their own devices in securing their livelihoods. They are working against the current, according to the logic of the marketplace, and find little support in the regulations contained in the Common Agricultural Policy of the European Community. In spite of the surpluses and deregulation of the agricultural market, biological agriculture remains marginal and its healthier products are available only to the privileged.

3. **NGOS, DEVELOPMENT, AND NATURAL RESOURCES MANAGEMENT TRENDS IN AFRICA**, by Michael Brown, Project Director, PVO-NGO/NRMS Project, USA

The Development Context for NRM

The theories and philosophies underpinning development are changing. NRM is one development activity that has been affected by these changes, and is the focus of discussion here.

Development is no longer Northerners doing "good work" for Southerners. Development is now a collaborative process in which all stakeholders in a given situation assume appropriate roles, with local people in developing countries taking the major initiative. This is the ideal. If implemented, it is thought, this process will lead to sustainability — namely, the appropriate financial and programmatic continuity of development activities. These activities may occur at the field level, or they may occur in capitals through lobbying. What is appropriate will be determined by myriad factors in each context.

Definitions and theories of economic and sustainable development are no longer the exclusive domain of Northern development "experts." Major responsibility for defining problems, conceptualizing possible approaches to these problems, implementing action plans, and monitoring the project/program flow is increasingly shifting to the multitude of national and local-level community organizations in the South, together with partner NGOs. This has transpired due to the realization among Northern NGOs and donors that they alone have clearly been unable to resolve the seemingly insurmountable problems of secure food production and sustainable resource management in Africa. In addition, there is a growing recognition — rooted in both philosophical premises and positive experiences — of the effectiveness, and great potential, of local NGOs in addressing these challenges.

These changes are key contributing factors to the establishment, broadly speaking, of an improved "enabling environment."

NRM Approaches and State of the Art in Africa

NRM in Africa encompasses a broad spectrum of activities targeted at different ecosystems, habitats, and landscapes, and occurring on the individual farm or more macro village or district levels. A heavy emphasis was placed on soil and water conservation during the colonial and post-colonial periods, together with forestry sector activities (including afforestation, reforestation, and more recently agroforestry). Large scale range management was popular in the 1960s and 1970s among donors and African governments, but proved to be unsuccessful for a variety of reasons (see section B in this chapter, on the pastoral sector). Most recently, conservation

of biodiversity projects are being grouped under the NRM umbrella.

There is no blueprint of field-tested, proven NRM models that can be transferred automatically from one agro-ethno-ecological area to the next. Every situation on the ground requires careful assessment as to what is technically and socially appropriate and feasible (see chapter 1, section C.5 on feasibility). What does exist, based on years of trial and error worldwide, is the potential for identifying what types of NRM activities will likely be appropriate under particular conditions. Once a potentially appropriate NRM intervention is identified, on-the-ground work determining whether it can be adapted to a specific context becomes a crucial component in project design. This is what determines feasibility.

Among the lessons learned from past NRM efforts is that community groups and local NGOs need to play a far greater role in defining and implementing NRM activities than heretofore, if sustainable development and NRM are to be achieved. The extent and depth of this role will vary case by case.

Factors Promoting a Greater Role for NGOs in NRM

A number of factors are responsible for the improved enabling environment for NGOs working in NRM. Our focus here is on factors enabling NGO work in Africa. These include:

- Substantive changes instituted by a number of African governments which evidence democratization and decentralization of decision making, allowing for more locally initiated approaches to NRM as one outcome;
- The inability of the state to respond to declining soil fertility and decreasing agricultural yields on farms throughout much of Africa in the context of an overall depleting NRM base, with expansion of agriculture onto ever more marginal lands — focusing attention on the nexus of agriculture/population/environment in NRM (see section A.4 in this chapter);
- Budgetary constraints in the North provoking donors to be more selective in providing large technical assistance programs to African governments, and to increasingly spin off various responsibilities to NGOs and community groups;
- Realization by donors that some of the most viable, cost-effective achievements in agriculture and natural resources have been achieved by low/modestly budgeted NGO activities, both international and African;
- Increasing donor disillusionment with the capacity of perennially undermotivated and overstaffed government bureaucracies (extension staffs in particular) to effectively address the development needs of rural constituencies;
- In the context of staff cutbacks and declining resources due to structural readjustment, government technical ministries recognizing that they cannot manage multiple, complex NRM challenges by themselves;
- The fact that an increasingly "green" global perspective on environmental issues and interrelations on the part of donor country electorates (with special sensitivity to threats to biodiversity in tropical-forested countries) is often reflected in the philosophies and mandates of African NGOs;
- Signs that villages are increasingly lobbying for, and actually assuming responsibility for, managing their resources, often aided by local NGOs, as governments diminish their centralized control over these resources; and
- Recognition on the part of donors that process activities are fundamental to achieving NRM, and that NGOs are exceptionally well-placed to further participatory NRM.

A number of trends at the NGO level have reinforced the enabling environment for NGO work in NRM:

- A proliferation of African NGOs working at the national and/or local level have come into existence in recent years;
- African NGOs are increasingly viewed as necessary potential partners by Northern NGOs and donors for philosophical, political, and practical reasons;
- At the same time that Northern NGOs are rethinking their own mandates, they are opting more often to develop partnerships with African NGOs to enable the testing of different approaches to NRM and the replication of successful models on a wider scale;
- Northern NGOs are more frequently being called on by African NGOs to focus on transferring organizational and technical capacities, and Northern NGOs are initiating certain capacity-building exercises in response;
- Northern NGOs themselves are increasingly grouping into partnership consortia both among themselves and with recently formed associations of African NGOs;

- African advocacy NGOs are more vocal critics of donor programs, and field-based, service NGOs are seeking or creating opportunities to engage constructively in policy dialogue with donors and governments on issues such as land/tree tenure, the integration of conservation and development, collaborative research, and sector assessments;
- A wide range of innovative approaches to integrating internationally and locally inspired conservation and development agendas is being tested; and
- The desirability and necessity of involving local populations in the design, implementation, monitoring, and evaluation of NRM projects and programs is more and more accepted by NGOs and donors as an operating principle, and suitable methodologies are being developed.

In sum, there are tremendous opportunities opening up for NGOs working in NRM in Africa. At the same time there are pitfalls — the expectations on the part of many agencies about what NGOs can deliver are still unrealistically high. To seize the opportunities, NGOs will need to strengthen their technical and institutional capacities so that sustainable development and NRM can move beyond rhetoric.

4. **THE POPULATION/AGRICULTURE/ ENVIRONMENT NEXUS**, by Roy Hagen, USA

This article considers the technical parameters which frame and constrain NRM decision making. It outlines opportunities that individual African resource managers, and NGOs working with them, now have to enter into productive dialogue with Africa's land.

Africa's environment and the health of its natural resource base are closely linked to the sustainability of agriculture and to population growth. The linkages between these three sectors has recently come to be called the population/agriculture/environment nexus. For a given level of agricultural technology, population growth necessitates shortened fallows and/or the clearing of new forest or savanna lands for agriculture, or out-migration to urban areas. Shortened fallows decrease the sustainability of agriculture. As crop yields decrease, more and more forest, savanna, and rangeland must be converted to cropland to produce the same amount of food.

It is the continued conversion of more and more wild lands to farm fields that poses the greatest threat to Africa's forests, rangelands, wildlife, protected areas, and biodiversity. Farmers are not stupid, and most agricultural peoples long ago settled on the most fertile lands, where soil productivity is the easiest to sustain. This is one of the principal reasons why the cool, bimodal (two rainy seasons per year) highlands of East Africa are so densely populated. When new areas are cleared for agriculture today, they are usually, by necessity, more marginal lands where sustainable agriculture is a much more difficult proposition. This means shallower soils, of lower natural fertility, on steeper slopes, with insufficient or irregular rainfall. These are exactly the sites where most of Africa's remaining forest, savanna, rangeland, and protected areas are found.

Agricultural Sustainability

The International Center for Research in Agroforestry (ICRAF) considers soil fertility depletion to be the limiting biophysical factor on the majority of African small farms. The loss of soil fertility is responsible for continuing declines in per capita food production on the continent. It results primarily from the "mining," without replacement, of the soil's natural capital of nutrients. A fundamental principle of agricultural sustainability is that nutrients that are lost during cropping must be replaced to maintain soil fertility.

Nutrients are lost through the removal of crops and crop residues, soil erosion, and leaching. ICRAF estimates average per hectare losses of 700 kilograms of nitrogen, 100 kilograms of phosphorus, and 450 kilograms of potassium over the last 30 years on 100 million hectares of cultivated land in Africa. Good management practices including soil conservation techniques to control erosion can minimize nutrient loss. Nitrogen can be fixed organically by certain plants. Potassium is highly concentrated in crop residues which, if returned to the soil, can maintain adequate levels for long periods. Some nutrient loss over time, particularly of phosphorus, is inevitable, however, especially for rainfed cereal plants. The phosphorus taken up by such crops is highly concentrated in the cereal grain which is removed with the harvest.

Phosphate depletion is an especially pervasive problem in Africa. Most African soils are naturally low in phosphate compared to Latin American and Asian soils. Once phosphate reserves are depleted, there is no effective way to replace them and restore previous levels of crop yield other than through inputs of chemical fertilizer or rock phosphate.

Declining soil fertility leads not only to reduced crop yields but also to less fodder production for cattle, less crop residues (needed to maintain soil organic matter), less fuelwood, and less manure from the cattle. This leads to increased runoff and erosion because there is less plant material to cover the soil and less soil organic matter to improve water infiltration. Indirect effects of declining soil fertility include: sedimentation in reservoirs, irrigation systems, and coastal ecosystems; more acute food shortages and famines in drought years; increasing poverty; land fragmentation; continued rapid population growth rates and/or out-migration to urban areas; and extension of agriculture onto inherently more marginal, fragile sites.

This situation raises a host of issues. Can farming systems relying on natural processes such as nutrient cycling, nitrogen fixation, and pest-protector relationships, in conjunction with more equitable access to productive resources and opportunities, lead to sustainable intensification of agriculture on heretofore low-production lands? (See Jules Pretty, *Regenerating Agriculture: Policies and Practice for Sustainability and Self-Reliance* [Washington, DC: Earthscan Publications and National Academy Press, 1995], for a how this may be accomplished.) On the other hand, there may be cases where inputs of chemical fertilizer or rock phosphate are necessary to sustain agriculture. Here, a strong case can be made that near-subsistence agriculture practiced by impoverished farmers at today's population levels is not ecologically sustainable. Some further argue that organic farming combined with soil and water conservation and agroforestry techniques will never be enough if they are not complemented with some purchased inputs of fertilizer. How can impoverished farmers afford to buy the inputs needed to sustain agriculture? How can near-subsistence farmers break out of their cycle of poverty and increase their production enough to produce a marketable surplus that might enable them to purchase fertilizers or rock phosphate? What can one do where there are no adequate markets for farmers' produce or no adequate roads to get their produce to market? What can be done if fertilizers are not available on the local market or are prohibitively expensive? What policy and macroeconomic reforms are needed? Will government/donor subsidies be required to replenish the nutrient capital of badly depleted soils? If near-subsistence farmers must become commercial farmers and purchase fertilizers and other inputs in order for agriculture to become sustainable, does this not increase their financial risks? Where does one find a happy medium between green revolution technologies reliant on high inputs of improved seed, pesticides, and fertilizers, and near-subsistence systems where the main input is the farmer's labor? Can an "evergreen revolution" as Jules Pretty calls for in *People and the Planet* (vol. 4, no. 4 [1995]) be more than a philosophical and rhetorical concept?

Population

One may counter that man has been practicing subsistence agriculture in Africa for thousands of years. This is true, but past conditions were totally different from those that prevail today. Rainfed agriculture was sustainable because population densities were low, permitting extended fallow periods of fifteen to twenty-five or more years that effectively restored soil fertility through natural processes. Such fallow periods are rarely possible anywhere in Africa today. The subsistence farming practices of the past are not sustainable with current population levels.

Africa is the only continent in the world where demographic growth continues at such high levels. The population of Africa remains strongly rural and dependent on agriculture. In countries where most of the population makes a living from near-subsistence agriculture, continued population growth leads to more people per square kilometer, to smaller average farm size, and to ever decreasing fallow periods — often until fallowing is no longer possible. Parts of the East African Highlands now support from 700 to 1,200 people per square kilometer, with an average farm size under one hectare for a family of eight. Soil nutrient depletion is becoming an acute problem in areas such as the Western Highlands in Kenya, where average yields of maize on once fertile soils have dropped to under one ton per hectare per season. This leads to declining surpluses — and increasing impoverishment, social tensions, and political unrest. Declining production was probably a factor contributing to the recent catastrophe in Rwanda.

It is unlikely that farms can continue to be subdivided and support the growing population without intensifying agriculture. But agricultural intensification requires higher levels of education and higher levels of inputs. It requires investments by families and by society that presuppose a certain standard of living. Without the possibility of intensifying production, farmers will seek off-farm employment or will extensify production. There are few countries in Africa where opportunities for off-farm employment come close to absorbing the population growth. Extensification of agriculture is equivalent to clearing more wild lands, even if it requires movement over hundreds of kilometers to find land available to clear. Available lands are almost invariably marginal. This is the nexus between population, agricultural sustainability, and the environment.

Following this reasoning, family planning and voluntary reductions in average family size are in theory critical to agricultural sustainability and to sustainable use of natural resources. Many African NGOs have worked effectively in this area. Over the past four years, Kenya has registered the most rapid, documented decrease in demographic growth of any country in the world. Over the long term, strategies for addressing population issues should be incorporated in NRM activities. Where this already has translated into family planning services, the issue is highly contentious due to traditional mores in many African countries.

Family planning professionals around the world have generally found the following factors critical in leading to voluntary reductions in family size:

- Available primary health care at affordable rates;
- A comfortable standard of living;
- A relatively high level of education in the general population, especially among women;
- A respected, equitable position of women in society;
- A general perception that family resources (including land) are limited; and
- Available contraceptive services at affordable rates.

The relationship between family size and social, economic, and ecological well-being is one of the most controversial issues Africans face today. It should not be ignored by any NGO working in the natural resource sector. The strategy adopted by NGOs to address the crux of the nexus must be well thought out in every individual situation.

5. MACROECONOMIC REFORM, DEMOCRATIZATION, DECENTRALIZATION, AND NGOS IN NATURAL RESOURCE MANAGEMENT, by Roy Hagen, USA

By the beginning of the 1990s, several factors were creating pressure for major change in North-South relations. The cold war was coming to an end and donors were becoming more prone to tie funding to principles of democratization and macroeconomic reform, versus superpower politics. Nondemocratic governments could no longer count on donor support based on how they voted at the United Nations. Also, a degree of donor fatigue had set in, with Northern nations becoming more economically conservative. This led electorates of donor countries to increasingly question the effectiveness of further aid funds flowing to African countries. The newly independent states of the former Soviet Union suddenly became competitors for donor monies that had flowed to Africa. At the same time, most African governments were laden with debt, and were desperately in need of debt refinancing and new credits.

In this new global political context, the International Monetary Fund and the World Bank, in collaboration with many Northern bilateral donors, undertook a program of linking access to credit and grants to macroeconomic reform and democratization. Some of the principal demands of these institutions were (and continue to be):

- Holding of free and democratic elections;
- Withdrawal of the state from the productive sector of the economy, that is, the selling off of state-owned companies and the creation of legal and policy frameworks favorable for investment in the private sector;
- Reduction in the number of civil servants to levels that can be supported by national budgets; and
- Decentralization of government — sharing of power and budgetary resources with local levels of government.

These requirements are deeply resented by some Africans as being neocolonialist. Other Africans have been advocates for these very changes. Regardless, these programs epitomize the transition in the geopolitical reality between Northern coun-

tries and Africa, and are thus having major impacts on African political and economic systems. In countries like Malawi and Kenya, the principal aid donors collectively shut off most development funds to add to the pressure for democratic elections.

These macro reforms have had an impact on control and use of natural resources. Democratization gives people and communities in principle a greater voice in government decision making, including judgements on the control, access, and use of natural resources. Privatization, which is often an offshoot of democratization, may result in increased individual ownership of land and natural resources and of the companies that process natural resource products. Reduction in the staff of technical ministries can lead to greater participation of, and power sharing with, local government, NGOs, and CBOs. All of these forces could in theory lead to greater decentralization of authority from central government to local levels.

Herein lies a two-edged sword. Local control of local resources should create an incentive for those who depend directly on these resources to manage them sustainably for the future benefit of themselves and their children. On the other hand, decentralization may also mean less central government funding for schools, health services, road maintenance, and the like. This may put recently empowered local governments under great pressure to rapidly exploit their natural resource base to increase their revenues to meet basic short-term needs. Local governments, like national governments, also can be subject to corruption.

With the movement toward decentralization and with the active participation of local populations in the management of natural resources, there is a growing consensus on the value of, and need for, approaches that involve local populations at every stage of NRM planning and implementation. There is also growing recognition that NRM approaches have been too focused on technologies, without enough emphasis on the underlying legal, institutional, and policy frameworks that enable or constrain sound NRM.

NGOs are well positioned to play a major role in fostering more participatory approaches to NRM. Democratization trends inevitably favor the development of NGOs and CBOs. They also put NGOs in a good position to advocate for policy reform.

This Guide discusses examples of the promising involvement of African NGOs in the NRM sector. Kenya and Burkina Faso have NGOs that specialize in natural resource policy reform. Malagasy NGOs were involved in rewriting the constitution of Madagascar as noted in Chapter 1. Dozens of community-based organizations in Niger and Burkina Faso are directly involved in managing local forests. NGOs are active in sectors ranging from agroforestry extension to the delivery of family planning services. The current policy environment is favorable for a much greater role for NGOs in NRM and policy reform.

B. SECTORAL TRENDS AND ISSUES

Land and Resource Tenure

1. TENURE SECURITY AND NGOS IN AFRICA: CHALLENGES AND OPPORTUNITIES, by Mark Freudenberger, Social Science and Economics Unit, World Wildlife Fund-US, USA

Introduction

NGOs in Africa are increasingly embroiled in the complex and politicized debate on land tenure reform. In rural communities, extension workers encounter conflicts over land, forests, and other resources that pit one faction of the community against another. This makes for difficult implementation of community projects. Forestry projects sometimes fail because the intended beneficiaries, for example, women, possess insecure rights to land. Rural communities sometimes resist NRM initiatives such as tree planting or the construction of soil and water conservation structures, because tenure arrangements have not been adequately negotiated between community stakeholders during the project design phase, which leads to confusion and potential conflict.

Within the past few years, governments and donor agencies have engaged NGOs across the continent in the debate on land tenure and NRM. Many NGOs are hesitant to take on tenure issues because property rights are invariably politicized and contentious. Yet willingly or not, NGOs increasingly must adopt positions on tenure reforms proposed by governments insofar as those policies impact on programming.

Are NGOs prepared to take on a policy advocacy role? Is NGO leadership adequately informed

to assume clear stances on these tenure issues? Should NGOs even be involved in these debates?

This article outlines the nature of the debate on land tenure in Africa and its importance to the work of the NGOs. It depicts the protracted struggle between the colonial and post-colonial state on one hand, and rural civil society on the other, over who controls the use of land, forest, and water resources. While the text focuses primarily on the reasons for the emergence of tenure issues in African conservation and development, the conclusion presents a series of recommendations for NGOs for determining how involved to become and what specifically to do.

Definitions and Assumptions

The term *tenure* refers to the set of rights that individuals and private entities hold to land and other natural resources. Tenure is about access to land and the ways individuals, communities, and the state determine the allocation and use of natural resources. Tenure may often be viewed as a bundle of rights in which the law and customs of a society recognize sets of rights to a particular resource. Complex bundles of rights characterize many traditional African tenure systems. For example, on the same piece of land, those who possess rights of access to trees may be different from those who have rights to cultivate field crops, and from those who may pasture their animals. The challenge for development practitioners is to determine how rural populations use and control those resources and how development projects affect these complex arrangements.

Within the territories used by African sedentary and pastoralist populations for their livelihood, one often finds various tenure "niches" that correspond to the ecological diversity of the locale. Different ecological zones often have different uses and may be characterized by different tenure arrangements. Tenure rights may be highly articulated in lowlands used for dry season gardening. In barren uplands used only for fuel wood gathering, rights may be less clear. Within any single rural territory, there may be *holdings* (individual or household lands), *commons* (lands managed by the community), and state *reserves* (lands protected by government). The existence of various tenure arrangements in a particular locale profoundly influences NRM projects.

Upon close inspection, NGO staff may find that some individuals and extended families possess rights of exclusion on the holdings — the basis of private property regimes — and, for example, may forbid a project from planting trees on their land. Authority figures, like the heads of clans or extended families, determine the conditions for the transfer, loan, rent, or sale of land. For this reason, NGO project personnel must obtain their acquiescence for any community forestry project.

In the same community where individual holdings are recognized, lands may also be considered part of the commons — forests, water points, rivers, and streams. While it may seem that no single authority controls these lands, rules may nevertheless govern the use of the resources by members of the community. During certain times of the year, for instance, communities in many parts of coastal West Africa strictly enforce prohibitions on collecting certain fruits or thatch grasses on common lands, prior to maturity.

Tenure arrangements in rural communities are constantly evolving as political, social, and ecological circumstances change. NGO projects are affected by this dynamic situation, and modify tenure arrangements in turn. For this reason, it is important to understand the history of the evolution of tenure systems in areas where an NGO project operates, to assess what interventions may be appropriate or potentially harmful.

The Evolution of Tenure Systems in Africa

The varied and complex tenure systems of Africa are functions of the great cultural, ecological, and economic diversity of the vast continent. Despite the imposition of colonial rule and accompanying western legal concepts about land, the foundations of many traditional tenure systems remain intact today; while changing, they are remarkably resilient. The foundations of these systems remain largely rooted in the norms, institutions, and rules of the pre-colonial period. In many places, the right of first occupancy guides the way in which land is secured and transferred between individuals and from generation to generation. The lineage, clan, family, or individual that cleared and farmed the land for the first time often retains preferential rights. The founding lineage may subsequently cede the land to others as a gift or lend it out for varying periods, but only rarely sell it. Overlapping use rights may develop — to the land, trees, grasses, and water resources — leading to what anthropologists refer to as a "bundle" of use rights.

Tenure arrangements often oscillate from season to season. During the rainy season farmers generally possess rights of total exclusion. Livestock owned by transhumant pastoralists is prohibited from grazing on cultivated fields. Communities enforce elaborate sanctions and compensate farmers for crop damage from livestock. Once the dry season arrives and crops are harvested, livestock owners acquire unencumbered rights to graze the fields. Livestock manure may even be the private property of the livestock owners and sold to farmers or exchanged for grains. The seasonal oscillation of rights to farmed areas is characteristic of the tenure arrangements surrounding many other natural resources.

Tenure is particularly well defined around natural resources of high utility and market value. Well articulated use rights have long existed in flood recessional lands, pastures, and fishing waters along major courses such as the Senegal and Niger rivers. Tenure around trees is similarly explicit for species used extensively for household consumption: citrus trees, the tamarind tree, the baobab, the karité, and date and palm trees. Throughout Africa, tenure rights have emerged for trees that generate export crops such as the *Acacia senegal*, which exudes gum arabic. Individual rights to dense groves of gum arabic trees have long been held by black Maure and Fulbe populations in the Ferlo of northern Senegal.

Indigenous tenure systems generally do not allow women permanent rights of access to land and other natural resources. Women rarely possess inheritance rights or the freedom to sell or give away land. Rather, married women are often granted land for cultivation so long as they remain in the husband's household. Divorced or widowed women often lose access to their husband's lands and must farm lands provided by uncles or brothers. It is often argued that this cultural norm prevents land fragmentation and minimizes inheritance conflicts. However, it is rapidly changing. Women are increasingly able to purchase lands in areas where land markets are emerging, primarily around the growing urban centers of Africa.

Colonialism and the Evolution of Tenure Systems

Colonial officials generally looked upon indigenous resource tenure systems as a constraint to agricultural development. Colonial administrators assumed, as do many government officials to this day, that rural populations lack defined, secure rights to land and other natural resources. From the colonial period to the present, the state has taken an active role in replacing customary tenure systems with a freehold or leasehold system. Like colonial regimes, post-colonial governments have periodically attempted to restructure land tenure systems by registering rights to land as a first step toward creating either a free market or state-managed resource allocation system. While this replacement paradigm is deeply ingrained in the policies, legislation, and administrative practices of African states, the history of land registration programs shows a consistent pattern of failure.

Despite concerted initiatives over the roughly sixty-year colonial rule in Africa, colonial administrations largely failed to coerce rural communities into registering land holdings. By the end of the colonial period, the French and British authorities gradually realized that land was indeed bound by multiple and overlapping land use rights. Converting customary tenure systems was turning out to be extremely time consuming, expensive, and a source of resentment for rural communities. By the 1950s the authorities had retreated to a position of simply documenting the particularities of indigenous land tenure systems.

Colonial states failed to institute a unified and standard land registration system. However, the authorities were remarkably successful in reducing the control Africans exercised over forest resources. Colonial forest codes and acts promulgated from as early as 1900 in Senegal placed economically valuable trees under forestry service management. Stands of *gonakier (Acacia nilotica)* trees used to provision steamboats with fuel on the Senegal River were some of the first protected areas created in Africa. By the 1930s, forest acts had placed many more trees under forestry service management. Legislation prohibited numerous practices long used by African farmers, such as coppicing trees for forage. Forestry legislation was severely enforced with fines and imprisonment. The principles and legal mechanisms of these colonial forest acts remain much in force today and remain the focus of bitter public resentment.

The forest codes of the colonial period led to the expropriation of land from African rural communities through the creation of forest and pasture reserves. "Gazetted reserves" (*forêts classés*) transferred management powers from local communities to the state. The administration anticipated that its

forest services would arrest environmental degradation through rational management of forest areas. Colonial technical services, however, like their present-day counterparts, turned out to be notoriously poor resource managers. Western forest and grassland management practices were largely inapplicable in Africa, and forestry services chronically lacked adequate financial support to carry out their work.

The Post-Colonial Experience and the Evolution of Tenure Systems

Post-colonial African governments have until recently replicated many of the land policies and programs of their predecessors. Policies have emphasized two approaches: establishment of legal codes that suppress indigenous land rights; and conversion of indigenous rights to some form of registered freehold or leasehold tenure. State assumption of administrative rights to natural resources has often reduced the ability of local communities to manage these resources. Forest reserves, sylvo-pastoral reserves, and national parks are controlled by the state, yet forestry and livestock services continue to lack sufficient human and financial resources to manage state lands adequately. The replacement of indigenous tenure systems with some type of statutory system has resulted in tenure insecurity for rural populations in many instances and thus reduced the incentives for local people to invest in land improvements and sustainable NRM practices. This has been the crux of the difficulty in initiating many NRM initiatives in Africa.

Throughout the colonial and post-colonial period, the state has sought to centralize resource management control in its own hands. Now, for the first time, control is gradually reverting back to rural civil society. This devolution is taking place in the context of negotiations over constitutional amendments, the creation of democratic fora in Sahelian Africa, regional conferences on tenure and decentralization attended by government and NGOs in West and East Africa, and a flurry of reforms in land laws. The current struggle to redefine power relationships often draws the contestants into questions of who is to control land and how it is to be utilized. NGOs are playing a crucial role in this debate.

The new tenure regimes that are emerging are amalgamations of statutory and traditional tenure systems. Where traditional authorities are strong and respected, customary tenure systems remain intact. Communities in rural Sahelian countries, for example, often follow the practices of the past, ignoring state laws and regulations designed to conserve natural resources. Government authorities weakened by budgetary cutbacks find it difficult to enforce land laws and administrative practices. In a major break from the past, reforms in Sahelian countries are trying to recognize this situation by devolving greater resource management control to the local level. The situation is similar in anglophone Africa.

The question African policymakers face today is, How in practical terms can the government formalize or officially acknowledge the diverse tenure arrangements of rural societies? It is unimaginable at present to conceive of a single, standard land tenure solution. The great variety of land tenure systems in Africa calls for a pluralistic and multifaceted response. But how will these arrangements be crafted? How can the discourse on devolution and decentralization be moved beyond platitudes into the realm of practice?

There may be an unprecedented willingness of the state to recognize the necessity for local communities to manage natural resources. Numerous proposals are being made by African governments, multilateral and bilateral donors, and NGOs to grant communities greater control and rule-making responsibility. Research sponsored by some donor agencies has shown that local institutions possess a surprising ability to manage certain natural resources sustainably, despite enormous odds. Yet do most communities have this capacity? What policy measures should the state take to protect and encourage local resource management practices? How will government and local community institutions address the complex legal and administrative issues associated with devolving state control over, for instance, forest resources, to local communities?

The community-based resource management projects (*amenagement du terroir villageois*) so much in vogue today in many parts of Africa perhaps create the context for the emergence of locally crafted resource management agreements. Within these projects, new power relations are being negotiated between the state and resource-user groups. These projects are social experiments, and illustrate how traditional tenure systems may be adapted to meet new realities. The challenge is to develop mechanisms to ensure that government respects and protects the resource use agreements negotiated at the local level. NGOs, the sponsors of many community-based resource management projects, are increas-

ingly drawn into working with local communities and government to craft new arrangements governing the use of natural resources.

Implications for NGOs

The question often arises in both non-governmental and governmental fora over whether NGOs in Africa ought to enter the debate around politically charged issues such as land tenure. Many argue that tenure questions are too complex for NGOs to handle, that treatment of the subject draws NGOs too far into the political realm, and that there is little NGOs can do in any case to respond to the problem.

NGOs cannot avoid confronting the tenure debate in Africa because they influence the evolution of land tenure systems through rural development projects. As NGOs shift the emphasis from relief projects to agricultural and rural development initiatives, they create a forum within which new tenure arrangements are constructed. For example, when a women's gardening project begins, an NGO often helps the community negotiate rights to garden plots, fruit trees, or wells. NGOs often set up discussions within a village to determine who will receive benefits from a reforestation project. Similarly, NGOs work with government agencies and villagers to devise arrangements for distributing irrigation benefits to members of the community. Sometimes these NGO projects succeed in opening up possibilities for asset-poor villagers such as women or low-caste households to gain access to irrigated lands.

So long as the NGO remains in a project zone, these agreements have a higher probability of remaining intact. Upon the departure of the NGO, the project-imposed tenure system frequently disintegrates. No external authority remains to enforce the arrangements negotiated by the NGOs. The collapse of the agreements may lead to serious conflicts. Similarly, NGO projects can become the locus of tenure disputes. A women's gardening project in The Gambia led to a bitter tenure conflict between men and women. Husbands loaned fertile land to their wives, though they stipulated that fruit trees be planted around the perimeter, watered, and protected by the women. When the trees matured, the husbands tried to reclaim the land by arguing that the fruit trees belonged to them and that gardening is harmful to fruit tree production. The women retaliated by cutting down the trees, stating that the shade hindered garden production.

In their day-to-day activities, field staff of NGOs confront a wide array of land tenure issues. During planning, they must consider how project activities affect various dynamics in village communities — such as relations between the rich and poor, men and women, young and old, pastoralist and sedentary groups, or long-term inhabitants and newcomers. NRM projects promoting activities like village and private woodlots, agroforestry, or small-scale soil and water conservation dikes must invariably work with many local institutions to define who will have access to the proffered soil and water conservation technologies and how future benefits from conservation and restoration will be distributed. The impact of planning decisions is clearly felt during implementation, as stakeholders can express their satisfaction or dissatisfaction in myriad ways.

The following types of activities indicate what role NGOs can play in achieving tenure security, which in turn facilitates NRM.

NGOs in the Public Policy Domain

NGOs have a variety of roles to play in the public policy domain. African governments are currently considering revisions in land laws, forest and pastoralist codes, and water rights legislation. New decrees will most likely have a profound impact on the security of access of women, minority populations, and the poor to natural resources. NGOs can monitor the impact of legislative changes, although no individual NGO can do this alone. NGO coordination councils like CONGAD and FONGS in Senegal, CCA/ONG in Mali, SPONG in Burkina Faso, JEU in Cameroon, the NARM Forum in Uganda, and COMODE in Madagascar already make pronouncements on government policies. The legitimacy and respect these coordinating bodies hold in the eyes of government might be effectively used to build a collaborative relationship between the state and NGOs to study and monitor legislative changes in land law in Africa. Several of these organizations have already begun to hold workshops on land legislation and questions pertaining to land tenure.

A more proactive stance on the part of NGOs would entail lobbying for the passage of certain land law reforms and regulatory changes. NGO coordination bodies should certainly have a voice in assessing the merits of, for example, revisions of forest and pastoralist codes. The implementation of some of these

reforms could have a dramatic impact on the success or failures of NGO NRM projects. African NGOs might thus choose to lobby for or against various legislative proposals based on their experiences in the field.

Project Design and Implementation

NGOs play a major role in effecting tenure changes at the local level. Staff thus need to learn to better assess the tenure situation in a particular locale before and during project implementation. Government and non-governmental development organizations alike often operate in an information vacuum as far as local resource allocation practices. The diversity of tenure systems in Africa precludes any more than the most general observations. Project staff should have as in-depth, up-to-date information as possible on the systems of the beneficiary populations. Mechanisms need to be created to more effectively package and channel the literature on land tenure in Africa into the NGO world. Not only should project staff consult academic studies and field reports to glean information on how tenure systems function in the area of project intervention, but staff should also conduct tenure studies prior to project implementation. Participatory research methodologies useful for studying land tenure issues, such as rapid rural appraisal (RRA), are being perfected.

NGOs should take care to negotiate new tenure arrangements at the outset of projects. Many NGOs are actively collaborating with village communities to design micro-level resource management plans for surrounding areas. These plans often entail negotiating agreements among various user groups concerning forests, pastures, fallow lands, or water resources. NGOs in these cases play an important role as facilitators.

Even though NGO staff may work with a host of rural and state institutions to negotiate new use-rights agreements, define contractual terms between villagers and the project, and resolve conflicts as they arise, little of this experience is shared among staff or with other organizations. Case studies need to be written and workshops conducted to share the experiences of NGOs in working out agreements and resolving tenure disputes that arise.

Legal Education

Rural populations often lack knowledge of land laws, forest codes, and pastoralist regulations and are therefore locked into positions of powerlessness and dependency. Legal education sponsored by NGOs is a promising avenue, and NGOs have attempted several experiments. In Senegal, CONGAD conducted a study on the perceptions of rural populations towards key provisions of the *Loi sur le Domaine National* (CONGAD, 1984). The study concluded that inadequate knowledge of the law in rural communities led to many abuses by the state administration. A Senegalese NGO currently is translating legal texts into Fulfulbe as part of a longer-term effort to build a legal education program for pastoralist populations.

NGOs might translate legal texts into local languages so rural populations can review them through adult literacy programs. These translations, however, must also be accompanied by an appropriate forum for discussion and debate. This will entail legal education of NGO literacy workers so they can serve as facilitators for making the land laws and environmental legislation more accessible to people. The need for public legal education is especially great following the passage of new land laws. NGOs should devise parallel programs to publicize legal revisions via radio and other mass communication avenues.

NGO Staff Training in Land Tenure

NGO staff may find it useful to organize workshops on various aspects of land tenure, such as changes in land law legislation, the evolution in customary land tenure systems, or how to incorporate tenure concerns into project planning and implementation. Workshops may be organized internally, or may take advantage of outside institutes specializing in land tenure. For instance, the Land Tenure Center of the University of Wisconsin-Madison, and the Institut des Sciences de l'Environnement of the Université Cheikh Anta Diop of Senegal cosponsored short courses on land tenure designed for government and non-government staff.

Participatory methods of information gathering such as RRA, *méthode de recherche participative (MARP)*, or *recherche-action* have proven to be useful for collecting and analyzing information on the land tenure systems in villages or areas where an NGO works. NGOs also can use these methodologies to negotiate new resource use agreements and land use management plans.

Acquiring proficiency in these methodologies requires a period of training and apprenticeship.

Northern NGOs could have a role in financing this training for their African partners. The International Institute for Environment and Development (IIED), the World Resources Institute (WRI), The Land Tenure Center, Clark University, and many others have developed and administered training through African partner organizations. Among the several African centers of excellence in using participatory research techniques to better understand tenure contexts are: the Institute des Sciences de l'Environnement, Université Cheikh Anta Diop (Dakar, Senegal); the Unité de Recherche en Sciences Juridique, Université de Saint-Louis (Senegal); the Center for Applied Social Science, University of Zimbabwe; and the Institute for Social Sciences, Makerere University (Uganda).

African NGOs and CBOs will be increasingly involved in complex village disputes over natural resources, either as mediators or as principals. NGOs have already gained much experience from resolving tenure conflicts that arise in projects. NGOs might organize training workshops to bring together staff to discuss the approaches they use to manage these disputes. Writing and reviewing case studies also may be a good training tool. New initiatives launched by the FTPP of FAO to understand and respond to conflicts in the forestry domain in West Africa could be of great utility to NGOs as well.

These are only a few of the many steps NGOs can take to further their understanding of tenure contexts, and contribute to future tenure security in rural Africa. The following article illustrates anecdotally many of the points raised here, and discusses many virtues of the revised tenure code in Guinea which could, from a policy standpoint, inspire advocacy work in other African countries.

2. NOTES ON THE LAND TENURE CODE BOOK, by Ben Sekou Sylla, CENAFOD, Guinea

You are settled on your land, you have built houses upon it, you grow crops there or raise animals, or perhaps you do nothing with it. You go to the village or the city. Your neighborhood chief, the elders, and the neighbors all recognize your rights to these lands, either because your parents had rights to the same lands before you or because you purchased them, as witnessed by other persons, or because other persons transferred them to you free of charge. In everyone's eyes, these lands belong to you.
But not so fast! The state does not yet recognize these rights. It can take the lands from you with no obligation to pay compensation. Nor can you use them as security or collateral to obtain a loan or cover a commitment to some other person. And you cannot avail yourself of these rights for any operations or transactions with state jurisdictions.

In sub-Saharan Africa, there is no single set of regulations governing land. In addition to an incomplete body of modern regulations, there are a variety of regional customs. Law and custom are often at odds, which creates many conflicts.

Many regulations pertaining to the land are based on customs. In almost all cases, they share a common concept: the land not only produces food and wealth but is also the source of life — and thus it does not belong to any single individual. The land is a community asset. Within the village, land is divided among families, and only by working the land do farmers have rights over it. When people settle on a piece of land, they have no property rights, only usage rights. An empty piece of land is not inherently a piece of land that has no master: the first occupant becomes its master. In the Mossi and Hausa regions, before the arrival of the white man, the chief was responsible for the land and its distribution. This custom prevented the emergence of unequal social classes — landless farmers and landowners — and contributed to the strength and stability of the community.

Since colonization, land issues are no longer regulated by custom alone. In order to build roads, hospitals, schools, factories, and cities, first the colonial authorities, and then independent governments, adopted measures modifying customary rights to land. Inhabitants have only the right to work the land, and even this right disappears when the state needs some or all of their lands.

In an effort to resolve the conflicts between these different approaches to land tenure, the government of Guinea developed a land tenure code. In order to share the use of a common resource, that is, a public asset, regulations and laws are made that everyone must obey. To protect the weak as well as the strong, to encourage farmers to invest in lands that permanently belong to them, and to reduce conflicts over land in the cities, such regulations, in the form of a code, represent the state's effort to better organize land use patterns in both rural and urban areas.

This land tenure code, which went into effect in March 1992, is made up of 238 articles. It explains

who may own land in Guinea, what it means to be the owner, how to prove one's ownership, how to become an owner, the land commission and its powers, and how to register property. It also sets forth the principal and subsidiary aspects of land titles, limitations, temporary provisions, provisions for conflicts, offenses and disputes, and provisions for state property.

Pastoralism/Range and Livestock

1. **THE LAW DOES NOT SPEAK THE SAMBURU LANGUAGE**, by Wangu Mwangi, Kenya Pastoralist Forum, Kenya

The Samburu, Maasai, Turkana, and other pastoral groups are engaged in a battle for survival, not against adverse climatic conditions or hostile enemies, but with modern legal systems, which decree that private property rights take precedence over all other considerations. From time immemorial, pastoralist communities have believed that the land feeds everyone and each person in the community should have access to it. This ancient language is no longer being heard.

In many pastoralist areas, an irreversible process of privatization has already begun. Driven by population pressure in the humid highland areas, agricultural communities have already taken over large areas of the subhumid plains originally grazed by pastoralists pushing the earlier users into drier regions. Commercial developers are buying up huge properties for industrial and other development. These new settlers have been aided in their objectives by the subdivision of communally held land into areas owned by individuals or groups who have the option to sell.

Under the Land Adjudication Act of Kenya, division of communally held land is supervised by government-appointed committees. The first step is the delineation of group ranches, cooperatively owned and operated by the people living within the boundaries of the ranch. The land adjudication process leads to inequitable distribution, which now threatens the nomadic lifestyle of the pastoralist communities.

The law and the pastoralists indeed speak two different languages. The government sees the formation of group ranches as the first stage in a process of privatization demanded by a development model that regards the pastoralist economy as underproductive and backward. Supported by a loan from the World Bank, the government intends to subdivide all communal land. Pastoralists have been forced to accept communal ownership in the form of group ranches as the only way to protect their land from alienation.

Group ranches are not sustainable because they have been imposed on pastoralist people who do not understand their rights under the law. In the Samburu District, prominent persons persuaded the Land Adjudication Committee to allocate them title deeds to large tracts of land within the group ranch. This privatized land happened to be the best dryland pasture on the ranch, and its allocation to a few people cut off the pastoralists' access to the only river available. When members of the ranch realized what was happening and protested, they were stopped by the local administration with the charge of "criminal incitement to civil disobedience." Ten years later, the issue still remains unsolved. The best weapon for pastoralists is legal education concerning their rights in order to prevent such a case from recurring.

In Kajiado District, adjacent to the municipal boundaries of Nairobi, the alienation of land for commercial development and agriculture has been particularly severe. Setting up group ranches in this district nullifies pre-existing rights to use of pasture in pastoral areas. Cooperative use of the land is narrowed to a much smaller group, and is regulated by an entirely new set of rules that are not understood by a majority of the members. Such change leads to exploitation of the members by a few prominent individuals, often the local leaders, who know how to manipulate the law in their favor. In the case of the Kisaju Group Ranch, the ranch committee sold some of the land, thereby reducing the individual entitlement from 142 to 127 hectares.

The economic rationale for group ranches is flawed. First, livestock is a land-intensive commodity, so when land is broken up into small pieces the economies of scale cannot hold. Second, land tenure reform, contrary to official expectations, has not resulted in better use of the land. In the Kisaju case, eight out of ten allottees sold part of their land in the first ten years, leading to a total loss of over one-third of the grazing land.

In the past, pastoralists were able to survive by sharing resources. Privatization has cut access to such shared resources, like water and cattle dips. Pastoralists are now forced to seek new ways of

cooperating in order to survive. For the first time in history, pastoralists are becoming squatters.

The effects of modernization cannot be halted, but with political will, a deliberate choice can be made to give the interests of pastoralist people higher priority. Pastoralists must be made aware of their legal rights as well as other options like land trusts.

In the words of one old Samburu man:

"We cannot do anything else with our land [except pastoralism]. Let the people become knowledgeable in modern ways. Maybe after twenty years, we can redefine our future and see what to do then. The ignorant are far too many and still behind and not up to modern ways. If we subdivide, many weak people would become squatters and dependent on relief aid which is already becoming a trend of living."

2. **PASTORALISM AND THE NGO RESPONSE: ISSUES AND OPTIONS FOR ACTION**, by Michael Brown, Project Director, PVO-NGO/NRMS Project, USA

This article reviews issues relevant to NGOs concerned with African pastoralists. It focuses on where and why there are opportunities for NGOs to support pastoral development in Africa.

Pastoralism refers to the activity of livestock owners (pastoralists), the majority of whose household gross revenue comes from livestock and related subsistence and commercial activities. The aggregate decisions made by pastoralists living in communities, together with the social, territorial, and cultural bonds among its members, defines the pastoral system. Approximately twenty to twenty-five million pastoralists live in sub-Saharan Africa.

Adapting to the demands of pastoral systems and arid land climates demands considerable flexibility. Over time, pastoralists are diversifying their household economies, in particular by taking up agriculture and commercial activities. While herd movement is still important within diversified pastoral systems, the seasonal movement of entire groups of people according to traditional herding patterns is being modified throughout much of Africa.

Pastoralism in Africa has been in crisis for decades. The sources of crisis are manifold. Responsible factors include:

- Donor/government development policies favoring sedentary agriculture over pastoral livestock production;
- Socioeconomic transformation in which traditional pastoral production systems are changing due to demographics and other trends;
- Political environments where pastoral interests are underrepresented in national bodies;
- Climatic variables causing long-term changes in pasture availability and quality; and
- Political conflict in pastoral areas producing an extraordinary number of displaced pastoral peoples.

A recent publication outlines how thinking on approaches to promoting development of the pastoral sector has changed over the past twenty years.

The following table compares "old" and "new" views on pastoral development and provides a thumbnail sketch of what formerly was done to develop the pastoral sector, compared with the current thinking on what needs to take place for sustainable development to occur.

Past approaches to development in the pastoral sector emphasized technical aspects of range management and livestock production. Production efficiency for discrete elements of pastoral systems was the focus, versus understanding the logic of pastoral systems from both social and economic perspectives. First and foremost, pastoral systems reproduce people and cultures that depend on livestock products for consumption, not just for sale. Current approaches to pastoralism are oriented to the mechanics of specific pastoral situations. The objective is not only to maximize the economic production resulting from pastoralism, but also to reinforce pastoral systems — generating enough wealth to reproduce people and herds that can withstand the vagaries of highly challenging environments. This shift is a result of over twenty years of long-term research, which has clearly demonstrated the failure of technical blueprints in solving the complex, sociopolitical and technical problems posed by pastoralists in Africa.

The following narratives review what NGOs have in done in the past and can do in the future to promote appropriate and sustainable pastoral development.

Table 3. Past and Present Views on Pastoral Development.
(from *Living with Uncertainty* [London: Intermediate Technology Publications, 1995])

AREA	OLD THINKING	NEW THINKING
Objectives	Focus on commodity production: livestock development	Focus on livelihoods: pastoral development
Range	Open range improvement (legumes,	Focus on key resources: improvement,
Management	fodder, rotation); paddocks and restrictive movement; fences	rehabilitation, creation; mobility and flexibility; no fences
Planning	Blueprint development planning	Flexible, adaptive planning with local recognition of uncertainty
Drought	Normal- and drought-year development separated; focus on production in normal years	Drought-proofing and safety net provisions integrated; focus on tracking: de/restocking, supplementary feeding, etc.
Tenure	Fixed tenure regimes: privatization (or exclusive communal) conflict issues largely ignored	Flexible tenure: complex mix of overlapping and integrated regimes; focus on conflict negotiation, mediation, and arbitration
Institutions & Administration	Service delivery packaged through centralized extension services; extension worker for technical delivery	Pastoral organizations for local management issues; extension workers as institutional organizers

Prior NGO Work With Pastoralists[1]

NGOs have been involved in an array of activities with African pastoralists, initiatives that chiefly fall under the rubric of community development and/or disaster relief. Development efforts involving herd reconstitution, literacy training, fodder production, cooperative development, credit, food for work, well construction, and range management have all been attempted. Activities have generally been highly localized, and not always integrated. The impact in terms of changing some of the fundamental constraints facing African pastoralists has thus been limited.

NGO work in the pastoral sector, while taking bottom-up approaches, has rarely had widespread impact. This is because NGOs have often underestimated the complexity of the variables that must be addressed to promote sustainable development among African pastoralists. Nor have strategies been developed to attack issues at different levels, or in a comprehensive, appropriate way among various actors. Shortcomings have included: (a) failure to define what is meant by *community* in the context of pastoralism; (b) failure to collect baseline data on traditional pastoral systems and monitor project progress in achieving objectives; (c) lack of technical support; (d) failure to work appropriately with government; (e) overlocalization of activities, with the

[1]Much of the remainder of this article is drawn from Michael Brown, "The Current Status of Pastoralism in Africa," and Camilla Toulmin and Richard Moorehead, "Local Strength and Global Weakness: NGO Experience with Pastoralists in Africa," both of which appear in *Non-Governmental Organizations and Natural Resources Management in Africa's Pastoral Sector: Where to Go From Here?*, a PVO-NGO/NRMS publication.

small-scale, community focus preventing NGOs from tackling the wider problem of rangeland areas with increasing populations and decreasing resource bases; and (f) failure to collaborate effectively to achieve leverage and complementarity.

The results of NGO actions in the sector have therefore been mixed. Impacts, where positive, have tended to be so localized, or else so targeted to a single technical issue, that the most fundamental issues, which must be addressed to promote sustainable pastoral development, have been neglected.

Steps to Becoming More Effective

To be more effective, NGOs must devote more effort to project identification. NGOs need to:

- Think strategically and holistically about what interventions are most needed to promote sustainable development;
- Move from emergency food aid programs to long-term pastoral development;
- Adopt programmatic rather than project-by-project approaches;
- Place more emphasis on applied research and participatory planning to identify viable pastoral sector initiatives;
- Put more effort into systematic monitoring and evaluation;
- Place more emphasis on designing activities that will promote sustainability;
- Place more emphasis on building adaptive management skills;
- Better apprehend pastoral sector issues from policy and programmatic perspectives;
- Become involved in policy advocacy with donors to coordinate between NGOs, rural producers, donors, and government;
- Promote PRA methodology;
- Rigorously incorporate socioeconomic analysis into project planning stages;
- Appropriately train pastoralists and local communities to assure programmatic sustainability;
- Provide specific expertise in land tenure rights and advocacy to secure pastoralist tenure rights; and
- Provide technical, financial, and institutional support to pastoral organizations in NRM.

Possible Areas of NGO Focus

- **PVO/NGO advocacy for pastoral production systems: the reconstitution of viable common property regimes.**

A consensus is evolving in the scientific community that extensive pastoral production systems in arid and semiarid rangelands may often be the most efficient option for productive, sustainable utilization of dryland natural resources. In this context, a priority activity that PVO/NGOs can engage in over the short term to support African pastoralists is advocacy to create an enabling environment for pastoralists' rights to engage in mobile pastoralism. This can be done in the context of community-based NRM activities, and to date has not been a PVO/NGO preoccupation.

As a systematic approach to advocacy, PVO/NGOs can undertake regional and nationwide awareness-raising campaigns, targeting donors, governments, and the international and national NGO communities working across Africa. In the Sahel, much awareness-raising work could take place in the context of evolving decentralization programs coming under the rubric of *approche aménagement/gestion de terroir* (land use management approaches [AT/GT]). The United Nations' Convention to Combat Desertification (CCD) offers great scope for NGOs in Africa and worldwide to coordinate their activities with government technical services and pastoral and other dryland peoples. Many NGOs involved in CCD activities are grouped in the NGO network called RIOD, described by Edit Tuboly in chapter 1.

One or another form of AT/GT will likely be relevant to many pastoral communities across Africa. The interface between sedentary agricultural populations, agropastoralists, and pastoral nomads depends on correct identification of the respective rights and responsibilities of different resource-user groups in drylands. These rights include formal and informal land and other resource tenure rights. It will be crucial for NGOs to ensure that still-efficient common property systems do not become converted to inefficient, open access systems. Activities that will only benefit local elites during the course of combating desertification, or any activities falling under the rubric of decentralization, should be avoided.

NGOs should educate all parties involved in the pastoral sector about the complexity of rangeland management. For instance, rangeland management has been based on equilibrium models of grazing systems. Conventional wisdom is that the objective of all efforts is to stabilize productivity, generally by controlling livestock numbers on particular rangeland parcels. This attempt to control stock numbers has

failed spectacularly across projects and the continent. It is now realized that flexibility in planning and in pastoral mobility is essential to promoting pastoral development. NGOs can campaign for rethinking basic assumptions about pastoralism in Africa.

■ **Institutional and technical capacity building.** Both service-providing NGOs working with pastoral communities and pastoral communities themselves could benefit from increased technical and institutional capacities. It is not evident that NGOs now working in the pastoral sector themselves have the capacity to systematically provide pastoral communities with the institutional and technical capacity to identify and implement sustainable development activities; nor is it evident that NGOs perceive the necessity of doing so.

Pastoralists require a variety of skills to operate effectively in their environment. NGOs have the opportunity to work with them to strengthen these capacities, which include:

- Developing technical and managerial knowledge on the management of range and dryland agriculture;
- Developing communication skills to work officially with government;
- Understanding new laws governing resources to which pastoralists lay traditional claims;
- Practicing basic accounting and bookkeeping to manage their local institutions and project activities;
- Interfacing with the necessary range of interest groups;
- Developing lobbying skills;
- Interacting with rural banks and other sources of credit; and
- Identifying additional income opportunities from nonresource-based activities.

NGOs thus can help refine pastoral communities' existing production systems to promote sustainable NRM, as opposed to overhauling them. NGOs can reinforce the strength of pastoral systems — their adaptive and opportunistic management capacity.

The challenge facing the NGO community here is the lack of models for pastoral institution building. Few if any projects in the sector have *successfully* strengthened pastoralist capacity to the point where pastoral associations are programmatically and financially self sustaining. Pastoral institutions capable of defending and enforcing common property rights to rangeland resources are rare. Thus, investing in pastoral development and NRM is difficult, if not impossible.

■ **Options for diversifying pastoral economies.** The greatest opportunity that NGOs have to improve the lives of pastoralists is in helping them diversify their economies, to become less dependent on pastoralism as their only livelihood option. This trend has already been initiated by pastoralists themselves; it is not difficult to find Sahelian and Horn of Africa pastoralists plying various commercial ventures or professions in regional cities, as well as in far-flung international capitals. Earnings have been crucial in diversifying their home-base economies. NGOs not only can be inspired by but can also study these trends, to identify the best intervention opportunities.

Helping pastoralists identify options for land use management within the context of pastoral systems, through the use of PRA, RRA, and other assessment methodologies, can also be a key component of technical capacity-building initiatives.

NGOs and the pastoral communities they work with already assess options in informal ways. Both must develop the capability to assess options more systematically or rigorously at the community level.

■ **Pilot projects in the context of technical skill building and refinement of proven pastoral techniques and practices in NRM.** There are many potential pilot activities for NGOs intervening in NRM in the pastoral sector. First and foremost are efforts to test different methodologies for developing pastoral institutional capacity. Second are a range of technical activities, which logically would come out of the PRA process at different local levels. These are initiatives in all aspects of range management and soil and water conservation: water point management, bush fire control, natural forest management, tree planting, sand dune stabilization, bourgou regeneration in the Sahel, and so on.

■ **Applied research toward finetuning the existing pastoral systems.** NGOs can participate in applied research to help pastoralists finetune their productive and resource management activities. So long as the dynamics and production parameters of particular pastoral systems remain unknown, identification of the most appropriate field interventions will be constrained.

Opportunities surely could be created for NGO collaboration with international and national research centers, such as the International Livestock Center for Africa, the International Center for Research on Agroforestry, or the International Center for Research in the Semi-Arid Tropics, on themes relevant to the pastoral sector. So, too, ministries of livestock, especially in the Sahel because of the ongoing devolution of authority to more local levels, are now positioned in theory to assist NGOs with applied research. NGOs should be prepared proactively to explore, in conjunction with pastoral organization partners, the types of applied research activities that would be most meaningful to pastoral organizations over the long term.

Specific research topics might include: apparent or definitive resource trends; means to mitigate or counteract apparently inappropriate natural resource utilization; trends in causes of conflicts over resources and their use by competing groups, and possible solutions; or designation of the appropriate unit for sustainable development/NRM activities, for example, on a land area basis, or around specific water points.

There are many options open to NGOs to help pastoralists through advocacy or appropriate field activities. NGOs must first determine which of their own capacities require strengthening, so that effective partnerships with pastoral communities can be established. NGOs must then seek out assistance. Chapter 4 of this publication should provide helpful ideas. The next section moves from the issues of arid and semi-arid Africa to those of the tropical, moist-forest zones.

Forest Management

1. **FOREST MANAGEMENT PERSPECTIVES FOR AFRICAN TROPICAL MOIST FORESTS**, by Gary S. Hartshorn, World Wildlife Fund-US, USA

Nearly a century of experience in the moist forests of tropical Africa, particularly West Africa, has failed to develop successful forest management systems for the sustainable production of timber from natural forests. After decades of applying the tropical shelterwood system to thousands of square kilometers in tropical West Africa, this approach was largely abandoned in the 1960s. Some failures were due more to socioeconomic or political turmoil than the inadequacy of forest management practices. A few promising experiments exist, but the prognosis for sustainable tropical forest management in Africa appears bleak.

Sustainable use of tropical forests depends on full, long-term political commitment. Because most unprotected natural forests are remote from government view and interest, there is usually minimal state effort to sustain the forests. In fact, governments often allow or promote the destruction of forests for short-term political purposes, for example, by not enforcing logging concession limits or by encouraging the expansion of the agricultural frontier. The unwillingness of politicians and most government forestry officials to promote a long-term commitment to sustainable forestry is a major obstacle to the survival of tropical forests. **NGOs are key to strengthening the political commitment to sustainable uses of tropical forests, and to publicizing abuses and destruction of these valuable natural resources.**

Unfortunately, the misperception still persists that vast forests and abundant trees indicate a nearly infinite resource. Governments tend to believe that granting timber concessions will benefit local people through the construction of roads, improved schools and health clinics, and new sources of employment. Such promises and legal commitments are seldom fulfilled, however, by the logging concessionaires. Government corruption and inadequate taxation (i.e., low stumpage fees) further lessen interest in, and commitment to, sustainable forestry investments.

Unless sustainable timber production becomes much more prevalent in the remaining moist forests of tropical Africa, few of these unprotected areas will survive well into the twenty-first century. Renewed efforts are urgently needed to find and test ways to use tropical forests without destroying them. These efforts must involve timber concessionaires, government line agencies, and local communities. Though nontimber forest products (NTFPs) are touted by some as attractive sources of economic returns, sustainable tropical forestry must be predicated on natural forest management for timber, complemented with plantations, agroforestry, and NTFPs.

It is ironic that with the commercial importance of gap-dependent species such as the African mahoganies (*Entandrophragma* and *Khaya* [Meliaceae]), *Terminalia* (Combretaceae), and *Triplochiton scleroxylon* (Sterculiaceae), tropical forest management systems were abandoned. Gap-dependent species tend to have acceptable natural regeneration and growth rates for sustainable forest management. For example, the prolific root sprouting of the commercial timber *Ocotea usambarensis* (Lauraceae) in northern

Tanzania makes it an attractive species for sustainable timber production using a selection cut harvesting system.

Most prior attempts to manage tropical forests sustainably for timber failed because of a disciplinary focus on one or a few species. Single-species silviculture in species-rich natural forests is difficult because of complex, ecological relations that limit seedling establishment and competitively overwhelm the focal species. Similarly, an ecological or silvicultural approach to forest manage-ment may fail because of the costs involved, uncertain forest tenure, or a change in government regulations.

A new paradigm of sustainable forest management is emerging that takes a more holistic, multidisciplinary approach. Key ecological features include seed production, growth, and ecosystem functions. The minimization of damage to future harvest trees during felling and extraction (e.g., with directional felling) is a critical component as well.

For more than a century, the harvesting of premium tropical timbers has generated sizable profits for entrepreneurs; however, meager benefits accrued to either the national treasury or local people. Though much of the commercial logging occurs in forests under the legal control of the state, royalty fees are usually minuscule. The economic value of tropical forest commodities and services other than timber is little known and seldom assessed. Without good figures on the opportunity costs of forest logging, clearing, or failure to invest in management, there is little incentive to promote sustainable forestry practices.

The tropical timber industry is largely disconnected from the natural forests, offering minimal feedback to forest owners or local producers and making it difficult to verify sustainable sources of timber. Though most governments require a forest management plan, this is seldom more than an operational plan for logging. The typical cut-and-get-out high-grading of valuable timbers maximizes short-term profits, while causing disproportionate damage to the residual stand, and avoiding post-harvest silvicultural treatments to ensure future harvests.

Though vast tracts of tropical forests still exist in central Africa, they are not uninhabited. Indigenous peoples have used these forests for millennia, principally on a subsistence basis. Local people, whether indigenous or recent immigrants, have legitimate needs and aspirations. Sustainable forest management for timber and/or NTFPs can make significant contributions to the sustainable development of these communities. Local people must receive direct, tangible benefits from production forestry, benefits that should be community based and locally controlled. Legal and political recognition of the tenure of local users is often fundamental to involving communities in sustainable forestry initiatives.

NGOs have a very important role to play in promoting, and even testing, sustainable forest management options. At the community or provincial level, NGOs can document and publicize local experiences relevant to improving forestry practices, raise community awareness through environmental education, and participate in research, as well as support community oversight of industrial forestry operations. At the national or international level, NGOs should participate in NGO networks concerned with forestry issues, influence national policy on natural forests, enlighten government agencies and timber companies about sustainability, and proactively involve interested parties in demonstrating sustainable forest management. At both local and national levels, NGOs may seek the assistance and advice of international NGOs with experience in tropical forestry issues.

Tropical forests can be managed on a sustainable basis for timber and/or NTFPs, while protecting biotic habitats and ecological functions, generating adequate returns to local communities, and providing models for sustainable development. Sustainable management of tropical forests must be ecologically sound, economically viable, socially responsible, and politically acceptable. In forest-rich countries, tropical forests have great potential for contributing to sustainable development.

2. COMMUNITY-BASED NATURAL FOREST MANAGEMENT IN THE SAVANNA ZONE, by Roy Hagen, USA

Community-based natural forest management (CBNFM) shows promise as an ecologically and economically sustainable approach to NRM. CBNFM depends, however, on the capacity of young, recently created, community organizations that are often both institutionally and technically

weak. Hence the challenge: How do we help get NGOs and CBOs to the point where they can engage effectively in CBNFM? African NGOs have not been much involved in this new area to date. In reading this article, one should therefore ask: What are the weaknesses that constrain my NGO/CBO's participation in CBNFM? How can these weaknesses be overcome?

One of the most exciting developments in community-based management of natural resources in the past decade has been CBNFM in the tree and shrub savanna zones of the Sahel, especially in Niger and Burkina Faso. Most of these efforts are natural forest management projects focused on the sustainable production of firewood from natural tree and shrub savannas for urban markets. These projects all center on the development of community-based comanagement of the resource with the national forest service. Although most projects are implemented by international NGOs and other agencies in collaboration with the local forest service (*Eaux et Forêts*), there is great potential for African NGOs and CBOs to assume a leading role in sponsoring community-based forest management. African NGOs could potentially respond to government and community needs for information sharing and communication, training, technical service delivery, conflict resolution, and advocacy for policy reform.

Problems and Opportunities

Many if not most African urban centers still rely on firewood and/or charcoal for a large part of their domestic energy needs. Demand often increases geometrically, along with the urban populations. This creates both a problem and an opportunity. The problem is unsustainable overexploitation of the forests within the urban fuelwood supply zone leading to deforestation or severe degradation. The opportunity is in the fact that the urban market presents commercial possibilities that can potentially cover forest management costs and generate profits for local communities. Income generation and transfer of responsibility from the state to local communities are keys to local empowerment. NGOs can play a crucial facilitation role in this transfer.

Fuelwood supply zones expand radially away from urban centers, creating larger and larger rings of degraded land. Inappropriate forest laws and policies that often date back to the 1930s have contributed to deforestation. Francophone laws in the Sahelian countries often forbid the harvest of live trees. This creates an incentive for woodcutters to kill trees. The simplest way to kill trees is with fire, especially mid-to-late dry season fires that can be extremely destructive in the tall-grass savanna forests.

Another highly negative aspect of forest law concerns the system for harvesting and marketing firewood and other products from state forest lands. Most African governments maintain that all natural forests belong to the state, and only the state has the right to grant permits for cutting and harvesting. Local communities that depend on the forests within their traditional lands, or *terroir*, have been almost totally disenfranchised under this system. When *Eaux et Forêts* permits for commercial harvest of firewood or charcoal for urban markets invariably are sold to relatively wealthy merchants from the urban centers. Local villagers are powerless under the law to prevent these outsiders from cutting "their" forests, even though they are dependent on these forests in many ways. Wood merchants may employ villagers to cut the wood, usually on a piecemeal basis for low wages, but sometimes the merchants bring in their own laborers. Villagers have been known to threaten woodcutters and transporters with bodily harm (as was the case near Bakel, Senegal, in 1990) for cutting wood on "their" lands. In the worst case, entire forests may be leveled when the government, for political reasons, becomes involved with powerful local interests, as happened in the Mbegué forests in Senegal several years ago.

Under the prevailing system, forests are destroyed or degraded, villagers suffer the loss of their resources, and city dwellers suffer the cost of increasing fuel prices as merchants go ever farther to find wood supplies. Most harvested species will resprout from the stump, but without management, young sprouts are continually cut as soon as they get to be a few centimeters in diameter. Where pressures are greatest, sprouts never get beyond the size of a finger. Trees that are harvested under open access, versus being managed under effective common property regimes, have little chance of regenerating optimally.

Community-Based Natural Forest Management

Pilot CBNFM projects have sought to make local communities the principal financial beneficiaries of the management of the forests. They have promoted the sharing of management responsibility with communities and have sought with

them to develop appropriate silvicultural, fire management, and range management techniques. Individual villagers wishing to participate in CBNFM activities are usually required to organize themselves into cooperatives or pre-cooperatives if they do not already exist, and are given the exclusive rights to harvest and comanage one block of forest or management unit. There is often one cooperative per village, and the limits of the forest block for which it is responsible often correspond to the traditional limits of the village lands (i.e., the *terroir*). The cooperative is generally promised harvest rights to its management unit as long as it respects the conditions of a management plan that is drawn up by, or with, the forest service.

The Technical Basis for CBNFM

CBNFM projects are premised on the fact that nearly all trees and shrubs in semiarid zones will resprout from live stumps after cutting. Although good data on growth rates and regeneration are rarely available, a cutting cycle is chosen based on the best available information. The cutting cycle is generally set at ten to fifteen years. Thus an individual management unit or stand will be harvested every ten to fifteen years. The forest or management unit for a cooperative is divided into a number of annual cutting units that is equal to the length of the cutting cycle. Each management unit is roughly equal in terms of its standing volume or productive potential. At the end of the cutting cycle, the entire forest will have been cut over once. The cycle will recommence on the first management unit the following year.

Usually fifty to ninety percent of the standing volume of trees is selectively harvested on the first cut, with the selections based on agreed criteria. The selection may be done by forest service agents or by a member of the cooperative who has received special training. During the first such training session on the Nazinon Forest south of Ouagadougou, it was found that once the criteria were established, local villagers were much more skilled at applying them than other trained Burkinabé, Chilean, and Belgian foresters on the CBNFM project. Their indigenous knowledge of local trees made them more skilled at determining which trees were sick, diseased, or rotten in the center. The selection and harvest of these trees can improve stand quality and value over time.

The most critical stage in the management cycle of a given stand is the first few years after the harvest, when the stump sprouts and seedlings must be protected to assure regeneration of the stand. In the dryer, short-grass savanna forests, the principal threat to regeneration of the shrubs and trees is from livestock. If livestock can be excluded for about three years, then regeneration is usually assured. Livestock exclusion in the past has been accomplished through a paid, surveillance system. In the higher-rainfall, tall-grass savanna forests, the principal threat to regeneration is fire, which may be set by either pastoral or agricultural peoples.

The tall-grass savanna forests of the Sahelian countries are well adapted to the relatively gentle, early dry season fires that have been traditionally set by rural peoples. Mid-to-late dry season fires, on the other hand, can kill most of the trees and shrubs in these same forests. Well-intentioned governments have sometimes tried to make all fires illegal. Fire prevention early in the dry season inevitably leads to some fires occurring later in the dry season. Mid-to-late dry season fires can be impossible to control, can kill most of the standing trees, and can even burn entire villages. Two early natural forest management pilot projects in the mid-1980s in the tall-grass savanna zones, one in the Maro Forest in Burkina Faso and the second in The Gambia, nearly destroyed the forests they were attempting to manage by opting for total fire exclusion. Both suffered the effects of February mid-season fires after several years' buildup of fuels. At Maro, the fire jumped all the firebreaks. Virtually all trees were killed or severely damaged — this in a tree savanna forest that had burned annually for decades prior to the pilot natural forest management project.

Early, controlled burns are increasingly seen as the only viable technique for avoiding destructive late-season fires and assuring regeneration in managed forests. Early, controlled burning can also be a critical element of wildlife management. Burning while the grass cover is still partly or mostly green has relatively little effect on woody vegetation, and stimulates regrowth of perennial bunch grasses. This tender regrowth is important for both domestic and wild grazing animals in the dry season. Herders and villagers in the tall-grass savanna zones are often highly skilled in the use and control of fire. Management partnerships building on such local knowledge will be critical to improving fire management techniques for regenerating the forest following harvest, and for wildlife and range man-

agement in the tall-grass savanna zone. A participatory approach involving local people in setting goals, defining and analyzing problems, and elaborating, implementing, and periodically evaluating strategy could be a powerful tool in refining management techniques. NGOs can help facilitate this process.

Use of Revenues from Firewood Sales

The revenues from fuelwood sales from a forest management cooperative traditionally have been divided up several different ways. The national government usually levies a tax on each stere (a pile 1m x 1m x 1m) of wood. This tax may be collected by the cooperative and transferred periodically to the state. In some cases, part of this tax is set aside for forest management. Within each cooperative, each member usually gets paid directly for each stere of wood he cuts. If the cooperative employs a clerk at the woodyard or rural market, this clerk may get a fixed amount of the selling price of each stere in lieu of a fixed salary. The cooperative as a whole often takes a small cut out of the selling price of each stere. The collective use of these funds can be highly variable, and may have nothing to do with forest management or wood harvest; sometimes they are managed by the entire village. Finally, a portion of the sales is usually set aside to cover forest management costs such as road maintenance, early burning, enrichment planting, or hiring of guards to keep livestock out of regenerating parcels. The forest management fund is usually managed by the forest service. Members of the cooperatives may be given first priority for hiring of labor needed for management activities. The desirability of transferring control of the management fund to the communities or cooperatives, the willingness of the forest services to allow this transfer, and the conditions for transfer are issues that need to be debated and negotiated between all stakeholders in the forest resource.

Outstanding Constraints and Issues

A 1993 review of CBNFM experience in Niger concluded that natural forest management is biologically and economically feasible in many areas where ready markets exist for firewood, hay, thatch, and other forest products. Live trees and shrubs can be harvested and successfully regenerated. Sales of products from the forest can cover management costs and provide attractive earnings for villagers. None of these pilot efforts, however, can yet be classified as sustainable. Most are still plagued by a range of problems, all related to the management capacity of the recently created community organizations.

The Guesselbodi natural forest management project in Niger that served as a model for many other projects rapidly went downhill after donor support was withdrawn in 1990, and was no longer functioning in 1993. The single cooperative, composed of men from nine villages around the forest, had not properly managed its funds and had ceased to make the investments needed to implement the management plan and to assure regeneration of trees, shrubs, and grasses. Forest management funds and the cooperative's vehicle were used for purposes totally unrelated to management of the forest. Guards were first diminished in number, then moved from the forest to the village, and then let go completely. At this point, there was no further control of grazing, resulting in inadequate regeneration; the whole operation became unsustainable. The cooperative finally depleted its funds to the point where it could not even pay its woodcutters as they delivered wood to its market. All this, after the cooperative had received years of intensive, capacity-building support from a U.S. PVOs.

A closer analysis of why this cooperative, or others, have mismanaged their funds and ceased to make necessary investments is clearly needed. It may not be surprising, however, that sustainable village structures capable of successfully operating business ventures may fail to be developed with only five years of donor support, as was the case at Guesselbodi. When one considers the low levels of literacy, formal education, and business skills in most rural African villages, five years is probably inadequate to promote a sustainable cooperative institution.

Key issues and problems that need to be addressed by CBNFM projects include the following:

■ Management capacity. The professional management capacity of cooperatives and other community groups is often inadequate. Village committees or boards of directors that meet infrequently are insufficient to meet cooperative management needs. Forests must be managed as a business, and managers with professional management and business skills are needed. This requires training in business management,

accounting, conflict resolution, and NRM. For example, many CBNFM projects have inadequate livestock control. Livestock exclusion for about three years following harvest is crucial in areas where grazing pressures are heavy. Most forest management cooperatives have been incapable of enforcing exclusion. This is tied directly to the weak institutional and management capacity of the cooperatives. It also reflects inadequate involvement of transhumant herders, and the difficulties of changing long-established traditions of land use. Inadequate control of grazing and browsing by livestock is probably the principal immediate threat to the sustainability of natural forest management pilot efforts in Niger.

- Distrust between villagers and the forest service. While relations have improved between villagers and government foresters, distrust continues. State forestry agents tend to see cooperatives as simply the means for supplying the labor for managing the forests. There is too little involvement of communities in forest management decisions.

- Participation of women. Forest management cooperatives have been almost exclusively composed of men focused on firewood production. Women use the same forests for many NTFPs for both commercial and subsistence needs. Women have not been involved in the planning and management process and have sometimes been excluded from the forests. Women are frustrated, and opportunities for multiple forest uses and greater profitability have been lost.

- Communication and collaboration between community management structures is often weak.

Potential Roles for African NGOs in CBNFM

African NGOs have enormous potential to participate in natural forest management. Most pilot efforts have involved international development agencies, including NGOs, working with the national forest service. All of these projects have attempted to foster the development of community-based forest management institutions. Their degree of success to date is questionable. Local NGOs with a national or regional base of operations have not generally been involved. The development of institutional capacity for professional forest management will require a long-term involvement that will probably exceed the patience of most donors (at least for direct involvement). NGOs should be able to provide training and help in coordinating activities.

The following are other specific functions that NGOs could carry out:

- Communications and information sharing on natural forest management (newsletters, field days, market information, etc.);
- Training in business management, accounting, silviculture, and fire and range management;
- Facilitating conflict resolution activities (in collaboration with local government and other stakeholders); and
- Developing a forum for policy dialogue where the interests of the local forest management cooperatives are represented.

A particularly attractive aspect of NGO involvement is the potential for village organizations to pay for the services an NGO provides. Natural forest management can and should be a profit-making endeavor. Hundreds of thousands of hectares are already under management in Niger and Burkina Faso, providing employment and profits for thousands of villagers. Village management structures should be able to pay for the services they receive, if NGOs can provide high-quality products. This, of course, will only be possible if NGOs can develop these capacities.

One attractive option that has not been tried, to our knowledge, is the creation of an association of CBNFM cooperatives or similar organizations in a given country. This new NGO could be supported by membership dues, fees for services, and, if necessary, donor funding to get started. Such an association could become an economic and political force, and could perhaps be the best type of structure to promote policy reform favorable for CBNFM.

3. **FOREST PEOPLE AND PEOPLE IN THE FOREST: INVESTING IN LOCAL COMMUNITY DEVELOPMENT**, by Kate Newman, Biodiversity Support Program, USA

Donors and international NGOs working in the world's forested areas are increasingly implementing development programs through local institutions. International and national NGOs with a technical or political interest in protecting the forest resource base should make every effort to seek working partnerships with truly local institutions.

The traditional method of channeling funds through local organizations does not guarantee or even encourage the growth, development, and strengthening of local structures. Much more must be done

with the local institutions before the disbursement of funds. Several key issues must be examined before funding is channeled anywhere.

Local Organizations: The Most Appropriate Entities to Work With?

It is commonly accepted that to be most effective at the local level, one must work with or through local institutions. This is true. An integrated approach of working both at the local, grassroots level and at the national, policy level is essential for several reasons:

- Local institutions are often the only providers of basic human services;
- Local institutions often have the trust of the local population;
- Interventions planned from the outside and implemented without the input of the local population often are not sustainable; and
- Local institutions are the best sources of valuable local knowledge.

The Choice of Local Institutions

An important point is that, in the forested areas of West and Central Africa, few groups are specifically organized to work in conservation at the local level. This does not, however, mean that there is no one to work with. On the contrary, institutions dealing with these issues exist — in fact, every group working in development is in some way dealing with the resource base.

The conservation of natural resources encompasses many subsectors, which means that conservation issues should be addressed in an integrated way. In almost any forested area in Africa, you will find local institutions working in one or several conservation subsectors. To meet the conservation needs of a particular forested area, you may have to choose several local partners to work with over the long term. A single local institution rarely has the expertise necessary to address conservation issues by itself, and often is overburdened with other critical issues.

Under a single project, partnerships could be formed with a range of institutions to address issues in different conservation subsectors. This integrated approach to a complex problem has Northern development workers shaking their heads, but flexibility and the understanding that people's needs come first are the only ways to win people's trust and their ultimate understanding and acceptance of the need to conserve their own natural resources. Without this, conservation will not be achieved.

How to Find the Best Local Partners

A careful, thorough examination of all the socioeconomic structures and systems in and around a forested area must be undertaken before designing a project or choosing a partner. A single protected area may contain a dozen socioeconomic systems that have different needs and different traditional ways of dealing with problems. We have to find out how local groups traditionally manage their resource base, what types of organizations or institutions exist already, and which issues they address. NGOs need to have the capacity to do this well.

There are already local institutions dealing with many aspects of conservation and NRM. Donors and international NGOs must find and assist these groups. Eventually, many groups will become more acutely aware of the need to manage their resource bases more soundly and may take on more responsibility, with our technical assistance.

Local Institutions: How to Work with them to Reach Common Goals — Activities and Inputs

In Zaire, USAID designed a large NGO umbrella project to strengthen local institutions by channeling money and material goods into projects the NGOs had already started. It soon became apparent that each local group was foundering under the weight of the huge inputs. Thus, a major donor was not strengthening local institutions but crushing them instead.

A flexible, integrated approach to working in partnership with local institutions is therefore necessary, although its assumptions and activities are not "classic." Institutional strengthening should occur in conjunction with, or even before, any channeling of funds takes place.

4. **SUSTAINABLE FOREST PRODUCTS: OPPORTUNITY WITHIN CRISIS**, a matrix created by Michael Jenkins, Thomas Fricke, Catherine Mater, David Richards, and Robert Simeone, MacArthur Working Group of The John D. and Catherine T. MacArthur Foundation's World Environment and Resources Program, USA

See matrix following page 84.

Biodiversity and Protected Area Conservation

1. **BIODIVERSITY'S CRITICAL ROLE IN SUSTAINABLE DEVELOPMENT,** excerpted from *African Biodiversity: Foundation for the Future*, a publication of the Biodiversity Support Program, USA

Perhaps more than anywhere else on earth, human well-being in Africa depends on the continued productivity of biological resources. Africans rely on access to these resources to meet their daily subsistence needs, to generate employment and cash, and in many cases to form the basis of their national economies.

Diverse ecosystems and a multiplicity of species and genetic material are critical to maintaining the stability and productivity of Africa's biological resource base. Furthermore, diversity provides ecosystems with the resilience necessary to cope with periodic but increasingly frequent stresses on the environment, such as drought, climatic change, and war. The critical need for biodiversity conservation in Africa's development and a framework for meeting this need are the foci of the Biodiversity Support Program, a USAID-funded consortium of the World Wildlife Fund, The Nature Conservancy, and the World Resources Institute.

New strategies for conserving biodiversity in Africa are urgently needed. Such strategies must:

- Treat biodiversity conservation and economic development as integral aspects of the same process of sustainable development;
- Respect and incorporate African values, knowledge systems, and priorities;
- Involve local people in the management and use of biological resources; and
- Control or reverse the loss of biodiversity across the landscape — in every country in Africa.

People value biological resources in different ways: spiritually, economically, aesthetically, culturally, and scientifically. Values also may be influenced by the different perspectives at international, national, and local levels.

Past biodiversity conservation strategies have tended to overlook African values and perspectives in determining priorities. International scientific values and knowledge, as opposed to national and local values and knowledge, largely have dictated what, where, and how conservation efforts have taken place in Africa.

Biodiversity conservation in Africa has focused primarily on the preservation of the continent's spectacular mammals, countless endemic species, and highly diverse ecosystems by establishing and managing protected areas in selected countries. While these efforts are important, conservationists have paid little attention to biodiversity outside of parks and reserves, even though the vast majority of species in Africa are not found within the four percent of the land mass that is currently protected.

Protected areas have been and should continue to be at the center of strategies to conserve biodiversity. It is also essential, however, for Africans and the international community to begin now to extend their view beyond parks to the rest of the landscape, where people and the species they rely on coexist.

Outside protected areas, wise use of ecosystem diversity can have profound economic effects. African nations rely on cultivated and naturally occurring biological products as primary earners of foreign exchange. Further, a variety of natural production systems can provide resilience in the case of economic downturns in any one sector. For example, if the coffee market fails, Kenya can turn to the savannas and coral reefs to attract tourist dollars, to the rich highlands for tea and dairy production, to the fresh-water lakes for fisheries, and to the lowlands for cattle and maize production. In each of these cases, important ecological functions depend to differing degrees on the continued presence of biodiversity.

At the local level, the importance of biodiversity encompasses the broadest range of values and needs. Rural residents rely primarily on biological resources to meet their subsistence, economic, medicinal, and spiritual needs.

Africans historically have recognized that genetic diversity in their crops and animal populations is closely linked with the ability of agricultural production systems to survive the vagaries of disease and climate. For example, the Mvac people of Cameroon plant about thirty varieties of cassava, each adapted to different natural conditions. During the recent drought in Zambia, farmers turned to indigenous

species of millet and sorghum for survival and income when their "improved" varieties of maize failed. In addition, in most of rural Africa, people meet their protein requirements with naturally occurring animal and insect species, using their domesticated livestock for income generation or social status.

Africans rely on naturally occurring plant species to meet many of their medicinal needs. In Ghana, for example, eighty-seven percent of the rural population and fifty-five percent of the urban population use plant medicines as a first or second recourse in case of illness. Women have the primary responsibility for ensuring family health and, as such, often have inherited complex knowledge of the medicinal uses of leaves, roots, and barks.

Finally, natural ecosystems are a continued source of much of the largely intangible rich cultural and spiritual heritage greatly valued by African societies.

In much of Africa, biological systems are coming under threat from a number of sources. The World Conservation Union (IUCN) has identified eight major threats to Africa's biodiversity:

- Inappropriate agricultural methods;
- Foreign-debt servicing;
- Over-harvesting of natural resources;
- Population and migration pressure;
- Commercial land-use practices;
- Fragmented populations of species;
- Climatic changes; and
- Introduction of alien species.

These threats to biodiversity can be understood as different manifestations of a widespread, accelerating pattern of uncontrolled landscape change in Africa and dramatic economic and social change worldwide. These have been alluded to in a number of articles in this publication. The specific threats to biodiversity — and the remedial actions they require — vary from country to country and from site to site. Yet the general patterns of inappropriate production methods and uncontrolled landscape transformations are widely found throughout Africa. The conservation of biodiversity there depends on implementing more sustainable modes of economic development.

Economic development efforts in Africa have been and will continue to be based largely on the exploitation of biological resources. Many of these efforts are unsustainable precisely because biological resources are being mismanaged and cannot long endure their present rates of use. Movement in the direction of sustainability is essential. Logically, this movement should begin with the factors identified above as contributing to the loss of biodiversity in Africa.

A new framework for conservation is required to improve biodiversity conservation in Africa. This framework must be applicable to all countries within the region and must integrate the conservation of biodiversity with sustainable development across the landscape, reflecting African priorities, viewpoints, and realities.

Given the increasing globalization of economic systems and environmental impacts, it is now imperative that the world's nations collaborate to find the means to reconcile the evolving needs of humans to the finite resources of the natural environment.

In Africa, meeting this challenge will require combining the strengths of both African and non-African knowledge and value systems. Conserving biological resources in all countries, for the benefit of all inhabitants, demands a new and broader vision that regards the entire landscape as an interconnected, functional system — a system that provides for the needs of a vast global community that starts with the African farmer but now stretches around the world.

2. DESIGNING INTEGRATED CONSERVATION AND DEVELOPMENT PROJECTS,

by Michael Brown, Project Director, PVO-NGO/NRMS Project, and Barbara Wyckoff-Baird, Biodiversity Support Program, USA

There are numerous potential entry points for NGOs in the design and implementation of integrated conservation and development projects (ICDPs). In reading this article, try to see where it is applicable to your NGO's interests and area(s) of intervention. Think about what aspects of ICDP design you could best contribute, and what, if any, capacity building your organization will require.

Conservation and development planners now recognize that efforts to conserve biodiversity in developing countries will not succeed in the long term unless local people perceive those efforts as serving their economic and cultural interests. With the dual goals of improving the management of natural resources and the quality of life of people, ICDPs

offer new alternatives for conserving wildlands and their biodiversity. ICDPs seek to balance the needs of local people, the environment, and future generations. The ICDP approach is thus significantly different from traditional conservation approaches, which created gazetted conservation areas where people were often dispossessed of their traditional, productive resource base. Recognizing the rights and needs of local peoples is a relatively recent and revolutionary element in conservation.

An essential element in the design of every ICDP is the linkage between conservation and development objectives. When this linkage occurs, it is possible to introduce development interventions that will result in conservation and wise use of natural resources. If producers view their future as a function of their present use of the renewable resources, they are likely to adopt more sustainable methods.

Involving Beneficiaries

When conservation benefits individuals living outside of the area but local people bear the burden of the conservation action, it is unlikely that a project will meet its goals. A high proportion of the benefits should be received by those who pay the costs. In the conservation of highly degraded habitats and endangered species, local resource users must have viable livelihoods and/or resource-use options to replace their lost access to biological resources. NGOs have opportunities for helping beneficiaries identify options that will be satisfactory substitutes for biologically unsustainable practices. In this way, beneficiaries will be both local peoples participating in conservation and the world as a whole benefiting from biodiversity conservation.

Failure to involve beneficiaries as genuine partners in all phases of project implementation has consistently led to disappointing results. Projects have failed because the intended beneficiaries have too often been passive recipients of plans conceived by outsiders.

Local beneficiaries, however, are not a homogeneous group. They differ in terms of their access to and use of resources, and their places within the community. A community's diversity must be assessed to foster a better understanding of the unintended impacts of a project on different socio-professional, ethnic, and gender groups.

Stakeholder Analysis

Many project planners use stakeholder analysis to identify individuals and groups with a vested interest in the outcome of a project. Once identified, the stakeholders can be incorporated into all stages of project design and implementation. Doing so may enable potentially appropriate and feasible projects to be designed. Failure to do so can prove disastrous. Women are one of the most important stakeholder categories (and there may be a number of women stakeholder groups in a particular situation), because ownership, management rights, and responsibilities for resources are often differentiated by gender.

Stakeholder interests can conflict, requiring strategies that give priority to addressing the root causes of the conflicts. This situation may prove inevitable. Conflicts can be managed through identifying their causes, and taking action to reduce conflict. The emphasis must shift from things (planting trees, digging wells, improving livestock health) in a project, to processes that promote collaboration among stakeholders in project design and management.

Indigenous Knowledge Systems

Socially sound projects build upon existing social arrangements, knowledge, and skills. Success lies in expanding on current circumstances rather than imposing externally developed technologies and institutions. Indigenous knowledge systems offer information on specific aspects of resource management and use, trends in resource availability, and sociocultural factors impacting the resource base.

It is believed that promoting local stewardship over resources is crucial to achieving conservation and sustainable development. Local communities and NGOs may often benefit from training to enable them to assume management responsibilities in an ICDP. Because stakeholders' interests often vary, some form of comanagement may be considered during design as a means to balance the interests of different stakeholder groups.

Components of an ICDP Strategy

A successful ICDP strategy has five components:

- Research for planning, monitoring, and evaluation;

- Conservation of the resource base and environmental management;
- Social and economic development;
- Institutional strengthening; and
- Negotiating and balancing the interests of stakeholder groups.

In addition, attention must be given to the overall economic, agricultural, and other resource policies in effect in a country or region. Changing such policies may be crucial to the success of the ICDP strategy, and may require targeted project activities.

A single institution is usually unable to implement the varied components of an ICDP. Stakeholders in ICDPs include government bodies, local communities, development or conservation NGOs, international PVOs, and universities and other research bodies. These stakeholders may approach each other from positions of distrust, contempt, or hostility. Building partnerships among these disparate groups is thus often a major challenge in project design and implementation.

Recommendations for ICDP Design

■ **Consider biological and socioeconomic criteria in selecting project sites.** Priority should be given to areas where:

- A large proportion of forest or other target resource remains, and the host government has a good history of conservation;
- High species richness and endemism exist;
- Conserving habitat will assure the conservation of a large number of species;
- The government has already begun efforts to preserve biodiversity in areas that are facing high population pressures; and
- The use of and threats to natural resources are weighed against the opportunity to effect change.

Major nonbiological criteria include the ability to promote significant local participation, and to achieve sustainable economic return. Insofar as possible, biological and socioeconomic factors should take precedence over political factors.

■ **Use a logical framework or hypothesis to guide design, monitoring, and evaluation.** It is critical that adequate research and monitoring be built into a project to ensure effective assessment and feedback. Planners must distinguish between assumptions and facts when formulating their hypothesis. Baseline surveys should be conducted in target areas, with periodic reviews of the validity of key indicators throughout the life of the project. A multidisciplinary approach is essential.

■ **Ensure grassroots participation by and collaboration among stakeholders by facilitating negotiation of a set of commonly shared perceptions, understandings, and working arrangements.** The establishment of working relationships and processes for communication and decision making is absolutely fundamental.

■ **Incorporate indigenous knowledge of NRM into the planning process.**

■ **Promote local control of access to resources by empowering institutions that set and enforce rules over resource use.** ICDPs must often begin by securing tenure rights for local communities as a means of promoting access and rational use.

■ **Ensure that the relationship between the project's conservation actions and development benefits is as direct as possible in the eyes of the local people.** For individuals to adopt conservation behavior, viable alternatives for meeting economic needs must exist, particularly when the conservation activity requires the alteration of existing production activities.

■ **Include a conservation education component that is neither simplistic nor pedantic.**

■ **Consider the potential impact of international, national, and local policies and laws on project implementation.** Identify those variables that do not seem to be directly relevant to project objectives, but could affect the likelihood of achieving project objectives.

■ **Assure financial and economic viability.** If land use is to become sustainable, resource users must be aware of the potential costs and benefits resulting from shifts in resource management strategies.

C. THE EVOLVING ROLE OF NGOS IN NATURAL RESOURCES MANAGEMENT AND POLICY REFORM

1. AFRICAN NGO PARTICIPATION IN NATURAL RESOURCE POLICY REFORM,

by J.F. Swartzendruber and Bernard Berka Njovens, USA

Policy reform has become a major component of activities in the field of NRM. However, much of the present policy reform work appears to reflect a somewhat limited conception of the role of civil society — including NGOs — in the policy process. As a result, NGOs are stereotyped as implementors of activities at the grassroots level and receive little support for nontraditional roles such as environmental policy analysis or advocacy.

Diagnosing policy problems, articulating "correct" new policies, and putting them into place are assumed to be tasks for government and donor agency professionals, even if these are frequently supplemented by public consultations in some form. Once the policy reforms have been instituted, the NGO community is expected to play its assigned role of going out to the field to introduce improved techniques for resource use and management. The limited perception of the nature of policy reform and the lack of awareness of the broader role of NGOs fail to connect with contemporary efforts to make development more participatory and to expand the "space" for civil society in Africa.

Programs in support of democracy and governance should help to make the case that policy reform is not solely a technical process of introducing discrete legislative changes to bring about a desired effect. Instead, more democratic governance processes need to be developed in order to strengthen local capacity to assess and modify environmental policies. This should be an ongoing activity based on local expertise and priorities, rather than the result of external consultancies carried out in conjunction with relatively short-lived projects. Previous articles have stated how changes in governance and the overall enabling environments for NRM are occurring, but much more, in fact, needs to be done.

NGOs in Africa represent an important building block for the strengthening of civil society. For this reason, it is necessary to broaden the conception of NGO roles beyond low-cost service delivery at the grassroots level. Analytic and advocacy functions are inadequately served at present. With the proper support, NGOs can play a key role in both analysis to feed into programming, and advocacy to strengthen civil society institutions.

A Challenge to NGOs

The evolution of more sophisticated roles for African NGOs, such as participation in the public policy process, lags behind the rate of growth of the NGO sector as a whole. While many new groups are being formed, few have taken up specialized functions such as policy research. Furthermore, even in the environment of political openness spreading across the continent, there remains a distinct ambivalence about the extent to which NGOs should attempt to become involved in policymaking. The policy arena remains, by and large, the domain of government, except where donors have used their leverage to force an occasional opening on topics selected by non-Africans.

There are five areas in which NGOs might develop a working relationship with government in order to influence policy. Where work still needs to be done, NGOs can strive to collaborate with government in achieving reforms concerning:

- The appropriate legislative framework to protect NGO autonomy;
- The forum for dialogue with government on policy issues;
- Funding mechanisms that do not distort NGO autonomy or accountability;
- The respective role of NGOs and government, assuming that NGOs are not substituting for, but are rather complementing, government; and
- Strategies for NGO self-reliance that avoid NGOs' becoming too dependent upon government or compromised by too close an association with it.

Unlikely Allies

NGOs desiring to initiate dialogue on policy issues may find useful allies in the cadres of technical personnel at relevant government agencies. These individuals are often reluctant to approach senior officials with suggestions for policy changes, despite being well aware of the problems associated with existing approaches to resource management. These are often the people sent to seminars on NRM in other African countries in which new approaches are being introduced.

These technocrats may welcome NGO initiatives to put policy change on the agenda and can help to reinforce NGO efforts by providing important data such as resource inventories, remote sensing products, or the results of donor-financed studies to which the NGOs would not always have access. Opportunities for such local alliances should be

built upon in the process of strengthening NGO participation in policy dialogue.

The Role of Donors in Policy Reform

Steady, consistent pressure from donors is needed to ensure that African governments continue the process of strengthening the functions of civil society. Coordination between donors is an important element of this process. Donors need to pay more attention to developing NGO capacity for positive involvement in policymaking, not just implementation.

There is considerable evidence, however, that donors still do not adequately understand the NGO community and the grassroots milieu in which it functions. Traditional donor modalities and mentalities are no longer appropriate for the development of genuine partnerships to support NRM activities by NGOs working in Africa (see chapter 1, section C on partnerships). This has led to a pattern of unrealistic project targets in relation to funding absorption capacity, implementation timeframe, and technical capacity. Donor staff still have a tendency to underestimate the complexities of and requirements for effective support to indigenous NGO activities.

Although policy issues are now a major priority for development assistance, donors have yet to invest any significant funding in strengthening an indigenous policy research capability in Africa. Closer collaboration between major donors and African NGOs working in the natural resource sector is imperative in this area. The focus of this collaboration should be to make the policy process more open to the voices of Africans at the grassroots level — the resource users themselves — in order to better reflect local-level concerns, perceptions, and priorities in the decision making that affects patterns of natural resource use.

Such an approach serves the function of "reform for efficiency" by providing government planners and decision makers with better linkages for communication and feedback, thereby improving the information basis for policy formulation. In the context of economic liberalization reforms, this effort will strengthen the ability of Africa's private sector to stimulate economic growth.

At the same time, integrating grassroots groups into the policy process serves the function of "reform for empowerment" by addressing two central problems of African governance: excessive distance between state and society, and lack of accountability for governmental decisions and actions. When NGOs become more active in policy formulation, civil society is strengthened and government decisions become more transparent and accountable. As a result, those who previously had little say in decisions affecting them can begin to exert more control over their own lives.

For the Future

While some NGOs express a willingness to become more involved in policy dialogue, given assurances of support from influential donor agencies, other NGOs are wary of engaging in policy issues because a confrontational approach toward African governments is often counterproductive. In the absence of strong donor support, NGOs living close to the margin financially are justifiably cautious about venturing into this new, potentially risky arena. The weakness of the NGO sector combined with government foot-dragging can undermine even energetic efforts of major donors to widen the scope of policy dialogue.

Nevertheless, over the long term it seems inevitable that NGOs will focus their efforts and resources on the policy context of their activities. Policy concerns are a logical extension of NGO project activities. As they address the problems of the poor and the inequities that exacerbate them, NGOs naturally become involved in the public policy process. Enhancing the effectiveness of their own interactions with governments and advocacy for the poor are key elements in any NGO strategy to curb increasing marginalization and to assume a more central, influential role in the development process.

Donors must demonstrate their commitment to working with and through NGOs to achieve better development results. More direct contacts must be established between donors and NGOs to exchange information, share experiences, and identify opportunities. Donors can then select those NGOs with credibility and standing, based on a track record of performance and accountability, and avoid those organizations in developing countries which are posturing as NGOs for the purpose of securing funds.

Donors need to persuade governments that NGOs are partners, not competitors, in the development

process. NGOs, because of their community-level presence and field experience, can contribute immediately to policy formulation in forestry, land tenure, community health, and agricultural extension. Eventually, NGO participation can be broadened to address macro issues with a national focus. Donor coordination is vital in this process. Its absence can send mixed messages to governments, enabling those that thrive on ambiguous situations to rule arbitrarily.

The following article presents a case study of how one NGO, Naturama in Burkina Faso, has been able to structure a program that has NRM advocacy as a central objective.

2. **NATURAL RESOURCE MANAGEMENT POLICY REFORM**, by Souleymane Zeba, The Friends of Nature Foundation (Naturama), Burkina Faso, with the International Center for Development and the Environment, World Resources Institute, USA

Aware of the economic stagnation paradoxically accompanying rapid economic change in Burkina Faso, the authorities have placed environmental protection at the heart of the nation's dominant concerns. However, the public sector has not produced the expected results in the area of NRM. Fortunately, the political and economic changes occurring in Burkina Faso have provided the government with the opportunity to involve NGOs in NRM. The economic and financial crises have led to the necessity for structural adjustments, and the mechanisms for implementing these adjustments encourage cutting the size of the public sector in favor of the private sector and NGOs.

As suggested in the preceding article, NGOs must depart from their traditional role as service providers in order to effectively influence policy formulation and implementation. This level of NGO involvement offers the government an opportunity, by providing a voice to NGOs in the decision making process, to communicate with populations, especially insofar as NGOs in Africa represent a true mirror of popular sentiment.

For this reason, Naturama, a Burkinabé environmental NGO, has adopted the objective of enhancing the role played by NGOs in policy reform — in particular, in the formulation of environmental policy. The purpose of the initiative is to improve environmental and natural resource management in Africa by more fully involving the population in the dialogue on policies and reforms.

The goals are to better understand how NGOs and the private sector have participated in, and contributed to, environmental policy reform; to identify some of the most promising methods and tools that have been used by successful NGOs; and, lastly, to identify opportunities for, and constraints to, greater participation in the environmental policy reform process in sub-Saharan Africa. Naturama has held discussions with NGO and government officials to:

- Evaluate their level of interest in participatory policy reform and the overall initiative;
- Examine the legal constraints that hinder NGO participation and the legitimacy of that participation;
- Conduct a preliminary evaluation of the experience of Burkina Faso's NGOs and private sector in the area of policy reform (promoted by either the NGOs or the government); and
- Identify a local counterpart familiar with NGOs and policy development to carry out a more thorough evaluation of opportunities for NGOs to participate in policy reform in Burkina Faso.

Sixty-three Burkinabé NGOs partially or totally involved in environmental activities collaborated with the government in preparing the National Environmental Action Plan (NEAP), and certain NGOs even participated in developing the environmental code.

The government has identified three main objectives for the environmental sector, which will serve as a foundation for policy measures targeting local concerns:

- Arrest environmental degradation, improve NRM, and ensure the sustainability of production systems;
- Improve food security and diversify sources of food products and income; and
- Make rural communities totally responsible for managing their affairs and, in particular, for managing the rural environment.

Among the countries of the Sahel, Burkina Faso has played a pioneering role since the 1980s in searching for new and practical approaches to solve

interrelated demographic, agricultural, and environmental problems. Despite good intentions, the programs have been carried out from a top-down perspective and, even though the population has often been involved, there has rarely been a true sense of ownership. The programs sought to apply multidisciplinary methods of resource management but were implemented by centralized, sector-specific departments. As a result, multidisciplinary measures proved difficult to put into practice. The ambiguities concerning the land tenure system and the local communities' rights of access to common resources tended to negate the desire of potential beneficiaries to invest in managing such resources.

The government therefore modified its strategy in an effort to take fuller account of local NRM concerns, which translated into a new approach commonly referred to as the *terroir (local lands) approach*. This concept of promoting the active participation of the local population is based on the autonomy of local communities in relation to central authorities and on a reexamination of the state's traditional role in development. An initial change in NRM policy was introduced through local lands management and village forestry activities after the concept was first developed, and a reference document was prepared for the National Village Forestry Program (PNFV).

The PNFV is based on the fundamental principle of promoting the accountability of local populations in managing their natural resources, through four strategic approaches:

- Participatory approach;
- Local lands management approach;
- Socioeconomic zone approach; and
- Program approach.

The Burkinabé constitution affirms that all citizens have the right to a healthy environment, as well as certain duties in terms of managing the resources of the environment. The goal of the Land Use and Tenure Reorganization Plan is thus to manage both the country's lands and its natural resources (including renewable and mining resources); however, it does not adequately emphasize the importance of promoting accountability and transferring decision-making powers to the grassroots level. The NGO Monitoring Office (BSONG) leads the dialogue between NGOs and the state and attempts to assess NGOs' contributions to developing the country. The adoption of a development program based on local participation has encouraged populations to use the means at their disposal to combat resource degradation. A policy program was also introduced to combat uncontrolled bush fires, the straying of livestock and improper logging practices, in addition to promoting a family planning program, a National Forestry Equipment Fund, and a National Desertification Control Plan. The latter advocates a comprehensive, concerted approach to controlling desertification, which must largely remain the responsibility of local populations, with support from the state, NGOs, and donors.

The situation today represents an opportunity for NGOs to stimulate the policy reform process, because they are located at the interface between decision makers and local communities. This position confers upon NGOs a certain legitimacy in relation to state agencies, as well as recognition from the communities benefiting from their actions. Through the participatory development program, the government has made efforts to involve NGOs in formulating plans. The second Five-Year Participatory Development Plan and the NEAP have given rise to more open debate involving NGOs. A fuller perception of the valuable role that they can plan as intermediaries between central organizations and community groups should help in reaching a consensus on measures to be taken, and facilitate their implementation due to general support from the population.

Naturama, for example, strives to communicate and implement an ideal vision of conserving nature and its resources in order to attain sustainable development. In this regard, Naturama successfully organized a campaign against placing office buildings in the classified forest adjoining the Ouagadougou Dam, which demonstrates that the political authorities do indeed attach a certain importance to the environmental concerns expressed by NGOs. Naturama also organized a protest against the indiscriminate felling of trees along major roads, and the Ministry of Public Works paid attention to the organization's arguments.

The root causes of Naturama's success include having a solid scientific and technical foundation, allowing it to take a position in critical situations. The diverse backgrounds of the NGO's members guarantee a thorough knowledge of policy issues and contribute to policy analysis. Swift response in performing a critical analysis of actions that are potentially harmful to the environment is another

strong point, as is membership in international scientific networks and in international NGO groups involved with environmental issues.

Different NGOs' levels of interest and capacities to participate in environmental policy reform are highly variable at the present time, and few NGOs include policy reform in their mission statements. The majority regularly publicize the apolitical nature of their articles of incorporation, as if this were required by national law. The few NGOs that do include policy reform in their terms of reference are in fact exceptions that prove the rule. This is true of Naturama, whose articles of incorporation speak of: mobilizing the intellectual, financial, and material resources of its members and partners in order to strengthen the foundations for genuine ecodevelopment through sustainable NRM; designing or helping to design programs based on sustainable NRM; and organizing cooperation through conferences, workshops, seminars, colloquiums, and symposiums on particularly sensitive issues related to the necessity of integrating natural resources issues in development actions.

To ensure that actions are at least minimally coordinated, BSONG attempts to normalize the working relationship between NGOs and state agencies. Environmental NGOs rarely have much influence over the profit-making private sector, because they have not developed critical attitudes concerning the actions of this sector that are harmful to the environment, as in the cases of industries that pollute, enterprises that extract firewood, and hunting operations. The press plays a very important role in disseminating the ideas of environmental NGOs. The press also helps NGOs reach the full range of advocacy and pressure groups within the general framework of NRM policies, policy implementation, and technical practice.

Environmental NGOs contribute to training local populations so that they can gradually assume greater and greater responsibility for their own affairs. Environmental NGOs are considered to be partners closely involved in major debates on finding solutions to the country's problems. NGOs were the initial instigators of farmer self-promotion because they approached communities with the goal of contributing to the success of local actions: in effect, they negotiated their participation in local development. Through their long-term operations in specific villages, many NGOs have considerable influence over local communities; their approach has ultimately created a privileged relationship between NGOs and local populations, which provides NGOs with the opportunity to influence policy reform at the local level. Thus, in a certain sense, they guide the local populations and provide them with a voice that will be heard by the administrative authorities. At the national level, however, NGOs' influence is less pronounced. Still, the actions of NGOs serve to reduce the omnipresence of the state in all areas of development.

NGO involvement in policy reform requires being regularly informed of new directions envisioned by the state. Thus, a framework for consultations among NGOs and between NGOs and the state is necessary. In this regard, several significant measures have been taken recently:

- The nomination of NGO members to sit on the Economic and Social Council;
- The appointment of an NGO representative to a seat in the lower chamber of the Burkinabé Parliament;
- SPONG representation on the NEAP Coordinating Committee;
- The creation of BSONG at the General Directorate of Cooperation; and
- NGO representation at the sessions of the PNGT Management Committee.

NGO participation in the NRM decision-making process is indeed a preoccupation in Burkina Faso, not only from the NGO point of view but also from the perspective of the government and donors. Based on this logic, and in order to further the cause of development, each of the concerned partners must redouble its efforts.

3. HOW A LOCAL NGO COORDINATES ACTION RESEARCH IN NRM: THE CASE OF HDS IN BANDIAGARA, MALI, by Justin Sagara, Harmonie du Développement au Sahel ([HDS] Development Harmony in the Sahel), Mali

This article looks at how a young Malian NGO grew into its role in the community, partially as a result of the implementation of an action research project. This project, located in the village of Yawakanda, was designed to improve upon a traditional system of soil erosion prevention by testing various methods of building *diguettes*, or ledges used to capture eroded soil. The project not only included various governmental and non-governmental partners in implementation, but also involved the support, par-

ticipation, and ultimately the adaptation of project activities by rural farmers in the area.

Harmonie du Développement au Sahel (HDS) is a Malian nonprofit whose mandate is rural development. HDS was officially recognized by the government of Mali by an agreement signed on August 26, 1991. Its office is located in Bandiagara, an administrative center in the Fifth Region of Mali and the capital of the Dogon Plateau. HDS intervenes in the following areas: environment, water/hydraulics, agropastoral, health, artisan, research, and training.

The principle that underpins HDS's philosophy is to support local populations based on the needs that the populations themselves have identified. HDS also believes that a lack of collaboration, coordination, and partnership between the different actors creates confusion at the local level and will ultimately work against building local technical and institutional capacities. Given this belief, HDS hopes to establish competent partners in the areas where it works by focusing on coordination at all times — thus, the word *harmony* in its name.

With regard to NRM, HDS currently is working to support populations in soil erosion work, a serious problem in the Dogon Plateau. Additionally, HDS is undertaking an action research project on the traditional institutions that promote NRM in the Dogon area. In the future, HDS hopes to broaden its scope into perennial harvesting of endangered plant species (especially those used in traditional medicines) in a botanical garden. This is a hope that has long been expressed by traditional healers in the Dogon Plateau, with access to plant material a long-standing problem.

In the fight against soil erosion, HDS has supported villagers in the recuperation of highly eroded soils, the restoration of degraded land, and the protection of land at risk of degradation, as well as by training farmers in practical skills in fighting erosion. The messages and materials used in these trainings are adapted for villagers in each respective area.
HDS faces two key problems in NRM:

- At the beginning, HDS had some difficulty with project design in NRM, especially in the definition of indicators. This problem was resolved through training sessions on project design. One might conclude, therefore, that it is necessary for young NGOs to pursue training to strengthen their capacities.
- Another problem involved outreach, as HDS had difficulty in responding rapidly to support to farmer initiatives. For example, two peasant organizations, which include around 150, villages requested HDS's support a long time ago. Unfortunately, HDS has not yet been able to provide such support because the designed projects have not yet been funded, even though HDS is aware of what technically needs to be done.

Currently, HDS has strong NRM capacities. These strengths are based on three points:

- HDS has a certain technical mastery of the issues regarding soil erosion and appropriate mitigating measures.
- HDS has a philosophy of listening to populations, taking into account their concerns and indigenous knowledge. This point has been key to the success of the NRM projects.
- HDS's ability to mobilize the capacities needed to undertake a project is central to its theme of "harmonization" in grassroots development. HDS's strength is that it can approach others, develop project objectives collaboratively with them, and thereby coordinate and create effective partnerships.

As an NGO that has adapted to the realities of life in farming communities, HDS faces fewer problems than before. The NGO knows the area from which it evolved, and this has allowed HDS to overcome certain issues which could have blocked its activities. One example of this is the anti-erosion project at Yawakanda financed by PVO-NGO/NRMS. When choosing the project site, HDS asked the population to indicate the appropriate plot of land. In this way, HDS avoided problems of land tenure which could have come up in the project process had it acted unilaterally. Those who know village life the best are most capable of making certain decisions. In addition, the farmers of Yawakanda agreed that the project strengthened the cohesion of the village. This was further confirmed in 1995 when the first beneficiary of the first activities of the project was also the first to volunteer to work on the land owned by someone else.

It is important, however, to note that HDS has had difficulties linked to fund-raising that threaten to

halt its NRM activities. In order to undertake an activity over a wider area, human and financial resources are absolutely necessary. Today, the lack of adequate financial resources is the biggest obstacle to HDS's responding to farmers' requests. If HDS could mobilize other partners to actively participate in the partnership, then it would not ask for anything more than the availability of its core partners who are already working largely on a nonremunerated basis. Sufficient funds are necessary in order to enable the core to function.

The Yawakanda project is a concrete example of a partnership involving four actors in Bandiagara. Each partner, depending on its specialty, was responsible for conducting its work relating to one or several sets of indicators. Other tasks were also assigned to partners during monthly meetings.

The ability of HDS to play a coordination role in Yawakanda was due to a number of factors. The first was related to knowing the objectives and goals of the Yawakanda project. It is important to first understand what one is looking to achieve in the activity, and this was clear to all partners. The three HDS partners also understood this well, and thus invested in the project.

Another important strength was HDS's availability in the implementation and coordination of this work. HDS was committed to making itself available to others, as well as to the population of Yawakanda. If the Yawakanda project succeeded, it was because of the commitment of all partners collaboratively.

In order to hold the monthly meetings, for example, many individual contacts needed to be made. Without these contacts, who could have known who was available for a meeting and at what times? Therefore, without these meetings, the partnership activity would have never happened. The lesson that HDS learned from this test project is that a partnership and collaborative activity must have a coordinator who is devoted to developing links between different parties. In Yawakanda, success was achieved because the government Water and Forest Ministry (*Eaux et Forêts*) and the District Agricultural Service (*Service Agricole du Cercle*) representatives, the German Agency for Technical Cooperation (*Deutsche Geselleschaft für Technische Zusammenarbeit: GTZ*) project representative, the Association of French Volunteers for Progress (*Association des Volontaires Français de Progrès: AVFP*) representative, and the local community consortium were all prepared to work together to achieve success. This is because everyone knew that the problem in Yawakanda — soil erosion — is one found throughout the entire Dogon Plateau. They also knew that if they could determine what techniques were appropriate to use to combat soil erosion, so as to enable farm productivity to be stabilized at worst, or increased at best, the project would be potentially replicable across hundreds of Dogon villages. The latter degree of success appears to be what has been achieved in the project.

CHAPTER III

EVOLVING APPROACHES AND TOOLS FOR NGOS WORKING IN NATURAL RESOURCES MANAGEMENT

Chapter 3 covers the range of methods available to enhance the institutional capacity of NGOs working in NRM. This chapter deals with specific tools and approaches that are important for effective NRM, even though some, like Participatory Rural Appraisal (PRA), Rapid Rural Appraisal (RRA), and Monitoring and Evaluation (M&E), clearly find applications beyond the natural resource sector.

A. PARTICIPATORY APPROACHES TO NATURAL RESOURCES MANAGEMENT

One of the most exciting developments in the past ten years has been the evolution and rapid dissemination of RRA and PRA techniques for directly involving local communities in problem identification, prioritization, and analysis — and in planning, executing, monitoring, and periodically evaluating their plans for addressing their problems. These techniques empower communities in their own development, including the management of their natural resources. African NGOs, with their understanding of local customs, languages, and constituencies, are ideally placed to make effective use of these new tools.

The first article in this chapter summarizes the differences among PRA, RRA, and other approaches to community participation. The second looks at the development of PRA and defines the main differences between PRA and RRA. The author addresses the advantages and disadvantages of PRA, and explores new applications of the methodology. The third article, which nicely complements the second, puts a particular accent on the types of biases most commonly encountered when conducting an RRA, and includes advice on how to minimize their effects.

The fourth article is an example from Kenya of participatory, community-based NRM with the Maasai. It addresses questions of equitability, the value of local knowledge, ecotourism development, and wildlife utilization, all within a rapidly changing socioeconomic context that is pushing strongly towards privatization and individual titling of traditional Maasai lands. The Kenya example offers one model from which NGOs may learn. In reading it, you may consider where the project falls in terms of participation, specifically participatory research.

The final two articles form an introduction to farmer participatory research, which covers a range of agricultural research techniques that should increasingly offer opportunities for NGOs to assume a role in years to come.

1. THE DIFFERENCE BETWEEN PRA, RRA, AND OTHER ACRONYMS, by Richard Ford, Program for International Development, Clark University, USA

What is the alphabet soup of community participation? As in any new and rapidly evolving field, advocates of local participation have been introducing many new approaches and variations on the basic RRA method. These, not surprisingly, have created some confusion in the profession. A few of the better-known acronyms include:

RRA: Rapid Rural Appraisal. The earliest of the community-based efforts, RRA dates back to the 1970s. It grew out of restlessness and frustration with research by questionnaires and statistical attempts to explain development behavior. RRA has had an enormous impact on the development community and has given rise to many of the offshoots, including PALM, MARP, PRA, and PLA. It continues to be used primarily as a research tool to gather and analyze data in direct collaboration with rural and urban local communities. Much of the early literature on RRA, including many titles by Robert Chambers, came from the Institute for Development Studies at the University of Sussex.

PRA: Participatory Rural Appraisal. The first of the RRA spinoffs to focus specifically on community action as opposed to research, PRA first appeared in

Kenya in 1988 and has become the primary community action variation on RRA. A handbook for PRA first appeared in February 1990, published jointly by Kenya's National Environment Secretariat and Egerton University in Kenya along with the World Resources Institute and Clark University in the United States; many other handbooks and case studies are also available. Details of PRA are described elsewhere in this Guide. The best sources for publications and related information on PRA are Clark University, Egerton University, and the International Institute for Environment and Development (IIED).

PLA: *Participatory Learning and Action.* This newsletter, which takes the place of *RRA Notes* (as of 22, February 1995), is probably the best of the networking publications for the PRA community. Published by IIED, it produces field notes from practitioners as well as occasional theoretical pieces. Anyone interested in subscribing should contact IIED directly.

MARP: Méthode Accéléré de Recherche Participative. MARP is the francophone African version of RRA. It has been adapted for the particular cultural, ecological, political and economic situations of West Africa. An active network of field researchers focus on MARP and produce a cluster of publications, many of them in collaboration with other PRA partners and colleagues such as IIED.

PALM: Participatory Learning Methods. Introduced by MYRADA, an NGO in India, PALM is another offshoot of RRA. It suggests that *rapid* implies something too fast and should give way to *participatory;* that *assessment* implies something from the outside and should give way to *learning*, which is something that people can do together; and that PALM is more appropriate than RRA to describe what is best suited for rural India. PALM is widely used among Indian and other South Asian NGOs.

FTPP: Forest, Trees and People Programme *Newsletter.* FTPP is an example of a sector-specific network that has incorporated many participatory approaches. FTPP is coordinated through the University of Uppsala with support from FAO. Working in close collaboration with the Community Forestry Unit at FAO that produces many toolkits and handbooks for community forestry, FTPP maintains contact with several hundred grassroots practitioners. It is one of the most active of the participation networks; affiliation is possible by writing to International Rural Development Centre, Swedish University of Agricultural Sciences, Box 7005, S-750-07, Uppsala, Sweden.

2. **PRA AS AN ANALYTICAL TOOL FOR NATURAL RESOURCES MANAGEMENT: A RETROSPECTIVE,** by Richard Ford, Program for International Development, Clark University, USA

PRA first appeared in the late 1980s. Evolving from previous approaches for field research as well as community mobilization, it has spread to many parts of the world during its brief lifespan. This short article presents a rationale for the approach, chronicles its evolution, and suggests some of the newer and more interesting uses currently under investigation.

Rationale for PRA

PRA is a way to systematize an old approach to community development: local participation. It emerges from growing frustration and disillusionment with centrally planned projects and offers a significant alternative to externally managed development. The methodology, while one of a number of community-based approaches, is unique in several ways. PRA:

- Helps rural communities to support activities that they design and implement;
- Strengthens local leadership and community institutions;
- Builds local ownership for project activity; and
- At the community level, integrates sectors related to sustainable management of development resources.

PRA helps to hammer out collaboration and partnerships between community institutions and development agents external to the community.

Two assumptions form the basis for PRA:

Local people have knowledge and information, but it needs to be better organized. The PRA approach is rooted in the assumption that resource users have considerable knowledge about their problems and are familiar with locally based ways to solve them. PRA further assumes that rural residents may not appreciate either the enormous influence that this information can wield, or how systematizing this information can help select options

to solve the problems, mobilize community groups to take action, and attract external assistance. As a first step, PRA helps local groups organize and systematize their own information in ways that they will be able to control, monitor, and retrieve.

Villagers have resources, but they need to be mobilized. Rural communities can initiate projects, acting primarily on their own resources. PRA helps local institutions and leaders mobilize themselves and their local capital, labor, and natural resources for effective action. PRA assumes that community institutions are among the most underutilized resources available for development. PRA efforts therefore do not wait for outside agents to take the initiative, but instead enable local groups to become the prime movers in analyzing information, setting priorities, creating plans, and taking action.

While community institutions can take initial steps to solve their own problems, they cannot necessarily do the job alone. External units such as government technicians and extension officers, NGOs, and international organizations often can provide critical technical, financial, communication, information, or managerial assistance that is beyond the capacities of local communities. PRA creates a setting in which village and outside groups share goals and agree on actions and inputs to meet common needs, among who may involve these external agents.

The PRA Approach

PRA uses tools of data gathering, analysis, and ranking derived directly from RRA methodologies developed by IIED. These include village sketch maps, transects, seasonal calendars, trend lines, time lines, institutional diagrams, resource access ranking, and options assessment ranking. Further, PRA calls upon the RRA criteria of productivity, sustainability, equitability, and stability to set targets to judge the effectiveness of community-based development and to solve the problems that the community finds most severe.

PRA, however, differs significantly from RRA in three fundamental ways.

First, **PRA is not necessarily rapid.** Because the PRA approach empowers local institutions and encourages them to become full and equal partners in managing their own local resources, PRA tools may be used in a community for several years. Thus, the concept of "rapid" does not necessarily apply to the entire process of community-based development.

Second, unlike RRA, **PRA is not designed to extract data from communities.** It is not a tool primarily for researchers who wish to remove data for their own analysis at some future date. Rather, PRA focuses on organizing data in ways that community groups can manage, and establishes techniques for analysis, planning, and implementation that are applicable to community institutions. It therefore helps community groups to empower themselves by leaving data with local institutions in forms they can use and maintain.

Third, **PRA leads specifically to a Community Action Plan** (in some cases, a Community Conservation Plan), which community groups have designed and for which they take responsibility to implement. Whereas RRA helps community groups to consider action, it has not stressed designating particular community groups to carry out specific actions (for example, school parents gathering four tons of sand for a new water storage system, or women's groups organizing 400 hours of community labor to extend bench terraces); setting goals and indicators for community groups to monitor; developing a schedule; or identifying resources to support implementation of the plan.

Advantages and Disadvantages of PRA

Experience with PRA in a number of communities across Asia, Africa, and Latin America suggests a number of advantages to the methodology:

- *Community mobilization and local ownership.* Without question, when a PRA exercise is well done, the sponsoring communities take pride in implementing what they have identified as their highest priorities. The element of local ownership may be the most important contribution that PRA can make.

- *Visual diagnostic tools.* Most analytical tools in the PRA lexicon rely largely on visual and symbolic representations rather than verbal and numerical ones. This allows community members who lack confidence in literacy to participate as equal partners with those who have more formal literacy skills.

- *Interactive.* PRA data gathering and analysis is not extractive. It therefore allows for dialogue

between insider and outsider as well as among insiders (i.e., those in the village itself). The interactions often cross class, gender, age, educational, and ethnic lines within a community, lines that are not often or easily crossed for making decisions and allocating resources.

- *Baseline data.* The data gathered through PRA can be used as a snapshot of a community at a particular time and then compared periodically with later data as a means to review project impact. While the information tends to be qualitative and therefore low on statistical comparability, it has proven to be a wonderful means for communities to discuss how project interventions are changing their lives — in positive and negative ways. It further helps groups decide whether they should modify their project designs.

- *Integration of sectors.* Among the greatest difficulties in the development profession has been enabling water, forestry, agriculture, education, and health ministries and agencies to cooperate. PRA does not have this problem. Because the approach starts with communities, which have no vested sectoral interest, and focuses on problems that, by their nature are cross sectoral, PRA is better able to integrate sectors than governments and even NGOs.

- *Inexpensive.* PRA costs little to initiate and even less to maintain. The approach does not leave local communities with high technologies they cannot maintain, nor does it require constant management by highly paid consultants or evaluation personnel. Rather, the locally based initiatives can sustain what they have set out to achieve.

- *Community institutions.* Many examples could be cited to show how PRA has provided skills, self-confidence, self-esteem, and visibility to community organizations. These range from water-user associations to bridge-building groups. Some are special purpose groups created to solve particular problems; others are communitywide development committees. Skills acquired include bookkeeping and financial management, public meeting leadership, conflict resolution, problem ranking, and finding external resources. All are important skills for community groups to master, especially in nations where the state has been unable or unwilling to provide basic develop ment services in health, water, education, agriculture, and income generation.

Yet the story of PRA is not a total success. While the primary emphasis lies with community groups, outside partners are an important element in the institutional chemistry. Developing a plan may raise expectations that donors may not necessarily support. National or global politics may force government or NGO units to leave the community. Setting priorities may exacerbate internal conflicts within a community. Developing a successful project may induce local elites to try to take over any revenues generated from, for example, a successful maize-grinding or oil-pressing machine. Local politicians may not enjoy seeing community groups addressing their own needs, rather than developing dependence on politicians who use patronage as a means to maintain their own power.

In spite of these inherent weaknesses, the PRA process has recorded considerable accomplishments. While there are many examples that could be cited, PRA successes include the following:

- In Botswana, village associations are developing plans for newly created wildlife management areas in which trophy and tourist revenues will be used in support of community development project activity.

- In Madagascar, village development committees are working out lists of priority projects in transport, water, income generation, food storage, and health that are of high interest to rural residents. Government and NGO partners then provide partial support for these efforts through funds derived from tourist and other national park revenues. The focus on development has opened discussions on conservation that are now leading to Village Integrated Conservation and Development Plans around the national park in Andasibe.

- In the Kenyan village where the first PRA was held, women's groups maintain a reservoir that provides water for 200 families, and have successfully (and profitably) operated a maize-grinding mill for five years. Many other income generating projects in the area are directly attributable to the PRA interventions of the late 1980s.

- In Armenia, PRA is providing skills, tools, and experience for community groups that have

had absolutely no voice in managing their local resources for the last seventy years. The total void in local management skills and community institutions resulting from the collapse of the soviet system has created economic hardship for Armenia as it navigates its transition from a command to a market economy. Local institution building is now getting underway as a result of PRA interventions.

PRA demonstrates that communities do not have to wait for external agents to come to their assistance. Organizing village information into a systematic plan focuses community attention and mobilizes community groups. Local groups taking initiatives on, for example, water or forestry, have consistently attracted the attention of or funding from external NGOs, international agencies, or government officers.

The Future

PRA is not a panacea for the fundamental inequities of development and resources management. Rather, PRA works to reverse the exclusion of local institutions from the development process. It has helped local groups understand that they can play a role in their own development.

PRA's adaptability to complex local situations has opened up a number of highly stimulating, new areas of inquiry and application. Some of these include:

- *Gender.* PRA originally assumed that practitioners would need to understand how gender and a number of other variables — including class, ethnicity, age, education, wealth, and religion — both constrain and enhance the ways in which community groups view problems and develop solutions. Experience suggests, however, that gender is distinct from these other areas. As a result, active and highly productive groups are developing tools of gender analysis that make PRA methodologies more compatible with gender differences.

- *Urban problems.* PRA originally focused exclusively on rural problems. In the last two years, a number of organizations have experimented with use of community-based methods for urban groups. IIED has recently published an insightful collection of examples of urban PRA (see Chapter 4). Field exercises in Armenia found considerable interest in and potential for developing the capacities of community institutions through PRA. It may be that a new field of research will soon emerge, focusing on community-based development in urban areas.

- *Regional relevance in NRM.* While PRA started at rural and local levels, one of its weaknesses has been lack of attention to regional priorities, plans, and resources. A recent exercise in Armenia suggests that regional appraisals, using PRA methods, can quickly develop indicative priorities that will help donor and government agencies set project guidelines for communities using PRA. There are encouraging early responses from regional and local authorities in Armenia.

- *Monitoring and evaluation.* Donor and government agencies have been suggesting in the last few years that development investments should not be continued if the results of the investment are not clear. As a result, donor agencies have been investing considerable sums in new technologies and methods that allow outsiders to measure development results. PRA takes a different approach. Using a system of Community Log Books, PRA helps village and urban communities plot their own progress toward achieving their goals. It helps local leaders identify indicators that will show them how well their communities are doing.

- *Multiple-objective land use planning in buffer zones.* Another major opportunity exists in land use planning. Among the most difficult of development issues is the task of sorting out who is entitled to use which land. Exercises that incorporate local participation, pairwise ranking, and community-based setting of criteria for land uses offer possibilities of blending low- and high-technology approaches that are both qualitative and quantitative, local and regional. A prototype of this approach now exists, and a field trial began in Madagascar in early 1996. There will be publications and case studies reporting on how effectively the prototype enables a cluster of villages, government agencies, and NGOs to agree on the nature of buffer zone management.

3. THE ACCELERATED METHOD OF PARTICIPATORY RESEARCH, by Bara Gueye, Senegal, and Karen Schoonmaker, USA

The accelerated method of participatory research (*méthode accéléré de recherche participative*, or MARP) is not a mechanical process of data collection in which analysis only begins after the field work has been completed. On the contrary, the information gathered is progressively analyzed in order to strengthen the research team's understanding of the phenomenon being studied. Accordingly, the researcher does not rely exclusively on her own interpretation of such phenomena, and must constantly take into consideration the knowledge accumulated by the community in which the study is being carried out.

The MARP process encourages the researcher to reexamine her approach and hypotheses as she gradually develops fuller knowledge of the phenomena being studied; for this reason, MARP does not encourage the use of standardized questionnaires. The research team must have a clear vision of the type of information it wants to obtain, but at the same time must be flexible in its approach, and prepared to adapt to new developments in the field.

Although tools that are already available may sometimes suffice to obtain the desired information, the team may have to develop better-adapted tools if the situation requires. The techniques and tools used in MARP evolve over time.

MARP also emphasizes the importance of the interaction among the researchers, on the one hand, and between the researchers and the local population on the other. This interactive process is a source of enrichment in that it allows for a dynamic exchange of experiences and points of view. MARP encourages the researcher to consider respondents not as mere objects to be studied, but rather as actors in the research process. It is important to link the populations to both the data collection process and data analysis as quickly as possible by encouraging feedback: research should be conducted *with* the populations, not *on* the populations.

When MARP is properly carried out, the people who collect the information also process, analyze, and utilize it. Analysis of secondhand information, in contrast, does not enable the researcher to correctly integrate the full range of interactions experienced throughout the process of generating information. MARP is based on a multidisciplinary approach because the complexity of development problems extends well beyond the scope of any single discipline. MARP makes it possible to obtain and analyze information within relatively short time frames. Few organizations are in a position to wait for the results of a long study before taking action; often, they are obliged to make decisions prematurely. In many cases, the best results are those that are the least expected. Researchers must therefore be prepared to identify new centers of interest in the field, which may then fundamentally alter the manner in which the study progresses. Under MARP, curiosity becomes a virtue.

Criticism of conventional and formal methods has cited the high costs of conducting a survey, particularly a large-scale survey; the time required for collecting and processing data; and the inadequacy of the data when the issues are sensitive and controversial, or when the respondents prove to be reticent. Field missions amounting to "rural tourism" have often consisted of particularly brief visits in the field, during which a few interviews were conducted in order to draw hasty conclusions. Surveys performed within a short time frame may provide interesting information, but they remain quite risky.

Accordingly, by combining methods that are highly structured and quantitative with those that are essentially intuitive and risky, MARP practitioners propose an intermediate method that attempts to unify the strong points of each of the two approaches. They recognize the need for a rigorous approach in order to guarantee the validity of the results, but also the need for flexibility and informality with respect to qualitative data in the field.

MARP is thus an intensive, rapid learning process that focuses on gaining knowledge of rural situations, and is essentially based on the actions of small, multidisciplinary teams using a variety of methods specially selected for the purpose of developing that knowledge. Particular emphasis is placed on assimilating the knowledge and understanding possessed by local populations and combining these with modern, scientific knowledge.

The first step allows individuals to gradually situate themselves within the MARP context and discern its basic methodological structure. MARP assumes that at least three points of view must be included in analyzing a situation; thus, it embraces the principle of triangulation. By diversifying the angles from

which a problem is studied, it becomes possible to gather information that is more complete and more reliable. With MARP, the team composition, the observation units, and the tools and techniques must be triangulated.

The triangulated situation is thus placed within the larger context of biases, with constant attention to the necessity of limiting the negative effects of such biases on the results of the research. MARP recognizes that it is impossible to totally eliminate biases. However, with respect to development projects, one may deliberately achieve a biased effect by orienting one's efforts toward understanding the problems of the underprivileged at the expense of the more privileged. MARP is explicit about biases, insofar as the method entails awareness of the existence of biases and attempts to manage them to the benefit of the study. Biases are dangerous when they distort reality. The following biases must be taken into consideration to avoid a situation where major distortions are reflected in the conclusions:

- *Spatial bias:* researchers and project managers favoring an easily accessible area, which affects site selection for the study (some villages are skipped because road access is difficult), as well as farm selection (team members are reluctant to go visit farms located at the outskirts of the village during hours of intense heat). This type of bias often leads teams to select sites located along major roads.

- *Seasonal bias*: carrying out research during the most comfortable periods of the year. The validity of efforts to generalize the results obtained must then be called into question. A village that is linked to various trade circuits during the dry season may be totally disconnected from these circuits during the rainy season. It is therefore important to consider the manifestations of certain problems being studied, either by stepping back to gain sufficient perspective in analyzing the changes that occur during the year, or by undertaking targeted "backup studies" during the other seasons.

- *Economic and social status bias*: concentrating on influential or well-off individuals who welcome the research teams and offer their hospitality.

- *Sexual bias*: meeting many more men than women. Researchers have realized that there are cultural barriers that prevent men from interviewing women, which is why the team members must include women. In addition, women respondents are not always readily available because of their schedule of activities.

- *Politeness bias*: respondents sometimes giving answers that are not totally frank but that they believe will satisfy the interviewer — not for the purpose of misleading the interviewer, but rather out of a sense of politeness. Researchers must take the time to explain the reasons for clearly stating the actual reality.

- *Local expectations bias*: when the team is perceived to hold the potential for developing the village, the risk of receiving "tailored" responses is great. The team should take precautions in explaining its presence in the village.

Time is the most valuable resource for the MARP team. There is never enough time to complete all that was planned. This explains the principle of making better use of limited time in the field. The team attempts to collect the maximum amount of information in a minimum amount of time. A system of priorities must therefore be established.

The acceptable degree of imprecision is a concept that relates to the same principle. This concept implies that the team must assess the level of detail required. MARP is not specifically adapted for collecting precise quantitative data. It allows for identifying trends and generating orders of magnitude. These two fundamental concepts require that the team maintain a balance of knowledge/ignorance and generality/specificity in conformance with its objectives.

MARP offers a range of tools to obtain information within the framework of conducting research on rural development issues. These tools are gradually refined as the practitioners discover new ways to collect information. Not all of the tools are applicable to every situation and they must therefore be adapted to the circumstances in which they will be used. It should also be noted that such tools are only intended to serve a particular purpose, and their effectiveness will totally depend on the researcher's ability to make the best possible use of them. The following tools have proved effective: structured interviews (groups, individuals, resource persons); diagrams (schedules, Venn diagrams); charts and

transects; historic profiles; classification techniques (preferential classification, classification by level of wealth, classification of problems); observation and quantification (observing, measuring, timing, estimating); participation in community activities; the use of photographs (aerial photography, satellite imagery); games; and secondary data.

As an example of tool triangulation, imagine that the team must find out how much income the women of a village earn from their market gardening activities. Some of the required information can be obtained through a semistructured interview with the women, although it is possible, on such an occasion, that the interviewer may not be in a position to pose questions directly, or that the women do not know the answers, or that they do not wish to provide them. The next step would then be to draw a diagram with a group of women in order to obtain an idea of the relative contribution of their various activities to their total income. It may also be necessary to visit the gardens with a technician in order to estimate the level of production. A resource person who obtains his/her supplies from the village (e.g., a vegetable trader) could also provide information on the quantities that he/she purchases during a single season.

Each of the techniques will elucidate one aspect of the issue. By comparing and cross-checking the information obtained, the team will develop a better understanding of the issue under consideration.

4. **ELANGATA WUAS ECOSYSTEMS MANAGEMENT PROGRAM**, by M. de Vreede, Program Coordinator, National Museums of Kenya

The Center for Biodiversity of the National Museums of Kenya believes that information about a county's biodiversity should include species, risk to species resulting from human perceptions and human impact, modes of preservation of species, and the ecosystems of which those species are a part. In Kenya, the majority of the population is directly dependent on natural resources. Community involvement in conservation and sustainable development should be part of the information generation/monitoring process of any NRM activity.

The objective of the Elangata WUAS Ecosystems Management Program, which involves the Center for Biodiversity, Kenya Wildlife Service, and local communities, is to establish a community-based management structure for an area covering 160,000 hectares and inhabited by about 15,000 Maasai pastoralists. One of the underlying goals is to prove that sustainable communal management of natural resources can be profitable for local populations on semiarid and arid lands. Sustainable management of resources is not possible, however, without the involvement of the entire population. This involves the participants' adapting traditional and modern management structures, with emphasis on equity and empowerment, particularly with regard to women. This requires, as pointed out in prior articles, taking people's priorities into account.

The Elangata WUAS Program gathers, among other things, information about indigenous knowledge. Local people are trained as parataxonomists to work as field assistants for scientists and as guides for tourists. Information about indigenous knowledge is collected for the following reasons:

- The indigenous knowledge of the Maasai is part of Kenya's culture and needs to be preserved;
- Indigenous knowledge concerning plants, trees, and animals provides insight into the risks that species may encounter; and
- Indigenous knowledge may provide ideas for sustainable use of natural resources by local communities or other communities living in comparable ecosystems.

It is not enough to study individual species when the aim is to conserve biodiversity and develop sustainable practices for the use of natural resources across wide areas. The ecosystems in which species live, and the land that supports these systems, are vitally important as well. The area in which the Elangata WUAS project is located, like many semiarid areas, is heavily overexploited.

The organizations and communities involved in the Elangata WUAS Program decided to target land degradation as a project activity in 1993, when they realized that the trained local parataxonomists were working with outsiders and not contributing to the empowerment of the community itself. Project organizers believed that if local people could assess land degradation and be trained in land rehabilitation, it would enhance their contribution to local populations. The project sponsored additional training to accomplish this objective, and to provide these environmental workers with skills to train other adults

in relevant rapid appraisal techniques. The parataxonomists and environmental workers also work as wildlife guardians involved in poaching control.

As is common among pastoralists, the Maasai resource base is limited. The Maasai used land for cattle raising and livestock husbandry. Currently land is being degraded due to population growth and the increased economic pressures on the population. Cattle maintain an intrinsic cultural value, but goats and sheep are increasingly being raised for cash. Water supply and income generation are the highest priorities for the community. The program experiments with various modes of resource utilization, which are extended to the community once their viability and sustainability are established. These experiments include ecotourism, wildlife utilization, a wood energy system, and small, income generating activities such as the production of ostrich feather dusters and toothpicks from Acacia-thorns.

Communal management of natural resources is only possible given equitable access to resources and familiarity with and access to decision-making mechanisms. The program has focused on this, along with the process of adapting indigenous social structures and responsibilities to address management needs. The most important components of this approach are participation, self-reliance, and equity.

In the traditional Maasai setting, women have severely limited access to decision-making processes. Since women are the most important, direct users of natural resources and therefore should be involved in all decisions made concerning resource exploitation, the program promotes women's involvement with traditional leaders as a "technical" issue. However, it is understood that all members of decision-making bodies have equal responsibilities and should contribute to the discussions regardless of gender. While traditional leaders have been reluctant to include women in meetings, these leaders welcome and listen to women in their "official" or "professional" capacities. Women are appointed when possible to managerial positions. More than sixty percent of program staff are women. The program provides a constant flow of information on its objectives and plans to the women who take part in the income generating activities. Production unit meetings are used as platforms for information, adult education, and discussion.

The program is taking place against a backdrop of ongoing subdivision of communally managed Maasai ranches. The members of these group ranches will, in the foreseeable future, acquire title deeds to individual pieces of land which, in general, will not be adequate to sustain a family. Since its inception, the Elangata WUAS Program has sought to introduce new, adapted communal forms of management and methods of resource utilization. Initially, the program invited the participation of traditional leaders from the area, as it was felt that not everyone in the area could benefit immediately from membership. Due to a drought in 1994 that required food distribution, everyone became involved. At the same time, wildlife utilization and ecotourism began to be profitable. Leaders in the area decided that members of the three group ranches (the future landowners) should form a Landowners Association, and the three group ranches agreed. Among the resources to be managed communally are wildlife, trees, quarry rock, and sand.

Promotion of self-reliance is an integral aspect of the program. The local population is in large measure dependent on the outside world, and the program is seeking ways to identify and produce inexpensive goods and services. For example, one community established a vegetable garden project at a site where water is available year-round. This will decrease imports of vegetables from a distance of more than 100 kilometers. Each participant can choose to use or to sell the produce from her garden. Kitchen gardens that use indigenous species are also encouraged in each household. With the subdivision of the land from group ranches, the population will become more sedentary and require more permanent housing. Instead of transporting building materials from a distance of more than thirty kilometers, a small building materials production unit will be established in the area. While the population has become increasingly dependent on modern veterinary medicine, the government has not been able to provide adequate services. The project will train paraveterinarians to complement government services and better meet the needs of the local population. Paraveterinarians will be based in small offices at the communal watering points to provide basic services and advice. One of their tasks will be to prevent the contamination of soil around watering points with drugs used to combat ticks. The project will establish a central store where drugs will be available at low cost.

5. OVERVIEW OF PARTICIPATORY METHODS AND TOOLS FOR AGRO-FORESTRY APPLICATIONS, by Chun K. Lai, Regional Coordinator, FAO-Asia-Pacific Agroforestry Network, Indonesia. Excerpted from *Participatory Methods and Tools for Agroforestry Applications in Asia-Pacific*, Field Document No. 3.

Interdisciplinary Approach

Tackling a complex NRM issue often requires looking at interactions between social and biophysical systems, preferably through an interdisciplinary team approach. By interdisciplinary research, we mean research conducted by individuals (scientists, extension agents, planners) with expertise in different disciplines. Each individual uses his/her specific expertise to develop lines of inquiry with local people. The team then pools information to construct a picture of the area and current resource management issues, and to generate a series of hypotheses regarding major constraints to the resource management system.

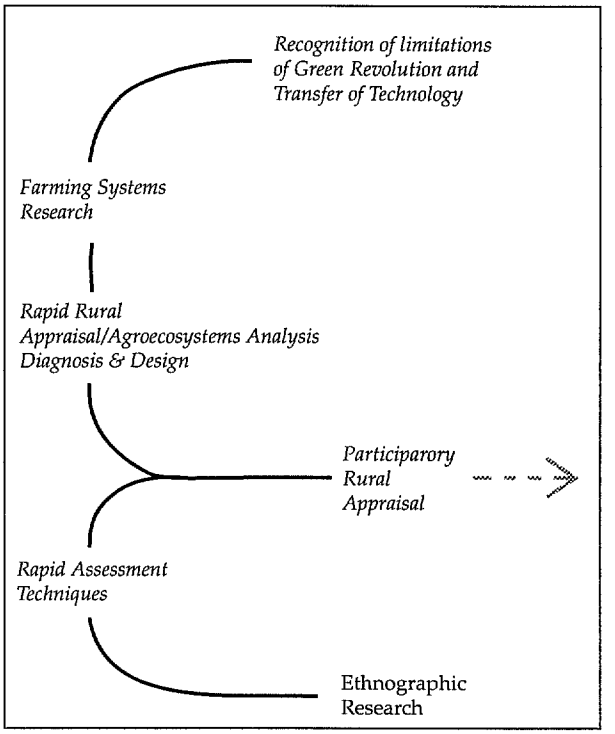
This approach allows close interaction with local people and planners, and can be a useful way of breaking down a complex problem. It grew out of the early farming systems approaches used at international research centers to identify problems and design more appropriate experimental research. Participatory methods identify key problems quickly and are an alternative to more detailed, questionnaire surveys which are time consuming and expensive, and which often generated data that were not used. Since then, researchers and non-governmental groups have developed a number of methodologies to identify key issues and design agricultural and rural development programs with different levels of farmer participation. Curreni applications of this approach are used in planning, monitoring, evaluation, and design of research and development projects.

Evolution of Methods

This evolution of methodologies since the early 1970s represents the creation of a more facilitative, catalytic role for the researcher, where the researcher learns from the farmer and empowers local people to take the initiative in implementing activities.

Interdisciplinary appraisal methods share a common background and history (see figure 1). Farming systems research, agro-ecosystems analysis, and RRA methodologies have, over the years, been adapted and modified by practitioners and researchers. PRA is a case in point. Many of the techniques used in PRA come from agro-ecosystems analysis. The difference in the methodologies is in the way that researchers work with farmers and communities in identifying problems and developing a research and development agenda.

Figure 1. Background and history of PRA.



There are similarities and differences among these different, interdisciplinary research methods (see table 4). The following text outlines the history of these approaches, and some of their limitations.

Farming Systems Research (FSR)

FSR evolved out of cropping systems research conducted by national and international agricultural institutes and centers in the early 1970s. Scientists felt that research conducted by multidisciplinary teams would help improve technology transfer to resource-poor farmers and lead to increased agricultural development. The characteristics of FSR are:

- An applied problem-solving approach conducted by multidisciplinary teams, with a degree of farmer participation;

Table 4. Comparison of Modes of Interdisciplinary Research.

	PARTICIPATORY RURAL APPRAISAL	RAPID RURAL APPRAISAL/ AGRO-ECO SYSTEMS ANALYSIS/ DIAGNOSIS & DESIGN	SURVEY RESEARCH	ETHNOGRAPIC RESEARCH
Duration	Short	Short	Long	Long
Depth	Preliminary	Preliminary	Exhaustive	Exhaustive
Scope	Wide	Wide	Limited	Wide
Structure	Flexible; informal	Flexible	Fixed; formal	Flexible; informal
Direction	Bottom-up	Between PRA and surveys	Top-down	Not applicable
Participation	High	Medium	Low	Medium-high
Major research tools	Semistructured interview; diagrams	Semistructured interview; pattern analysis	Formal questionnaire	Participant observation
Sampling	Small sample size based on variation	Small sample size based on variation	Random sampling; representative	None
Statistical analysis	Little or none	Little or none	Major part	Little or none
Case studies	Important	Important	Not important	Important
Organization	Nonhierarchical; facilitating	Between PRA and surveys; extractive	Hierarchical	Not applicable
Measurements	Qualitative indicators	Qualitative indicators; data trends	Detailed; accurate	Detailed; accurate
Analysis/ Learning	In the field; with the community	At the research station; with researchers	In the field; with the community	In the field; with the community

- Assessment of the scope for, and potential impact of, technology change within a farming systems framework;
- Identification of a homogenous group, usually resource-poor farmers, within specific agroclimatic zones as clients of research;
- A dynamic, iterative process, in which one year's trial results generate hypotheses for the next year; and
- Concern that results of farm trials do influence on-station research priorities.

Agricultural research usually falls under one of these headings:

- Basic (on-station[1], generate new understanding of biological process)
- Strategic (on-station, solve specific research problem)
- Adaptive (on-farm, adjust technology to representative environment)
- Applied (on-farm, create new technology)

The difference between on-station and on-farm research depends on the need to control variables, versus the need to test particular technologies under local conditions, working with farmers in the process of technology development and selection.

Tools used to conduct FSR include:

- Analysis of secondary data and exploratory surveys,
- Formal surveys and farmer monitoring,
- Laboratory tests,
- Direct observation in farmers' fields, and
- On-farm trials.

Limitations of FSR

FSR has evolved in several new directions based on criticism of its original methodological focus. Shortcomings of the "traditional" FSR approach include:

- Problems in multidisciplinary collaboration, specifically in interactions between social and natural scientists;
- Generating a holistic view of the farming system has led to the collection of huge, unwieldly data-sets;
- Not focusing specifically on poor farmers;
- Still being dominated by a transfer-of-technology approach;
- Scientists having problems talking with and learning from farmers, because of the traditional attitudes of scientists; and
- Researchers still being dominant in the design, conduct, and evaluation of on-farm trials.

New FSR directions adopt an opposite approach from the transfer-of-technology mode of operation. These complementary approaches start with the knowledge, problem analysis, and priorities of farmers. The locus of research activities is also changed from the research station to farmers' fields, and the farmer and his household now play a larger role as "experimenters." These new approaches are called by such names as "farmer-back-to-farmer," "farmer first and last," and "farmer participatory research." All of them focus on greater farmer involvement in research priority identification and conduct of research through all its phases.

New methodological approaches adopted in the new FSR include:

- Informal/innovator surveys to identify issues and current technologies used by farmers;
- Building on indigenous research and technology;
- Identifying resource-poor farmers to work with;
- Case studies of farm households;
- Chain interviews (following a hierarchy of institutions);
- Intrahousehold interactions, and gender-role analysis; and
- Adopting farmers' criteria in conducting and evaluating trials.

Agro-ecosystems Analysis (AEA)

Gordon Conway and researchers working in Khon Kaen University in Thailand developed AEA in the early 1980s. AEA is often used in the diagnostic or planning stage of program development.

An *agro-ecosystem* may be defined as "an ecological system modified by human beings to produce food, fiber, and other agricultural products. Defined by some on purely biophysical characteristics;

[1]On-station is formal scientific testing under the controlled supervision of trained scientists, while on-farm is formal testing in farmers' fields that is therefore more subject to intervening variables.

or socioeconomic components" (Conway, 1987). AEA is one departure from the traditional FSR approach, as it attempts to integrate research with rural development objectives. The AEA process tends to follow a step-wise procedure within a workshop format.

AEA is usually conducted over two to three weeks in a workshop environment, and includes the following steps:

Step 1: Participants define objectives of analysis (e.g., improving agricultural productivity) and identify research priorities.

Step 2: Participants identify relevant systems to be investigated and their boundaries and hierarchic arrangements.

Step 3: Patterns analysis conducted by interdisciplinary team to analyze system in terms of: space, time, flows, and decisions affecting key agro-ecosystem properties, including sustainability, equity, stability, and productivity.

Step 4: Outcome: series of key questions for future research, or guidelines for development.

AEA emphasizes analyzing a particular system based on the interaction of four key agro-ecosystem properties:

- **Productivity:** the net increment in valued product per unit of resource, commonly measured as yield or net income per hectare;
- **Stability:** the degree to which productivity remains constant despite fluctuations in environmental variables such as climate, or economic conditions such as market;
- **Sustainability:** the ability of a system to maintain its productivity when subject to stress or disturbance, often difficult to measure; and
- **Equity:** a measure of how evenly the productivity of the agro-ecosystem is distributed among its human beneficiaries.

These properties, especially stability and sustainability, are often difficult to measure using direct indicators.

AEA uses semistructured informal interviews as mechanisms for eliciting information from key informants in the village. The following tools can be used during the AEA to determine the existing patterns within the agro-ecosystem.

System definition: System boundaries and hierarchies are usually delineated by biophysical features such as watersheds, administrative boundaries, economic boundaries.

Spatial analysis: Spatial patterns are usually determined using simple sketch maps, and agro-ecosystem transects indicating functional relationships with physical features (soils, elevation).

Time analysis: Temporal patterns are best analyzed through graphs and charts showing trends such as seasonal change, longer-term changes such as prices, and changes in landscape over time. Patterns of stability and productivity are revealed in such diagrams.

Flow analysis: Flow diagrams help indicate the patterns of flow and transformation of commodities such as money, agricultural produce, information. These can be represented as decision trees, or spheres of influence (Venn diagrams).

Key questions: These arise throughout the whole procedure of systems definition, and are continually revised during the process. At the end of the exercise, these questions form researchable hypotheses that should fit into a conventional research or development program.

Limitations of AEA

Unlike FSR, agro-ecosystems analysis allows a greater scope for systems analysis, and is useful as a research and development planning tool. However, it also has some limitations. These include:

- The extractive nature of the exercise. Researchers gather information from villages in a nonparticipatory manner. Often the villager is simply viewed as an informant rather than an active participant in the exercise.

- The relatively short time required to conduct the analysis can sometimes result in superficial data collection, and the generation of incorrect research hypotheses or development interventions. This can be rectified by increasing the duration of time spent in the field collecting data, and verifying the accuracy of the data by triangulation and cross-checks with secondary sources.

Diagnosis and Design (D&D)

John Raintree and colleagues at ICRAF/Nairobi developed the Diagnosis and Design (D&D) method in the early 1980s. It is a methodology for diagnosis of land management problems and design of agroforestry solutions, and is intended to help agroforestry researchers and development workers plan and implement effective agroforestry interventions.

The basic unit of D&D analysis is the land use system, based on the premise that knowledge of a system is essential to design effective agroforestry research for development. Key features of this analysis technique are:

- **Flexibility:** Can be adapted to meet the needs/resources of different users.
- **Speed:** Rapid appraisal application at planning stage (in-depth follow-up during implementation).
- **Repetition:** Open-ended, iterative learning process to refine diagnosis and improve technology design with feedback and new information.

D&D can be used to address major decisions in land use system delineation and description, constraints analysis, technology design and evaluation, and research planning, implementation, and analysis.

Macro D&D is a rapid appraisal technique that relies heavily on secondary data that can be verified with quick surveys. Its objective is to identify broad issues and problems constraining all land use systems in a given ecozone. The objectives of *micro D&D*, on the other hand, are to describe and analyze the constraints of a given land use system, and then design and evaluate the agroforestry technologies, or the appropriate research programs to develop such technologies. D&D exercises have been conducted in Africa, Latin America, and Asia.

The D&D process follows five stages: prediagnostic, diagnostic, design and evaluation, planning, and implementation. The basic logic of the procedure is presented in table 5, which summarizes the basic questions, key factors, and modes of inquiry in the different stages.

Implementation of an entire macro and micro D&D by ICRAF in collaboration with local institutions can take up to eight months, including short workshops after each phase to discuss and digest results. Village- or farm-level D&D exercises are generally similar in duration to RRA exercises (one to three weeks).

D&D may also be suggested as a process to assist in formulation of coordinated national research and extension programs, incorporating the steps shown in table 5.

Limitations of D&D

Potential limitations of the D&D method include:

- Its tendency to focus on agroforestry technologies only;
- That the process may be driven by external researchers; and
- That macro D&D requires a large amount of secondary data and time.

Table 5. Basic Procedures and Stages of D&D.

D&D STAGES	BASIC QUESTIONS TO ANSWER	KEY FACTORS TO CONSIDER	MODE OF INQUIRY
Prediagnostic	Definition of the land use system and site selection: which system to focus on? How does the system work? How is it organized? How does it function to achieve its objectives?	Distinctive combinations of resources, technology, and land user objectives Production objectives and strategies; arrangement of components	Seeing and comparing the different land use systems Analyzing and describing the system
Diagnostic	How well does the system work? What are its problems, limiting constraints, problem-generating syndromes, and intervention points?	Problems in meeting system objectives (production shortfalls, sustainability problems) Causal factors, constraints, and intervention points	Diagnostic interviews and direct field observations Troubleshooting the problem subsystems
Design and Evaluation	How to improve the system? What is needed to improve system performance?	Specifications for problem solving or performance- enhancing interventions	Iterative design and evaluation of alternatives
Planning	What to do to develop and disseminate the improved system?	Research and development needs; extension needs	Research design; project planning
Implementation	How to adjust to new information?	Feedback from on-station research, on-farm trials, and special studies	Rediagnosis and redesign in the light of new information

6. AN INTRODUCTION TO FARMER PARTICIPATORY RESEARCH (FPR),

excerpted from *Farmer Participatory Research: Rhetoric and Reality,* by Christine Okali, James Sumberg, and John Farrington, Overseas Development Institute, United Kingdom

Research can be defined as careful study or investigation, especially in order to discover new facts or information. There are many classifications of types of research activity, and investigators have made various attempts to identify steps or stages in the research process. For the purposes of this study, we need a general framework that accommodates a wide range of individual and institutional involvement in what we will consider agricultural research. Thus this study considers research, whether formal or informal, and involving scientists or farmers, to be a more or less deliberate and systematic process that proceeds through three general stages: (a) identification of opportunities (perhaps more commonly referred to as problems or constraints); (b) identifi-

cation of ideas or options; and (c) testing and/or adaptation of the ideas and options.

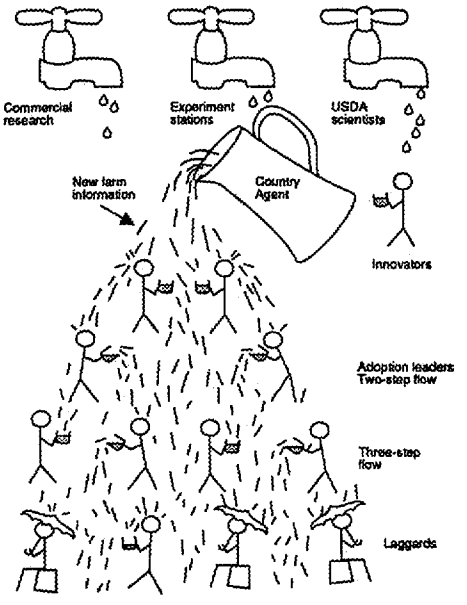
While at one level of discussion farmer participatory research (FPR) is seen as an easily identifiable and well-defined research approach, a careful reading of the literature quickly demonstrated the contrary. In practice the term encompasses a wide variety of research and research-related activities. In fact, the term FPR is often used synonymously with other with other terms such as participatory technology development, agricultural technology development, and appropriate technology. At the same time, the actual research objectives and activities discussed under these various titles are closely related to other on-farm, client-oriented research approaches, including farming systems research.

In some cases, therefore, FPR describes projects designed simply to carry out research in close collaboration with farmers, while in others it refers to research activities carried out within a much broader agricultural research framework, which in some cases actually includes extension activities and institutions. The term also refers to activities which lie within, but are subsidiary to, broader development programs focused on, for example, community organization, education, or water. This is part of the explanation of why the discussion of FPR is intertwined with wider debates about empowerment,[2] social justice, and community development. In some ways, therefore, and for some institutions and individuals, the focus of FPR is as much on political, social, and institutional processes as on the development and testing of agricultural technology. These alternative views of FPR relate to the distinction between demand-side populism (the promotion of interests and claims by social groups from below) and supply-side populism (the promotion, by "progressive" outsiders, of self-improvement and self-organization among the poor and weak).

In terms of a technological focus, researchers and NGOs are using FPR to investigate a wide range of agricultural problems including both production and processing. Some authors have argued that it has a particular value for investigating "agro-ecological," "low-input" and "sustainable" production systems.

The first principle of FPR is an assumption that many farmers are actively engaged in an ongoing search for new or improved crop planting material, varieties, and protection techniques, and livelihood options more generally. As will become apparent, there are important differences between this vision of "research-minded" farmers as generators of new information, understanding, and technology, and "innovators" who are perhaps more appropriately termed "first adopters." What distinguishes innovators from early adopters is direct access to scientists and research results. There is no suggestion, however, that the innovators themselves are, or can be, a source of new understanding or technology (see figure 2).

Figure 2. Classical depiction of the diffusion process in the context of a central source of innovation model.



The "trickle-down process" by which new farm technology is diffused from scientists to farmers. the innovators often receive their new farm ideas directly from agricultural scientists. The farmer adoption leaders receive their new ideas from the country agent, and then, in turn, pass these new practices along to their neighbors and friends. Research studies indicate, however, that the new ideas often do not trickle down all the way to the low-income laggards. And the new technical information may not be as accurate as when it was first passed along by the country agent.

[2]In the sense of the creation of an environment of inquiry in which people question and resist structural reasons for their poverty, through learning and action.

Another principle is that there are elements within local farming systems and the larger contexts within which they exist that have not been observed or examined by formal research, but that are understood and being explored by farmers themselves. The key assumption is that it is through an examination of these elements, an examination based on the knowledge and understanding of both farmers and researchers, that sustainable techniques and solutions can be developed. Thus, in principle, FPR aims to operate at the interface between knowledge systems: it can be described as a people-centered process of purposeful, creative interplay between local individuals and communities on the one hand, and outsiders with formal agricultural and research knowledge on the other (i.e., a collegial interface).

All agricultural research is or should be carried out with specific clients or potential end-users in view. Although many programs of FPR attempt to work with whole rural communities rather than individuals, in line with an overall poverty focus, most projects emphasize the involvement of the poorest members, and particularly women. The clients of FPR, therefore, are generally identified as low-income rural people who may be fully occupied with agricultural production or agriculture-related activities, or who may have alternative income sources outside the agricultural sector. Not only is this research approach considered to be especially appropriate for working with the rural poor, but it is also seen to be essential for working in areas that might be considered difficult, fragile, and demonstrating low potential for agricultural production.[3] These environments are characterized by low, unreliable rainfall, poor, easily degradable soils, and hilly topographies, and are more often than not isolated from centers of communication, services, and trade. The most frequently cited cases are the Andean region of Latin America, the semiarid zones of Africa, and some tribal areas of Asia.[4] While these are perhaps the extreme examples, they highlight the more general characteristics of poor rural areas, including a limited range of nonagricultural income opportunities, high rates of out-migration, and often substantial distances from services, including those of formal agricultural research and extension.

Many descriptions of the locations where FPR is being implemented emphasize their diversity, with the implication that standardized or blanket solutions are unlikely to succeed. In the main, FPR is being popularized as a means to redress the perceived imbalance in the focus of formal agricultural research, which is seen to have concentrated on high-potential areas with more reliable rainfall regimes and access to markets and communications.[5]

While there are commonly understood reference points for FPR, there has been no generally accepted statement of the limits within which the approach is meant to be applied. One can, however, identify those circumstances and locations that are commonly excluded. These include high-potential, irrigated, and uniform agricultural areas where relatively better soils and climatic conditions — and the use of agricultural inputs — support high yields. Agricultural experiment stations are frequently located in areas such as these; where station and farmer conditions are similar, direct farmer involvement in the research process may be of secondary importance, as farmers themselves often keep in close touch with the research services (see table 6).

It is now a well-known story that over the last forty years considerable research emphasis has been placed on the generation of high-yielding crop varieties and management strategies for use in high-potential — often irrigated — areas. The fundamental objective was to produce a marketable food surplus to feed burgeoning populations, particularly in urban areas. Underlying this was the philosophy that the use of inputs would overcome environmental differences, and that basic packages would be sufficiently productive so that market forces would ensure the development of the necessary input delivery and marketing systems. Thus, most commodity-based

[3]Some researchers argue that FPR should be valuable in a much wider range of situations and circumstances.

[4]Not all researchers agree that marginal or low-potential areas are so easily identified. It has been argued that a number of these areas have potential for substantial increases in productivity, such as the Andean and sub-Sahelian regions. On the other hand, poverty occurs equally in areas of low and high agricultural potential and is, at least in part, structurally determined.

[5]This is also true of extension. In Kenya, for example, good extension workers are stationed in areas where agriculture is more developed; otherwise, farmers complain.

Table 6. Conditions for Research Stations, Resource-Rich and Resource-Poor Farms.

CHARACTERISTIC	RESEARCH STATION	RESOURCE-RICH FARMS (RRF)	RESOURCE-POOR FARMS (RPF)
Soils	Deep and fertile, few constraints	Few effective constraints	Shallow, infertile, often severe constraints
Macro- and micro-nutrient deficiencies	Rare, remediable	Occasional	Quite common
Plot size and nature	Large, square	Large	Small, irregular
Hazards	None or few	Few, usually controllable	More common (floods, droughts, animals grazing crops, etc.)
Irrigation	Usually available	Usually available	Often nonexistent
Size of management unit	Large, contiguous	Large or medium, contiguous	Small, often scattered and fragmented
Natural vegetation	Eliminated	Eliminated or highly controlled	Used or controlled at micro-level
Access to purchased inputs	Unlimited, reliable	High, reliable	Low, unreliable
Sources of seed	Foundation stocks and breeders' seed of high quality	Purchased, high quality	Own seed
Access to credit when needed	Unlimited	Good access	Poor access and seasonal shortages of cash when most needed
Irrigation, where facilities exist	Fully controlled by research station	Controlled by farmers or by others on whom s/he can rely	Controlled by others, less reliable
Labor	Unlimited, no constraint	Hired, few constraints	Family, constrained by others less reliable
Prices	Irrelevant	Lower than for RPF for inputs; higher than RPF for outputs	Higher than for RRF for inputs; lower than RRF for outputs
Priority for food production	Neutral	Low	High
Access to extension services	Good, but one-sided	Good, almost all material designed for this category	Poor access, little relevant material

research programs took as their starting point increased productivity of land, and promoted a package of improved practices which included high-yielding varieties, fertilizer, and improved management. Major indicators of performance were yield and economic return per hectare. Research focused on irrigated rice, wheat, and maize. This approach, and the associated green revolution technology, led to dramatic increases in food production in some areas (and a lively and continuing debate around issues such as sustainability, biodiversity, equity, and environmental and social impacts).

It is now also widely accepted that an alternative approach, less dependent on external inputs and able to cope with ecological uncertainty and diversity, is required for poor people farming in low-potential areas.[6] Cropping systems in these areas are considered to be more complex and diverse, requiring a systems approach to both analysis and improvement. Individuals and institutions promoting FPR have consequently aligned themselves closely with those espousing sustainable agriculture on the one hand, and the use of systems approaches on the other. For example, in some situations, an agro-ecological resource management approach to technology development has been promoted in which foresters, water management specialists, and ecologists are added to the research team. Within this framework, the timetable is long term, the focal point is the village or watershed, and the client is the whole society. However, the resulting increase in the complexity and scale of the research agenda and methodologies dramatically increases the gap between what needs to be done and what most research teams can actually do.

At a technological level, the aim of FPR is to understand the main characteristics and dynamics of the agro-ecosystem within which the community operates, to identify priority problems and opportunities, and to experiment locally with a variety of technological options based on ideas and experiences derived from indigenous knowledge and formal science. It is important to note that FPR, because of its focus on poor farmers in diverse, low-potential areas, is not in principle intended or expected to generate innovations with potential for wide adoption, although the underlying ideas may well find wider applicability.

Agricultural Research and Farmers

At its simplest, FPR refers to the involvement of farmers in a process of agricultural research. There is, however, no explicit statement or implicit assumption about the nature or level of their involvement. Hence, it is largely practitioners themselves, whether associated with development agencies or research institutions, who are determining these critical parameters. There is agreement among a wide variety of institutions on the need for farmer participation in the research process. There are at the same time wide differences in both opinion and practice over the central issue of how they should participate, for what purpose, at what stage, and in what kinds of programs.

Both the locations and the people designated as clients of participatory research are frequently marginalized within national political life. Consequently, problems of local empowerment and social organization are considered by some to be integral to the discussion of development in general and of FPR in particular. While the development of technology is one objective of closer researcher-farmer interaction, therefore, FPR is also viewed as an empowering process whereby those with a legitimate interest in the outcome of research are able to exert some influence on priorities and decisions. Given the diversity of situations, both institutional and programmatic, within which FPR is being used, approaches to participation and to the whole issue of empowerment vary considerably (see tables 7 and 8).

While reports of FPR cover activities and programs being carried out at all these levels, and there is clearly no best mode or level of participation, many practitioners claim to operate as closely as possible to the collegial mode. Thus, programs report positively on their attempts to move from contractual to collaborative research modes. In addition, some facets of the literature place considerable emphasis on a distinction between FPR and other research approaches, particularly farming systems research, within which farmers also participate.

The idea of cooperating with farmers is certainly not new. Colonial researchers were not ignorant of the value of farmer cooperation. The current interest in FPR follows closely on two decades of interest and

[6] There can be crises in high-potential areas that may be vital parts of a country's grain production system. Such areas may also require an alternative approach.

Table 7. Four Modes of Farmer Participation in Agricultural Research.

	CONTRACT	CONSULTATIVE	COLLABORATIVE	COLLEGIAL
Type of Relationship	Farmers, land, and services are hired or borrowed, e.g., the researcher contracts with the farmer to provide specific types of land.	There is a doctor-patient relationship. Researchers consult farmers, diagnose their problems, and try to find solutions.	Researchers and farmers are partners in the research process and continuously collaborate in activities.	Researchers actively encourage the informal research and development system in rural areas.

Table 8. Indicators of Participation.

STAGES	INDICATOR
Information sharing	Beneficiaries receive information about project aims and how the project will effect them. Helps facilitate action.
Consultation	People are not only informed but are also consulted on key issues. Beneficiaries may provide feedback to project managers who may use the information to influence project design and implementation.
Decision-making	Beneficiaries are involved in decision making about project design and implementation.
Initiating action	Beneficiaries propose action to initiate themselves.

Note: This is not a hierarchical presentation. The appropriate level of participation depends on the type of project and the socioeconomic environment in which it is being implemented.

investment in both appropriate technology and farming systems research. It is somewhat ironic, therefore, that much of the participatory research literature seems to go to extraordinary lengths to distance itself from farming systems research, with which it shares many common elements, including farmer participation, multidisciplinarity, and location specificity.

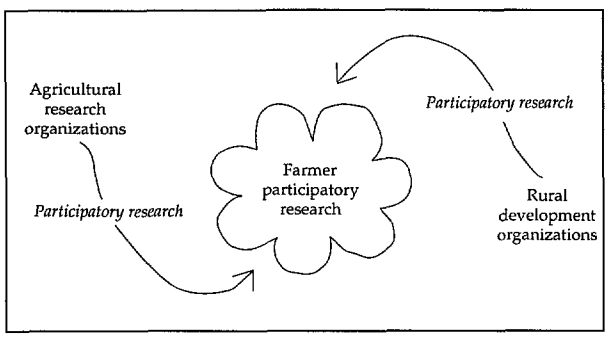
The top-down, center-outward, or transfer-of-technology approach is the most popular whipping boy and therefore provides a common denominator against which most subsequent models are evaluated. Transfer of technology was followed by an emphasis on the modification of the research agenda by feedback (farming systems research and extension), and later by models referred to as "farmer-back-to-farmer" and "farmer first and last." All of these identified the continuing need to put farmers at the center of the research process. More recently there has been a call to move "beyond farmer first" through the addition of a political agenda incorporating basic changes in power relationships and thus addressing the empowerment issue head on.

Implementing Participatory Research

What is FPR as evidenced by actual field experience? This is essentially the subject of the present article. It should be obvious that in practice many factors determine the actual choice of the type, level, and

intensity of farmer participation in agricultural research. Reports from the field suggest that farmers and researchers are working jointly in numerous ways within a range of institutional settings. As noted previously, the principal objective of many of these institutions is the empowerment of local people through the implementation of a general development agenda, to which agricultural research may well be only peripheral. On the other hand, there are agricultural research programs that are very much concerned with technical issues related to agricultural production or improving processing operations, and that are deeply involved in FPR. In many cases these institutions are less concerned with the discussion of, or research about, new social organizations. In general, therefore, FPR is associated with two often distinct traditions, agricultural research on the one hand, and community development on the other. The actual orientation and emphasis of any given project depends, in large part, on the tradition of the implementing organization, with more or less weight being given to either participation or research (see figure 3). The activities reviewed during the course of this article originate from both sources.

Figure 3. Interpretation of FPR depends on institutional orientation.



The literature about FPR is characterized by a discussion of dualisms: interdisciplinary versus disciplinary, holistic versus reductionist, farming systems versus FPR. This polarization of the debate, and the dichotomized thinking that it reflects, it itself highly problematic. In general, there is an attempt to break the link between research and positivist science, but in practice this often proves difficult. There is, nevertheless, general agreement on the steps in the research process, and three are mentioned in almost all programs: the identification of opportunities and constraints, the identification of ideas and options for addressing these opportunities and constraints, and the testing and adaptation of ideas and options.

Decisions about who actually participates in the research process are central to all programs. While many find it relatively simple to define the ultimate beneficiaries of the research as the rural poor living in marginal locations, it is clear that not everyone can, will wish to, or possibly should be expected to participate in the research. Who participates ultimately depends on a number of factors including the research objectives, the nature of the participation (in the sense of how much time will be involved), the skills required, and the interest of potential partners in the subject under investigation. In general there are two extreme positions, on the one hand, the selection of a small number of "researcher farmers," and on the other, the involvement of the whole community. Regardless of the actual criteria used for selection, since there is almost always an assumption of collective action implicit in the empowerment objective of FPR, there must be some sense that those who participate are representative of or represent the views of all potential beneficiaries.

Summary

For the most part, the discussion of FPR is being framed in terms of direct interaction between formal agricultural research systems and the farmers' own informal research, a framework which excludes research implemented by farmers or researchers alone. We, however, include the possibility of farmers and researchers being involved at any or all points along a continuum of levels of participation (table 8). As we shall see, the activities at the two ends of the continuum vary considerably, but both extremes have clear implications for FPR. This is particularly true of farmers' own research, which is not considered to play a particular role within either what might be termed traditional or farming systems research, but which — at least in principle — is central to FPR. In all cases, these research activities take place within a political, social, economic, and agroclimatic context, and in certain situations, that context may not support farmer participation in research. Thus the clear concern of some organizations with policy, institutions, and organizations referred to earlier. This concern with creating a more enabling context for participatory research has been associated with some projects that have attempted to change the nature of formal research organizations.

B. OTHER APPROACHES AND TOOLS

This section covers a variety of topics. First are several articles on different functions and methods of monitoring and evaluation (M&E). Any results-oriented organization that seeks to improve its performance over time must have some system for monitoring what it is doing and periodically evaluating the results. Donors are also increasingly insisting that NGOs and other implementing agencies assess the impact of activities that donors fund. The first article presents an overview of the functions and methods of M&E in NRM projects. The following two authors stress participatory approaches to monitoring and evaluation - approaches that place villagers in the lead in analyzing the effectiveness and impact of activities purportedly undertaken to their benefit.

The fourth article describes the country-specific approach to ICDP design, with a focus on Madagascar. It includes design principles that should be of interest to NRM projects in general, particularly the ideas of hypothesis testing and rolling design as methods of dealing with uncertainty during project design. The article "Results Oriented Programming" also deals with the need for flexibility in project implementation, building on what works, and modifying or abandoning what doesn't.

The final article takes a technical look at the potential use of remote sensing and geographical information systems (GIS) technologies by African NGOs. These technologies are clearly not for all NGOs because of accessibility, cost, and the level of human resources development required. GIS technologies can, however, be powerful tools for those in a position to use them. This article does a good job of defining set-up and maintenance costs, especially for GIS systems.

1. **SUSTAINABLE ECONOMIC DEVELOPMENT OPTIONS FOR THE DZANGA-SANGHA RESERVE**, by Barry Coates, Hank Cauley, Mike Stone, Todd Lappin, Stephen Crolius, Sally Rubin, Thomas Fricke (consultant), Telesis Inc., USA

The need to identify viable development options that do not require destruction of ecosystems, the biodiversity values they contain, and the systemic functions they promote is both challenging and critical. In 1990, PVO-NGO/NRMS together with the World Wildlife Fund-US's Africa and Madagascar Program collaborated with a private firm (Telesis Inc.) that specializes in economic analysis. The intent was to determine what, if any, economic development options exist in a moist, tropical-forest zone of extraordinary biodiversity and cultural value in the southwestern Central African Republic (CAR).

This article presents a brief summary of how the investigators evaluated economic development options. It describes the methodology and gives the reader an idea of the degree of analytical sophistication that is required of NGOs to engage in serious policy discussions with both donors and local communities over resource use and trade-offs among different strategies.

While it is unlikely that most NGOs will have the capacity to undertake this type of analysis on their own, it is nevertheless important to understand why the analysis is important, how it can be done, and what it can do. It is meant to complement the articles on ICDP design (chapter 2) and feasibility analysis (chapter 1).

A major challenge for resource managers in the developing world is to integrate the goals of conservation and economic development. It has long been accepted in theory that sustainable environmental practices are essential to a sustainable economic program. However, when translating these concepts into the practical realities of resource management, it has proven difficult to view the options as anything other than mutually exclusive choices: conservation or development.

Telesis collaborated with WWF-US and the PVO-NGO/NRMS Project to develop an integrated resource management framework that could be applied to specific projects. The Dzanga-Sangha Dense Forest Special Reserve, in the southwest corner of the CAR, is the first such project.

The Dzanga-Sangha Dense Forest Special Reserve is a recently established 340,000 hectare buffer zone around the Dzanga-Ndoki National Park. Preserving both the wildlife of the reserve and the natural habitat of the Aka people, a pygmy ethnic group that inhabits the rainforest, are of central importance. There is currently little threat of deforestation in the reserve, given its low population density and the absence of large-scale agricultural activity.

Poaching, however, poses an immediate problem. The rapid depletion of certain wildlife populations such as the forest elephant, lowland gorilla, and leopard for trophies, as well as the duiker and forest pig for bushmeat, makes this threat clear.

Recognizing that the issues facing the reserve concern economics as much as conservation, the WWF-US and the PVO-NGO/NRMS Project asked Telesis to undertake an assessment of sustainable economic development opportunities in the Dzanga-Sangha Reserve. The objective was to define clearly the key opportunities for and constraints on economic development. This initial assessment was intended to be used as the basis for a more comprehensive economic development strategy as part of an integrated resource management plan. Telesis's work was carried out from October through December 1990, and included interviews in the United States and Europe and a mission to the CAR.

Analytical Framework

Telesis's framework for evaluating economic development alternatives consistent with resource management strategies is illustrated in table 9. The major tasks of the assessment were to:

- Quantify current economic activity;
- Describe the interests of diverse stakeholder groups;
- Assess pragmatically the opportunities for expanding economic activity in the reserve, particularly the development of nature tourism and the extraction of nontimber products; and
- Understand and describe the linkages between economic development and the reserve's ecosystem.

Various stakeholder groups perceive the reserve differently and have nonoverlapping interests they wish to see realized there. Groups within the CAR government, many local Bantu and Oubangi-speaking inhabitants, and the international financial community value the reserve primarily as an economic resource. Others value the reserve as an ecosystem that sustains wildlife and plant species as well as the traditional hunting and gathering activities of the Aka.

The goal of a sustainable development strategy is to reconcile these diverse interests. Inevitably, decisions on resource use require compromise and trade-offs by resource users. In our analysis, we have tried to make those trade-offs as explicit as possible.

The assessment looked at the range of activities with income-creating potential in the reserve, and evaluated their impact in both economic and ecological terms. The recommendations attempt to reconcile stakeholder interests in light of the explicit costs and benefits of alternative economic activities.

Evaluation of Alternative Management Strategies

The analysis of the linkages between economic activities shows that logging is incompatible in the long term with other economic activities built around nature tourism. The two alternative management strategies identified for the reserve, therefore, are:

- Logging and timber sawmilling. With this alternative the reserve population would increase and be largely dependent on the timber concession operator for employment.

- Diversified economic activity. With this alternative the local population would rely on nature tourism and increased trade to improve employment and income for a local population only slightly larger than at present.

A simplistic comparison of annual monetary benefits[7] received by the local population and the CAR government under these two strategies demonstrates an apparently large tax advantage for logging. This comparison showed that local inhabitant income from logging would be only slightly higher, by 4.5 million Central African Francs (FCFA) in total (US$4 per person) per year. Government revenues from logging, however, would be significantly higher, at an additional FCFA 76.4 million ($305,000) per year over income from diversified economic activities. However, this comparison is misleading in that it does not capture logging's high risk of financial failure, implicit subsidies, or the fact that over the long term logging drives the value of the forest to zero.

[7]The study analyzed a single year's return, estimated for 1993, to show indicative monetary flows. This analysis did not use a discounted cash flow due to the inherent uncertainties in estimating future returns from each of these activities.

Table 9. Recommended Trade-Offs to Balance Stakeholder Interests.

STAKEHOLDERS	INTERESTS OF STAKEHOLDER GROUPS		RECOMMENDED ACTIONS
	SHORT TERM	LONG TERM	
Local Community			
Aka	Maintain ecosystem and forest usage Improved community services		Start small businesses based on tourism Form governance committee to health care and distribute community funds (e.g., park fees)
Bantu	Employment opportunities Improved infrastructure and community services		Stop poaching
CAR Government	Maintain revenues from reserve	Sustainable economic growth and resource use	Prohibit logging in reserve Sell existing Slovenia-Bois assets
	Economic development	Preservation of Aka culture and wildlife	Ensure governance committee shares of fees collected Start campaign to support tourism
International Community			
NGO/PVO Groups	Preservation of endangered species and Aka culture	Biodiversity Conservation of tropical rainforest	Provide short-term compensation to CAR Government to offset logging revenue loss Provide technical and financial support for economic diversification
Financing Organizations	Ability to service loans Develop earning capacity	Sustainable use of resources Long-term earning capacity	
Tourism Organizations	Business opportunities Improved infrastructure	Preservation of reserve's unique attributes	Provide expertise and/or investment in exchange for short-term exclusivity

Of course, the simplistic comparison also fails to capture the risks associated with establishing a viable tourism industry. However, there is an important difference in the nature of the risks with logging versus the risks with tourism. In the logging case, the risks are structural: remote location and species density disadvantages cannot be overcome through management initiatives. By contrast, attractions such as the Dzanga Saline, a salt lick around which elephants congregate, represent a competitive advantage relative to other tourism destinations. With careful planning and outside support, the risks from poor management can be minimized.

Economic analysis is not, of course, the only criteria that should enter into consideration of the reserve's future. Economics do not measure the values placed on conservation of the ecosystem and broader interests of the inhabitants of the reserve:

- In addition to economic considerations, the government's objectives include the conservation of wildlife in the reserve, as evidenced by the establishment of the buffer zone and national park.
- The interests of stakeholders in the international community (including WWF-US), who support the conservation of tropical forests, the Aka culture, and endangered wildlife, also need to be considered. The international community considers conservation of the Dzanga-Sangha Reserve to be important, as evidenced by contributions from WWF-US and others.
- The local community's goal is not necessarily to maximize local income from the reserve, but to increase the quality of life and economic opportunities for current residents and their dependents. Funds from park fees and safari hunting can potentially support development initiatives promoting improved community health care, sanitation, and education.

Although short-term monetary benefits are apparently higher for logging, long-term costs are also high. The inclusion of nonmonetary considerations argues strongly for the cessation of logging activities.

Recommendation

There is currently an opportunity to break the cycle that begins with logging. The logging concessions held by Slovenia-Bois have been suspended following the company's bankruptcy. The conclusion of this study is that a resumption of logging and sawmilling activities is not the best use of the reserve's resources. Not only is resumption of logging incompatible with long-term sustainability of the reserve's ecosystem, but logging also provides only limited economic benefits.

The findings from this project should not be generalized to other buffer zones where logging is a healthy economic activity. It is the marginal economic viability of logging as an unsubsidized business activity in the Dzanga-Sangha Dense Forest Reserve that is the primary consideration underlying this recommendation. Any improvement in the economic viability of logging in the reserve can come only at the expense of the region's ecology or the government's revenues. Measures to reduce logging's harmful impact on the reserve's ecosystem will threaten the concession operator's viability, risking further economic harm through successive boom-bust cycles.

The size of the task involved in creating viable economic alternatives to logging should not be underestimated. Each of the stakeholders has an important role to play; success will require commitment and a coordinated effort from each. The main challenges include the formation of a local governance committee that can distribute funds received from reserve activities in a manner that benefits the community and reinforces the commitment to sustainable activities; and obtaining the cooperation of key CAR government ministries in development of the reserve. For example, continued harassment of tourists by the police and military will obviously limit the growth of nature tourism.

The international community also has a critical role to play. The community's interest in preservation of the forest and wildlife should be expressed by increased financial and technical support for the development of alternative economic activities in the Dzanga-Sangha Reserve. This analysis suggests that a financial commitment of FCFA 76 million ($305,000) per year would maintain net government revenues from the reserve. This support should be phased down over a ten-year period, as direct and indirect revenues from tourism replace those from logging.

International concern for tropical forests has never been stronger, and a number of international NGOs have expressed their interest in supporting initiatives in the region. Local, national, and international stakeholders should act promptly to mobilize this support and address the critical resource management issues.

2. **INVOLVING STAKEHOLDERS: THE EXAMPLE OF BUFFER ZONE MANAGEMENT**, adapted from *Buffer Zone Management in Africa*, by Michael Brown, Project Director, PVO-NGO/NRMS Project, USA

The most prominent players in buffer zone management (BZM) strategies have tended to be the people who carry out most NRM planning: representatives of government agencies, international donors, and international development and conservation NGOs. A major weakness in this trend has been that many of the stakeholders with direct socioeconomic interests in the resources have had little say in the fate of those resources. For this reason, conservation projects have not been as successful as was hoped.

Just who are these stakeholders? The lists for any given area in Africa can include:

- Local resource users — farmers, fishing peoples, ranchers, hunters, pastoral nomads, artisans, and others.
- Non-governmental conservation groups.
- Non-governmental development groups.
- Commercial/industrial business people, especially from such industries as forestry, fisheries, and mining.
- Relevant government agencies, especially managers of forestry, game, mineral, and water resources.
- Locally elected political bodies.
- Conservation and science researchers.
- Donors.

In most buffer zone areas, local resource users are *de facto* resource managers. As important stakeholders, they shape the resources. Thus, they participate in the areas' eventual fate even though they have not formally participated in resource management planning.

The weakness in many BZM processes is that the various stakeholders do not acknowledge each other's *de facto* and potential roles. The resulting poor communication, poor coordination, and lack of collaboration often leads to stakeholder groups working at cross-purposes to each other.

Local Resource Users: Critical to the Success of Buffer Zone Management

Local resource users are critical to conservation and BZM, yet they are frequently excluded from the process. In a typical scenario, a centralized government agency, upon the advice of a conservation NGO, will create a protected area, and perhaps a buffer zone. To protect the natural resources, a hunting ban is mandated. Meanwhile, the local hunters, who provide the staple source of protein for their families, are given no alternatives; they continue to hunt despite the ban. Others in the community traditionally may have collected wood from protected forest resources, using the materials as cooking fuel and construction materials. They too are left with no alternatives, and often continue collection in the reserves despite bans or official limits.

In both the above cases, traditional resource use is categorized as criminal. This may occur in situations where resource use is in fact exceeding sustainable use limits, or it may occur where it is assumed that sustainable use is being exceeded. All too often, buffer zone and other ICDPs may be designed on the basis of limited data, and hence be heavily laden with assumption. As long as assumption is distinguished from fact, however, potentially innovative and risky BZM projects may be justified.

In the above cases, hostility inevitably grows between the local resource users and resource managers responsible for planning. Conservationists wonder why the local people don't cooperate or appear to understand the importance of the protected resources. The local people see government officials as uncaring, as being more concerned about wildlife than about people.

Creation of protected areas may cause the impoverishment of communities that were once economically self-sustaining. Local residents may become malnourished and lack construction materials. When such conditions arise, the government may then face political and moral challenges, not to mention long-term challenges to the resource base.

Genuine negotiations or bargaining to facilitate BZM too often begin late in the scenario, after all the major decisions have been made. Attempts at remedial or token participation can be too little, too late, to save the resource base. By then, previous policies may have destroyed the cultural and economic fabric of the local community.

Official resource managers sometimes try to promote token local-level participation in the planning process. They hold meetings, or "educational" sessions, and conduct surveys or needs assessments.

All the while, they mistake these largely one-sided, top-down activities for true participation.

Scientists and development experts are often guilty of the same tunnel vision as central government agencies. They put their academic agendas or conservation objectives ahead of the values and needs of local resource users. These agendas and objectives reflect the aesthetic, recreational, and intellectual predispositions of the generally Western experts more than they do the results of longitudinal scientific research or the local economic utility of conservation.

Western conservation groups have also tried their hands at BZM. It is not hard to imagine the reasons for their not-uncommon failures. Even the most well-meaning group may fail to comprehend the economic, cultural, and political realities faced by local resource users.

In stressing the need to get resource-user participation "right," as part of the BZM process, it is important not to over-idealize the intentions or capabilities of resource users. While local resource users should be empowered, they should not necessarily be left with all planning and management responsibilities.

In the past, local communities may have balanced their needs with the resource base. Today, however, communities can be hard pressed to first recognize, and then cope with, new forces at play in their midst. Appropriate outside technical assistance is badly needed, given the dimension and complexity of current situations.

Factors such as policy, demography, and cultural resilience or resistance to change contribute to the complex, dynamic situation faced in protected areas and their buffer zones today. In-migration, for instance, may have caused overuse of resources. Cultivation of cash crops, often replacing subsistence crops, may destroy forest and soils. In other cases, traditional slash-and-burn practices may require adaptation, where deforestation may be objectively discerned by consensus to be at unsustainable levels as a spin-off of itinerant agricultural systems. Pastoral groups that once had access to large areas of land, including the newly designated protected areas, may now be confined to a smaller area such as the buffer zone, where the rationale underpinning extensive grazing systems may be undermined.

When combined with demographic changes and new cultural preferences, formerly well-adapted, traditional resource management systems can become outmoded. Under such circumstances, local resource users need to work with other stakeholders in finding ways to sustain both the community and the resource base.

3. **USING COMMUNITY-BASED DATA FOR MONITORING AND EVALUATION**, by Richard Ford, Program for International Development, Clark University, USA

Once a PRA exercise is completed, what does one do with the data? In Madagascar, thirteen communities on the border of Mantadia National Park are using the data to monitor their own progress in project implementation, development, and conservation. An example from Vohibazaha may help.

The village lies about two kilometers from the park in Madagascar's Eastern Highlands. Its fifty families earn their living almost entirely from rice production. There are no roads. The closest railway station is a three-hour walk and then sometimes a twenty-four-hour wait for a train for an hour's ride to the nearest road. In recent years, the park staff have begun negotiations with the people of Vohibazaha to reduce slash-and-burn agriculture inside the park. If this condition is met, the park will share tourist revenues with the village in support of local development and conservation projects.

Vohibazaha conducted a PRA in January 1993. Villagers developed their database, ranked priorities, and established project activities, primarily in transport, health, and food storage. Working with park officers, a local NGO, and an American project group, the village undertook two collaborative projects in 1994. The first was a village granary to store portions of their rice harvest.

Previously, Vohibazaha farmers would keep a two- or three-month supply of rice on hand and sell the rest to pay debts and buy supplies. To sell their harvest meant carrying fifty-kilogram (110-pound) loads to a merchant at the train station. After three months, when their own rice supply was exhausted, farmers would trudge for three hours to the merchant's shop, buy their own rice back, and return to the village. It would take an entire day to bring back fifty kilos. It cost villages about fifty percent more to buy the rice back than they received for the rice at harvest time.

The granary would change all of this. Farmers still sold much of their rice at harvest time. The Granary Cooperative, however, paid about fifteen percent more than the merchant. And there was no six-hour walk, round trip, for each fifty kilos of rice sold. When rice stocks run low, villagers now go to the Granary Cooperative and buy rice at about fifteen percent less than the merchant's price. And there is no six-hour walk to bring the rice back.

From the villager's perspective, everyone wins. Farmers get more for their rice than before, and buy it back for less when they need it. There is no longer any reason to carry it to the merchant. The Granary Cooperative is also pleased because they earn a profit for performing a storage service. Though not as large as the merchant's earnings, the profit is still significant.

The Village Development Committee has had a second idea about managing the granary to see how effectively it is working. They plan to redo the village livelihood map every six months to see if they can find changes in village income or well-being as a result of the granary. They also plan to keep a chart or charts showing: (a) how much money is saved by not going to the merchant; (b) how much time is saved by not hiking three hours in each direction; and (c) how much money the Granary Cooperative earns as a result of its new business.

Such community-based M&E is now possible because: (a) village groups, through the initial PRA, have become accustomed to the idea of baseline data to compare community well-being before and after the granary; (b) they are now comfortable preparing charts showing changes in price and time saved, again because of their exposure to PRA; and, finally, (c) they are pleased with the concept that they are now responsible for tracking the granary's impact on their community.

These data are kept in a Village Log Book which includes the original PRA charts and diagrams, updated versions of these charts noting recent changes in the community, minutes of meetings held and decisions taken, and financial records of any budgets or grants that the community is managing. As an indication of the community's delight with the monitoring, the village president uttered a choice comment as he was updating a chart. Now, he explained, when researchers visit our village, we don't have to waste time talking to them. Instead we simply show them our charts.

Armed with these basic and largely visual data sets, community groups are now able to assess their own rates of accomplishment, as well as the impact of project interventions in their community. The data have also helped to stimulate excellent discussions within a village, based on these "self-profiles" of their progress. While there is still need for external audits and evaluations of project activity, the possibility of new participatory tools that enable villagers to monitor themselves introduces a bold, refreshing new dimension to M&E.

4. A SYSTEMATIC APPROACH TO DESIGNING MONITORING AND EVALUATION PLANS FOR CONSERVATION AND DEVELOPMENT, by Richard Margoluis and Nick Salafsky, Biodiversity Support Program, USA

This article is taken from a draft version of the authors' *Measures of Success: A Systematic Approach to Designing, Planning, and Monitoring Conservation and Development Projects* (Washington, DC: Biodiversity Support Program, 1996). This project monitoring guidebook is based upon materials developed for and field-tested during a series of workshops with projects of the Biodiversity Support Program (BSP) and the Biodiversity Conservation Network (BCN, *1995 Annual Report*). The participants in these workshops contributed greatly to the development of these materials. Other BSP and BCN staff who have contributed significantly to the development of the concepts presented in this chapter include Diane Russell, Hank Cauley, Frank Hicks, Bernd Cordes, and Kathy Saterson. For complete details on the ideas and methodology outlined here, see *Measures of Success.*

Overview

This article begins by outlining four hypothetical conservation and development project scenarios.[8]

[8]We are using the word project to mean not just large, internationally funded endeavors, but rather any actions undertaken by managers, researchers, and community members interested in achieving certain, defined objectives.

We then discuss the challenges faced by managers of projects like these in documenting whether their project is working as intended, and why or why not. Next, we present a brief overview of a systematic approach to project design and monitoring that we believe can help project managers address these challenges. Finally, we illustrate this approach by providing an example of a conceptual model, project plan, and an M&E workplan for one of the scenarios.

Four Project Scenarios

Tropical Rain Forest Scenario

Suppose you are the urban or field-based manager of a project in a biosphere reserve in a tropical rain forest region. The core area of the reserve contains approximately 150,000 hectares of forest, a mixture of primary and secondary forest. The buffer zone area contains fifty small villages whose residents include a mixture of indigenous and migrant peoples. Residents of the villages are predominantly subsistence farmers who grow grains, other food crops, and a few cash crops in small, shifting agricultural plots in the forest. Residents also collect timber and nontimber products from the forest that they use for household consumption and sell in local markets. Major threats to the forest include expansion of the agricultural frontier (especially due to the influx of migrants), local overharvesting of forest products, commercial logging, development of cattle ranches, and development of a large dam for hydropower. The NGO that you are working for is developing a project that involves working with the community members to develop a few of the forest products for national and international sale.

Savanna Scenario

Or maybe you are a researcher who has been asked by the local office of the government park service to help them design a conservation plan for an existing national park in a subtropical, semiarid region. The park is 750,000 hectares of savanna and grasslands. Outside of the park are a number of settlements seasonally inhabited by seminomadic livestock herders. Inhabitants of the settlements depend on their livestock and increasingly limited hunting and gathering of wild animals and plants for subsistence. Major threats to the park include overgrazing, overhunting, and poaching of large mammal species, and development linked to a rapidly increasing, unregulated foreign tourism industry. The park service is attempting to take a number of steps to protect the park against these threats including conducting environmental education with herders to minimize impacts of their activities on wildlife; stepping up enforcement activities to deter poaching; working with local hotel owners and tour operators to help minimize sewage and use impacts; and working with the national and provincial governments to ensure that a portion of the tourism user fees are returned to the local communities.

Coastal Zone Scenario

Or perhaps you are the traditional leader of a coastal village who is responsible for helping your people maintain their resources for future generations. Your village is located at the mouth of a river flowing from upland forests, through mangrove forests, into a large bay. The residents of your village get most of their food from fishing and gathering shellfish in the river and in the coral reefs in the bay. Residents cook their food and build their houses using wood from the mangrove forests. Over the past few years, you and your neighbors have noticed that residents of neighboring villages are venturing into your village's traditional fishing grounds. In addition, large fishing vessels from other countries have also recently begun operating near these fishing grounds. You and the other elders of the community have noticed over time that local fishermen have to go farther away from the community to catch enough to eat and sell, and that the size of fish being caught has dramatically declined. In addition, silt and pollution coming down the river have ruined many of the shellfish beds. Furthermore, it becoming harder to find shrimp in coastal areas near small rivers where the mangroves have been cut down. You and your community have decided to try to adapt traditional management systems that have been breaking down, to save resources for future generations, and to work with local government representatives to stop pollution and commercial fishing that you think are ruining your environment.

Wetlands Scenario

Or finally, suppose you are the manager of a local chapter of a conservation NGO whose members live in a state with extensive wetland habitats tied to a major river. The wetlands serve as important habitats for migratory birds and for a number of important fish and game species. These species

support extensive recreational uses of the area including bird watching, canoeing, fishing, and hunting. The wetlands are also part of the water supply system for major urban areas. The wetlands are threatened by encroaching development and urbanization including roads, dredging, non-point-source runoff containing agricultural chemicals, and encroachment from exotic plant and animal species. You are trying to work with local owners and governments to obtain conservation easements on the parcel. In addition, your organization is hoping to work with federal and state agencies to mitigate the effects of the runoff and filling. Finally, you are hoping to devise a management plan to help control some of the impacts of the exotic species.

The Need for a Systematic Approach to M&E

A common challenge across these conservation and development projects is to be able to measure the success of the interventions being undertaken. In order to ensure that the desired conservation occurs, you need to know which actions work and which do not work — and you need to know why. In addition, you need to make sure that your interventions are having a positive impact on the people involved. Finally, if you are supported or funded by outside organizations or are working for local communities, you need to be able to prove to them that you are accomplishing the goals and objectives that you set.

Everyone working in the field of conservation and development faces this challenge. In response, an increasing number of practitioners are becoming interested in integrating M&E into the management of their projects. These practitioners, however, confront a number of constraints to actually doing the monitoring. For example, project staff are often so involved with day-to-day operations that they may feel that they don't have the time or money to invest in doing M&E. Likewise, field staff may believe that M&E can only be done by experts or scientists and that they are not qualified for the job. Finally, and perhaps most importantly, people may simply feel that they don't know how to design and implement a monitoring program.

Our motivation in developing this systematic approach to M&E is a strong conviction that although these constraints are real, they can and must be overcome if conservation and development projects are ultimately to succeed. Although conducting M&E requires a substantial commitment of time and money, we think this investment is vital to ensure that the overall project is running effectively. If there is no M&E, then you have no sure way of knowing whether the project is using its resources to make a positive difference, doing nothing, or worst of all, causing unintended problems. In addition, instead of thinking that only experts can do effective M&E, we believe that the people who are most qualified to design, implement, and especially use M&E are the field-based managers and practitioners who are most familiar with local conditions. Finally, although every site has unique conditions making it impossible to develop a "monitoring cookbook" explaining what information to collect, we feel that it is possible to outline a process or approach of how to go about determining what to do.

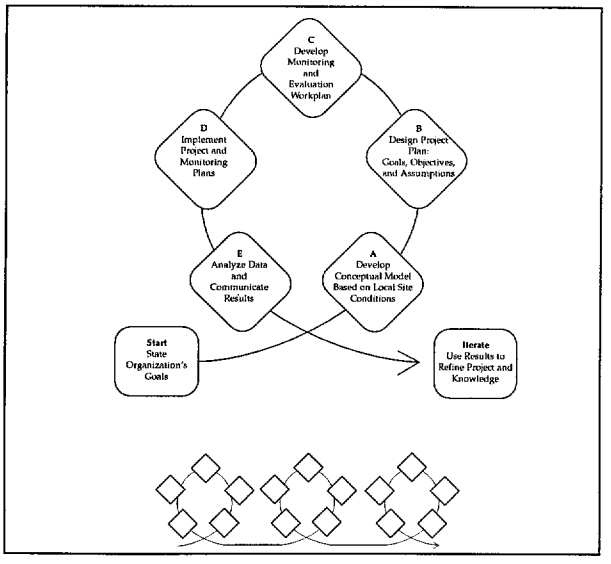
The premise behind this approach is that M&E is a powerful management tool that is crucial to ensuring project success. It is our hope that whether you are a manager or a researcher or a village leader, this approach will assist you in using M&E to design integrated and effective project monitoring plans, and then ultimately collect, analyze, and use the information you need to be able to measure the success of your conservation and development project.

An Overview of Steps in M&E

The basic approach to doing project-based M&E is presented in figure 4. The diagram contains five diamonds, each of which represents a different step in the project cycle. These steps generally need to occur in sequential order as represented by the letters A - E. The steps themselves, however, are part of an iterative process that involves going around the cycle numerous times as outlined in the sketch at the bottom of the page.

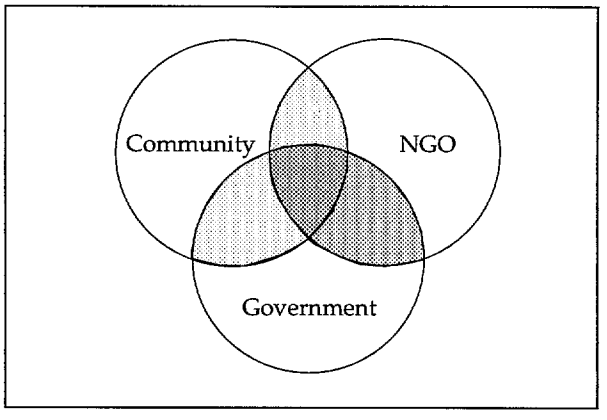
Start: *State Organizational Goals.*
Prior to entering the project cycle, each of the implementing groups should explicitly articulate its goals as an organization (many groups should already have their goals set forth in a mission statement, in which case this process merely involves reviewing those goals). This process is important since the specific actions a group will take will vary greatly, depending on its goals. For example, despite the overlap between conservation and development issues, the actions of a group that has biodiversity conservation as its primary goal may be different from those of a group that has enhancing community income levels or creating small-scale enterprises as its goals.

Figure 4. Monitoring and evaluation integrated into the project cycle.



As outlined in figure 5, it most likely that no two groups participating in a project will have precisely the same goals. This difference makes it all the more important that each group explicitly spell out its goals so that it is possible to see where overlap exists (the shaded areas) and where the differences are (the unshaded areas).

Figure 5. Organizations with differing goals.



A. *Develop Conceptual Model Based on Local Site Conditions.*

The first step in the cycle is to develop a conceptual model of the proposed project based on local site conditions. A conceptual model is a diagram of a set of relationships between certain factors that are believed to influence or lead to some final target condition. A good model does not attempt to explain all possible relationships or contain all possible factors that influence the condition, but instead tries to simplify reality by including only the information most relevant to the model builder. The model should be developed in three stages. In the first stage, the model should show the relevant factors at the project site, assuming that the project does not exist. In the second stage, the model should be updated to reflect the interventions that the project will undertake. In the final stage, the model should be revised over time.

As part of all three steps in the conceptualization process, it is of the utmost importance to assess local site conditions to see: (a) what community needs, desires, knowledge, attitudes, practices, and expectations are; and (b) what biological and socioeconomic conditions exist at the site that will provide opportunities and constraints to the project. This information should then be incorporated into the conceptual model. This assessment of local conditions ensures that project planning fits in with local needs.

B. *Design Project Plan: Goals, Activities, Objectives and Assumptions.*

The second step is to design the project by laying out explicit goals, objectives, and activities based on key factors in the conceptual model. *Goals* are broad statements of the desired state toward which the project is directed. A well-stated goal is visionary, relatively general, and brief. *Objectives* are more specific statements of the desired outcomes or accomplishments of the project. A good objective will have clear impact and be measurable, time-limited, and practical. *Activities* are specific actions project participants undertake that are designed to reach each of the project's objectives. A well-stated activity is focused, linked, feasible, and appropriate. All activities need both to be linked to specific objectives that fit within the framework of the conceptual model, and to be pretested and revised if necessary, to ensure that they will work given local conditions.

C. *Develop Monitoring and Evaluation Workplan.*

The third step is to develop a specific M&E workplan based on the results of the preceding steps. A monitoring workplan starts by listing impact and/or process indicators for each goal, objective, activity, and other necessary information. The remainder of the plan lists methods for collecting data to measure these indicators, where, when and by whom these data will be collected, and how the data will be used. The plans should be as specific as

possible. All indicators and methods proposed in the plan need to be pretested and revised if necessary, to ensure that they will work given local conditions.

D. *Implement Project and Monitoring Plan.*
The fourth step is to implement the project and monitoring plan. While this step is fairly self-explanatory, it is also obviously of great importance. It is critical that the project and monitoring plans be integrated and thus implemented simultaneously.

E. *Analyze Data and Communicate Results.*
The fifth step is to analyze the data collected through the monitoring process, and communicate the results to the appropriate audiences. Data analysis and collection can be greatly facilitated by considering this process during the formulation of the original monitoring plan. This step ensures that raw data collected are actually used as initially intended.

Iterate: *Use Monitoring Results to Revise Project and Improve Knowledge.*

Once data have been collected and analyzed, the results should then be used to adjust the project, starting with the conceptual model and continuing with the rest of the steps in the cycle. This iteration is where the work invested in monitoring can pay off by helping projects incorporate the information that they have learned to improve the project.

<u>An Example of the Approach Using the Coastal Zone Scenario</u>

Conceptual Model

1. State final target condition.
   - Long-term community welfare (broad sense), as expressed through the availability of marine resources for future generations

2. List factors that influence final condition.
   - Health and integrity of coastal zone ecosystem
   - Habitats in the coastal zone (mangrove forests, estuaries, coral reefs, ocean)
   - Populations of reef target species
   - Resource harvesting (intensity, locale, timing, and technology)
   - Pollution (organic and inorganic)
   - Siltation
   - Health of upstream forests
   - Mangrove harvesting
   - Housing construction
   - Fuelwood demand

3. Put in boxes and arrange in Conceptual Model.
   See Conceptual Model in figure 6a.

4. Add additional factors and expand Conceptual Model as needed.
   - Community member fishing
   - Neighboring groups fishing
   - International commercial fishing
   - Government enforcement of fishing rights
   - Subsistence needs
   - Cash needs
   - Human population

Project Plan

1. Take target condition and write as goal.
   - To ensure the availability of marine resources for our grandchildren, and our grandchildren's grandchildren

2. Identify threat factors you can influence.
   - Community fishing practices (local and neighboring groups)
   - International commercial fishing practices
   - Mangrove use for fuelwood and construction
   - Human population levels

3. For each threat factor, develop objectives and activities.
   See column 1 in worksheet 1.
4. Revise Conceptual Model to incorporate activities.
   See figure 6b.

Monitoring Workplan

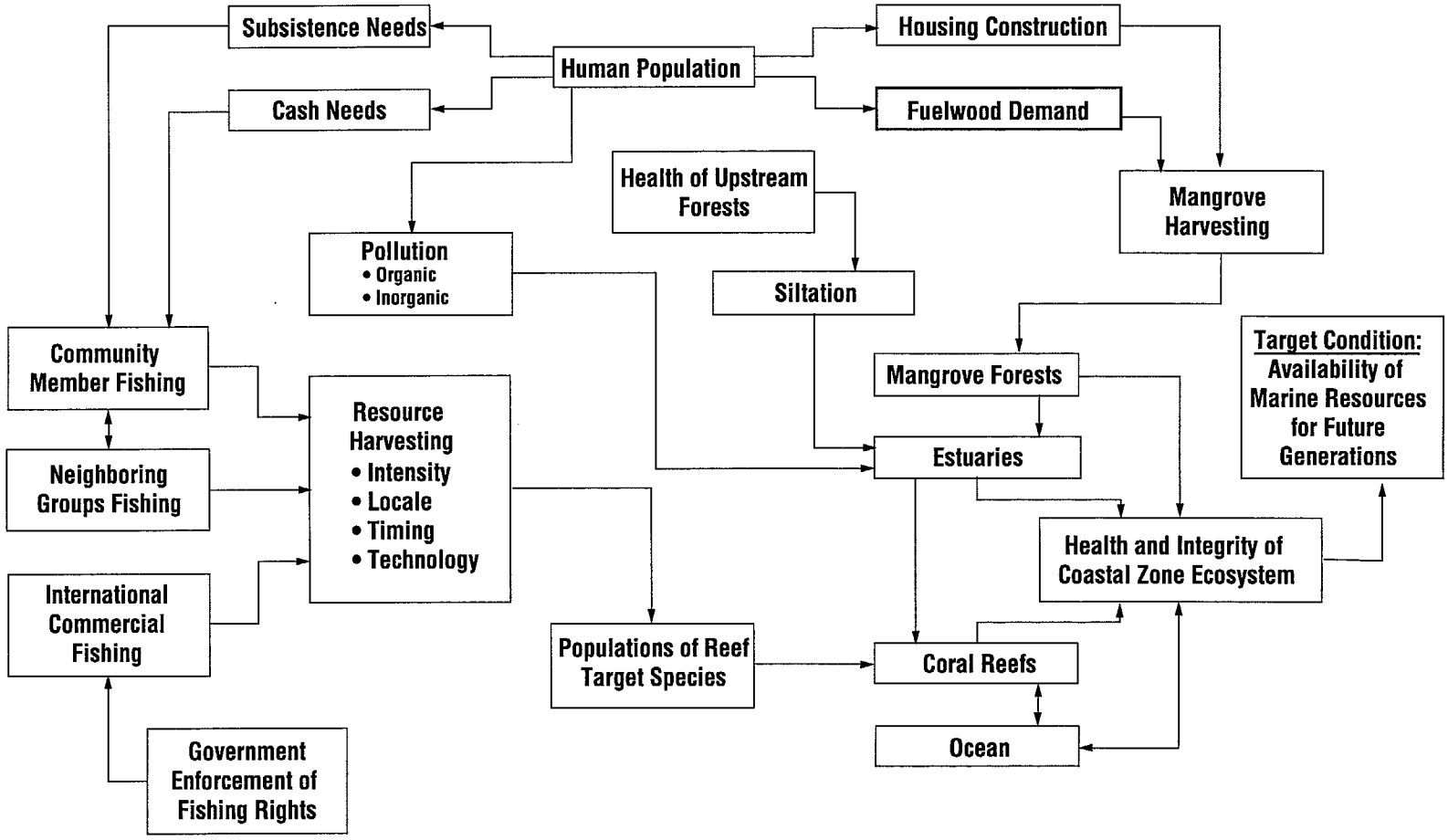
1. For each goal and objective, develop one or more impact indicators.
   See column 2 in worksheet 1.

2. For each activity, develop write down one or more process indicators.
   See column 2 in worksheet 1.

3. Using your conceptual model and your list of assumptions, write down any other pieces of information that you need to know, and develop indicators.
   See column 1 in worksheet 2.

4. For each indicator, determine how, when, where, and by whom data will be collected.
   See column 3 in worksheets 1 and 2.

Figure 6a. The Coastal Zone Project Conceptual Model.



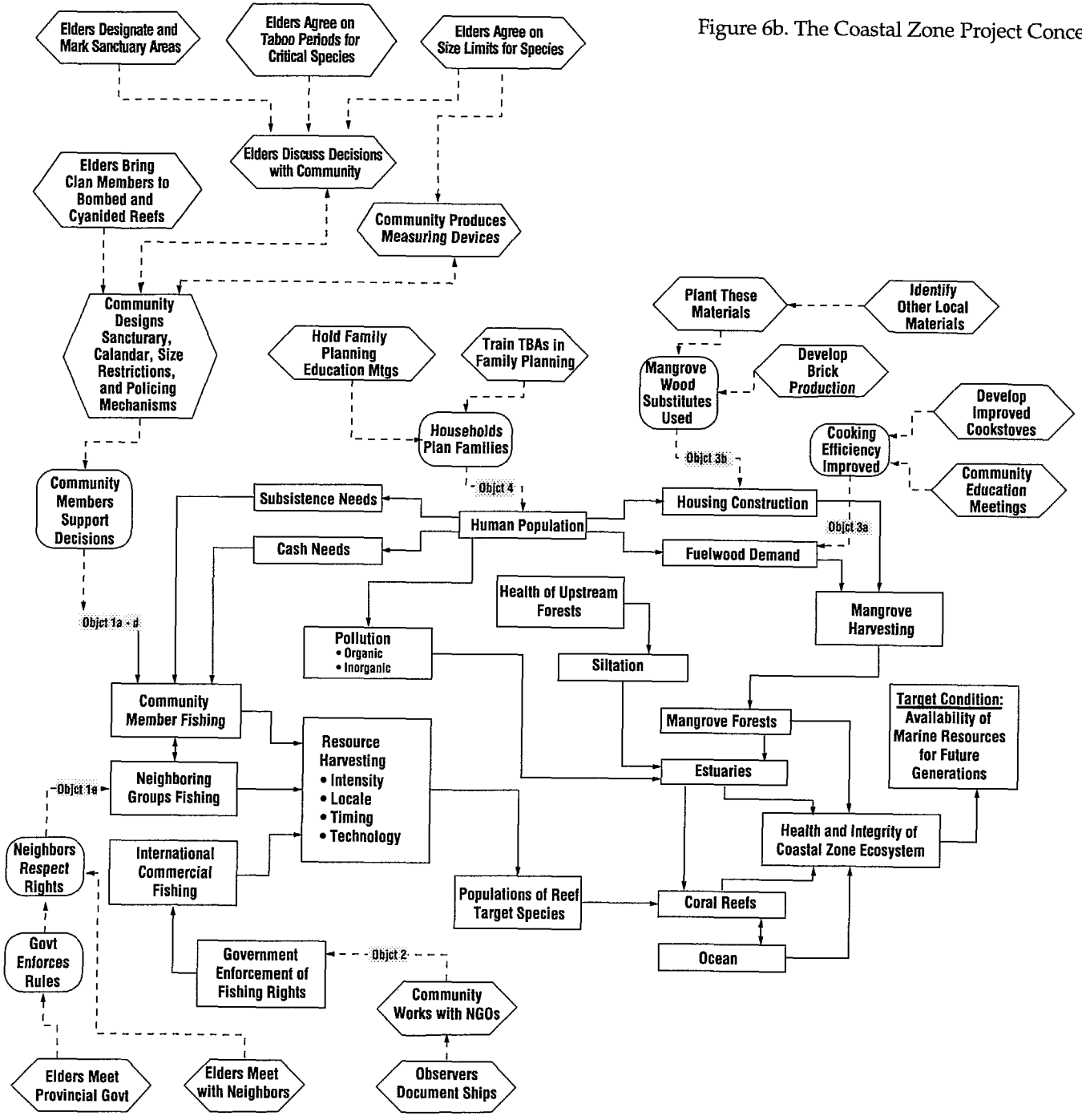


Figure 6b. The Coastal Zone Project Conceptual Model.

Worksheet 1. Project and Monitoring Plans for Coastal Zone Project.

Goal/Objective/Activity	Indicator(s)	Monitoring Plan (How, When, Where, Who)
Goal: To ensure the availability of marine resources for our grandchildren, our of and of grandchildren's grandchildren.	- Target species caught per day using standard technology (rates stay constant or increase) - Average size/weight of species caught	**How:** Review records (fishermen and buyers) **When:** At dock **Where:** Daily records compiled monthly **Who:** Community-designated monitoring coordinator
Objective 1a: (Location) During the second year of the project, village elders do not hear any substantiated reports of community members fishing in sanctuary areas.	Number of reports of violations	**How:** Group interview (Council of Elders that receives reports of violations) **When:** Monthly meetings of Council **Where:** Chief's house **Who:** Designated Council member
Activities for Objective 1a: - Convene elders to designate, map, and mark sanctuary areas based on traditional fishing practices.	Sanctuaries are designated and boundaries are mapped and marked	**How:** Direct observation (visit sanctuary sites) **When:** Immediately after activity has taken place **Where:** At sanctuary **Who:** Community-designated monitoring coordinator **How:** Key informants (members of Council of Elders) **When:** After appropriate Council meeting **Where:** Chief's house **Who:** Designated Council member
- Hold meetings with community members to discuss declaring part of the traditional fishing grounds as sanctuary areas.	Number of meetings held at which sanctuaries are the primary topic of discussion	**How:** Key informant interviews (Chief) **When:** Monthly meetings of Council **Where:** Chief's house **Who:** Designated Council member **How:** Direct observation **When:** Continuous; daily records compiled monthly **Where:** At fishing sites and dock **Who:** Community-designated monitoring coordinator

Goal/Objective/Activity	Indicator(s)	Monitoring Plan (How, When, Where, Who)
- Design community policing mechanisms.	System of community policing developed and put into place	**How:** Focus groups (community members) **When:** At start of project and once a year thereafter **Where:** Community meeting house **Who:** Community-designated monitoring coordinator
Objective 1b: (Timing) By the end of the second year of the project, village elders do not hear any substantiated reports or find evidence of community members fishing for taboo species during their critical breeding periods.	Number of reports of catching taboo species during critical periods	**How:** Group interview (Council of Elders) **When:** Monthly meetings of Council **Where:** Chief's house **Who:** Community-designated monitoring coordinator
Activities for Objective 1b: - Village elders meet to agree on taboo periods for critical species.	Taboo periods set	**How:** Key informant interview (Chief) **When:** After relevant meeting **Where:** Chief's house **Who:** Community-designated monitoring coordinator
- Elders meet with community members to develop seasonal fishing calendar.	Calendar established	**How:** Group interview (Council of Elders) **When:** After relevant meeting **Where:** Chief's house **Who:** Community-designated monitoring coordinator
Objective 1c: (Technology) By the end of the second year of the project, no fishermen are using either cyanide or bombs for capturing fish.	Reports of cyanide and bomb fishing	**How:** Group interview (Council of Elders) **When:** Monthly meetings of Council **Where:** Chief's house **Who:** Community-designated monitoring coordinator
	Reef area damaged by cyanide/bomb fishing	**How:** Sentinel site monitoring (of high-risk areas) **When:** Twice a year **Where:** Selected reef sites **Who:** Community-designated monitoring coordinator

Goal/Objective/Activity	Indicator(s)	Monitoring Plan (How, When, Where, Who)
Activities for Objective 1c: - Community elders organize visit of representatives of each family group to bombed and cyanide-impacted reef sites.	Number of visits conducted	**How:** Key informant interviews (organizers of visits) **When:** Monthly meetings of Council **Where:** Chief's house **Who:** Community-designated monitoring coordinator
- Develop more formal community policing mechanisms to enforce existing restrictions on cyanide and bomb fishing.	Policing plan developed and enacted	**How:** Focus groups (community members) **When:** At start of project and once a year thereafter **Where:** Community meeting house **Who:** Community-designated monitoring coordinator
Objective 1d: (Intensity) By the end of the third year, there are no incidences of harvesting snappers, groupers, and conch in violation of size limits for each species as defined by the community council.	Number of below-permissible size individuals of each species (snappers, groupers, and conch) brought to shore	**How:** Key informant interviews (Council member responsible for monitoring daily catches) **When:** Daily **Where:** Dock **Who:** Community-designated monitoring coordinator
Activities for Objective 1d: - Community meeting to define size limits.	Meeting held	**How:** Key informant interviews (Chief) **When:** After relevant meeting **Where:** Chief's house **Who:** Community-designated monitoring coordinator
- Community members produce measuring devices that fishermen and women can use in their boats to assess catch size.	Number of devices produced for each species	**How:** Key informant interviews (with community group charged with making devices) **When:** After relevant workshop **Where:** Community meeting house **Who:** Community-designated monitoring coordinator
	Percentage of boats with relevant devices on board	**How:** Survey of all fisherman **When:** Biannually **Where:** Dock/Beach where fisherman keep boats **Who:** Community-designated monitoring coordinator

Goal/Objective/Activity	Indicator(s)	Monitoring Plan (How, When, Where, Who)
- Community elders develop system of monitoring daily catches to ensure compliance with established size guidelines.	Plan developed and implemented	**How:** Direct observations (of all fishing boats) **When:** Once a week **Where:** Dock/Beach **Who:** Community-designated monitoring coordinator **How:** Survey of all fishermen **When:** Biannually **Where:** Dock/Beach **Who:** Community-designated monitoring coordinator
Objective 1e: Within three years of the project start date, no more than one incident per month occurs in which neighboring clans are found fishing in village traditional fishing grounds.	Number of incidents per month in which neighboring clans are found fishing in traditional grounds	**How:** Group interviews (Council of Elders) **When:** Monthly meetings of Council **Where:** Chief's house **Who:** Community-designated monitoring coordinator
Activities for Objective 1e: Council of Elders organizes delegation to discuss purpose and status of sanctuaries with neighboring village.	Number of meetings held	**How:** Key informant interviews (Chief) **When:** Monthly meetings of Council **Where:** Chief's house **Who:** Community-designated monitoring coordinator
Council of Elders contacts provincial ministry of natural resources to enlist its assistance in enforcing traditional resource claims.	Contacts with relevant government officials	**How:** Key informant interviews (Chief) **When:** Monthly meetings of Council **Where:** Chief's house **Who:** Community-designated monitoring coordinator
Objective 2: By the end of five years, numbers of foreign fishing vessels operating in community fishing grounds have been reduced by seventy-five percent.	Number of sightings of foreign fishing vessels per month	**How:** Direct observations **When:** Continuous **Where:** At sea while fishing/From shore **Who:** Key observers from the community

Goal/Objective/Activity	Indicator(s)	Monitoring Plan (How, When, Where, Who)
Activities for Objective 2: - Train key observers to document sightings of illegal, foreign fishing activities (including ship identification numbers), and report sightings to provincial authorities.	- Number of training sessions - Number of people trained	(Both) **How:** Group interviews (Council of Elders) **When:** Monthly meetings of Council **Where:** Chief's house **Who:** Community-designated monitoring coordinator
- Contact sympathetic NGOs in capital city for assistance in obtaining media coverage of the violations.	Number of contacts made	**How:** Key informant interviews (Chief) **When:** Monthly meetings of Council **Where:** Chief's house **Who:** Community-designated monitoring coordinator
Objective 3a: By the end of two years, all households will use one-third less mangrove fire-wood (measured by weight) than they did at the start of the project.	Kilograms of mangrove wood used per household on a weekly basis	**How:** Household surveys **When:** Quarterly **Where:** Village households **Who:** Community-designated monitoring coordinator and designated Council member
Activities for Objective 3a: - Hold community education meetings to discuss the importance of mangroves for the estuarine food chain.	- Number of meetings held - Percentage of community participating	(Both) **How:** Key informant interviews (Chief) **When:** After relevant meeting **Where:** Chief's house **Who:** Community-designated monitoring coordinator
- Consult with local government authorities for assistance in developing improved cooking stoves that reduce fuelwood consumption.	Percentage of households using improved cookstoves	**How:** Household surveys and direct observation (done together) **When:** Annually **Where:** Village households **Who:** Community-designated monitoring coordinator and designated Council member
Objective 3b: By the end of seven years, all new buildings constructed in the community use no mangrove wood and instead substitute other materials (bricks or bamboo).	Number of new building projects using mangrove wood	**How:** Direct observation **When:** Continuous **Where:** Village **Who:** Community-designated monitoring coordinator and designated Council member

Goal/Objective/Activity	Indicator(s)	Monitoring Plan (How, When, Where, Who)
Activities for Objective 3b: - Identify other local materials that can be used for construction purposes.	New materials identified	**How:** Key informant interviews (Chief) **When:** Monthly meetings of Council **Where:** Chief's house **Who:** Community-designated monitoring coordinator
- Plant bamboo and other fast-growing species to provide long-term supplies of building materials.	Hectares of bamboo planted	**How:** Land use surveys of family plots in combination with direct observation **When:** Annually **Where:** Village households **Who:** Community-designated monitoring coordinator and designated Council member
- Obtain funding and technical support from regional government to develop local brick production capacity.	- Amount of funding obtained - Number of trainings held by government extension workers	**How:** Key informant interviews (with chief and ministry representatives) **When:** After relevant meetings **Where:** Chief's house **Who:** Community-designated monitoring coordinator
Objective 4a: By the end of three years, seventy-five percent of families in the community are knowledgeable about and have access to contraceptive options.	- Percentage of women (15 - 45) knowledgeable about family planning options	**How:** Household surveys **When:** Annually **Where:** Village households **Who:** Community-designated monitoring coordinator and designated Council member
Note: Cultural sensitivities make setting directly measurable impact objectives such as contraceptive acceptance and prevalence impossible in this community. This objective, although weak in this regard, is the best one possible.	- Percentage of men (15 - 45) knowledgeable about family planning options	**How:** Household surveys **When:** Annually **Where:** Village households **Who:** Community-designated monitoring coordinator and designated Council member
	- Number of sites in community where contraceptives are available	**How:** Key informant interviews (with TBAs and community health promoters) **When:** Annually **Where:** Homes of TBAs/promoters **Who:** Community-designated monitoring coordinator

Goal/Objective/Activity	Indicator(s)	Monitoring Plan (How, When, Where, Who)
Activities for Objective 4a: - Arrange with Ministry of Health officials to hold monthly education meetings that discuss family planning benefits and options.	- Number of meetings held per year - Percentage of women and men of target ages attending	**How:** Key informant interviews (with Ministry of Health representatives) **When:** Two times per year **Where:** Ministry of Health office **Who:** Community-designated monitoring coordinator
- Arrange with Ministry of Health officials to train traditional birth attendants (TBAs) in family planning and well-baby options.	- Number of training sessions held with TBAs - Number of TBAs attending	**How:** Key informant interviews (with Ministry of Health representatives) **When:** Two times per year **Where:** Ministry of Health office **Who:** Community-designated monitoring coordinator
Objective 4b: By the end of ten years, average birth spacing for the community has doubled.	Average time between births	**How:** Household surveys **When:** Annually **Where:** Village households **Who:** Community-designated monitoring coordinator and designated Council member
Activities for Objective 4b: Same as for Objective 4a.	Same as for 4a	Same as for 4a

Worksheet 2. Additional Information Required Based on Conceptual Model and Assumptions.

Information	Indicator(s)	Monitoring Plan (How, When, Where, Who)
Assumption 1: Government agencies have the will and capacity to enforce necessary regulations both locally and internationally.	Number of responses to community requests for enforcement	**How:** Key informant interviews (Chief) **When:** Monthly meetings of Council **Where:** Chief's house **Who:** Community-designated monitoring coordinator
Assumption 2: Community cohesiveness is still sufficient for elders to be respected and for violations to be reported to them.	Community attitudes toward reporting to elders	**How:** Focus groups (community members) **When:** At start of project and once a year thereafter **Where:** Community meeting house **Who:** Community-designated monitoring coordinator
Assumption 3: Local substitutes are available for mangrove wood in house construction.	Substitutes are identified	**How:** Group interviews (Council of Elders) **When:** Monthly meetings of Council **Where:** Chief's house **Who:** Community-designated monitoring coordinator
Conceptual Model Question 1: What is the impact of siltation on estuaries and reefs?	Sedimentation in estuaries and on reefs	**How:** Direct observation **When:** Continuous **Where:** Village **Who:** Community-designated monitoring coordinator and designated Council member

5. HYPOTHESIS TESTING AND ROLLING DESIGN IN MADAGASCAR: A CASE STUDY, by Roy Hagen, USA

This case study concerns designing an integrated conservation and development project (ICDP) and conducting M&E at the programmatic level in Madagascar. It complements the article on ICDP design, by Michael Brown and Barbara Wyckoff-Baird, in chapter 2, as well as the M&E article above.

Madagascar's Protected Area Program is based on the hypothesis that development can be an effective means of promoting conservation of Madagascar's protected areas and their biodiversity. This concept is implemented through what have come to be known as ICDPs (see chapter 2).

From the creation of the first protected areas in Madagascar in the 1920s until recently, Madagascar relied, as did the rest of the world, on policing or enforcement as the principal means for conserving its protected areas. The government created protected areas and declared them largely off limits to local populations. Forest service agents had responsibility for enforcing these restrictions.

Enforcement was generally sufficient when population density and demands on the natural resource base were relatively low, and the forest service had adequate resources and support from government authorities. But conditions in Madagascar have changed drastically, as they have elsewhere, and enforcement is no longer sufficient. Most of the villagers living around Madagascar's protected areas live in poverty and rely on unsustainable land use systems that leave them with little alternative than to exploit the resources of the adjoining protected areas.

The ICDP approach began to gain wide popularity in the late 1980s. It is based on the recognition that protected area conservation must take into account the legitimate development needs of people living around protected areas.

The government of Madagascar has entrusted the coordination and policy implementation of its protected areas to the recent, donor-inspired NGO, the National Association for the Management of Protected Areas (ANGAP). Working with ICDP operators, ANGAP has placed a major emphasis on developing better linkages between development and conservation and determining whether these linkages are working.

ICDP Goal

The goal of an ICDP is to improve the conservation of ecosystems and biodiversity in the protected area in question. All ICDPs are thus centered around a protected area or areas. Rural development is not the goal *per se*, but may be a means to promote conservation.

Threats

Various human pressures threaten to destroy or degrade protected areas. Natural threats such as cyclones, drought, or climatic variations are largely beyond human control. One can do something, however, about human pressures. Common human pressures on protected areas in Madagascar include the following:

- Unsustainable slash-and-burn agriculture (*tavy*);
- Both commercial and subsistence-level harvest of all types of wood products;
- Both commercial and subsistence-level harvest of a diverse array of non-woody, plant products;
- Commercial and subsistence-level hunting and fishing;
- Pasturing of domestic livestock in protected areas; and
- Wildfires caused by human activity.

The peripheral zone around a protected area has been loosely defined as that zone from which the human pressures on the protected area originate, that is, the area in which the people exerting the pressures on the area live.

Objectives of ICDPs

The principal objective of an ICDP is to diminish (or ideally, eliminate) the human pressures on the protected area. A secondary objective, one not unique to ICDPs, is to develop and implement a management plan for the protected area. This article concentrates on the design steps for achieving the principal objective.

Means

Appropriately targeted development activities are the means for diminishing human pressures on a

protected area. This is a unique feature of ICDPs. An ICDP seeks to define and extend alternatives to the destructive practices that threaten to destroy or degrade the protected area.

Key Linkages between Development and Conservation

Two key linkages between development and conservation have been identified. They address two basic questions — where, and how, the ICDP should inte vene.

Where to intervene? This is not a trivial question. In Madagascar, from 100 to 200 villages and hamlets may exist within five to ten kilometers of a protected area. An ICDP that attempts to work with all people in all villages around a protected area quickly runs the risk of diluting its efforts to the point of having little measurable impact, and, perhaps worse, largely missing the key pressures on the protected area.

- An ICDP should geographically target those populations and behaviors that are exerting the key pressures on the protected area.

One should intervene where the threats are the greatest. This is the first linkage between development and conservation.

How to intervene? Once the project has identified the key populations and destructive practices that are destroying or degrading the protected area, the project must define how it will intervene. What can or should be done?

- An ICDP should identify and extend alternatives to the destructive practices of the target populations.

An ICDP seeks to change the behavior and practices of peripheral zone residents. To diminish the threats to the protected area, we have to convince people to change the way they do things, but not through simple enforcement. We need to identify with them, and extend viable alternatives to destructive practices. This is the greatest challenge in the design and implementation of an ICDP.

Alternatives must be technically sound, culturally acceptable, and financially feasible for the target population, and must entail acceptable levels of risk. The identification and extension of economic alternatives to destructive practices is the key that makes the development component of ICDPs different from conventional rural development projects.

Information Needs for ICDP Design

If one accepts the above goal, objectives, and linkages for ICDPs, then there are a number of key steps to ICDP design that logically follow.

Identification and Prioritization of Pressures

One must identify the individual human pressures on the protected area and prioritize which particular pressures pose the greatest threat to the protected area. Finally, one must identify and prioritize where these pressures occur. Both analysis are intimately linked. Prioritization is generally subjective.

Spatial Analysis of Pressures

For the geographical analysis of pressures, it is necessary to divide the peripheral zone into units that can be subjectively compared to one another. Sources of information for the identification and geographical analysis of pressures include combinations of the following:

- The staff from the previous phases of redesigned ICDPs;
- Satellite imagery, aerial photographs, and existing thematic maps — especially good for deforestation and changes in land cover/ land use;
- Ground surveys of the protected area and its peripheral zone — especially good for detecting tree cutting, pasturing of livestock, and various extractive activities;
- Socioeconomic survey techniques (PRA, RRA, etc.);
- Government technical agents, authorities, researchers, and others familiar with the protected area and its peripheral zone; and
- Literature.

Prioritized Zonation of the Protected Area

The analysis of pressures around the protected area should be balanced by dividing the protected area into zones of higher to lower priority for conservation. This could be based on factors such as the presence of the habitat of rare and endangered species, the level of degradation, and so on. The two maps of pressures and priority zones for conservation

should be compared to better define and prioritize the zones of intervention of the ICDP.

Analysis of the Causes of the Priority Pressures

It is critical to analyze the causes of each key pressure The same pressure may have different causes among various locations. On the Masoala Peninsula, the ICDP design team found that the poorest of the villagers practice slash-and-burn agriculture for their subsistence food needs. Others, somewhat better off, make an economic choices between producing *tavy* rice versus vanilla, cloves, coffee, and other cash crops because the producer prices of these crops vary over time. The wealthiest villagers hire laborers to clear the forest for *tavy* primarily to gain tenure rights to the land. Different situations will necessitate identification of different alternatives and strategies in ICDPs.

Design of Alternatives and Hypotheses Testing

ICDP design typically involves a relatively high degree of uncertainty as to what strategies will work best. One of the unique features of the Protected Area Program in Madagascar is the recognition that we do not yet know how best to link development with conservation. One of the principal objectives is to test hypotheses linking development and conservation so that one can continually improve on these linkages over time. These hypotheses can be expressed in the form, If the project extends alternative X, then pressure Y will decrease.

Monitoring and Evaluation for Hypotheses Testing

Hypotheses testing would be difficult or impossible without an M&E system designed for this purpose. The previous article on M&E in this chapter covers this process in detail. A basic principle for M&E systems in ICDPs is that each pressure or destructive practice must be monitored independently. At the same time, the alternatives proposed by the project to relieve these pressures must also be monitored.

For example, if an ICDP promotes cash crops as an alternative to slash-and-burn upland rice, then the M&E system should monitor the adoption of the alternative cash crops on the one hand (i.e., number of farmers participating, number of hectares planted, and increase in incomes), and the extent of continuing deforestation for slash-and-burn purposes on the other hand. If farmers do not adopt the alternative, one must analyze the reasons why, and develop new alternatives/strategies as appropriate. If farmers adopt the alternative, but the M&E system shows that slash-and-burn cultivation continues unabated, the hypotheses will be invalid. Adoption of new practices in and of themselves are therefore not sufficient to validate the hypothesis. For example, farmers might use increased revenue from their cash crops to hire laborers to clear more forest for them in order to obtain tenure, as at Masoala. This would be an unintended, perverse effect of the project's intervention.

Only if the M&E system shows that the alternative is adopted and forest clearing is decreased can one conclude that the hypotheses may be valid. This would be reinforced if the M&E system included a site or sites where there was no project intervention, and where slash-and-burn practices continued unabated.

M&E should be considered first and foremost an internal management tool that projects can use continually to improve on project implementation — to make mid-course corrections as needed. This requires considerable flexibility on the part of both donor and operator. The flexibility to make mid-course corrections is sometimes called a *rolling design.*

6. **RESULTS-ORIENTED PROGRAMMING,** from the NGO Division, Canadian Partnership Branch, Canadian International Development Agency, Canada

Results-oriented programming is a new approach to development. It anticipates the uniqueness of each situation and rewards innovation. Resources can be shifted at any time from activities that prove to be uneconomical, inefficient, or ineffective to activities that promise to yield better results. Ongoing evaluation, particularly self-evaluation, is essential to enable an NGO and its partners to learn immediately from successes and failures, in order to develop alternatives and try again.

This approach replaces the blueprint or proposal-led model, which assumes that projects can be easily replicated, and that current knowledge, based on past experience, is an adequate guide for successful project results. In blueprint programming, the inputs and details of the project proposal, rather than the results sought, drive the project and are the

point of reference for M&E. This model gives much more time and attention to the plan than to the end results.

Following is an example of the two approaches:

Blueprint Programming

Program goal:	Job creation
Program objective:	To reduce unemployment
Resources to be applied:	Funds budgeted
Activities to be implemented:	Training courses
Expected outputs:	Twenty courses, 300 trainees

Results-Oriented Programming

End result:	The creation of a certain number of sustainable jobs within a specified time frame.

The focus of the planning is on progress toward the stated results. Training courses will not be the only activity required, because taking courses does not guarantee the trainee a job. Community attitudes may have to change. The local economy will have to be surveyed. Projects that can hire the trainees will have to be supported.

Goals generally refer to an NGO's vision of a better world. Objectives derive from goals and are specific, measurable statements of what the program or project seeks to achieve. Results refer to what a program or project actually achieves, within a particular period of time, toward the attainment of the goals and objectives. Within the context of results-based management, *results* means the outcomes, impacts, effects, or consequences of projects, programs, or other activities.

Identifying Realistic Results

NGOs may not be able to adequately appraise results, in the sense of final program outcomes, for years. NGOs should distinguish between intermediate program outcomes, which can be accomplished within the funding period, and sustainable effects, which may be assessed in later years.

An NGO and its partners must communicate to arrive at realistic expectations of what they can achieve in a given year or over the life of a program/project. While they may have a common vision, common goals, and easily agree on specific program/project objectives, they may have different expectations. In clarifying expected results and identifying indicators, the NGO and its partners are building the framework for future evaluation of the program/project. They are defining how they are willing to be judged.

Indicators of Results

Results need to be measurable if programming is to be oriented around them. At the outset, an NGO and its partners need concrete and comprehensive information on the current situation to serve as a basis for comparison as the program progresses. Measurement of progress can be quantitative and qualitative. Indicators must be chosen that correspond to the program/project being assessed.

Obstacles to Measuring Results

Risk Factors. Measuring effects may be complicated if conditions for success change. The results sought by an NGO may not be achieved because they are blocked by political or other factors outside the NGO's control. The actions of the NGO and its partners may be necessary but insufficient to accomplish the desired task. The NGO should assess the critical conditions (success or risk factors) underpinning the program, and be prepared to justify its continued support for activities and partners facing apparently insurmountable obstacles to achieving the desired program results.

Attribution. If an NGO and its partners seek social change and change occurs, it will be difficult to isolate the causes of the results observed and attribute them to the actions of particular organizations. The attribution problem cannot be avoided in results-oriented programming in the social, political, and economic spheres. Describing and measuring development results will necessarily be tentative. Findings about the NGO's internal processes and program outputs may have to be accepted as proxies for development results.

Timing. Another measurement problem arises from the fact that organizations and development activities experience ups and downs. For this reason, regular self-evaluation by NGOs and partners

is preferable to evaluations every three or more years. The establishment of long-term partnerships and of a long-term presence by NGOs in particular communities will facilitate the assessment of results.

7. GEOGRAPHICAL INFORMATION SYSTEMS (GIS) AS A TOOL FOR CONSERVATION, by David Olson, Conservation Science Unit, WWF-US, USA

This overview examines how geographical information system (GIS) technology is applicable in biodiversity conservation work. In fact, it can be used to address any number of issues in the field of NRM.

Conservation strategies are increasingly focusing on patterns and processes that operate at landscape scales. Focusing on landscapes allows for determining the long-term persistence and viability of populations, species, and ecosystems.

In order to effectively address such issues as habitat fragmentation, linkages among habitats, and edge effects within the short time frame demanded by increasing pressures on ecosystems, we must employ the best available tools for information, analysis, and communication. GIS stores, displays, and analyzes geographic information and map data, and can greatly enhance the ability of conservation planners and managers to address landscape-level issues. GIS can also be used for planning and monitoring trends at more local levels. As the technology is becoming increasingly within the purchasing power of NGOs, its potential usefulness in NRM should significantly increase in the years to come. GIS has the following features for conservation work:

- GIS enables us to access and utilize recent and accurate information relevant to conservation. High-quality, temporal data on forest cover, land use patterns, and other landscape features are increasingly available through satellite imagery, aerial photos, and digital databases, and can be employed rapidly for prioritizing conservation efforts and management of conservation sites and activities. For remote areas where many conservable areas are found, site-specific information relevant for conservation is often only available from remote sensing data. Scientists also can use GIS to conduct analyses for single-species conservation programs, for example, to correlate prey density or vegetation types with target species distributions, or to predict migration corridors.

- GIS technology performs spatial analyses, statistical queries, and predictive modeling of large, complex data sets. The analytical capabilities of GIS software enable us to assess patterns of biodiversity, threats, and spatial relationships at levels of complexity and resolution appropriate for conservation; to measure, quantitatively and qualitatively, large-scale and often abstract parameters and apply them to conservation analyses; and to identify important patterns and factors that might not emerge in more conventional analyses. Also, conventionally cumbersome, dynamic databases can be readily stored and modified over time using GIS.

- GIS outputs such as maps, satellite imagery, and graphic displays provide conservation advocates with powerful tools for conveying complex spatial relationships to decision makers, local communities, researchers, and conservation donors. GIS can provide rapid analyses and map updates for timely responses to decision makers and public debates.

- The benefits of GIS described above all help equalize the ability of conservation advocates to access information and employ robust analyses relative to the capabilities of those human institutions that degrade and exploit biodiversity.

GIS can be as simple as paper or mylar overlays. Such basic systems can provide general answers to many commonly asked questions, but projects that call for highly accurate results or complex analyses typically require the use of computer-based GIS. Computerized GIS "platforms" rang from laptops to personal computers to workstations, with respectively higher capabilities, complexity, and costs (equipment, software, personnel, and time). GIS software packages also vary considerably in their technical functions and analytical capabilities, abilities to interface with different information and data sources, ease of learning, and acquisition and maintenance costs. Field projects can effectively employ GIS using PC ArcInfo, CAMRIS, or other software on a laptop or personal computer. Peripherals such as printers, digitizers, GPS units, scanners, and support softwares (e.g., IDRISI or other remote sensing software, relational databases, and graphics programs) can greatly enhance a field program's capabilities. Information and databases generated by activities in the field can be transferred to more sophisticated facilities for further analyses, modeling, revisions, and presentation enhancement.

Although GIS holds the potential to greatly enhance our understanding of conservation problems and to facilitate the implementation of conservation strategies, careful application is necessary to avoid wasting limited funds, time, and opportunities. Both software and hardware can be expensive, rapidly eating up project budgets and supplies. Updating and maintenance can represent substantial recurrent costs, particularly for more sophisticated GIS programs. Most field project computers configured for basic word processing do not have the disk space or RAM needed for GIS software and would require upgrades. Databases can be quite expensive either to obtain or build. Automated GIS will not be within the direct reach of many NGOs. Through partnerships, however, smaller NGOs may benefit from the technology, and also may be potential data generators for using the technology.

Project managers often underestimate the time and effort required to gather and digitize basic information for input into GIS. Satellite imagery can be prohibitively expensive for many projects. The trained personnel required to operate and maintain GIS systems are often difficult to locate or demand substantial salaries, and training itself can be time consuming and expensive. Project managers must carefully consider the capital outlay and recurrent costs associated with GIS before they embark upon building a capability. GIS consultants can be contracted for some tasks, but may not be cost effective because of high fees and the potential lack of project control and ownership over data, analyses, and final products. Conservationists also must be cautious when developing and presenting GIS products for advocacy and persuasion. Maps and statistics, assumptions and caveats can get buried, or colors can be changed, with the result that outputs are commandeered for purposes contradictory to conservation. Using GIS requires considerable integrity.

Potential costs and drawbacks of GIS must be carefully weighed, but in reality even small conservation projects can easily develop GIS capability with minimal costs and greatly enhance their effectiveness. For example, CAMRIS software installed on a laptop and supported by a small printer, digitizer, and peripheral software can produce high-quality maps at affordable cost (approximately US$2-3,000 for the entire system). Indeed, the vast majority of analytical functions required by most conservation planners and project managers are accommodated through such a system. Even paper and mylar overlays and close inspection of hardcopy maps can provide adequate answers to many questions. For many basic questions, the human brain is actually quite competent relative to computers at analyzing spatial patterns, such as the degree of fragmentation and identification of corridors. Costs can be minimized and productivity increased if a thorough investigation of available GIS options and available data sources is conducted prior to acquiring equipment and hiring personnel. Discussions with colleagues operating GIS in similar projects is essential, since vendors may not always present the full range of available options or understand the constraints of conservation programs.

GIS can be affordable and invaluable tools for conservation planning and management, but if the questions being asked are inappropriate or trivial then limited conservation resources will have been squandered. Moreover, the kinds of questions that arise from a particular conservation challenge should determine the type of GIS designed and implemented by a project manager. Project managers must educate themselves as to the most appropriate set of questions to be asking about their particular ecosystem or biodiversity issue, for both local and regional scales. All conservation activities, particularly those aimed at the conservation of biodiversity (in contrast to those focusing on local or regional ecosystem services and issues of human utility), must be related to achieving the fundamental goals of conservation:

- Representation of all distinct natural communities within a network of protected areas and areas managed for biodiversity conservation;
- Maintenance of ecological and evolutionary processes that create and sustain biodiversity;
- Maintenance of viable populations of species; and
- Conservation of blocks of natural habitat large enough to be responsive to large-scale periodic disturbances and long-term changes.

Analyses of landscapes (or aquascapes) at local and regional scales are important tools for achieving these goals and are particularly well supported by GIS. Landscape analyses allow conservationists to measure features such as habitat block size and the status, threat, and trajectory of ecosystem or habitat into landscape requirements and threshold values for maintaining critical ecological processes and species populations. Estimating landscape-level processes can help determine the geographic extent

of the area, or "dynamic arena," that is appropriate for developing a comprehensive conservation strategy for each ecosystem. GIS mapping of patterns of biodiversity across landscapes and development of associated predictive models are critical tools for identifying priority areas and activities for conservation, identifying gaps in conservation networks, and helping to estimate the level of effort needed to fully represent a region's biodiversity in a network of protected areas or conservation programs.

GIS-based landscape analyses provide important tools for conservation monitoring, evaluation, and adaptive management. Benchmarks for landscape-level parameters, such as the total amount of core habitat or the percentage of different successional habitats, can be determined and monitored through remote sensing imagery. Assessments of landscape conditions can also help identify the most appropriate sequence of conservation activities, such as reestablishing natural disturbance regimes before restoration of corridors, or providing warning signs that warrant shifting of conservation activities. Importantly, landscape analyses enable conservation programs to look at the big picture, both in terms of larger spatial scales and longer time periods. Such perspectives are critical if we are to build into conservation strategies adequate margins of safety for ecosystem processes and species populations that face both natural and human-induced disturbances. NGOs both big and small have the opportunity to play a critical role in biodiversity conservation. GIS is a tool that NGOs will find increasingly useful (if not obligatory) in many situations. The better NGOs understand the potential and limitations of the different systems and tools, the more they will be able to decide what aspects of GIS are or are not applicable to their situations.

CHAPTER IV

RESOURCES

This chapter provides readers with organizations, opportunities, publications, and other resources for information on both capacity building and natural resources management. This list is by no means exhaustive, but rather is an attempt to provide the first step in the continual process of accessing information. It is hoped, therefore, that as readers utilize the listed resources, they will not only be accessing useful information but also opening the door to other opportunities for obtaining the resources they need.

The chapter is divided into three sections: Organizations and Educational Opportunities, Publications, and Electronic Communications.

The first section, Organizations and Educational Opportunities, has six subdivisions: four dividing organizations geographically (Africa, North America, Europe, and Asia/Australia); one for publishers or publication distributors; and one for U.S. foundations. Under each section, organizations are listed alphabetically with descriptions of activities and contact information. If the organization has developed publications that have been included in the publications section of this chapter, this is indicated at the end of the description of the organization, along with the publication numbers. Due to time and space constraints, this list does not include all publications.

The Publications section has two subdivisions: Institutional Development and Natural Resources Management. Both subdivisions list publications under topical headings. Under Institutional Development, the topics are: Analysis/Evaluation; Capacity Building; Electronic Communications; Fund-raising/Proposal Writing; Gender; Governance/Advocacy; Management; Networks; non-governmental Organizations' Roles in Development; Participation; and Structural Adjustment. The topics under Natural Resources Management are: Agriculture; Agroforestry; Appropriate Technology; Buffer Zone Management; Directories; Environmental Education; Environmental Impact; Forestry; Gender; Indigenous Knowledge; Integrated Conservation and Development Projects; Land Tenure; Non-Governmental Organizations in NRM; NRM Policy; Participation; Pastoralism; and Protected Areas. Publications are listed alphabetically under each topic and each has been given a number. The numbers are used to cross-reference the publications with the organizations that have produced them, and are not indicative of any prioritization. Information on ordering publications is either found in the entry, or (if the work is produced by an organization listed in the previous section) on the page indicated. Costs are given in US dollars except as indicated.

The final section provides contact information on organizations with electronic communication capabilities. Lists of contacts are organized alphabetically by African countries.

A. ORGANIZATIONS AND EDUCATIONAL OPPORTUNITIES

1. AFRICA

Africa 2000 Network
c/o UNDP
PO Box 30218
Nairobi, Kenya
Tel: (254) 2-328776
Fax: (254) 2-213748

The Network promotes sound environmental management and resource use throughout Africa by providing technical assistance to national programs for institutional capacity building, strategic planning, information dissemination, and the development of appropriate environmental policies. The Network also funds training in small communities for specific resource management projects.

African Center for Technology Studies (ACTS)
PO Box 45917
Nairobi, Kenya
Tel: (254) 2-741651/744047
Fax: (254) 2-743995

ACTS seeks to promote the application of scientific and technological results on sustainable development through research, training, and information dissemination. ACTS conducts training programs in political science, information management, research techniques, and publishing. ACTS has published more than sixty books and several research series, including the magazine *Innovations*, which documents efforts to introduce sustainable development activities in Africa.

African Forest Action Network (AFAN)
c/o Louis Djomo
AFAN Coordinator
PO Box 2503
Yaoundé, Cameroon
Tel: (237) 239702
Fax: (237) 230768

Created in June 1994, AFAN promotes the conservation and sustainable use of Africa's forests. Through information exchange, cooperation, and support among African NGOs, AFAN works to: disseminate information and share field experiences with other networks and organizations; coordinate lobbying activities in Africa and internationally for sustainable forest management; and strengthen the organizational capacity of the network and its member NGOs. AFAN has recently launched a quarterly publication, the *AFAN Newsletter.*

African NGOS Environmental Network (ANEN)
PO Box 12093
Dakar, Senegal
Tel: (221) 225547/256064
Fax: (221) 255564

ANEN has established a continentwide environmental network. Its long-term objectives include promoting environmentally sustainable, culturally acceptable, economically feasible, and community-based development; strengthening the technical capabilities and expertise of local African NGOs involved in environment and development issues; and promoting the involvement of local people — especially women — in environmental and development issues. ANEN publishes a bimonthly magazine entitled *EcoAfrica.* (See also Publication 86.)

African Water Network (AWN)
PO Box 10538
Nairobi, Kenya
Tel/Fax: (254) 2-556943

AWN promotes the development of water resources through direct community participation. The network is active in developing resource materials and in capacity building through exchange visits and internship programs. AWN also seeks to work with similar organizations and networks in policy advocacy at the national and international levels. *Droplets,* a bimonthly newsletter, and other resource materials are available from the network.

Agence Panafricaine d'Etudes et Conseils (APEC)
PO Box 12227
Dakar, Senegal
Tel: (221) 255563/2
Fax: (221) 255564

Created in 1992, APEC provides training assistance and institutional support to African NGOs, with a focus on strengthening research capabilities. APEC's chief objectives are: to establish a network of African specialists committed to working with local communities in the study of alternative development strategies; to develop training programs and institutional support for African NGOs that benefit vulnerable groups; and to analyze the impacts of development programs. APEC plans to launch a bimonthly magazine, *Initiatives.*

Agency for Cooperation and Development (ACORD/Guinea)
BP 1653
Conakry, Guinea
Tel: (224) 443413

ACORD/Guinea seeks to complement the funding and operational activities of its member agencies by facilitating the emergence of strong, autonomous local structures. The membership of the consortium is nonoperational, and sees its role as capacity building in issue areas such as agriculture, community development, environment and conservation, water and sanitation, women and development, formal education, and microenterprise.

Association pour la Cooperation des Eglises, l'Environnement, et le Développement de l'Afrique Centrale (ACEEDAC)
BP 1199
Brazzaville, Congo
Tel: (242) 813383
Fax: (242) 814751

ACEEDAC's chief activities include capacity building of local organizations, providing support to churches to ensure their financial autonomy, and assisting grassroots groups in the implementation of integrated and participatory development projects. ACEEDAC also conducts training programs on development and environment issues. The Association publishes a triannual bulletin entitled *ACEEDAC CONTACT*.

Association Panafricaine pour le Développement Communautaire/Senegal (APPDC)
BP 3624
22, Blvd. de la République
Dakar, Senegal
Tel: (221) 211501

APPCD attempts to prevent rural-to-urban migration by integrating women and youth into the cycle of production, diversifying and improving food crop production, developing cattle and poultry farming through pasture revitalization, and training and education.

Botswana Biointensive Nutrition Project
PO Box 162
Maun, Botswana

This project seeks to enable families in Botswana to improve nutrition by growing a wider variety of foods and improving agricultural methods.

Center for Agriculture Technology
PO Box 9786
University Post Office
Ibadan, Nigeria
Tel: (234) 22-714053

The goal of the center is to increase food production through the adaptation of appropriate technologies.

Climate Network Africa (CNA)
PO Box 76406
Nairobi, Kenya
Tel/Fax: (254) 2-729447/2-48182
E-mail: cna@elci.apc.org

CNA promotes and facilitates the exchange of information on climate-related issues in Africa by increasing the flow of relevant information both cross-sectorally and from the local to the international level. CNA's goal is to improve the chances for environmentally sustainable and socially equitable development. *Impact* is CNA's publication.

Collectif des Organismes de Participation au Développement (COPAD)
BP 11 or BP 4650
Yaoundé, Cameroon
Tel: (237) 211551/748
Fax: (237) 211144

COPA is a national network that provides a forum for exchanging information among organizations taking part in development activities in Cameroon. The network also serves as an intermediary between members, the government, and donor agencies, and provides technical support to development organizations working in Cameroon.

Conseil Inter-Organisation Non-Gouvernementales en Centrafrique (CIONGCA)
155, Lakouanga
Bangui, Central African Republic
Tel: (236) 613336
Fax: (236) 614074

The goal of CIONGCA is to encourage development initiatives, facilitate the sharing of experiences among local and foreign NGOs, ensure the training of NGO leaders, and support the formation of local NGOs.

Cooperative for Research and Education (CORE)
PO Box 42440
Fordsburg 2033, South Africa
Tel: (27) 11-8369942/3
Fax: (27) 11-8369944

CORE provides research and education services to community groups, educational institutions, NGOs, and trade unions in South Africa. Its activities include producing educational materials; establishing teacher development centers and programs; monitoring political negotiations and human and

trade union rights; producing weekly press clippings for churches, trade unions, political organizations, and community groups; and researching current social issues.

DHA Self-Help Organization
PO Box 150
ATTA Swerri
Imo, Nigeria

The DHA Self-Help Organization arranges courses and field extension programs for small farmers in poultry production.

The Development Resources Centre (DRC)
PO Box 6079
Longsbank Building, 15th Floor
187 Bree Street (cnr rissik)
Johannesburg 2000, South Africa
Tel: (27) 11-8387504
Fax: (27) 11-8386310

DRC offers consultant services and training courses in organizational development and management topics. In addition to delivering its own courses in community work and organizational development, advocacy for community organizations, and participatory planning methodologies, DRC has developed a diploma course in Management of Development Organizations with the University of the Witwatersrand Graduate School of Business.

Earth Care Africa
PO Box 76358
Nairobi, Kenya
Tel: (254) 2-566428

Earth Care was created in 1992 to assist NGOs and development organizations in the analysis, monitoring, and implementation of development policy and information on environmental issues. The organization provides training in dissemination of environmental information, communications, policy analysis, and publishing.

East African Environmental Network (EAEN)
c/o East African Wildlife Society
PO Box 20110
Nairobi, Kenya
Tel: (254) 2-751100/72
Fax: (254) 2-746868

EAEN works to raise awareness about natural resource conservation and sustainable development through information dissemination, public education, and advocacy. EAEN convenes an annual, regional conference on social, cultural, economic, political, and physical dimensions of the environment, at which participants from NGOs, independent organizations and government agencies join in open and free discussion. The Network publishes an annual newsletter, *EAEN Network News*.

El Taller
BP 137,29 IBN BASAM
Tunis, Belvedere 10002
Tunisia
Tel: (216) 1-752057
Fax: (216) 1-751570
E-mail: eltaller@gn.apc.org

An NGO network that organizes regular workshops for African NGOs, El Taller provides training in organizational management, NGO leadership and development, and capacity building. Through structured courses, NGO participants share experiences and exchange information about institutional development. Workshops also address concrete issues, including human rights, environment, gender, democracy, the development agenda, lobbying and advocacy, and NGO management. Course participants spend several weeks visiting NGOs in other countries to compare experiences.

Environment Liaison Centre International (ELCI)
PO Box 72461
4th Floor, Gateway House
Nairobi, Kenya
Tel: (254) 2-562015/22/172/560476
Fax: (254) 2-562175
E-mail: elci@gn.apc.org

ELCI was created as a liaison between the United Nations Environment Programme and environmental NGOs worldwide. ELCI has increasingly acted as the coordinator of this 700 member network, responding to the information and communication needs of its membership. The

center focuses on a host of issues including agriculture and forestry, community development, renewable energy, biodiversity conservation, women in development, and formal education programs. ELCI publishes two bimonthly newsletters, *Ecoforum* and *News Alert* (available in English, French, and Spanish), in which NGOs share information about environment and development issues. (See also Publications 26, 170, and 171.)

Environmental and Development Agency Trust (EDA Trust)
PO Box 322
Newton 2113, South Africa
Tel: (27) 11-8341905
Fax: (27) 11-8360188
E-mail: newground@wn.apc.org

EDA Trust works with resource-poor community organizations by providing advice and training, and by facilitating access to services in order to increase the organizations' capacity to manage their own development; and to bring about positive policy changes through advocacy, networking, and lobbying towards a more sustainable, just, and equitable use and distribution of society's resources.

Environnement et Développement Action-Tiers Monde (ENDA-TM)
PO Box 3370
Dakar, Senegal
Tel: (221) 216027/224229
Fax: (221) 222695
E-mail: endadakar@apc.org or geo2.enda

ENDA Inter-Arabe
Cite Venus, Bloc 2
El Menzah VII
1004 Tunis, Tunisia
Tel: (216) 1-752003
Fax: (216) 1-766234

Originally established as an environmental training program, ENDA now provides support to rural and urban grassroots and environmental groups in Africa, Asia, Latin America, and France. The organization also develops communications and networking capacities for NGOs concerned with sustainable natural resource use, community development, appropriate environmental technologies, economic development, health, and children's issues. Through research, training programs, publications, workshops, and seminars, ENDA works to educate and train communities and organizations about NRM issues and methods for institutional strengthening. ENDA's serial publications include the *African Environment* series (available in English and French); *Etudes et Recherches* (occasional paper series); *Documents de Base; Vivre Autrement Magazine*, and *Foyers Amelioré*

Food for the Hungry International/Kenya
PO Box 14978
Waiyaki Way, Westlands
Nairobi, Kenya
Tel: (254) 2-60689/61916

Food for the Hungry provides assistance to communities in health, agricultural training, livestock improvement, agroforestry, microenterprise, and water supply projects.

Forum of African Voluntary Development Organizations (FAVDO)
PO Box 12093
Rue 4, Zone B
Dakar, Senegal
Tel: (221) 255547/6064
Fax: (221) 255564

E-mail: GEO2:RADI

Established in 1987 to facilitate the development of African NGOs, FAVDO assists its members on issues of leadership, involving women in decision-making processes, and economic and environmental sustainability. The forum has concentrated on promoting popular participation and integration of NGOs in civil society; fostering NGO capacity building; studying indigenous knowledge of natural resource use; and organizing subregional seminars for NGOs to develop environmental action programs. FAVDO publishes two newsletters, *Echoes of FAVDO* (quarterly) and *FAVDO Newslink* (monthly), in both English and French.

Indigenous Food Plants Programme (IFPP)
PO Box 48108
Nairobi, Kenya

IFPP focuses on researching traditional crops in Africa and works to promote and re-establish knowledge of traditional methods and crops in communities. The program publishes a newsletter, which can be obtained by contacting the above address.

Innovations and Networks for Development Forum (IRED: Innovations et Réseaux pour le Développement)
General Secretariat
BP 12675
Niamey, Niger
Tel: (227) 732056/3527
Fax: (227) 732064

Publications
CP 116
3 rue de Varembe
1211 Geneva 20, Switzerland
Tel: (41) 22-7341716
Fax: (41) 22-7400011

An international network of over 1,000 individuals, peasant and urban groups, handicrafts associations, women's groups, cooperatives, and NGOs, IRED works to foster shared values about equitable global development and to strengthen local associations to play greater roles in their own development and future. IRED's objectives include improving access to information; developing income generating activities and savings and credit systems with village communities; training managers of local organizations in negotiating skills, planning, and evaluation methods; and facilitating better communication between local, national, regional, and international organizations. IRED publishes a directory of its partner organizations, materials on organizational development, and a general description of IRED goals, structure, and mission. IRED also publishes a quarterly newsletter entitled *IRED-Forum*, in English, French, and Spanish. (See also Publications 30, 35, 67, 84, and 97.)

Institut Africain pour le Développement Economique et Social (INADES)
08 - PO Box 8
Abidjan 08, Côte d'Ivoire
Tel: (255) 440641
Fax: (255) 443129/30
E-mail: geod:inades-fo

INADES provides training to rural communities and organizations in agricultural technologies, natural resource protection, communication systems, organizational management, and community development. Through a staff of trainers, agronomists, sociologists, and economists, INADES conducts training programs in soil conservation methods, afforestation, agroforestry, home gardens, farm economics, and urban forestry. The institute publishes a quarterly magazine entitled *Agripromo*.

International Center for Agricultural Research in the Dry Areas
PO Box 54660
Aleppo, Syria

The center focuses on the potential for increasing food production in dry subtropical and subtemperate areas.

International Centre for Research in Agroforestry (ICRAF)
ICRAF House
United Nations Avenue
PO Box 30677
Nairobi, Kenya
Tel: (254) 2-521450
Fax: (254) 2-521001
E-mail: CGI236

An international, nonprofit research institution, ICRAF works to mitigate tropical deforestation, land depletion, and rural poverty through improved use of trees and shrubs in crop and livestock production systems. ICRAF supports research on agroforestry programs throughout tropical Africa, Asia, and Latin America, and seeks to foster greater networking of individuals and organizations involved in agroforestry research. ICRAF publishes a quarterly newsletter entitled *Agroforestry Today* (available in English and French). (See also Publications 134, 136, 140, and 166.)

International Institute of Rural Reconstruction (IIRR)
PO Box 66873
Westlands
Nairobi, Kenya
Tel: (254) 2-442610
Fax: (254) 2-448148

World Center/Asia
y.c. James Yen Center
Silang
Cavite, Philippines
Tel/Fax: (63) 96-4020891

Headquartered in the Philippines, IIRR works to increase the capacity of rural people to become economically productive and to gain social and political voices. Through field operations, research, and international training and extension, IIRR generates and shares practical knowledge among rural develop-

ment organizations and practitioners. IIRR programs include agriculture and food production, NRM, community development, enterprise development and management, public health and family planning, and development education. IIRR offers training to communities in biodiversity conservation, agroforestry and biointensive gardening, financial management and cooperatives development, and leadership. *Rural Reconstruction Review* is IIRR's newsletter. (See also Publications 137 and 139.)

International Institute of Tropical Agriculture (IITA)
PMB 5320, Oyo Road
Ibadan, Oyo State, Nigeria
Tel: (234) 22-413244/315

Established in 1967, IITA seeks to develop alternatives to shifting cultivation that will maintain the productivity of land under continuous cultivation in the humid and subhumid tropics; to develop higher-yielding, pest- and disease-resistant varieties of cowpeas, yams, and sweet potatoes worldwide and of maize, rice, cassava, and soybeans in Africa; and to strengthen national agricultural research systems by a comprehensive training program and collaborative research.

Kenya Energy and Environmental Organizations (KENGO)
Mwanzi Road, Westlands
PO Box 48197
Nairobi, Kenya
Tel: (254) 2-749747/748281
Fax: (254) 2-749382

KENGO, a national network of organizations working on environment, energy, and community development issues, coordinates and disseminates information among Kenyan NGOs; plans and coordinates NGO projects on renewable energy, forestry, and community development; and forges links between NGOs, government agencies, and research institutions. KENGO has published booklets on natural resource issues including *A Pocket Directory of Trees and Seeds* in Kenya; *How to Collect, Handle and Store Seed*; and the *Seed Collector's Training Manual.* The Network puts out a twice-yearly newsletter, *KENGO News*, containing information on KENGO activities, development projects, and agroforestry and energy conservation issues, as well as a thrice-yearly journal on sustainable development issues in Africa entitled *RESOURCES*. Since 1990, KENGO has offered an annual regional training course on land use management and extension in Nairobi. The course's aim is to equip African project staff with appropriate knowledge and skills to integrate sustainability principles and multidisciplinary approaches into land use and resource development programs.

Mananga Management Centre (MMC)
PO Box 20
Mhlume, Swaziland
Tel: (268) 31133/31334/31491
Fax: (268) 31135

In operation for over twenty years, MMC offers theoretical and practical training courses to managers of nonprofit and rural development organizations. The courses, based on practical exercises, projects, case studies, and role playing, cover issues such as NGO development, environmental management, rural development and agricultural extension, project appraisal and management, women in development, computer technology, and training of trainers. The three basic qualifications for managers who wish to attend a course are fluency in written and spoken English, some experience in a management role, and a desire to improve their confidence and competence as managers.

Mwelekeo Wa Non-Government Organizations (MWENGO)
PO Box 55450
Nairobi, Kenya
or
c/o The Ford Foundation
PO Box 41081
Nairobi, Kenya
Tel: (254) 2-338123/4
Fax: (254) 2-338565

MWENGO was established in 1993 as an NGO network whose primary activities include information exchange and updates on research, publications, and events concerning community development; training programs and documents; coordination of workshops on participatory community development; research on NGO management and accountability; and policy research and analysis. MWENGO publishes a quarterly newsletter.

National Women's Resource and Service Centre (NWRSC)
3rd Floor, Heerengracht Building
PO Box 31104
Braamfontein, South Africa
Tel: (27) 11-4037614/5
Fax: (27) 11-4037879

A nonpartisan development and capacity-building institution, the NWRSC uses facilitation and training methods to assist community-based organizations and constituencies to formulate and achieve resource development goals. The Centre offers training courses that cover issues of organizational development (effective meetings, financial and accounting systems, employer-employee relations); human resources development (strategies for training in community-based projects and gender policy, planning and implementation); and project development (proposal writing, business planning, evaluation criteria).

Organisation of Rural Associations for Progress (ORAP)
PO Box 877
Bulawayo, Zimbabwe
Tel: (263) 9-31009
Fax: (263) 9-31088/78053

ORAP works with more than half a million village-level family units, local organizations, associations, and NGOs to foster community-based and equitable social and economic development. Since its establishment in 1981, ORAP has initiated more than 150 types of activities including household technologies, sustainable agriculture techniques, and drought relief efforts. ORAP has also played a key role in advocating policy reforms in the international development arena. In 1991, ORAP joined with World Learning's School for International Training (SIT) to develop a joint training and education program for mid-level staff of African NGOs and students and graduates of U.S. universities. The program's curriculum addresses the complexities of grassroots development strategies and management of NGOs who help facilitate such development. (See page 163 for additional information about SIT's courses and programs in the United States.)

Réseau Africain pour le Développement Intégré (RADI)
PO Box 12085
Dakar, Senegal
Tel: (221) 257533/34
Fax: (221) 257536

Established in 1985, RADI seeks to support grassroots economic activities. Between 1989 and 1994, RADI helped seventeen village associations develop market gardening projects in Senegal using improved irrigation methods, and started agricultural projects in Mali, Guinea, and Central Africa. All projects are linked to training sessions on agricultural techniques and local language instruction. RADI is a member of many African and international networks and has promoted many exchange visits for African NGOs. *Jef Gel (Work and Deserve It)* is RADI's bimonthly newsletter.

Réseau International des ONG sur la Désertification (RIOD)

Global Focal Point
ELCI
Heinz Greijn
PO Box 72461
Nairobi, Kenya
Tel: (254) 2-562015/22/172
Fax: (254) 2-562175
E-mail: Heinz_Greijn@elci.gn.apc.org

Regional Focal Point for Africa
ENDA-TM
Masse Lo
BP 3370
Dakar, Senegal
Tel: (221) 225983/222496/226127
Fax: (221) 222695
E-mail: Masse_Lo@endadak@gn.apc.org

Regional Focal Point for Canada
Solidarité Canada Sahel
Daniel Lapierre
801, rue Sherbrooke Est, Suite 400
Montreal, Quebec H2L 1K7
Canada
Tel: (514) 597-2288
Fax: (514) 597-2334
E-mail: pbrien@web.apc.org

Regional Focal Point for USA
Natural Heritage Institute
Michelle Schwartz
114 Sansome Street
Suite 1200
San Francisco, CA 94104 USA
Tel: (415) 288-0550
Fax: (415) 288-0555
E-mail: nhi@igc.apc.org

Regional Focal Points for Europe
Both ENDS
Edit Tuboly
Damrak 28-30
1012 LJ Amsterdam, The Netherlands
Tel: (31) 20-6230823
Fax: (31) 20-6208049
E-mail: bothends@gn.apc.org

European Environmental Bureau
Paloma Agrasot
26 rue de la Victoire, Boite 12
1060 Brussels, Belgium
Tel: (32) 2-5390037
Fax: (32) 2-5390921

Subregional Focal Point for Central Africa
CONGAC
Jacqueline Nkoyok
BP 6912 New-Bell Douala
Douala, Cameroon
Tel: (237) 402602
Fax: (237) 430504

Subregional Focal Point for Francophone West Africa
AVD
Ouedraogo Florent
01 BP 4683
Ouagadougou, Burkina Faso
Tel: (226) 308616
Fax: (226) 308617

Subregional Focal Point for North Africa
ENDA Inter-Arabe
Michael Bracknell
Cite Venus, Bloc 2
El Menzah VII
1004 Tunis, Tunisia
Tel: (216) 1-752003
Fax: (216) 1-766234

Subregional Focal Point for Eastern and Southern Africa
Uganda Women's Tree Planting Movement
Ruth Mubiru
Blacklines House, Room 829
PO Box 10351
Kampala, Uganda
Tel: (256) 41-254240
Fax: (256) 41-255288
E-mail: uwtp@mukla.gn.apc.org

Subregional Focal Point for Anglophone West Africa
Nigerian Environmental Study Action Team (NEST)
Prof. Okpara
27 Aare Avenue
Bodija
UIPO Box 22025
Ibadan, Nigeria
Tel: (234) 22-412664
Fax: (234) 22-510488

National Focal Point for France
Sahel Defis
Tahirou Diao
253, ch. Fontanieres
69350 La Mulatiere, France
Tel/Fax: (33) 78-869041
E-mail: tahirou@globenet.gn.apc.org

National Focal Point for Germany
TBW (German NGO Forum on Environment and Development)
Jurgen Gliese
Baumweg 16
6000 Frankfurt, Germany
Tel: (49) 69-490195
Fax: (49) 69-440049

National Focal Point for Sierra Leone
SLANGO
Clarice Davies
49 Siaka Stevens Street
Freetown, Sierra Leone
Tel: (232) 22-228497
Fax: (232) 22-229630

The United Nations Convention to Combat Desertification, signed in June 1994, represents a new level of NGO and CBO involvement in NRM activities at the international policy level. This collaboration has been so successful that the participating CBOs and NGOs have agreed to the establishment of RIOD. RIOD is a facilitating structure that aims to combat desertification by disseminating information, raising awareness, promoting cooperation among NGOs and CBOs, and monitoring implementation of the CCD.

Rural Industries Innovation Centre
Private Bag 11
Kanye, Botswana

This organization promotes small-scale technologies based on local resources in Botswana. It has produced a solar-powered water purification plant in the Kalahari.

Service d'Appui aux Initiatives Locales de Développement (SAILD)
PO Box 11955
Yaoundé, Cameroon
Tel: (237) 224682/6244
Fax: (237) 225162

SAILD works to initiate and develop rural, local organizations in Africa, particularly in Cameroon and Chad. SAILD provides technical and financial support to rural communities through partnerships with federations and other organized peasant groups. SAILD divides its services into several categories: training, technical agricultural support, communications, savings and loans, and administrative and financial development. SAILD publishes a quarterly magazine, *La Voix du Paysan*, which shares learning and information among farming communities.

Se Servir de la Saison Seche en Savanne et au Sahel (Six S)
PO Box 100
Ouahigouya, Burkina Faso
Tel: (226) 550411/110

BP 1170
Ouagadougou, Burkina Faso

Six S was founded in 1976 as a financial and intermediary assistance institution for African grassroots associations active in agricultural development and water conservation. The network does not work on specific projects but instead channels aid to local organizations for various stages of organizational development. Six S also conducts training programs on institutional strengthening, water conservation, and agriculture in West African countries.

Social Impact Assessment and Policy Analysis Corporation, Ltd. (SIAPAC)
(Headquarters)
PO Box 82
Windhoek, Namibia
Tel: (264) 61-220531
Fax: (264) 61-235859

Private Bag BR 23
Gaborone, Botswana

PO Box 2963
Honeydew 2040
Johannesburg, South Africa

A social research firm operating in three African countries, SIAPAC works with NGOs to develop and implement quantitative, qualitative, and participatory appraisal methods related to socioeconomic research. SIAPAC organizes workshops and trainings, and conducts field and analysis activities for client organizations including private engineering firms, government agencies, donor organizations, and NGOs.

Uganda Youth in Production Association (UYPA)
PO Box 8762
Kampala, Uganda
Fax: (256) 41-245597

UYPA is a grassroots youth organization concerned with education, reforestation, agroforestry, renewable energy, livestock, and rural development.

Ugunja Appropriate Skills Training Centre
PO Box 331
Ugunja, Kisumu, Kenya

This local organization promotes sustainable forestry and appropriate farming techniques through reforestation, horticulture, permaculture, and livestock management.

Union Nationale des Maisons Familiales Rurales
BP 131
Thies, Senegal
Tel: (221) 811923

Established in 1984, this national organization aims to educate villagers and improve their living conditions through soil and water conservation and organic agriculture projects.

Voluntary Agencies Development Assistance (VADA)
PO Box 57781
Nairobi, Kenya
Tel: (254) 2-331020/226255

VADA offers assistance in organizational management in four categories: training, institution building, evaluation, and NGO networking. Training programs can be either open, based on needs assessments of particular organizations, or planned on an annual basis; training for small NGOs can be donor sponsored. Institution-building services include organizational assessments, strategic planning, administration development, development of mission statements, and board governance. Evaluation assistance includes baseline, feasibility, and impact studies. NGO networking assistance involves strengthening of NGO networks and training in networking skills and NGO development.

West African Rural Foundation (WARF)
BP 13
Dakar, Senegal
Tel: (221) 254953/241400
Fax: (221) 245755

An intermediary funding organization, WARF provides grants to small, rural organizations and NGOs in Senegal, The Gambia, Mali, Guinea-Bissau, and Guinea. It provides funds for strategic planning, institutional stabilization, and methodological training in sustainable agriculture techniques. Types of grants include multiyear institutional support grants and grants that link researchers with local organizations to conduct participatory research (See also publication 1.).

Women, Environment, and Development Network (WEDNET)
PO Box 72461
Nairobi, Kenya
Fax: (254) 2-562175

WEDNET is an innovative information sharing and research project under ELCI (see above). It aims to research and advocate women's indigenous knowledge. Its newsletter, *WEDnews*, is available in French and English. (See Publication 132.)

2. NORTH AMERICA

Abundant Life Seed Foundation
PO Box 772
Port Townsend, WA 98368 USA
Tel: (360) 385-5660
Fax: (360) 385-7455

The Abundant Life Seed Foundation provides free packets of seed to third world groups. Those wishing to receive seed should send a letter listing which seeds are of interest to their organization.

Academy for Educational Development, Inc. (AED)
GreenCOM Program
1255 23rd Street, NW, Suite 400
Washington, DC 20037 USA
Tel: (202) 884-8899
Fax: (202) 884-8997
E-mail: greencom@aed.org

Through its USAID-funded Environmental Education and Communication Project (GreenCOM), AED provides long- and short-term assistance to developing country organizations and development agencies to improve individual and institutional behavior concerning the environment. Using a participatory approach that involves social marketing, communication, and education, GreenCOM works to involve all stakeholders in NRM and environmental protection projects. GreenCOM has published information about its capabilities in English, French, and Spanish, and is currently drafting a report entitled *People and Their Environment: Environmental Education and Communication in Five African Countries.*

African Wildlife Foundation (AWF)
1717 Massachusetts Avenue, NW
Washington, DC 20036 USA
Tel: (202) 265-8394
Fax: (202) 265-2361

Nairobi Office
PO Box 48177
Nairobi, Kenya
Tel: (254) 2-710367
Fax: (254) 2-710372

An international organization established to conserve wild species and habitats throughout Africa, AWF has provided professional training to NGO staff, park rangers, and wildlife managers. AWF's PARCS pro-

ject has trained 300 park managers from Cameroon, Congo, Malawi, Tanzania, and Uganda in planning, management, and extension skills. AWF convened a workshop on protected area management in Arusha, Tanzania, to develop training courses in human resources management, planning, finance and accounting, policies, and procedures. AWF also organized a three-country study tour for wildlife officials and local community leaders from Kenya, Tanzania, and Zimbabwe to examine programs and projects that incorporate community involvement into conservation efforts. AWF publishes a practical handbook for park wardens entitled *Wilderness Guardian.*

American Society for Training and Development (ASTD)
Publishing Service
PO Box 4856, Hampden Station
Baltimore, MD 21211 USA
Tel: (410) 516-6949
Fax: (410) 516-6998

Membership Services
1640 King Street, Box 1443
Alexandria, VA 22313-204 USA
Tel: (703) 683-8100
Fax: (703) 683-8103

Originally created in 1945 as a national training society for U.S. industry, ASTD has evolved into a worldwide, 55,000-member organization that provides training in organizational leadership and development, facilitates networking in the private and nonprofit sectors, and disseminates information on organizational management topics through publications, workshops, and national and international conferences. (See also Publications 14, 15, 16, and 17.)

Applied Research and Development Institute (ARDI)
2121 South Oneida Street, Suite 633
Denver, CO 80224 USA
Tel: (303) 691-6076
Fax: (303) 691-6077

ARDI provides management and leadership support to national and international nonprofit organizations by making available existing resources — e.g., publications, information on training programs and funding opportunities, consulting services — and by creating new resources through its own research efforts. ARDI publishes much of this information in a catalog entitled *Resources for Nonprofits,* which is available for approximately US$6.95. ARDI has also created training packages for organizational development, including a video on nonprofit board leadership ($79.95 to rent; $149.95 to purchase), a modular training "workshop" on how to establish effective boards of directors ($99.95), and a modular grant proposal writing "workshop" ($99.95).

Appropriate Technology International (ATI)
1828 L Street, NW
Suite 1000
Washington, DC 20036
USA
Tel: (202) 293-4600
Fax: (202) 293-4598

ATI/Tanzania
PO Box 1409
Arusha, Tanzania
Tel: (255) 57-6783
Fax: (255) 57-8231

ATI/Uganda
22-A Namirembe Rd.
PO Box 8830
Kampala, Uganda
Tel: (256) 41-245100
Fax: (256) 41-245580
(c/o General Post Office)

ATI/Senegal
BP 10251
Dakar, Senegal
Tel: (221) 254523
Fax: (221) 254527
(c/o ACA)

ATI works to transform small-producer economies to more sustainable levels in Africa, Asia, and Latin America. In collaboration with international donor agencies, commercial sector companies, and private foundations, ATI forges partnerships with local, community-based NGOs and businesses to develop self-sustaining, rural production enterprises. ATI strives to develop production, processing, and marketing opportunities for dairy producers, animal herders, fiber processors, oilseed farmers and entrepreneurs, nontimber-forest-product collectors and processors, and tree-crop producers. Through partnerships with in-country institutions, ATI now provides more direct assistance to small producers and communities in the form of appropriate technology, microcredit, training in entrepreneurship and marketing skills, and policy reform. Three times per year ATI publishes a newsletter on oilseed issues in Africa entitled *Oilseed Press.* (See also Publication 145.)

Board on Science and Technology for International Development (BOSTID)
National Academy of Sciences
National Research Council
2101 Constitution Avenue, NW
Washington, DC 20418 USA
Tel: (202) 334-2633
Fax: (202) 334-2027

BOSTID, a research department within the National Research Council's National Academy of Sciences, has produced many publications on issues including agriculture, forestry, livestock, aquaculture, and technologies. Publications may be available without charge. Contact the above address for further information. (See also Publication 138.)

Canada Africa International Forestry Association
2995 Waterloo Street
Vancouver, BC V6R 3J4, Canada
Tel: (604) 731-2545
Fax: (604) 731-3391

This group acts as a network between Canadian and African forestry organizations. Its newsletter is a forum on tropical forestry, social forestry, agroforestry, conservation, and NGO activities.

Canadian Crossroads International (CCI)
31 Madison Avenue
Toronto, ON M5R 2S2, Canada
Tel: (416) 967-0801
Fax: (416) 967-9078

CCI promotes exchange programs for volunteers from Canada to go to the developing world and volunteers from the developing world to go to Canada, to assist in self-help development projects, including agriculture and environment projects. It also produces a quarterly journal, available at $7 (Canadian) per year.

Canadian International Development Agency (CIDA)
200 Promenade du Portage
Hull, PQ K1A 0G4, Canada
Tel: (819) 997-5456
Fax: (819) 997-6088

CIDA, the Canadian bilateral foreign assistance institution, contributes millions of dollars to projects in the developing world, including those in natural resources management. CIDA also publishes a quarterly magazine, *People-Centred Development Forum.*

CARE
151 Ellis Street
Atlanta, GA 30303 USA
Tel: (404) 681-2552
Fax: (404) 577-1205/6662

CARE's purpose is to help the developing world's poor in their efforts to achieve social and economic well-being. CARE supports processes that create competence and become self-sustaining over time. CARE's task is to reach new standards of excellence in offering disaster relief, technical assistance, training, food, and other material resources and management in combinations appropriate to local needs and priorities. CARE also advocates public policies and programs that support these ideas. CARE is a member of the USAID-funded PVO-NGO/NRMS Project.

Center for Indigenous Knowledge for Agriculture and Rural Development (CIKARD)
318B Curtiss Hall
Iowa State University
Ames, IA 50011 USA
Tel: (515) 294-9503
Fax: (515) 294-6058

CIKARD focuses its activities on preserving and using the local knowledge of farmers and other people around the world in agriculture and rural development.

Consultative Group on International Agricultural Research (CGIAR)
1818 H Street, NW
Washington, DC 20433 USA
Tel: (202) 473-8918

CGIAR, a network of international agricultural research centers, is housed at the World Bank and is a valuable source of information on publications on agricultural research.

Economic Development Institute (EDI)
The World Bank Group (Headquarters)
1818 H Street, NW
Washington, DC 20433 USA
Tel: (202) 473-6287
Fax: (202) 676-0858
E-mail: JDELL@worldbank.org@INTERNET

Regional Coordinating Organizations for EDI:
Fonds d'Appui au Activités Remunatrice des Femmes (FAARF)
BP 5683
Ouagadougou, Burkina Faso
Tel: (226) 311593
Fax: (226) 316273

WMTOP Coordinator
Pan-African Institute for Development/West Africa
PO Box 133
Southwest Province
Buea, Cameroon
Tel: (237) 222186
Fax: (237) 322343

FEFGA/Senegal
Sotrac Mermoz No. 132
BP 6257
Dakar, Senegal
Tel/Fax: (221) 251687
Magaomero College
Ministry of Community Development
Lilongwe, Malawi
Tel: (265) 534222
Fax: (265) 522139

Community Development Training Institute-Tengeru
Ministry of Community Development, Women's Affairs and Children
Arusha, Tanzania
Tel/Fax: (255) 51-44485

Social Development Institute
PMB 1
Imperu, Ogun State, Nigeria
Tel: (234) 37-620243

EDI, a training and consuling branch of the World Bank Group, has developed a Grassroots Management Training and Outreach (GMT) program for organizations and communities in developing countries. Focusing its efforts on both men and women, the GMT works with managers of community-based conservation, agriculture, health, and population projects and microenterprise initiatives to build individual and group capacity. Training workshops are offered in local languages and draw on proverbs, songs, drawings and role plays. Comprised of three- to five-day residential training followed by trainer outreach visits to villages, the workshops address issues such as human resources management, finance and credit management, production and marketing, money management, and entrepreneurship and leadership. GMT also provides technical support in monitoring and evaluation, and assistance in networking activities.

Educational Concerns for Hunger Organization (ECHO)
RR 2, Box 852
North Fort Myers, FL 33903 USA
Tel: (813) 543-3246
Fax: (813) 543-5317

ECHO offers free seeds and useful information on agriculture and appropriate technology for developing country organizations. To obtain a subscription to its newsletter, please write to the above address.

FINCA International
1101 14th Street, NW, 11th Floor
Washington, DC 20005 USA
Tel: (202) 682-1510
Fax: (202) 682-1535

FINCA International provides village banking services to small communities in Africa to enable individuals and small businesses develop and become self-sufficient. The organization provides three critical services: working capital loans to finance self-employment activities; mechanisms to promote family savings; and a community-based approach that fosters mutual support and encourages self-worth. While FINCA itself does not directly provide grants to new businesses or organizations, it can help individuals and groups seek out other funding sources to which they might apply for support.

Global Environment Facility (GEF)
NGO Small Grants Program
c/o UNDP-NGO Programme
1 United Nations Plaza
New York, NY 10017 USA
Tel: (212) 906-5084
Fax: (212) 906-5313

Africa National Coordinators:
GEF/SGP National Coordinator
Red Cross Society
PO Box 854
Gaborone, Botswana
Tel/Fax: (267) 305146

BP 575 Ouagadougou
Burkina Faso
Tel: (226) 308991/17110
Fax: (226) 310470

BP 836
Yaoundé, Cameroon
Tel: (237) 228622
Fax: (237) 221873

01 BP 1747
Abidjan, Cote d'Ivoire
Tel: (225) 250834
Fax: (225) 211367/7404
E-mail: fo.civ@undp.org

PO Box 1423
Accra, Ghana
Tel: (233) 21-773226
Fax: (233) 21-773899
E-mail: fo.gha@undp.org

PO Box 30218
Nairobi, Kenya
Tel: (254) 2-228776
Fax: (254) 2-331897
E-mail: fo.ken@undp.org

SECO-ONG
BP 1781
Bamako, Mali
Tel: (223) 223041
Fax: (223) 226298

c/o UNDP
4 Labourdonnais Street
Port Louis, Mauritius
Tel/Fax: (230) 2122524

CONGAD
BP 5561 Dakar Fann
Km. 1, Avenue Cheik A. Diop
Dakar, Senegal
Tel: (221) 244409
Fax: (221) 235500/44413

PO Box 4775
Harare, Zimbabwe
Tel: (263) 4-703577
Fax: (263) 4-728695

Initiated in 1991 as part of a joint World Bank, UNDP, and UNEP initiative, the GEF/NGO Small Grants Program provides grants of up to US $50,000 to developing country NGOs, peoples' associations, and community groups, for projects concerning biodiversity conservation, climate change, ozone depletion, and international waters pollution. Projects addressing land degradation, desertification, and deforestation will be considered as well. The program gives priority to projects that include community participation in planning, implementation, and monitoring and evaluation; involve local organizations as project implementors or as partners; focus on women's roles in NRM; draw on indigenous knowledge; contain elements of institutional strengthening; have firm scientific and technical bases; and facilitate participatory evaluation methods. Networking and advocacy activities may qualify for funding. Organizations that receive grants are required to submit regular project reports to the national coordinator.

Global Excellence in Management Initiative (GEM)
Case Western Reserve University
Weatherhead School of Management
1600 Wilson Boulevard, Suite 500
Rosslyn, VA 22209 USA
Tel: (703) 528-8200
Fax: (703) 528-8209

The GEM Initiative, supported by USAID, offers institutional capacity-building programs for USPVOs and international NGOs addressing global development issues. GEM's objectives are to promote organizational excellence; to create new forms of global cooperation; and to sustain and develop the capacity to continually learn, adjust, and innovate over time. These objectives are pursued through the following training programs:

- The PVO and NGO Organizational Excellence Program develops key organizational management capacities and conducts a Certificate Program in Global and Social Innovations for PVO and NGO leaders;
- The PVO and NGO Partnership Program, designed especially for U.S. PVOs and their NGO partners, strengthens collaboration between partners and helps them to build a shared vision of the future;
- The Sector Organizational Alliance Program mobilizes organizations within a sector to discover common values, share resources, and develop plans for joint action;
- The Global Change Innovations Network, operates through an extensive database, link-ing PVOs and NGOs with other organizations that have reached levels of organizational excellence.

Institute for Development Research (IDR)
210 Lincoln Street
Boston, MA 02111 USA
Tel: (617) 422-0422
Fax: (617) 422-0494

IDR conducts research and prepares educational materials on institutional development and capacity building for U.S. and international NGOs and grassroots organizations. The institute produces training manuals and articles about institutional development, and occasionally facilitates workshops with intermediary training organizations in developing countries. Training programs cover issues of leadership development, negotiation skills, policy influence, participatory education and research, and coalition building. (See also Publications 2, 18, 19, 38, 39, 44, 45, 91, and 108.)

Institute for Sustainable Communities (ISC)
56 College Street
Montpelier, VT 05602-3115 USA
Tel: (802) 229-2900
Fax: (802) 229-2919
E-mail: isc@together.net

ISC offers training and institutional development support to nonprofit organizations and government agencies in Central and Eastern Europe. Through partnerships with local and national institutions, ISC provides support in four categories: environmental training; community planning and implementation; institutional capacity building; and environmental education and public awareness. While focused on Central and Eastern Europe, ISC's training programs contain principles that can apply in an African context. (See also Publications 156, 157, 158, and 188.)

InterAction (American Council for Voluntary International Action)
1717 Massachusetts Avenue, NW, Suite 801
Washington, DC 20036 USA
Tel: (202) 667-8227
Fax: (202) 667-8236/4131
E-mail: ia@interaction.org

A U.S.-based membership coalition of development, relief, and refugee assistance agencies, InterAction works to build capacity and self-sufficiency in poor communities throughout the world. Among its many committees that address development-related issues is the Committee on Institutional Development, which, through partnership building, sharing of expertise, and promotion of experience-based training methodologies, facilitates improved organizational effectiveness among its membership agencies. The PVO Standards Committee works to promote the highest level of ethical standards for InterAction member groups in areas of governance, finance, communication, management practices, human resources, and public policy. Through its Africa Liaison Project, InterAction designs workshops and briefings on development initiatives in Africa. Issues covered have included institutional strengthening of African NGOs, advocacy capacity building for nonprofit groups, and integration of gender issues and sustainable development in Africa. InterAction publishes a biweekly newsletter (*Monday Developments*) to serve as a link between Northern and Southern NGOs. The coalition also makes available publications by some of its member groups or individuals. (See also Publication 28.)

Land Tenure Center
1300 University Avenue
University of Wisconsin
Madison, WI 53706 USA
Tel: (608) 262-3657
Fax: (608) 262-2141

The Land Tenure Center is an institute for research and education on social structure, rural institutions, resource use, and development.

NTL Institute
1240 North Pitt Street, Suite 100
Alexandria, VA 22314-1403 USA
Tel: (703) 548-1500
Fax: (703) 548-3179

NTL Institute is a U.S. nonprofit membership organization offering training programs and workshops in all aspects of individual and organizational development. Since 1947, NTL members have used interactive, experiential learning techniques to guide their training programs in interpersonal skills development, organizational management and development, diversity management, and social change management. In collaboration with universities, private sector firms, and nonprofit organizations, NTL offers advanced degree and certificate programs in organizational development; workshops in team building, training theories and practices, and organizational change; and personal and professional development workshops. (See also Publications 6, 25, and 82.)

National Center For Nonprofit Boards (NCNB)
2000 L Street, NW, Suite 501
Washington, DC 20036-4907 USA
Tel: (202) 452-6262
Fax: (202) 452-6299

NCNB was created to improve the effectiveness of other organizations by strengthening their boards of directors. For more than seven years, the Center has published articles, educational materials, and guides on nonprofit governance and fiscal management. It has also organized and conducted board development workshops and training programs throughout the United States and, more recently, in parts of Africa, Eastern Europe, Asia, and Latin America. Topics covered in training programs include: establishing organizational mission, raising money, hiring and supporting a chief executive, and fostering long-range planning. (See also Publications 31, 50, 53, 76, 78, and 83.)

On-Farm Seed Project
Winrock International Institute for Agricultural Development
Petit Jean Mountain, Rte. 3
Morriltown, AR 72110 USA
Tel: (501) 727-5435
Fax: (501) 727-5242

This project conducts workshops and experiments concerning on-farm seed storage methods in Africa. The project also produces a newsletter in French and English entitled *Seed Sowers/Les Semeurs.*

PACT (Private Agencies Collaborating Together)
1901 Pennsylvania Avenue, NW, Suite 501
Washington, DC 20006 USA
Tel: (202) 466-5666
Fax: (202) 466-5669

Publications
777 United Nations Plaza
New York, NY 10017 USA
Tel: (212) 697-6222
Fax: (212) 692-9748
E-mail: PACTNY@UNDP.org

An international consortium of PVOs, PACT was established to promote NGO and development agency collaboration, foster greater North-South partnerships, build the capacities of indigenous organizations, and provide technical and training services to NGOs throughout the world. PACT offers training services for PVOs and NGOs in financial management, human resources development, participation, local institution building, and evaluation techniques. In Africa, PACT has coordinated training, technical assistance, and networking for South African NGOs and community organizations, promoted a food oils network in Mali, and managed a large-scale, integrated conservation and development program in Madagascar. PACT is also providing participatory management training to NRM NGOs in Cameroon, Kenya, and southern Africa, and has coordinated regional workshops for NGO consortia in Burkina Faso, The Gambia, Senegal, Togo, Ghana, Zambia, and Kenya. (See also Publications 3, 10, 32, 54, 68, 95, 98, 100, 113, 189.)

Progressive Strategies
7319 Beverly Boulevard, Suite 7
Los Angeles, CA 90036 USA
Tel: (213) 525-1651
Fax: (213) 525-1659

Progressive Strategies is a private firm providing training assistance to U.S. and international nonprofit, government, and corporate institutions in organizational development and management. Through action-planning methodology and interactive training, Progressive Strategies works with client staff and board members to improve both individual and organizational performance. Training and technical assistance services include management and strategic planning; organizational assessment and development; technical and proposal writing; fund-raising campaign design; networking strategies and coalition building; communications development; human resources development; and monitoring and evaluation design.

Smithsonian Institution
Wildlife Conservation and Management Training Program
Department of Conservation
National Zoological Park
Washington, DC 20008-2598 USA
Tel: (202) 673-4826
Fax: (202) 673-4686

The Smithsonian Institution's Wildlife Conservation and Management Training Program provides short-term conservation training to mid- and upper-level personnel from government agencies, research institutions, and NGOs in developing countries. The program conducts courses and workshops, covering issues of conservation biology, wildlife management, zoo biology, and environmental education.

Other workshops and courses offer training in career development, instructional methods, and conservation-related issues.

Transnational Network for Appropriate Alternative Technologies (TRANET)
PO Box 567
Rangeley, ME 04970 USA
Tel/Fax: (207) 864-2252

TRANET membership and its bimonthly journal are free to developing countries, and offer opportunities for information dissemination in the network. This group has also established several small, appropriate technology libraries in the developing world, and offers free publications to grassroots groups.

Treeroots Network
2995 Waterloo Street
Vancouver, BC V6R 3J4, Canada
Tel: (604) 731-2545
Fax: (604) 731-3391

Treeroots Network develops linkages between Southern and Northern groups and NGOs; provides technical expertise; develops NGOs' capacity for advocacy; disseminates information on community-forestry practices through its newsletter, resource center, and databanks; helps organize workshops and seminars on community forestry-related topics; and promotes projects thar originate in the community in which they are implemented.

Trees for the Future
PO Box 1786
Silver Spring, MD 20902 USA
Tel: (301) 929-0238
Fax: (301) 929-0439

Trees for the Future aims to assist developing country communities in designing environmentally sustainable, self-help projects.

U.S. Department of Agriculture — Forest Service
Office of International Forestry
Africa Program
PO Box 96538
Washington, DC 20090-6538 USA
Tel: (202) 273-4695/205-1782
Fax: (202) 273-4748
E-mail: /s=m.buccowich/ou1=w01c
@mhs.fswa .att mail.com

The Forestry Support Program of the USDA's Forest Service has produced numerous publications concerning educational opportunities and training programs for international NGOs working in NRM. Also available through the USDA's New Forests Project are packets of tree seeds, technical information, and training materials — free of charge to groups interested in starting reforestation projects with fast-growing, nitrogen-fixing trees. For further information or to order the reforestation packet, contact: The New Forests Project - USDA, 731 Eighth Street, SE, Washington, DC 20003, USA. Please include an environmental description of your area including elevation, average annual rainfall, length of rainy and dry seasons, high and low temperatures, soil characteristics, and the purpose of tree planting. (See also Publications 150, 152, 154, 169, 179, and 183.)

Volunteers in Overseas Cooperative Assistance (VOCA)
50 F Street, NW, Suite 1075
Washington, DC 20001 USA
Tel: (202) 383-4968
Fax: (202) 783-7204

VOCA is a private, nonprofit organization that provides short-term, voluntary technical assistance to grassroots organizations and communities in agriculture and cooperative development, NRM, and institutional strengthening. VOCA has assisted NGOs and government agencies to improve their technical expertise in NRM and institution building. VOCA conducts on-site training and education in all areas of environmental management for NGOs, students, policymakers, the private sector, and the public; assists government agencies in developing environmental policies, laws, and regulations; and works with local farmers, communities, and NGOs to document and promote indigenous knowledge and sustainable resource use.

Volunteers in Technical Assistance (VITA)
1815 N. Lynn Street, Suite 200
Arlington, VA 22209 USA
Tel: (703) 276-1800
Fax: (703) 276-1865

VITA conducts research and provides technical assistance and information to individuals and groups in developing countries. VITA News is its quarterly journal.

Washington Office on Africa (WOA) and Africa Policy Information Center (APIC)
110 Maryland Avenue, NE, Suite 112
Washington, DC 20002 USA
Tel: (202) 546-7961
Fax: (202) 546-1545
E-mail: woa@igc.apc.org

Initially established as a lobbying organization to support the antiapartheid movement in South Africa, WOA has expanded its scope to issues affecting grassroots interests throughout the continent. Together with APIC, WOA educates U.S. policymakers and the public about key issues in Africa, and has worked to broaden its network of advocacy organizations in order to foster greater links between grassroots African groups and the Washington policy arena. Both WOA and APIC offer individual and group memberships. Members receive the WOA newsletter, *Washington Notes on Africa*, which covers United States-Africa policy and political issues, as well as a variety of WOA and APIC publications. APIC has developed an international e-mail service to disseminate policy documents on Africa and United States-African relations to a broader U.S. and African audience.

World Learning Inc. (WLI)
Projects in International Training and Development (PIDT)
1015 15th Street, NW, Suite 750
Washington, DC 20005 USA
Tel: (202) 408-5420
Fax: (202) 408-5397

PVO-NGO/NRMS Project
1250 24th Street, NW, 5th Floor
Washington, DC 20037 USA
Tel: (202) 293-4800
Fax: (202) 293-9211
E-mail: michael.brown@wwfus.org

Originally established in 1932 as an international educational and cultural exchange institution, WLI has increasingly applied its expertise to institutions and individuals working in international development. Through PIDT, WLI conducts training and offers support to public and private institutions in developing countries working to promote social and economic change in developing countries. Activities include on-the-job training in organizational development, formal training-of-trainers workshops, and projects that promote human resources development. As a member of the USAID-funded PVO-NGO/NRMS Project, WLI has provided training tomany African NGOs in the NRM sector. (See also Publications 142, 148, 178, and 192.)

World Learning/School for International Training (SIT)
Admissions Office
Kipling Road, PO Box 676
Brattleboro, VT 05302-0676 USA
Tel: (802) 257-7751
Fax: (802) 258-3500

As the accredited college of WLI, SIT serves as one of the primary centers in the United States for educating NGO staff and others involved in promoting or managing participatory, sustainable development. SIT offers a one-week training course on international policy advocacy for students in its Programs on World Issues and Intercultural Management. SIT adds a post-course internship program for leaders of Southern NGOs, as well as offering a graduate course on policy advocacy.

In a more recent initiative, SIT developed an International Policy Advocacy Program for key staff and leaders of NGOs. Using participatory, experiential education methods, the course includes international policy institutions and policymaking processes; general principles of effective advocacy; basic skills of advocacy, strategic planning, coalition building, NGO-government relations, constituency education, and electronic networking; and cross-cultural communication and networking skills.

World Neighbors
4127 NW 122 Street
Oklahoma City, OK 73120-8869 USA
Tel: (800) 242-6387/(405) 752-9700
Fax: (405) 752-9393

This organization aims to promote development and self-reliance through both hands-on field projects, and training and extension. World Neighbors also develops training materials in development, health, and agriculture. The organization publishes two quarterly newsletters, *World Neighbors in Action* (available in English, French, and Spanish) and *Soundings from Around the World*. Both newsletters are free to developing world residents. (See Publication 130.)

World Resources Institute (WRI)
1709 New York Avenue, NW
Washington, DC 20006 USA
Tel: (202) 638-6300
Fax: (202) 638-0036

WRI is a research and policy institute helping governments, the private sector, environmental and development organizations, and others address the question of how to promote economic growth given limited natural resources. WRI is currently conducting policy research in five main areas: climate, energy, and pollution; biological resources and institutions; economics and population; technology and the environment; and resource and environmental information.

World Wildlife Fund-US (WWF-US)
1250 24th Street, NW
Washington, DC 20037 USA
Tel: (202) 293-4800
Fax: (202) 293-9211

WWF Publications
P.O. Box 4866
Hampden Post Office
Baltimore, MD 21211 USA
Tel: (410) 338-6951

The U. S. branch of WWF-International, WWF-US works with partner organizations in Africa, Asia, Latin America and the Caribbean, and Central and Eastern Europe to promote wildlife and natural resource conservation and management. WWF-US is a member of the USAID-funded PVO/NGO-NRMS Project. In addition to its field and project-specific operations, WWF-US has an organizational development program through which it works to develop the capacity of local NGOs and nonprofit organizations involved in natural resources and wildlife management issues. (See also Publications 33 and 34.)

3. **EUROPE**

Both ENDS
Damrak 28-30
LJ Amsterdam 1012, The Netherlands
Tel: (31) 20-6230823
Fax: (31) 20-6208049

The goal of Both ENDS is to build the capacities of socially oriented environmental organizations with a priority given to developing countries. This goal is to be achieved through two main elements: "direct" capacity building through information dissemination and technical assistance; and "indirect" capacity building through the promotion of Southern NGOs' work and input into policy discussions.

Center for Our Common Future
Palais Wilson
52 rue des Paquis
1201 Geneva, Switzerland
Tel: (41) 22-7327117
Fax: (41) 22-7385046

The Center for Our Common Future is dedicated to building a global constituency for change through information exchange. Publications on the development activities of government agencies and NGOs are offered free of charge to developing world NGOs.

European Environmental Bureau (EEB)
26 rue de la Victoire, Boite 12
1060 Brussels, Belgium
Tel: (32) 2-5390037
Fax: (32) 2-5390921

The EEB is a consortium of 160 environmental NGOs from 26 countries, including the 15 members of the European Union. The EEB aims to achieve two main goals: to promote an equitable lifestyle in the long term, and sustainable use of both human and natural resources.

Forest, Trees, and People Programme (FTPP)
(Coordinating Body)
c/o Food and Agriculture Organization
Forestry Department
Viale della Terme di Caracalla
00100 Rome, Italy
Tel: (39) 6-52251
Fax: (39) 6-52253152/5155/5782610

East Africa Region:
c/o Forestry Action Network (FAN)
PO Box 21428
Nairobi, Kenya
Fax: (254) 2-718398
E-mail: dominic.walubengo@arcc.permanet.org

Central/West Africa Region:
Institut Panafricain pour le Développement — Afrique Centrale (IPD/AC)
BP 4078

Douala, Cameroon
Fax: (237) 424335

Coordinated by the FAO, FTPP is a multidonor program that supports global networking and information dissemination on community-based forestry activities. FTPP concentrates its efforts on strengthening community-based institutions, methods development through participatory research and case studies, networking and advocacy, and publication of regional newsletters. FTPP operates six regional networking centers in Africa, Asia, Latin America, and North America, including one at FAN in Kenya and another at IPD/AC in Cameroon. FAN acts as the networking facilitator for anglophone Africa, while IPD disseminates French versions of FTPP publications and publishes regional copies of the FTPP newsletter. (See also Publications 141, 160, 161, 162, 163, 165, 172, 186, and 190.)

German Appropriate Technology Exchange (GATE)
PO Box 5180
Dag Hammarskjold Weg 1
6236 Eschborn 1, Germany

GATE publishes a free, quarterly magazine that covers development issues, especially those dealing with technology dissemination and environmental protection.

Groupement de Recherche et d'Echanges Technologiques (GRET)
213 rue La Fayette
75010 Paris, France
Tel: (33) 1-40056114
Fax: (33) 1-40056110

GRET works in over forty countries to promote development through field interventions, collection and analysis of research on development projects, and mobilization of a network of developments pecialists. GRET has several publications available through the above address, including its newsletter, *La Lettre du Réseau Recherche Développement.*

Henry Doubleday Research Association (HDRA)
Ryson-on-Dunsmore,
Coventry CV8 3LG, United Kingdom
Tel: (44) 203-639229
Fax: (44) 203-639229

HDRA selects and supplies seeds for shrubs and trees that are free of charge to tree-planting organizations in developing countries.

Information Center for Low-External-Input and Sustainable Agriculture (ILEIA)
Kastanjelaan 5
PO Box 64
NL-3830 AB Leusden, The Netherlands
Tel: (31) 33-943086
Fax: (31) 33-940791
E-mail: ileia@antenna.nl or ileia-nl@geo2.geomail.org

ILEIA's long-term objective is to foster widespread adoption of low-external-input and sustainable agriculture as a valid approach to agricultural development. This approach emphasizes use of local knowledge combined with modern technology as a way to reduce heavy reliance on such external inputs as fertilizers, pesticides, and machinery. ILEIA disseminates information through its documentation center, publications (including a quarterly newsletter, bibliographies, and resource guides), and international workshops. (See also Publication 126.)

Interim Secretariat for the Convention to Combat Desertification
Geneva Executive Center
11/13 Chemin des Anemones
BP 76
1219 Geneva, Switzerland
Tel: (41) 22-9799111
Fax: (41) 22-9799030/1
E-mail: secretariat.incd@unep.ch

The interim secretariat for the was established to oversee and coordinate the convention and its subsequent activities.

Intermediate Technology (IT)
Myson House, Railway Terrace
Rugby CV21 3HT, United Kingdom
Tel: (44) 788-560631
Fax: (44) 788-540270

IT Zimbabwe
Gorlon House, 2nd floor
7 Jason Moyo Avenue
Harare, Zimbabwe

IT Kenya
PO Box 39493
Nairobi, Kenya

IT Sudan
PO Box 4172
Khartoum Central
Khartoum, Sudan

IT is a British nonprofit organization working to develop and promote the use of tools, machinery, and other methods to enhance local knowledge, skills, and resources in developing countries. Currently active in nine countries including Kenya, Malawi, Sudan, and Zimbabwe, IT has for over twenty-five years provided technical support for housing, food production, agroprocessing, small-scale manufacturing, and energy projects. (See also p. 169.)

International Academy of the Environment
4 chemin de Conches
1231 Conches, Geneva, Switzerland
Tel: (41) 22-7891311
Fax: (41) 22-7892538

The academy fosters greater international communication and dialogue on the environment and development through education, training, interdisciplinary research, and policy formation. Its programs and activities include courses, seminars, and workshops, on specific environment-development issues; executive seminars, workshops and research projects on the role of business in environmental affairs; training programs for teachers and trainers to develop curricula; and workshops for scientists from Northern and Southern nationsto share information. The academy is developingan integrated curriculum in environmental management issues for executives and international decision makers; topics will include ecological systems and population dynamics, forest and biodiversity conservation, environmental auditing, legislation and regulation, and reassessment of traditional development paradigms.

International Council of Voluntary Agencies (ICVA)
CP 216
1211 Geneva 21, Switzerland
Tel: (41) 22-7326600
Fax: (41) 22-7389904
E-mail: unx024@cgnet.com or icva.geneva@cgnet.com

ICVA is an international association of private and nonprofit organizations active in humanitarian assistance and sustainable development. ICVA's chief objectives are to provide a forum for increased NGO cooperation and coordination on humanitarian issues and sustainable development; to develop shared perspectives and common positions Northern and Southern NGOs on these issues, with a view to developing effective advocacy activities; to facilitate information sharing and partnership among NGOs worldwide; and to increase NGO effectiveness through institutional strengthening and improved networking. (See also Publications 93 and 96.)

International Federation of Organic Agriculture Movements
c/o Oekozentrum Imsbasch
6695 Tholey-Theley, Germany
Tel: (49) 68-535190

The federation is a consortium of organizations concerned with organic and sustainable agriculture. It produces a quarterly bulletin and sponsors international conferences.

International Fund for Agricultural Development (IFAD)
Via del Serafico, 107
00412 Rome, Italy
Tel: (39) 6-54592445
Fax: (39) 6-5043463

IFAD is a member of the United Nations system under the Food and Agriculture Organization. It is dedicated exclusively to the eradication of poverty throughout the developing world. *IFAD Update* is IFAD's newsletter, available in English, French, Spanish, and Arabic.

International Institute for Environment and Development (IIED)
3 Endsleigh Street
London WC1H 0DD, United Kingdom
Tel: (44) 171-3882117
Fax: (44) 171-3882826

IIED aims to promote sustainable development through research, technical assistance, training, policy studies, and information dissemination. Additionally, it focuses on the linkages between economic development, the environment, and human needs. IIED produces numerous publications, available from the above address, including its Drylands Programme newsletter, *Haramata*, which is available free of charge to those in developing countries.

International NGO Training and Research Center (INTRAC)
PO Box 563
Oxford OX2 6R2, United Kingdom
Tel: (44) 865-201851
Fax: (44) 865-201852

INTRAC works to improve the organizational effectiveness and program performance of Northern and Southern NGOs involved in relief and development work. It seeks to extend NGO influence by strengthening NGO organizational management and supporting institutional development of the sector as a whole. INTRAC operates primarily through local partner organizations, and offers short-term training courses in areas such as strategic management, organizational development, participatory planning and evaluation, and financial management. Courses are offered in Europe, Africa, and Asia. (See also Publications 12, 22, 23, 43, and 109.)

International Research Center on Environment and Development (CIRAD)
54 boulevard Rapail, Room 311
75270 Paris CEDEX 06, France

CIRAD produces a journal, *Environment Development Energy News (EDEN)*, which provides updates on research being undertaken at the center and is available in English and French.

Panos Institute
10 rue du Mail
75002 Paris
France
Tel: (33) 1-40410550
Fax: (33) 1-40410330

Publications
Angel House
9 White Lion Street
London N1 9PD
United Kingdom

1717 Massachusetts Ave, NW, Suite 301
Washington, DC 20036 USA
Tel: (202) 965-5177

PO Box 17415
Accra, Ghana

BP 378
Bamako, Mali
Tel/Fax: (223) 231396

20 rue Mohammed V
BP 21 132
Dakar, Senegal
Tel: (221) 221666
Fax: (221) 221761

s/c Eirene
BP 186
N'Djamena, Chad
Tel: (235) 518593
Fax: (235) 514005

Panos Institute is an international network of journalists specializing in environment and development issues. The institute's goal is to build the capacities of information institutions in the developing world through trainings, seminars, and technical assistance. (See Publication 135.)

Réseau Arbres Tropicaux (RAT)
Secretariat du Réseau Arbres Tropicaux SILVA
21, rue Pau Bert
94130 Nogent-sur-Marne, France
Tel: (33) 1-48755944
Fax: (33) 1-48763193

RAT is a network that focuses on the promotion of trees and forests through communication and information exchange, rather than on conservation activities. The network finances thematic study trips, subregional discovery and reflection meetings, and workshops for professionals and youth. *Le Flamboyant* is RAT's newsletter.

Réseau des Groupements, Associations Villageoises, et Organisations Paysannes (Réseau GAO)
32, rue Le Peletier
75009 Paris, France
Tel: (33) 1-42465713
Fax: (33) 1-42465424

Réseau GAO facilitates the exchange of information and experiences in order to promote peasant and rural organizations. It encourages the formation of working groups with the objective of synthesizing reflections and experiences from the field. It also engages in information exchange on irrigation, NRM, cereal commercialization, and cattle farming. *La Lettre du Réseau GAO* is its newsletter. (See also Publication 90.)

United Nations Non-Governmental Liaison Service (NGLS)
Palais des Nations
1211 Geneva 10, Switzerland
Tel: (41) 22-7985850
Fax: (41) 22-7887366

Room 6015
866 U.N. Plaza
New York, NY 10017 USA
Tel: (212) 963-3125
Fax: (212) 963-8712

NGLS was created in 1975 to facilitate and promote improved interaction between the NGO community and the U.N. system on development issues. The NLGS magazine, *Voices from Africa*, enables African development practitioners and writers from NGOs, the research community, and elsewhere to share their work, their concerns, and their ideas on development issues and challenges facing the continent. (See also Publication 27.)

The World Conservation Union (IUCN)
Rue Mauverney 28
Gland 1196, Switzerland
Tel: (41) 22-9990001
Fax: (41) 22-9990002

IUCN is a membership organization of governments, non-governmental organizations, research institutions, and conservation organizations, representing approximately 120 countries. Its primary goal is to promote and encourage the protection and sustainable utilization of living resources. (See Publication 193.)

4. ASIA/AUSTRALIA

International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)
Asia Center
Patancheru 502324
Andhra Pradesh, India
Tel: (91) 40-596161
Fax: (91) 40-241239

Sahelian Center
BP 12404
Niamey, Niger
Tel: (227) 722529
Fax: (227) 734329
E-mail: icrisatsc@cgnet.com

ICRISAT attempts to improve crop production in the drought-prone regions of the developing world through research.

Social Development Management Institute
2/F Philippine Development Center
Magallanes Corner Real Streets
Intramuros, Manila, The Philippines
Tel: (63) 2-497041/51
Fax: (63) 2-4888891

The institute offers numerous courses in community organizing and institutional development. Inquire for the most current listing of courses.

Tree Seed Centre
CSIRO Division of Forest Research
PO Box 4008
Queen Victoria Terr.
Canberra ACT 2600, Australia
Tel: (62) 818211

The Tree Seed Centre, a division of the Commonwealth Scientific and Industrial Research Organization, provides seeds for pilot and research projects in the developing world.

5. PUBLISHING COMPANIES/ DISTRIBUTORS

The Apex Press
Council on International and Public Affairs
777 U. N. Plaza, Suite 3C
New York, NY 10017 USA
Tel: (914) 271-6500

c/o Zed Books
7 Cynthia Street
London N19JE, United Kingdom
Tel: (44) 171-8374014
Fax: (44) 171-8333960

The Apex Press offers analytical, thought-provoking publications on issues such as grassroots and sustainable development, human rights and environmental justice, social economics, developing country politics, and environmental technology and social change. To order these publications or a copy of the Apex Press catalog, contact the above addresses. (See also Publications 13, 117, and 144.)

Intermediate Technology Publications Limited
(Southern Africa)
c/o David Philip Publisher (Pty) Ltd.
PO Box 23408
Claremont 7735, South Africa
Tel: (27) 21-644136
Fax: (27) 21-643358

(Headquarters)
103-105 Southampton Row
London WC1B 4HH, United Kingdom
Tel: (44) 171-4369761
Fax: (44) 171-4362013

(Zimbabwe)
c/o Grassroots Books Pvt. Ltd.
PO Box A267 Avondale
Harare, Zimbabwe

(West Africa, Uganda, Tanzania)
c/o Len Ainsworth
PO Box 992
Aldbourne SN8 1ZA, United Kingdom

(See also Publications 36, 59, 85, 111, 112, 116, 128, 129, 147, 174, 187, 191.)

International Labour Office (ILO) Publications
CH-1211 Geneva 22, Switzerland
Tel: (41) 22-7996111
Fax: (41) 22-7986358

(See also Publications 24, 51, and 114.)

Kumarian Press, Inc.
630 Oakwood Avenue, Suite 119
West Hartford, CT 06110-1529 USA
Tel: (203) 953-0214 (inquiries)
Fax: (203) 953-8579

(See also Publications 20, 21, 40, 42, 62, 63, 65, 102, and 103.)

Lynn Rienner Publishers
1800 30th Street, Suite 314
Boulder, CO 80301 USA
Tel: (303) 444-6684
Fax: (303) 444-0824

Lynne Rienner Publishers publishes books and scholarly papers on global environmental issues, democracy and human rights, gender issues, developing country economies, multilateral development banks and foreign aid, security and peace issues, and comparative political systems. (See also Publications 7, 37, 46, and 49.)

Pfeiffer & Co. International Publishers
Langwa Street
Strijdon Park
Randburg 2194, South Africa
Tel: (27) 11-7928465
Fax: (27) 11-7928046

Distribution Center
2780 Circleport Drive
Erlanger, KY 41018 USA

Pfeiffer also has distributors in Johannesburg, Amsterdam, Oxford, Sydney, and Toronto. It offers numerous publications on organizational development, training, skills development, diversity management, team building, and effective leadership practices. (See also Publications 5 and 75.)

Routledge Press
11 New Fetter Lane
London EC4P 4EE, United Kingdom
Tel: (44) 171-5839855
Fax: (44) 171-6612704

(See also Publications 41, 127, and 173.)

USAID Development Information Services Clearinghouse
Document Distribution Unit
U.S. Agency for International Development
PPC/CDIE
1500 Wilson Boulevard, Suite 1010
Arlington, VA 22209-2404 USA
Fax: (703) 351-4039

This is USAID's distribution center for numerous documents and research articles which are generated as a result of their activities. Developing country organizations sponsored by USAID may receive documents free of charge. Developing country organizations not sponsored by USAID may receive up to five microfiche documents free, while there is a fee for paper documents. For more information and a subscription to *ARTS Abstracts* (a listing of documents available from USAID), write to: Africa Bureau Information Center, USAID, Room 2664 NS, Washington, DC 20523-0037 USA; tel: (202) 736-4663/fax: (202) 736-4133. (See also Publications 9, 47, 81, 148, 155, 182, and 184.)

Women, Ink.
International Women's Tribune Center
777 U. N. Plaza
New York, NY 10017 USA
Tel: (212) 687-8633
Fax: (212) 661-2704

Women, Ink. is a project implemented by the International Women's Tribune Center, for the promotion and dissemination of resource materials that concern women's issues in development. Materials are available on many subjects, including environmental and sustainable development, agriculture, gender, and institutions, as well as resources on gender analysis and planning. A catalog is available upon request.

World Bank Publications
PO Box 7247-8619
Philadelphia, PA 19170-8619 USA
Tel: (202) 473-1155
Fax: (202) 522-2627

(See also Publications 4, 131, 149, and 167.)

Zed Books
7 Cynthia Street
London N1 9JF, United Kingdom
Tel: (44) 171-8374014
Fax: (44) 171-8333960

(See also Publication 121.)

6. U.S. FUNDING INSTITUTIONS

African Development Foundation (ADF)
1400 Eye Street, NW , Tenth Floor
Washington, DC 20005 USA
Tel: (202) 673-3916
Fax: (202) 673-3810

ADF is a public corporation of the United States, established by the U.S. Congress in 1980 to provide economic assistance to grassroots communities in Africa. ADF provides funding to NGOs, private organizations, and associations, and occasionally to individuals throughout Africa to promote grassroots development in the following areas: agriculture; community development; communications; education and training; credit/ revolving loans; forestry; fish and animal husbandry; management and capacity building; research in grassroots development; small business development; and women in development. ADF will not fund projects that involve large-scale building or construction.

The types of grants that ADF awards include:

- Action Research Grants to African scholars, development professionals, and community developers to study and propose solutions to problems that are impediments to sustainable development;
- Senior Fellowship Grants to African academicians and development professionals; and
- Knowledge Transfer Grants to support the dissemination of the findings of research activities.

ADF maintains offices in the following countries to provide local technical support for applicants and grantees:

- Sahel Region: Senegal, Mali, Niger
- West I Region: Sierra Leone, Guinea, Cape Verde
- West II Region: Benin, Togo, Ghana
- Eastern Region: Tanzania, Uganda, Zambia
- Central Region: Cameroon, Congo, Rwanda, Central African Republic
- Southern Region: Zimbabwe, Botswana, Lesotho

Eligibility requirements:

- Legal status as a group, association, or organization with authority to carry out activities in local community development, or to act as a national intermediary able to channel resources to grassroots entities;
- Evidence of participation and control by indigenous, disadvantaged Africans in the policy and decision-making processes of the organization;
- Focus and commitment consistent with ADF's mandate;
- Track record of experience relevant to the organization's proposed use of ADF support, or an ability to manage and implement projects, or to supervise others who can do so;
- Ability to maximize or successfully integrate its own resources with those provided by ADF assistance; and
- Capability of maintaining fiscal accountability.

Application Guidelines

An official ADF grant application form is required and must be obtained from the ADF in-country liaison office in the applicant's region; or from the Office of Program and Field Operations, or for research, from the Office of Learning and Dissemination, both located in Washington, DC. The maximum grant award is US$250,000; there is no minimum award amount. There are no deadlines; applications are received continuously.

Conservation, Food, and Health Foundation
c/o Grants Management Associates
230 Congress Street, 3rd Floor
Boston, MA 02110 USA
Tel: (617) 426-7172

The foundation's primary purpose is to assist in the conservation of natural resources, the production and distribution of food, and the improvement and promotion of health in the developing world. In particular, it supports self-help initiatives and projects that transfer responsibility to citizens of developing countries to manage and solve their own problems. Preference is given to projects, including research, in fields which tend to be underfunded. The three primary areas are:

- Conservation: improve ecological and environmental conditions in the developing world. Support provided for field research and related activities, training, and technical assistance efforts that:
  - Conserve viable ecosystems, protect biological diversity;
  - Educate third-world personnel in conservation and protection of resources; and
  - Train indigenous scientific personnel to work in conservation in the developing world.

- Food: support efforts to develop or improve food for consumption in the third world. Projects should:
  - Address fuel and resource problems related to food production and preparation;
  - Offer education and training to small-scale food producers and farmers; and
  - Control pests and diseases affecting crops that are essential in developing countries.

- Health: improve the level of health in the third world through research and technical assistance programs.

Eligibility criteria: Support is generally limited to nonprofit, tax-exempt (501c-3) organizations in the United States. The foundation, however, will also fund foreign governmental and non-governmental organizations determined to be the equivalent of 501c-3 organizations. Preference is given to small organizations working in developing countries, or to modest-scale projects that employ or train personnel from the developing world. Projects must have a potential for widespread application. Support is not provided for: buildings or land purchase; endowments or fund-raising; famine or emergency relief; general operating support; or individuals, except for individual research efforts sponsored by established, nonprofit institutions.

Application Guidelines

All applications must be submitted in the form of a **concept paper**, no longer than three to four typed pages with a preliminary, one-page budget. The format for the concept paper can be obtained by writing or calling the foundation. Concept papers may be submitted at any time, but must be received by January 1 or August 1 of each year in order to be reviewed at the May/June and December meetings of the foundation. Notifications are made within thirty days of the submission deadline, at which time a full proposal may be required for the board's review.

The Ford Foundation
320 East 43rd Street
New York, NY 10017 USA
Tel: (212) 573-5115 (main line)
Fax: (212) 818-0639 (Africa Programs)

PO Box 2368
or
29 Marina
Lagos, Nigeria
Tel: (234) 1-2630141/017
Fax: (234) 1-2635056

PO Box 41081
or
Silopark House, 6th Floor
City Hall Way
Nairobi, Kenya
Tel: (254) 2-338123/4

Fax: (254) 2-338-565

PO Box 6780
or
2nd Floor Robert House
6 Central Avenue
Harare, Zimbabwe
Tel: (263) 4-731091/092/729209
Fax: (263) 4-731093

PO Box 20614
or
Suite 201, Levinson Arcade
City Centre, Independence Avenue
Windhoek, Namibia
Tel: (264) 61-239133
Fax: (264) 61-239060

PO Box 1794
or
Tagher Building
1, Osiris
Garden City
Cairo, Egypt
Tel: (202) 3552121
Fax: (202) 3554018

BP 1555
or
Villa No. 7
Rue 2 bis X Rue de l'Est
Point E
Dakar, Senegal
Tel: (221) 239619/4898
Fax: (221) 235590

PO Box 30953
Braamfontein 2017, South Africa
or
Braamfontein Centre
23 Jorissen Street, 5th Floor
Johannesburg 2001, South Africa
Tel: (27) 11-4035912
Fax: (27) 11-4031575

The Ford Foundation is a private philanthropic institution dedicated to international peace and to advancing the well-being of people throughout the world. The foundation awards grants for educational, developmental, and experimental efforts designed to produce significant advances on problems of worldwide importance. The foundation's domestic and international work encompasses seven broad categories: urban poverty, rural poverty and resources, rights and social justice, governance and public policy, education and culture, international affairs, and reproductive health and population. Operating out of its New York headquarters and field offices in Asia, Africa, and Latin America, the foundation concentrates most of its overseas work in developing countries.

Eligibility criteria: The Ford Foundation primarily supports organizations, particularly those of historically disadvantaged groups. Grants to individuals are few in number and are limited to research, training, and other activities related to the foundation's programmatic interests. Funding is rarely available for the construction or maintenance of buildings.

Application Guidelines

Prospective applicants are encouraged to submit a brief letter of inquiry prior to a formal proposal in order to ascertain whether the foundation's current interests and funds permit consideration of a proposal. There is no application form, but proposals should include: objectives; the proposed program for pursuing objectives; qualifications of persons engaged in the work; a detailed budget; present means of support and status of applications to other funding sources; and legal and tax status.

The opportunities that prospective grantee organizations provide for minorities and women are considered in evaluating grant proposals. Applications are considered throughout the year; those for in-country or subregional activities should be directed to relevant field offices. Grants awarded in Africa tend to range from US$10,000 to $500,000.

IBM International Foundation (IIF)
Old Orchard Road
Armonk, NY 10504 USA
Tel: (914) 765-1900

IIF was established as a private, charitable foundation in 1985 to provide educational and economic developmental opportunities for deprived racial groups in South Africa. It has since expanded its scope to global initiatives in the areas of job training, primary education, management development, and the environment. IIF awards grants for information technology and training in the fields of education and economic development, as well as for the devel-

opment of partnerships between private and non-profit organizations. Currently, IIF only supports initiatives in South Africa.

Application Guidelines

A standard grant application form is required and must be obtained from the foundation.

LOTUS Information Technology Education Trust (LOTUS Trust)
PO Box 4126
Rivonia 2128, South Africa
Tel: (27) 11-8846969
Fax: (27) 11- 8845890

LOTUS Trust makes grants to community-based, innovative projects in South Africa that provide individuals and communities with the resources to effect ongoing change, and that remove barriers to an equitable distribution of wealth, power, and opportunity. The trust focuses primarily on programs that promote access to information and computer technology for disadvantaged communities and, in particular, for the black majority community.

Among the fields in which LOTUS Trust awards grants are:

- Strengthening of community organizations: assisting community-based organizations with information technology skills and equipment to enhance their service delivery and effectiveness;
- Empowerment of Women: supporting institutional efforts to advance women and support their equitable contributions to the nation's development, using information technology for networking and support systems.

LOTUS Trust offers the following types of support:

- Cash grants through an application process,
- Software and technical support donations,
- LITET internships in information technology, and
- Training and educational travel support.

Eligibility criteria: The organization must hold valid non-governmental organization status within the Republic of South Africa and must be tax exempt according to Section 18(a) of the Income Tax Act of 1962. The following guidelines are used to determine eligibility status:

- Nondiscriminatory;
- Religion not promoted as one of its explicit goals;
- Nonpolitical;
- Not primarily research-based unless the goal of the research is to enhance the capacity of broader change efforts.

Application Guidelines

A comprehensive proposal must be submitted to the executive director including:

- An organization description and mission statement;
- A detailed description of the program/project;
- A complete program/project budget;
- An overall organization budget;
- A listing of the board of directors/advisors;
- Documentation of non-governmental, tax-exempt status;
- Letters of support from collaborating organizations; and
- Other materials, if appropriate.

The John D. and Catherine T. MacArthur Foundation
140 South Dearborn Street
Chicago, IL 60603-5285 UASA
Contact: Office of Grants Management, Research, and Information
Tel: (312) 726-8000
Fax: (312) 920-6258

The MacArthur Foundation was created as a private, independent, grant-making foundation for charitable and public service purposes. It has developed a number of programs in areas where it believes a focused philanthropic effort can make an important contribution. These areas include: The Community Initiatives Program; The World Environment and Resources Program; The Education Program; The General Program; The Health Program; The MacArthur Fellows Program; The Program on Peace and International Cooperation; and The Population Program.

The MacArthur Foundation awards grants to organizations and individuals throughout the world, with an increasing number of awards to applicants from developing countries. The foundation will typically support capacity building only for institutions

outside of the United States, especially under the Population and World Environment and Resources Programs.

Application Guidelines

Grant seekers should first submit a letter of inquiry detailing the project and its relationship to the interests of the foundation. A summary of the proposed project's budget and information on the nature of the organization seeking funding should also be submitted. In response to this letter of inquiry, the foundation may request a full proposal.

The McKnight Foundation
600 TCF Tower
121 South Eighth Street
Minneapolis, MN 55402 USA
Tel: (612) 333-4220
Fax: (612) 332-3833

The goal of the foundation's grant-making in Africa is to enhance women's economic opportunity and the well-being of their families. The foundation will consider requests from NGOs for support of work related to social and economic empowerment of women, with special attention to: small enterprise development; agricultural development; priority on development projects rather than emergency relief (except in highly unusual circumstances); maternal and child health; and research on food production and alleviation of hunger. Highest priority will be given to requests for buildings, equipment, planning, skills training, technical assistance, and leadership development. Operating support and capital requests are only considered for projects involving smaller, community-initiated activities. The foundation awards grants to communities and organizations in Tanzania, Uganda, and Zimbabwe.

Eligibility criteria: Activities not eligible for funding are:

- Legal work;
- Primary and secondary education;
- Scholarships/support for general university functions;
- Government activities and projects (with the exception of planning);
- Transportation; and
- Most programs in the area of AIDS prevention and treatment.

The Foundation does not support individuals or religious organizations.

Application Guidelines

Initial approach:	Letter of inquiry
Board meeting dates:	March, June, September, December
Deadlines:	March 1, June 1, September 1, December 1
Final notification:	Within two-and-a-half months

Average grant size: US$10,000 to $250,000. (Funds may be requested for up to three years.)

Charles Stewart Mott Foundation
1200 Mott Foundation Building
Flint, MI 54502-1851 USA
Contact: Judy Samelson, Vice President

South Africa Field Office
8th Floor, Mansion House
132 Market Street
Johannesburg 2000, South Africa
Tel: (27) 11-3369851
Fax: (27) 11-3360121

The Mott Foundation supports efforts that promote a just, equitable, and sustainable society. The goal of the foundation's Civil Society program is to promote and support civil society in the United States and selected areas of the world, particularly South Africa, Central/Eastern Europe, and Russia and the Republics. The foundation has four programs:

- Civil Society: support from this program is centered around political, economic, and social transformation involving citizen participation and empowerment;
- Environment: prevention of toxic pollution, reform of international lending and trade policies, protection of the Great Lakes ecosystem, special initiatives;
- Poverty: building communities, strengthening families, improving education, expanding economic opportunity, and cross-cutting initiatives; and
- Flint: institutional capacity building, and special projects.

Assistance will be given to encourage the participation of formerly disenfranchised populations in deci-

sion making that affects their communities at the local, regional, and national levels. The foundation seeks to:

- Strengthen the effectiveness of the nonprofit sector by developing and implementing policies and laws to protect the legal status of nonprofit organizations (by supporting those involved in networking, information sharing, and advocacy throughout Southern Africa).
- Strengthen education for democratic participation through workshops, materials, and public education for adults and youth, thereby encouraging citizen participation in the political process.
- Support women's participation in government and non-governmental organizations through training, leadership development, and empowerment.

Eligibility criteria: No support is given to religious organizations, individuals, or for building or endowment funds, research, scholarships, or fellowships.

Application Guidelines

An application form is not required. Applicants should submit a proposal signed by the person authorized to accept grants at the organization, and containing the following:

- A detailed description of the project, including its necessity and beneficiaries;
- How the proposed grant fits within the philosophy, policies, and program structure of the foundation;
- The amount of funding requested;
- The feasibility and sustainability of the proposed grant activity;
- A copy of the current year's organizational budget and project budget;
- A copy of the most recent annual report and audited financial statement;
- A brief history of the organization and description of its mission (foreign applicants are required to submit an affidavit showing equivalence as a tax-exempt institution under U.S. law);
- A timetable for the implementation and evaluation of project; and
- How the project's results will be evaluated and disseminated.

All applications relating to South Africa should be submitted to the South Africa Field Office. The average grant size is US$20,000 to $200,000.

The Rockefeller Foundation
420 Fifth Avenue
New York, NY 10018-2702 USA
Tel: (212) 869-8500
Fax: (212) 764-3468 or 398-1858

The Rockefeller Foundation's International Program to Support Science-Based Development is based on the premise that scientific advance and technical innovation, used in environmentally sound ways, can serve the cause of international equity by helping to reduce the incidence of poverty, disease, malnutrition, unwanted pregnancies, and illiteracy in developing countries, and thereby advance the well-being of their peoples. Some of the areas into which the International Program organizes its grants are:
Global Environmental Program:

- Supporting young environmental scientists, analysts, policymakers, and community leaders who can be architects of future policy in development and the environment;
- Laying the groundwork for efficient production and use of energy; and
- Seeking innovative ways for the United States to practice more intensive energy efficiency to accelerate the introduction of renewable energy sources.

Agricultural Services:

- Applying biotechnology to developing country food crops;
- Strengthening food production systems in Africa; and
- Increasing knowledge for the management of natural resources.

African Initiatives:

Beyond the traditional program areas, the African Initiatives support a small number of innovative projects that improve children's technological literacy; increase the participation of girls in primary and secondary education; and improve educational arrangements preparing professionals for leadership and public policy in science.

African Dissertation Internship Award:

This competitive program enables African graduate students enrolled in U.S. or Canadian universities to return to Africa for twelve to eighteen months of supervised doctoral research. A total of approximately twenty-five awards are made annually in agriculture, health, and in life sciences, and related social sciences and history.

Application Guidelines

Application forms are not required. Organizations may be asked to supply information on their own affirmative action efforts, including data on gender and minority composition of the leadership of the institution. Applicants should submit:

- A detailed description of the project and amount of funding requested;
- Information on project sustainability once foundation support is completed;
- A listing of additional sources and amounts of support;
- A brief history of the organization and description of its mission; and
- The qualifications of key personnel.

Initial approach: Letter or proposal

Board meeting dates: Usually in March, June, September, December

Deadlines: None

B. PUBLICATIONS[1]

Institutional Development

Analysis/Evaluation

1. *L'Analyse Institutionelle des Organisations Rurales en Afrique: Guide Pratique.* 1993. (WARF, p. 155)

Capacity Building

2. *Building Capacity through Action Learning.* 1994. Vol. 10, no. 5. $8.00. (IDR, p. 160)

3. *Building Organizational Effectiveness Through Participation and Teamwork.* 1992. Nanette Brey Magnani and David P. Magnani. Washington, DC: PACT Communications, Inc./World Education. 140 pp., $17.95. Field-tested manual that applies themes of empowerment and participation to NGO organizational management. Contains a model for a one-week, participatory training workshop that integrates research, organizational planning, design, and building concrete problem-solving skills. (PACT, p. 161)

4. "Capacity Building for Participatory Organizations." 1992. Thomas Carroll. Paper presented at the World Bank Workshop on Participatory Development. 18 pp. (World Bank Publications, p. 170)

5. "Characteristics of Successful Organization Development: A Review of the Literature." Peggy G. Walters. In J. William Pfeiffer, *The 1990 Annual: Developing Human Resources,* pp. 209-23. San Diego: University Associates, Inc. $39.95 (paper), code 562; $89.95 (looseleaf), code 561. Defines the characteristic processes that are used for organizational development and discusses ways to evaluate the effectiveness of these interventions. (Pfeiffer Publishers, p. 169)

6. *The Emerging Practice of Organization Development.* Walter Sikes, Allan Drexler, and Jack Grant, eds. $19.95. Covers issues of improving nonprofit organizations; morals, ethics, and values; organizational development (OD) and race, gender, and cultural differences; insights into OD practices; and the future of OD. (NTL, p. 160)

7. *Fellowships in International Affairs: A Guide to Opportunities in the United States and Abroad.* 1994. Women in International Security. 196 pp., $17.95. (Lynne Rienner Publishers, p. 169)

8. *The Fifth Discipline: The Art and Practice of the Learning Organization.* 1990. Peter M. Senge. New York: Doubleday (ISBN# 0-385-26095-4). 409 pp. $25.00. By the director of the Systems Thinking and Organizational Learning Program, Massachusetts Institute of Technology, this book describes types of

[1] Note: Prices are given in US dollars, except as indicated.

"learning disabilities" that organizations and groups of people in both the private and non-profit sectors face, and methods they can employ to overcome such disabilities. Draws upon science, spiritual wisdom, psychology, and contemporary management thought. A complementary *Fifth Discipline: Fieldbook* is also available (ISBN# 0-385-47256-0); $29.95. Contact: Trans-SA Book Distributors, The Atrium Building, 9th Floor, 41 Stanley Avenue, Millpark 2092, Johannesburg, South Africa.

9. *Final Evaluation of the Private Voluntary Organization Initiatives Project.* 1992. Shirley Buzzard and John Zarafonetis. Washington, DC: TvT Associates. 29 pp. Evaluates this USAID-supported effort to mobilize the financial and human resources of NGOs/PVOs to improve the welfare of African populations. Identifies the shortfalls and successes of the PIP, primarily its failure to effectively institutionalize or make sustainable the project components. (USAID Development Information Services Clearinghouse, p. 169)

10. *Handbooks on Participatory Approach to Training: Volumes I and II.* 1993. Siapha Kamara and Aloysius Denkabe. Freedom Publications. 42 pp. each, $12.50 each. Based on training experiences of the CUSO-CCPD Training Programme for NGOs in Northern Ghana, the handbooks describe in simple language how the principles of participation in training and development can be translated into practice. Vol. I presents project planning, management, and mobilization; Vol. II discusses gender in development. (PACT, p. 161)

11. *Institution Building: The Achilles Heel of Development Projects.* Contact: Claudio Schuftan, PO Box 30677, Nairobi, Kenya/fax: (254) 2-520023.

12. *Institutional Development and NGOs in Africa: Policy Perspectives for European Development Agencies.* 1992. Alan Fowler, with Piers Campbell and Brian Pratt. INTRAC/Novib. 52 pp., $10.00. An overview of NGO institutional development in sub-Saharan Africa, intended to help NGOs formulate policies and strategies for the institutional development of the African NGO community. (INTRAC, p. 167; also available through PACT Publications.)

13. *International Directory of Youth Internships.* 1993 (5th edition). Cynthia Morehouse, ed. (ISBN# 0-945-25747-3). 58 pp., $7.50. This directory provides information on intern and volunteer opportunities within the United Nations Secretariat and agencies, and with selected international NGOs. (APEX, p.168)

14. *OD Annual, Volume I: Entry — Beginning the OD Consultation Process.* 1987. Conrad Jackson, ed. 68 pp., $15.00 (members), $20.00 (nonmembers); order #JADD. Explores problems faced by practitioners of organizational development (OD) and change, and examines issues that managers of organizations must address. (ASTD, p. 156)

15. *OD Annual, Volume III: Diagnosing Client Organizations.* 1990. Conrad Jackson and Michael Manning, eds. 133 pp., $15.00 (members), $20.00 (nonmembers); order #JADC. How to diagnose problems within an organization. (ASTD, p. 156)

16. *OD Annual, Volume IV: Intervening in the Client Organization.* 1992. Conrad Jackson and Michael Manning, eds. 178 pp., $15.00 (members), $20.00 (nonmembers); order #JAIN. Provides theoretical and practical guidance on how to intervene in an organization's development process, and presents case studies that demonstrate effective reorganization techniques, team-building exercises, and sociotechnical redesign. Also offers insights on issues of international management and value-based management strategies. (ASTD, p. 156)

17. *OD Annual, Volume V: Evaluating Organization Development.* 1994. Conrad Jackson and Michael Manning, eds. 142 pp., $15.00 (members), $20.00 (nonmembers); order #JAED. Addresses the importance of evaluation as a tool in effective organizational development and presents case studies of different evaluation approaches. (ASTD, p. 156)

18. *Organization Development in Social Change Organizations: Some Implications for Practice.* 1987. Vol. 4, no. 2. $4.00. (IDR, p. 160)

19. *Organizational Barriers to NGO Strategic Action.* 1988. Vol. 5, no. 2. $4.00. (IDR, p. 160)

20. *Participation and Empowerment through Organizational Development: What We Can Learn from the Grameen Bank.* 1993. Andreas Fuglesang, Dale Chandler, and Daya Akuretiyagama. Grameen Trust Publication (ISBN# 9-840-51238-2). 282 pp., $15.00. Description and analysis of the Grameen Bank's organization and methods of communicating with the poor to ensure them direct access to and control of resources. (Kumarian Press, p. 169)

21. "People-Oriented Policies: A Diagnostic Human Framework." 1992. In *HRD: International Perspectives on Development and Learning.* John Fyfe, Merrick Jones, and Pete Mann, eds. (Kumarian Press, p. 169)

22. *Strengthening the Capacity of Small Enterprise Development Agencies: Cases from Africa.* Caroline Sahley. Examines the common organizational weaknesses of a range of enterprise development agencies and considers how these constraints can be addressed. (INTRAC, p. 167)

23. *Strengthening the Capacity of Southern NGO Partners: A Survey of Current Northern NGO Approaches.* 1994. Rick James. Vol. 1, no. 5. 56 pp. Provides an overview of various Northern NGO approaches to strengthening the capacity of their partner NGOs in the South, including reassessments of traditional roles in partnerships, use of supportive financing methods; support for management training, encouragement of organizational development consultancies, assistance for the development of Southern NGO networks, and support for Southern training centers. Emphasizes the importance of institutional funding, management training, and development of organizational frameworks. (INTRAC, p. 167)

24. *Training for Change: New Approach to Instruction and Learning in Working Life.* 1994. Yrjo Engestrom (#ISBN 9-290-16104-3). 148 pp., $16.00 or 20 SFR. Presents a cognitive and activity-theoretical view of learning and teaching, including guidelines and examples for forming cognitive objectives of instruction, organizating learning contents, selecting instructional materials, and developing curriculum. (ILO Publications, p. 169)

25. *Training Theory and Practice.* W. Brendan Reddy and Clenard C. Henderson, Jr., eds. $19.95. Compilation of ideas on the theory and practice of human relations training from numerous NTL trainers and associates. (NTL, p. 160)

26. *Working Together for Sustainable Development: Building NGO Networks and Capacities.* 1985. (ELCI, p. 148)

Electronic Communications

27. *At Ease with E-Mail: A Handbook on Using Electronic Mail for NGOs in Developing Countries.* 1995. Spanish, English, and French. (NGLS, p. 168)

28. *The Essential Internet: Basics for NGOs.* 1995. Washington, DC: InterAction's Alliance for a Global Community. (InterAction, p. 160)

29. *Guide de l'Internet en Afrique.* 1995. Produced by the United Nations Sudano-Sahelian Office (UNSO), United Nations Institute for Training and Research, OSS, and Cooperation Francaise. Contact UNSO at PO Box 30218, Nairobi, Kenya; tel: (254) 2-622010/fax: (254) 2-520874; or 1 U.N. Plaza, New York, NY 10017, USA; tel: (212) 906-5755/fax: (202) 906-6345.

Fundraising/Proposal Writing

30. *Alternative Financing Development Associations and NGOs in the Third World/Financier Autrement les Associations et ONG de Développement du Tiers Monde.* 1995 (3rd edition). Fernand Vincent. 464 pp., $35.00 or 50 SFR. A two-volume manual targeted at directors of cooperation agencies, commercial and development banks, and government agencies, this book examines current financing systems and financial requirements of development organizations and describes key strategies, such as mobilization and capitalization, for developing alternative financing mechanisms. (IRED, p. 150)

31. *The Board Member's Guide to Fund-Raising: What Every Trustee Needs to Know About Raising Money.* 1991. Fisher Howe. 168 pp., $32.00; order #36. Presents key elements of successful fund-raising programs, including how to seek support from individuals, government agencies, and founda-

tions; how to organize publicity campaigns and directly ask for contributions; and how to prepare proposals. (NCNB, p. 161)

32. *Diversity in Development: U.S. Voluntary Assistance to Africa.* 1985. Martha Keehn. A summary of the activities and philosophies of 150 voluntary agencies working in Africa, including assessments of development needs that PVOs feel most and least able to address. (PACT, p. 161)

33. *A Guide to Designing Effective Proposals.* 1991. English and Spanish. (ISBN# 0-891-64127-0). 120 pp., $13.00 (English and Spanish). A self-paced, instructional manual that describes how a nonprofit, conservation organization can write effective proposals, and includes figures and worksheets to guide readers through the process. (WWF Publications, p. 164)

34. *A Guide to Financial Resource Development.* 1993. Emilie Mead and Laura Campobasso (ISBN# 0-891-64129-7). 179 pp. $9.95. One in a series of WWF publications on organizational development, this guide is designed to help conservation organizations and NGOs understand the importance of strategic planning, how to manage financial resources, and how to diversify funding sources. A self-instructional workbook, the guide draws upon WWF programs and activities throughout the world. (WWF Publications, p. 164)

Gender

35. *Directory of Resources for Women.* 1992. Women's Task Force, Development Support Service of IRED-ESA. 175 pp. Lists resources available in areas of agriculture, communication, information and documentation, community development, education, training and training facilities, environment, finance, health, legal issues, organizational development, research, and rural development. Contact: IRED-ESA, PO Box 8242, Causeway, Harare, Zimbabwe. (IRED, p. 150)

36. *Getting Down to Business: A Training Manual for Businesswomen.* 1991. Uschi Kraus-Harper and Malcolm Harper (#ISBN 0-903-03163-9). 160 pp., $22.95. A manual to help trainers organize and conduct more effective courses for women in business and small-enterprise development. (Intermediate Technology Publications, p. 169)

Governance/Advocacy

37. *The Changing Political Economy of the Third World.* 1995. Manochehr Dorraj, ed. 325 pp., $19.95 (paper); $47.00 (hardback). Case studies of transitions in regional political economies, with particular attention to foreign aid, environmental policies, and roles of women. (Lynne Rienner Publishers, p. 169)

38. *Civil Society and Political Transition in Africa.* 1994. Vol. 11, no. 6. $5.00. (IDR, p. 160)

39. *Creating Social Capital: Non-governmental Development Organizations and Intersectoral Problem-Solving.* 1994. Vol. 11, no. 3. $8.00. (IDR, p. 160)

40. *Democratizing Development: The Role of Voluntary Organizations.* 1991. John Clark (ISBN# 0-931-81691-2). 228 pp., $18.95. Assesses the roles of NGOs and PVOs in the development process, particularly in the South. (Kumarian Press, p. 169)

41. *Environmental NGOs in World Politics: Linking the Local and the Global.* Thomas Princen and Matthias Finger (ISBN# 0-415-11510-8). (Routledge Press, p. 169)

42. *Getting to the 21st Century: Voluntary Action and the Global Agenda.* 1990. David C. Korten (ISBN# 0-931-81684-X). 254 pp., $18.95. Analysis of the role that voluntary agencies and citizen groups can play in effecting a transformation to more equitable, just societies. (Kumarian Press, p. 169)

43. *Governance, Democracy, and Conditionality: What Role for NGOs.* Andrew Clayton. The first publication to address the issues of good governance and conditionalities from the perspective of both Southern and Northern NGOs. Case studies from NGO experiences in Africa, Asia, and Latin America. (INTRAC, p. 167)

44. *Institution Development for Strengthening Civil Society.* 1994. Vol. 11, no. 9. $5.00. (IDR, p. 160)

45. *NGO Influence on National Policy Formation in*

Zimbabwe. 1994. Vol. 11, no. 2. $8.00. (IDR, p. 160)

46. *Policy Reform for Sustainable Development in Africa: The Institutional Imperative*. 1994. Louis Picard and Michele Garrity, eds. International Institute of Administrative Sciences. 186 pp., $34.00. (Lynne Rienner Publishers, p. 169)

47. *A Research and Advocacy Agenda for African NGOs in Eastern and Southern Africa*. 1992. The Research Paper Series of the PVO/NGO Initiatives Project. Washington, DC: DATEX, Inc. 56 pp. Examines the changing agenda for African and Western NGOs, one whose focus is now participatory democracy, better governance, environmental protection, and respect for human rights. Suggests the need for shifting policies and behaviors of African governments, African NGOs, and international donor agencies. (USAID Development Information Services Clearinghouse, p. 169)

48. "Strengthening Civil Society: The Role of NGOs." Laura Roper Renshaw. In *Development* 4 (1994), pp. 46-9. Published by the Society for International Development. For information on *Development* magazine, contact: Society for International Development, Headquarters Office, 207 via Panisperna, 00184 Rome, Italy; tel: (39) 6-6873214/fax: (39) 6-6872549.

49. *The Third World in Global Environmental Politics*. 1995. Marian A. Miller. 225 pp., $17.95 (paper); $40.00 (hardback). Analyzes efforts of developing countries to influence evolving environmental regimes, examining similarities in countries' strategies to effect policy reform. Considers negotiations on biodiversity conservation, technology transfer, and hazardous waste trade. (Lynne Rienner Publishers, p. 169)

Management

50. *The Board's Role in Public Relations and Communications*. 1995. Joyce L. Fitzpatrick. 28 pp., $9.00; order #015. Practical guidelines for board members to act as organization spokespeople and handle media relations, particularly during crises. (NCNB, p. 161)

51. *The Business of Learning*. 1995. Joao Batista Araujo e Oliveira (#ISBN 9-221-08522-8). $20.00 or 25 SFR Survey of the literature on diffusion of new technologies in modern society, and the role that training and public policy play in their impact. (ILO Publications, p. 169)

52. *Classic Readings in Organizational Behavior*. 1995 (2nd edition). Steven J. Ott, ed. Pacific Grove, CA: Brooks Cole (ISBN# 0-534-50413-2). $31.25. Essays by theorists and practitioners in the areas of employee motivation, group behavior, leadership, organizational culture, power, influence, and organizational development. Contact: International Thomson Publishing Co., 7625 Empire Drive, Florence, KY 41042, USA.

53. *Creating and Renewing Advisory Boards: Strategies for Success*. 1995. Nancy R. Axelrod. 28 pp., $9.00; order #09. Analyzes methods for creating and strengthening advisory boards and committees, draws upon case studies, and makes practical suggestions. (NCNB, p. 161)

54. *Development Management: Plain or Fancy? Sorting Out Some Muddles*. Thomas W. Dichter. 18 pp. Examines the importance of establishing basic organizational and management skills and personnel policies for effective development management. (PACT/Technoserve, p. 161)

55. *Diagnosing Organizations*. 1994 (2nd edition). Michael I. Harrison (ISBN# 0-803-95645-2). $16.95. Contact: Sage Publications, 2455 Teller Road, Newbury Park, CA 91320, USA/tel: (805) 499-0721.

56. *Effective Leadership in Voluntary Organizations*. 1985. Brian O'Connell (ISBN# 0-802-77188-2). 202 pp., $5.95; CAT #P13. Handbook that outlines the practical methods of establishing a voluntary organization. Provides guidelines on topics such as fund-raising, fulfilling the president's role, distinguishing between the functions of volunteers and staff, involving minorities, evaluating programs, and setting new directions. Contact: Independent Sector, 1828 L Street, NW, Washington, DC 20036, USA; tel: (202) 223-8100/fax: (202) 416-0580.

57. *La Gestion des Petites et Moyennes Organisations Africaines*. 1989. Contact: Gestion Norsud,

1141 est Boulevard Saint-Joseph, Montreal, Quebec H2J 1L3, Canada.

58. *La Gestion des Groupements Paysans de Production.* 1990. Contact: Gestion Norsud (see no. 57 above).

59. *How to Run a Small Development Project.* 1986. (ISBN #0-946-68847-8). 44 pp., $11.50. Describes how to design and manage small development projects, emphasizing the importance of forward planning. Details project start-up and operations, as well as forging partnerships with Northern organizations. (Intermediate Technology Publications, p. 169)

60. *International Dimensions of Organizational Behavior.* 1991. Nancy C. Allen. Boston, MA: Kent Publishing Co. Addresses the impact of social cultures on organizations, managing cultural diversity and multicultural teams, negotiating processes and tactics in other countries, and managing and supporting people whose work takes them back and forth across international borders.

61. *Leadership Is: Everyday Ethics — Key Ethical Questions for Independent Sector Organizations.* 1993. Sandra T. Gray, ed. 20 pp., $12.00; CAT #P89. A useful workbook containing series of questions to serve as a centerpiece for reflecting on the ethical behavior and practices of an organization. Contact: Independent Sector (see no. 56 above).

62. *Management Consulting in Africa: Utilizing Local Expertise.* 1993. Frederick J. Kaijage, ed. 213 pp., $22.95 (paper), $34.00 (hardback). Series of articles evaluating the African management consultant scene, the political reasons that prevent hiring of local consultants for development programs, and the great potential that women, universities, and indigenous organizations have in providing management assistance. (Kumarian Press, p. 169; also available through the University of Dar Es Salaam, Tanzania.)

63. *Management Dimensions of Development: Perspectives and Strategies.* 1991. Milton J. Esman (ISBN# 0-931-81664-5 and #0-931-81665-3). 168 pp., $16.95 (paper), $30.00 (hardback). Contemporary views on the issues and problems of development management, with concrete examples of actions that organizations can employ to solve problems. (Kumarian Press, p. 169)

64. *Managing as a Performing Art.* 1989. Peter B. Vail. San Francisco: Jossey-Bass (ISBN# 1-555-42140-7). $18.95 hardback. Describes how to respond with flexibility and creativity to the chaotic changes occurring in an organization. Addresses issues of leadership, organizational excellence, communication, teamwork, and ethics. Contact: Jossey-Bass, Inc., Publishers, 350 Sansome Street, San Francisco, CA 94104, USA.

65. *Managing Organizations in Developing Countries: An Operational Approach.* 1989. Moses N. Kiggundu (ISBN# 0-931-81642-4). 317 pp., $27.95. Examines theoretical and operational requirements for establishing organizations in developing countries, with an emphasis on building sustain ability rather than on seeking external technical assistance. Covers strategic management, human resources development, transfer of technology and knowledge, and decentralization. (Kumarian Press, p. 169)

66. *Managing the Non-Profit Organization.* 1990. Peter E. Drucker. New York: Harper and Collins Publishing. $13.00 (paper; ISBN# 0-887-30601-2), $17.00 cassette (ISBN# 1-559-94552-4). Drucker applies years of management experience to helping the nonprofit manager clarify mission statements, operational plans, manage human resources, work with boards, raise funds, and utilize volunteers. Contact: Harper and Collins Publishing, 1000 Keystone Industrial Park, Scranton, PA 18510, USA.

67. *Manual of Practical Management for Third World Rural Development Associations/Manuel de Gestion Pratique des Associations de Développement Rural du Tiers Monde.* 1989. Fernand Vincent. 260 pp., $16.00 or 24 SFR. Addressed primarily to managers of grassroots organizations, this manual presents practical information and examples from Africa and Asia of local organization start-up, administration, communications, and financial management. (IRED, p. 150)

68. *Measuring Our Impact: Determining Cost-Effectiveness of Non-Governmental Organization Development Projects.* Margaret Bowman, Jorge Baanante, Thomas Dichter, Steven Londner, and Peter Reiling. 22 pp. Describes a Technoserve methodology by which NGOs can measure the effectiveness of their pro-jects, covering nonfinancial assistance to enterprise owners (e.g., management training, increasing incomes, generating employment, redistributing income to poor). (PACT/Technoserve, p. 161)

69. *Nine-Part Nonprofit Management Series.* 1988. Brian O'Connell. $5.00 per single part, $35.00 for set; CAT #P31. Nine publications that address essential issues in nonprofit organizational management. These include the role of the board, how to find good board members, operating effective committees and conducting good meetings, roles of volunteers and staff officers, recruiting and evaluating chief staff officers, fund-raising, and accounting. Contact: Independent Sector (see no. 56 above).

70. *The Nonprofit Sector in the Global Community: Voices from Many Nations.* 1992. Kathleen D. McCarthy, Virginia A. Hodgkinson, Russy Sumariwalla, et al (ISBN# 1-555-42397-3). 520 pp., $49.95; CAT #P41. Examines the significance and functions of the nonprofit sectors in the North and South. Provides a rich blend of diverse perspectives of non profit sectors throughout many countries in transition. Contact: Independent Sector: (see no. 56 above).

71. *The Nonprofit Sector in the United States and Abroad — Cross Cultural Perspectives.* 1990. Spring Research Forum Paper Series. $50.00; CAT #P60. Contact: Independent Sector: (see no. 56 above).

72. *Participative Management.* 1991. Lorne C. Plunkett and Robert Fourner. New York: John Wiley and Sons (ISBN# 0-471-54374-8). 288 pp., $34.95. Describes the nature of participatory management, how to develop and support work teams, and how to implement this approach in an organization. Contact: John Wiley and Sons, Inc., 1 Wiley Drive, Somerset, NJ 08875, USA.

73. *Profiles of Excellence — Achieving Success in the Nonprofit Sector.* 1990. E.B. Knauft, Renee Berger, and Sandra Gray. 197 pp., $24.95; CAT #P47. Describes four basic principles of effective nonprofit leadership: a clear sense of mission; a dynamic leader; an involved board and committed governing board; and the ability to raise funds and motivate volunteers. Contact: Independent Sector (see no. 56 above).

74. *Project Management Handbook.* 1988. D.I. Cleland and W.R. King. New York: Van Nostrand Reinhold (ISBN# 0-442-22114-2). $79.95. Collection of essays providing an overview of the nature of project management; how to organize resources; how to fit projects into the larger life cycle of the organization; how to plan, implement, and control projects; and how to build project teams. Contact: International Thomson Publishing Co., 7625 Empire Drive, Florence, KY 41042, USA.

75. *Self-Directed Work Teams: A Primer.* Cresencio Torres and Jerry Spiegel. 100 pp., $19.95; order #564C25. Describes a new kind of leadership for organizations and how it can significantly affect changes in management; includes guiding principles, working models, key strategies, and action steps for creating successful, self-directed teams. (Pfeiffer Publishers, p. 169)

76. *Six Keys to Recruiting, Orienting, and Involving Nonprofit Board Members.* 1991. Judith G. Nelson. 58 pp., $22.00; order #42. Provides step-by-step approach to establish and maintain effective board, including useful models for board development plans, bylaw language, agendas for orientation meetings, and checklists for first-year goals. (NCNB, p. 161)

77. *Strategic Management in Public and Non-Profit Organizations.* 1991. Jack Koteen. New York: Praeger (ISBN# 0-275-94003-9). $18.95 plus shipping costs. Reviews advantages and disadvantages to strategic management in nonprofit organizations, and presents various methods for designing and implementing management strategies in the public sector. Covers all aspects of strategic management including leadership; management system design, organization, and evaluation; budget-

ing; and accountability. Contact: Greenwood Publishing Group, Inc., 88 Post Road West, PO Box 5007, Westport, CT 06881-5007, USA; tel: (203) 226-3571/fax: (203) 222-1502.

78. *Strategic Planning and the Nonprofit Board.* 1995. Dabney G. Park, Jr. 28 pp., $10.00; order #06. Information on strategic planning for nonprofit organizations, including the role of the board. Presents seven practical steps for a board to take in launching a planning process. (NCNB, p. 161)

79. *Strategic Planning Workbook for Nonprofit Organizations.* Bryan Barry. St. Paul, MN: Amherst Wilder Foundation. 88 pp., $25.00. A step-by-step approach to strategic planning for nonprofit organizations. Includes definitions of strategic planning and its importance to any organization, five steps for getting organized and implementing plans, and a sample three-year plan with detachable worksheets. Contact: Amherst H. Wilder Foundation, Publishing Center, 919 Lafond Avenue, St. Paul, MN 55104, USA; fax: (612) 642-2061.

80. *Strategies for National Sustainable Development: A Handbook on their Preparation and Implementation.* 1995. Jeremy Carew et al. A joint IIED and IUCN document. 160 pp., £14.95. Review of worldwide efforts over many years to develop sustainable national development strategies, including practical guidelines on how to mobilize a society's resources. Contact: Earthscan Publications, 120 Pentonville Road, London N1 9JN, United Kingdom; tel: (44) 71-278-043/fax: (44) 71-278-142. Or Earthscan, c/o Alternative Books, PO Box 2428, 2125 Randburg, South Africa; tel: (27) 11-886-2645/fax: (27) 11-886-504.

81. "Strategies for Sustainable Development: Essential Elements in Planning and Implementation for Benefit Continuation." 1989. Nan Borton. Concept paper from the PVO Institutional Development Series. Arlington, VA: International Science and Technology Institute, Inc. 17 pp. Assesses the planning and implementation activities of U.S. PVOs and their beneficiary organizations to determine the institutional, financial, and human resource conditions that enhance benefit sustainability, and to identify effective strategies to achieve these conditions. (USAID Development Information Services Clearinghouse, p. 169)

82. *Teambuilding: Blueprints for Productivity and Satisfaction.* W. Brendan Reddy and Kaleel Jamison, eds. $19.95. Experiences of managers in different sectors, on the skills and conditions needed to produce creative, efficient work teams. (NTL, p. 160)

83. *Ten Basic Responsibilities of Nonprofit Boards.* 1995. Richard T. Ingram. 28 pp., $10.00; order #01. Describes the fundamental responsibilities of boards, focusing on the board as a single entity, as well as responsibilities for individual board members. (NCNB, p. 161)

84. *Towards Greater Financial Autonomy of Development NGOs and Community Organizations/Renforcer l'Autonomie Financière des Associations et ONG de Développement du Tiers Monde.* 1989. Fernand Vincent and Piers Campbell. 300 pp., $25.00 or 40 SFR. Assesses how Southern NGOs should and can improve their financial autonomy in order to become self-sufficient and more effective institutions of development. Addresses institutional development, financing policy, techniques for increasing financial autonomy, fund-raising and donor relations, and financial management. (IRED, p. 150)

85. *The Work of a Cooperative Committee: A Programmed Learning Text.* 1987. Peter Yeo et. al. (ISBN# 0-903-03153-1). 88 pp., $9.75. Examines the responsibilities and duties involved in becoming a cooperative committee member, including financial, planning, and administrative responsibilities. (Intermediate Technology Publications, p. 169)

Networks

86. *African NGOs Environment Network: An Institutional Innovation.* This paper from ANEN traces the origin and development of the network. (ANEN, p. 146)

87. "Building Partnerships Between Northern and Southern Development NGOs Issues for the 90s." Allen Fowler. In *Development 1*, pp. 16-23. Contact: Society for International Development (see no. 48 above).

88. *Directory of Development Research and Training Institutes in Africa.* 1992. Organization for Economic Cooperation and Development (OECD). This directory, produced in collaboration with CODESRIA, provides detailed information on 641 research and training institutes in 49 African countries. $40.00. Contact: OECD, 2001 L Street, NW, Suite 650, Washington, DC 20036, USA; tel: (202) 785-6323/fax: (202) 785-0350.

89. *Directory of Non-Governmental Environment and Development Organisations in OECD Member Countries/Repertoire des Organisations Non - Governementales dans les Pays Membres pour l'Environnement et le Développement.* 1992. OECD. Provides profiles of over 640 nonprofit associations and NGOs in OECD member countries concerned with environmental and development issues, including useful information on each organization's goals, educational work, and activities. Many African NGOs will find it quite helpful for seeking out potential partner and funding institutions in the North, as well as organizations that offer training workshops in organization development and management techniques. $68.00. Contact: OECD (see no. 88 above).

90. *Guides de Synthèse sur les Organisations Paysannes.* As of 1993, guides on Burkina Faso, Cameroon, Madagascar, Senegal, and Togo had been published. (Réseau GAO, p. 167)

91. *Models of Interorganizational Collaboration in Development.* 1994. Vol. 11, no. 7. $5.00. (IDR, p. 160)

92. *NGO Development Training in Southern Africa: Promoting South-South Linkages Through Information Sharing,* vol. 1 (Botswana, Lesotho, Namibia, Swaziland, and Zimbabwe). 1995. Ann McKinstry Micou. New York: Institute of International Education. 165 pp., free. Comprehensive guide to African and international NGOs, foundations, and organizations that provide training services to NGOs throughout these five countries; a second volume for Angola, Malawi, Mozambique, Tanzania, and Zambia is currently in production. Many listed groups offer training in community development, institutional strengthening, financial management and accounting, human resources development, environmental education, communications and information dissemination, small business development, income generation and cooperatives, vocational skills, NRM, and participatory training. Contact: Southern African Information Exchange (SAIE), IIE, 809 U.N. Plaza, New York, NY 10017, USA; tel: (212) 984-5364/fax: (212) 984-5452/e-mail: amicou@iie.org or SANGONET, PO Box 31, Johannesburg 2000, South Africa; tel: (27) 11-838-6943/fax: (27) 11-838-6310.

93. *NGO Management Development and Training: Recent Experience and Future Priorities.* Institute of International Education. From a regional seminar in Eastern and Southern Africa. Contact: SAIE (see no. 92 above) or VOICE, PO Box 8465, Causeway, Harare, Zimbabwe. For information on membership, contact ICVA in Switzerland. Rates for NGOs in non-OECD countries are typically less than those for NGOs in OECD countries. (ICVA, p. 166)

94. *NGOs and Governments: Stakeholders for Development.* French and English. Ian Smillie and Henny Helmich, eds. OECD (ISBN# 92-640-3899-X). Case studies of the relationship between NGOs and governmental development agencies in thirteen developed nations and the EEC. Contact: OECD (see no. 88 above).

95. *North-South Partnership: Assessing Institutional Compatibility, A Case from West Africa.* Explores the theory and reality of implementation of an institution-building project through partnership of a Northern PVO and Southern NGO. (PACT, p. 161)

96. *Relations Between Southern and Northern NGOs: Policy Guidelines.* Practical suggestions for local, national, and international NGOs on participatory and institutional development, strategic management, financing, and division of labor. (ICVA, p. 166)

97. *Se Renforcer pour Mieux Collaborer: Travaux de la rencontre de 60 délégués de Mouvements Paysans, d'Artisans, de Femmes, d'Associations et d'Instituts d'Appui au Développement du Sahel et d'Afrique de l'Ouest.* 1988. 104 pp., $8.00 or 12 SFR. Information about this meeting, including key themes such as: the development of associations and local networks; relationships

between popular movements and institutes or centers of support; development finance and credit; and new global strategies for communication and information exchange. (IRED, p. 150)

98. *Toward Partnership in Africa.* 1990. English and French. InterAction and FOVAD. In-depth review of partnership issues among African and U.S. PVO staff; practical guidance on how to overcome obstacles and promote solidarity between northern and southern NGOs. (PACT, p. 161)

99. *West African Government and Volunteer Development Organizations: Priorities for Partnership.* 1990. W.R. Johnson and V.R. Johnson. Lanham, MD: University Press of America, Inc. (ISBN# 0-819-17747-4). 124 pp. Examines the growing role of both external NGOs and indigenous volunteer development organizations in West African development, and the extent to which this trend reflects the diversity and complexity of activities, growing levels of and need for financing, and rising levels of external support and internal legitimacy. Also assesses the changing roles of these organizations and what this portends for future development activities. Contact: University Press of America, Inc., 4720 Boston Way, Lanham, MD 20706, USA.

100. *Working Together: NGO Cooperation in Seven African Countries.* 1987. Charles B. Duell and Laurel A. Dutcher. A study of field-level cooperation and the needs of local communities in seven African nations. (PACT, p. 161)

Non-Governmental Organizations' Roles in Development

101. *Development Nemesis: Development and Today's Reality/The Actors and the Future of Development: The Era of Empowerment.* Contact: Claudio Schuftan, PO Box 30677, Nairobi, Kenya; fax: (254) 2-520023.

102. *Intermediary NGOs: The Supporting Link in Grassroots Development.* 1992. Thomas Carroll (ISBN# 1-565-49009-6). 274 pp. Field-based analysis of intermediary, national development NGOs that attempts to provide a typology for the role of NGOs in development; uses examples from Latin America and the Caribbean that seem to apply to policy needs in Africa, and provides criteria for assessing NGO performance. (Kumarian Press, p. 169)

103. *Intermediate NGOs: the Supporting Link in Grassroots Development.* 1992. Thomas Carroll (ISBN# 1-565-49009-6). (Kumarian Press, p. 169)

104. *Local Organizations: Intermediaries in Rural Development.* 1988. Milton J. Esman and Norman T. Uphoff. Ithaca, NY: Cornell University Press, Cornell Paperbacks (ISBN# 0-801-49508-3). $18.95. Contact: CUP Services, PO Box 6525, Ithaca, NY 14851, USA

105. *Looking Beyond the Doable: Resolutions for the New Development Decade.* Contact: Claudio Schuftan (see no. 101 above).

106. *Making a Difference: NGOs and Development in a Changing World.* Michael Edwards, ed. (ISBN# 1-853-83144-1). Contact: Earthscan Publications (see no. 80 above).

107. *NGO and African Development: Contributions, Capabilities and Needs.* 1986. Simon Murchiru. Available from African NGO Network. Nairobi, Kenya.

108. *NGOs as Development Catalysts.* 1992. Vol. 9, no. 1. $8.00. (IDR, p. 160)

109. *The Role of Southern NGOs in Development Cooperation.* Alan Fowler and Rick James. (INTRAC, p. 167)

110. *The Oxfam Handbook of Development and Relief.* Deborah Eade and Suzanne Williams. Provides information on how Oxfam works to combat poverty and respond to emergency situations. Includes a directory of over 600 NGOs and aid agencies. Contact: OXFAM/UK, 274 Banbury Road, Oxford OX2 7DZ, United Kingdom; tel: (44) 1-865-311311/fax: (44) 1-865-312600 or OXFAM/US, 26 West Street, Boston, MA 02111, USA; tel: (617) 482-1211/fax: (617) 728-2594.

111. *Rural Enterprise: Case Studies from Developing Countries.* 1988. Malcolm Harper and Shailendra Vyakarnam (ISBN# 1-853-39001-

1). 106 pp., $15.50. Case studies on efforts in developing countries to initiate rural enterprise projects. Examines problems and opportunities in the field. (Intermediate Technology Publications, p. 169)

112. *Their Own Idea: Lessons from Workers' Cooperatives.* 1992. Malcolm Harper (ISBN# 1-853-39139-5). 150 pp., $18.95. Case studies of efforts to start up and establish small-group and individual businesses and enterprises. (Intermediate Technology Publications, p. 169)

Participation

113. *Community Empowerment: A Participatory Training Manual on Community Project Development.* 1993. Stanley Gajanayake and Jaya Gajanayake. 160 pp., $25.00. Proposes a powerful, effective strategy for resolving processes of community project development; includes twenty-five workshop sessions with training techniques that are learner-centered, experiential, and participatory, as well as thirty innovative, participatory techniques for the grassroots level. (PACT, p. 161)

114. *Guide Pour des Etudes Utilisant les Discussions de Groupe.* 1994. Document no. 2. Judi Aubel (ISBN# 9-222-08520-5). 64 pp., $12.00 or 15 fr.s. This document describes group interviewing techniques—"focus group discussions"—and how they have been used increasingly in the last few years in development. (ILO Publications, p. 169)

115. *NGOs, Participation, and Rural Development: Testing the Assumptions with Evidence from Zimbabwe.* Jessica Vivan and Gladys Maseko. The United Nations Research Institute for Social Development (UNRISD). Contact: UNRISD, Palais des Nations, CH 1211 Geneva 10, Switzerland; tel: (41) 22-7988400/fax: (41) 22-7400791.

116. *Power and Participatory Development: Theory and Practice.* 1994. Susan Wright and Nici Nelson, eds (ISBN# 1-853-39241-3). 208 pp., $11.50. Explores power dimensions of participatory development and research, and examines the shifts in power within communities and institutions that are needed for participatory ideas to be effective. Presents case studies from both the North and the South (e.g., video-making with homeless people in the United Kingdom and development theater in Mali). (Intermediate Technology Publications, p. 169)

117. *A Voice for the Excluded: Popular Participation in Development: Utopia or Necessity?* 1994. Matthias Stiefel and Marshall Wolfe (ISBN# 1-856-49248-6). 265 pp., $25.00. Comparative study of local community participation in the development process in developing countries. It discusses roles of NGOs, the state, international agencies, and communities themselves, and how they either support or undermine participatory development efforts. (APEX, p. 168)

Structural Adjustment

118. *Structural Adjustment Programmes.* IRED. 40 pp., $15.00. Provides essential information on structural adjustment programs (SAPs) in Eastern and Southern Africa, geared towards leaders of indigenous NGOs and people's organizations. Covers basic SAP concepts, definitions of the IMF and World Bank, and government and rural perspectives of SAPs. Contact: IRED-ESA, PO Box CY3, Causeway, Harare, Zimbabwe; tel: (263) 4-79-6853/fax: (263) 4-72-2421.

Natural Resources Management

Agriculture

119. *Circular Letter on Sustainable Agriculture in Africa.* French and English. Contact: AGRECOL, c/o Oekozentrum, 4438 Langenbruck, Switzerland.

120. *Farming for Development.* Quarterly journal. French and English. Contact: International Federation of Agricultural Producers, 21 rue Chaptal, 75009 Paris, France.

121. *From Feast to Famine: Official Cures and Grassroots Remedies to Africa's Food Crisis.* 1991. Bill Rau. A critical analysis of development strategies in Africa. (Zed Books, p. 170)

122. *Importance of Biological Agriculture in a World of Diminishing Resources.* 1986. Vogtman, Boehncke, and Fricke, eds. 448 pp., $20.00. Proceedings of the Fifth Scientific Conference, with articles on soil improvement, agricultur-

al systems, pest control, and low-input cropping. Contact: AgAccess, 603 4th Street, Davis, CA 95616, USA; tel: (916) 756-7177/fax: (916) 756-9188.

123. "Governments, NGOs and Agricultural Development: Perspectives on Changing Inter-Organizational Relationships." Anthony Bebbington and John Farrington. In *Development Studies 29* (January 1993), pp. 199-219.

124. *Natural Crop Protection, Based on Local Farm Resources in the Tropics and Subtropics.* 1987 (2nd edition). Gaby Stoll. Verlag Margraf Publishers. 187 pp. Contact: TROIPS, Tropical Scientific Books, Raiffeisenstrasse, 14, D-6070 Langen, Germany.

125. "NGOs, Agricultural Technology and the Rural Poor." John Farrington and Stephen Biggs. In *Food Policy 15* (December 1990), pp. 479-91.

126. *Participatory Technology Development in Sustainable Agriculture: An Introduction.* 1989. 40 pp. Free to those in the developing world. (ILEIA, p. 165)

127. *Reluctant Partners? NGOs, the State, and Sustainable Agricultural Development.* John Farrington and Anthony Bebbington (ISBN# 0-415-08844-5). (Routledge Press, p. 169)

128. *Tools for Agriculture: A Guide to Appropriate Equipment for Smallholder Farmers.* 1992. Guide to small-scale farming equipment, including information on technology manufacturers in over ninety countries. (Intermediate Technology Publications, p. 169)

129. *Tools for Organic Farming: A Manual of Appropriate Equipment and Treatments.* 1990. George McRobie, ed. 77 pp. Includes section on integrated pest and weed management. (Intermediate Technology Publications, p. 169)

130. *Two Ears of Corn: A Guide to People-Centered Agricultural Improvement.* 1982. R. Bunch. 251 pp. $7.95. (World Neighbors, p. 163)

131. *Using Indigenous Knowledge in Agricultural Development.* 1992. D.M. Warren. World Bank Discussion Paper no. 127. 46 pp. (World Bank Publications, p. 170)

132. *WEDnews.* French and English. The newsletter of the Women, Environment, and Development Network (WEDNET) Project. (WEDNET, p. 155)

Agroforestry

133. *Agroforestry Abstracts.* A quarterly publication that lists abstracts of and reviews current agroforestry research worldwide. $128 or £73. Contact: CAB, Wallingform, Oxon OX10 8DE, United Kingdom; tel: (44) 1-491-32111/fax: (44) 1-491-33508.

134. *Agroforestry for Soil Conservation.* 1989. Anthony Young. 276 pp. (ICRAF, p. 150)

135. *Agroforestry in Africa: A Survey of Project Experience.* 1990. Paul Kerkhof, Gerald Foley, and Geoffrey Barnard, eds. 216 pp. (PANOS, p. 167)

136. *Agroforestry in Dry Land Africa.* 1988. D. Rochelean, F. Weber, and A. Field-Juma. A practical handbook for researchers, policymakers, and others interested in sustainable development in Africa. (ICRAF, p. 150)

137. *Agroforestry Information Kit.* 1989. $10.00. Contains over sixty practical information sheets on issues such as seed collection, soil and water conservation, and fire control. Contact: IIRR Office, 475 Riverside Drive, Room 1270, New York, NY 10115, USA; or IIRR/Philippines. (IIRR, p. 150)

138. *Agroforestry in the West African Sahel: Resource Management for Arid and Semi-Arid Regions.* 1984. National Research Council. (BOSTID, p. 157)

139. *Agroforestry Technology Information Kit.* IIRR. Includes six books on various issues concerning agroforestry. Somewhat Philippines-oriented, but the information is useful for Africa as well. Contact: Dr. Pamela G. Fernandez, Department of Agronomy, UPLB College, 4031 Laguna, Philippines. (IIRR, p, 150)

140. *Agroforestry Today.* ICRAF's quarterly journal. Free to those in the developing world. (ICRAF, p, 150)

141. *Social and Economic Incentives for Smallholder Tree Growing; A Case Study from Murang'a District, Kenya.* 1993. P.A. Dewees. Rome: FAO. 74 pp., $5.00; order #CFCS5. Explores economic framework of smallholder agriculture in Kenya, with relation to tree-growing management and practices. Assesses challenges faced by planners and developers to encourage farmers to grow more trees. (FTPP, p. 164)

Analysis

142. *PVO-NGO/NRMS Analytical Methods and Strategic Planning Workshop.* 1993. English and French. Report from a workshop in Madagascar of PVO-NGO/NRMS Project representatives. The workshop's purpose was to collaboratively develop an appropriate strategy and methodology to implement the project's Phase II Analytical Assessment, and to determine whether strengthening of NGOs' institutional and technical capabilities leads to sustainable NRM. (World Learning, p. 163)

143. *The Seed Sector in Developing Countries: A Framework for Performance Analysis.* 1992. E. Cromwell. An overview of the Overseas Development Institute's projects to privatize seed distribution and production in Africa. Contact: Overseas Development Institute Publications, Regent's College, Inner Circle, Regent's Park, London NW1 4NS, United Kingdom; tel: (44) 171-4877413/fax: (44) 171-487-7590.

Appropriate Technology

144. *Appropriate Technology: A Focus for the 90s.* 1991. Robert William Stevens, ed. (ISBN# 0-942-85030-0). 180 pp., $19.50. Collection of papers from a May 1988 conference covering both theoretical and practical aspects of sustainable agriculture, small-enterprise development, information dissemination, and training; emphasis is on the future of appropriate technologies in developing countries. (APEX, p. 168)

145. *Appropriate Technology Sourcebook.* 1986. Ken Darrow and Mike Saxenian. ATI. 800 pp. A review of over 1,000 books on appropriate technologies, including agricultural tools, grain storage, etc. The complete "library" of these publications is available on microfiche with a portable reader from ATI. (ATI, p. 156)

146. *Appropriate Technology Source.* Quarterly magazine. French and English. 35 Dutch guilder. Contact: AT Source, PO Box 41, 6700 AA Wageningen, The Netherlands.

147. *Joining Farmers; Experiments: Experiences in Participatory Technology Development.* B. Haverkort, J. van der Kamp, and A. Waters-Bayer, eds. Reports from researchers supporting farmers' experimental efforts and linking them up to learn from each other. (Intermediate Technology Publications, p. 169)

Buffer Zone Management

148. *Buffer Zone Management in Africa.* 1990. English and French. M. Brown, R. Buckley, A. Singer, and L. Dawson. Washington, DC: PVO-NGO/NRMS Project. Report from a 1990 workshop in Uganda. Presents methodologies and case studies of buffer zone activities around parks in Cameroon, Madagascar, Mali, Rwanda, Tanzania, and Zimbabwe, examining key issues and challenges to protected area management as well as lessons for groups in how to plan and implement similar workshops. (USAID Development Information Services Clearinghouse, p. 169 and World Learning, p. 163)

Directories

149. *African Development Indicators 1994-95* (ISBN# 0-8213-3127-2). $24.95; available on disk as well. Contains detailed data on economic, financial, social, and environmental conditions of fifty-three African counties; indicators on demographics, health, education, land use, forests, water, and energy. (World Bank Publications, p. 170)

150. *African Regional NGOs: An Overview of Institutions.* 1994. Profiles regional African NGOs involved in forestry and NRM issues, and briefly discusses potential future roles of US PVOs and USAID. (USDA/FSP, p. 162)

151. *Development of a Database of Organizations (public, private, NGOs, universities) Involved in Forestry.* 1992. Volunteers in Technical Assistance. Washington, DC: The World Bank, Asia Technical Department, Agricultural Division, Land Resources Unit. An electronic database of private sector companies, universities, research institutions, and PVOs/NGOs, worldwide, active in the fields of tropical or subtropical forestry; also identifies forestry information networks. To obtain information from the database, inquire at your country or regional World Bank Mission.

152. *A Guide to Grants and Fellowships in International Forestry and Natural Resources 1995.* Summarizes grants, scholarships, and fellowships offered by over 200 U.S. organizations and foundations. (USDA/FSP, p. 162)

153. *Profiles of African Scientific Institutions.* 1992. African Academy of Science (ISBN# 9-966-83111-8). Covers research institutions, universities, and government agencies concerned with policy formulation and research coordination, NGOs, and information centers.

154. *Profiles of International Programs at U.S. Natural Resource Schools.* 1994. Information on training and undergraduate, graduate, and certificate programs in natural resources at U.S. colleges and universities, particularly for international students. (USDA/FSP, p. 162)

155. *Short-Term Training Opportunities in Environment and Natural Resources.* 1992. Catherine Hoke, Jens Sorensen, and John Swallow; International Resources Group, Ltd. Washington, DC: USAID. 242 pp., $27.56 (paper; USAID-funded PVOs may receive five FREE paper copies per order), $3.75 (microfiche); order #PN-ABK-285. Information on international training programs, primarily short-term and nondegree. Categories covered include biological diversity, NRM, forestry, protected areas and wildlife management, and mapping, GIS, and image processing systems. Many training and course materials available in English, French, Spanish, Portuguese, or Arabic. (USAID Development Information Services Clearinghouse, p. 169)

Environmental Education

156. *Environmental Education Teaching Methodologies and Team Building.* 1995. 138 pp., $12.00 plus shipping costs. A workbook presenting teaching strategies and methodologies for environmental education, including examples of interdisciplinary, hands-on activities and team-building exercises that can be used in schools and communities. (ISC, p. 160)

157. *Interdisciplinary Teaching Methods and Environmental Ethics.* 1994. 125 pp., $12.00 plus shipping costs. A workbook describing interdisciplinary, hands-on teaching methods and theories of ethics in environmental education. Draws on designs and techniques used in the United States, and includes a community-based environmental education plan. (ISC, p. 160)

158. *Introduction to Community-Based Curriculum Development in Environmental Education.* 1994. 94 pp., $10.00 plus shipping costs. A workbook of teaching strategies and models, including processes of curriculum development and activities for both schools and communities. (ISC, p. 160)

Environmental Impact

159. *Environmental Screening of NGO Development Projects.* 1991. $32.10 (Canadian). Six booklets presenting methods for identifying and mitigating the environmental impacts of water supply and sanitation, irrigation, and pest management projects. Contact: Canadian Council for International Cooperation, 1 Nicholas Street, Suite 300, Ottawa ON K1N 7B7, Canada; tel: (613) 241-7007, ext. 300/fax: (613) 241-5302.

Forestry

160. *Community Forestry: Rapid Appraisal of Tree and Land Tenure.* 1989. Community Forestry Note no. 5. (FTPP/FAO, p. 164)

161. *Forestry and Nutrition: A Reference Manual.* 1989. (FTPP/FAO, p. 164)

162. *Forests, Trees, and People Newsletter.* This quarterly contains articles, essays, and information on community forestry activities around

the world, as well as networking events and progress in specific regions. (FTPP/FAO, p. 164)

163. *A Framework for Analyzing Institutional Incentives in Community Forestry.* 1992. J. Thomson. Rome: FAO. 129 pp., $6.00; order #CFN10. Clarifies institutional aspects of Sahelian forestry, and develops a more general framework for analysis of community forestry activities, based on the concept that all institutions, from local to national levels, operate by sets of rules of behavior. Also emphasizes importance of land tenure and diverse economic characteristics of trees. (FTPP/FAO, p. 164)

164. "Institutional Strengthening of Local NGOs Involved in Forestry: A Challenge for Innovation." 1992. In *Unasylva 43*, no. 4, #171, pp. 56-60. Rome: U.N. Food and Agriculture Organization. Draws on experiences from South Asia to discuss the need for and process of institutional strengthening among rural NGOs involved in NRM. Contact: FAO Library, U.N. Food and Agriculture Liason Office for North America, 1001 22nd Street, NW, Suite 300, Washington, DC 20437, USA.

165. *The Major Significance of 'Minor' Forest Products: The Local Use and Value of Forests in the Western African Humid Forest Zone.* 1990. J. Falconer and R.S. Koppell. Community Forest Note no.6. 230 pp. (FTPP/FAO, p. 164)

166. *Multipurpose Trees and Shrubs: Sources of Seeds and Innoculants.* 1991. Peter G. Von Carlowitz. 334 pp. List of sources of tree seed from around the world. (ICRAF, p. 150)

167. *Strategy for the Forest Sector in Sub-Saharan Africa/Strategie pour le Secteur Forestier en Afrique Subsaharienne.* 1995. Narendra P. Sharma, Simon Rietbergen, Claude R. Heimo, and Jyoti Patel. World Bank Technical Paper no. 251 (English: ISBN# 0-821-32880-8; French: ISBN# 0-821-33146-9). 100 pp., $7.95. (World Bank Publications, p. 170)

168. *Sustainable Harvest and Marketing of Rain Forest Products.* 1992. Mark Plotkin and Lisa Famolare, eds. $20. Contact: Island Press, Box 7, Dept. 5AU, Covelo, CA 95428, USA; tel: (800) 828-1302.

169. Technical Paper Series: *Neem: The Cornucopia Tree* (1986) and *Acceleration du Reboisement Grace Aux Pepinieres Scolaires* (1987). (USDA/FSP, p. 162)

170. *Tree Planting in Africa South of the Sahara.* 1984. 75 pp. (ELCI, p. 148)

171. *Women, Trees and Forests in Africa—A Resource Guide.* (ELCI, p. 148)

Gender

172. *The Gender Analysis and Forestry Training Package.* 1994. Rome: FAO. Designed for forestry planners, extension workers, and rangers, the package describes how to incorporate gender analysis into forestry work and how to train others to use it. Includes frameworks for forestry management and field operations; case studies with slide sets; a video on gender analysis and forestry; and materials for designing and developing specific training programs. (FTPP/FAO. p. 164)

173. *Gender Planning and Development.* 1993. Caroline O. Moser. 286 pp., $18.95. Describes the conceptual rationale linking development and gender roles and needs, and identifies methodologies, tools, and techniques to integrate gender in planing processes. Emphasizes the importance of training increating gender awareness. (Routledge Press, p. 169)

Indigenous Knowledge

174. *Beyond Farmer First: Rural People's Knowledge, Agricultural Research, and Extension Practice.* 1994. Ian Scoones and John Thompson, eds. (ISBN# 1-853-39237-5). 288 pp., $7.95 (paper), $28.50 (hardback). Examines how agricultural research and extension are part of a process of acknowledging and resolving conflicting interests and viewpoints, making choices, and forming alliances. Contains case studies from Africa, Asia, Latin America, Australia, and Europe. (Intermediate Technology Publications, p. 169)

Integrated Conservation and Development Projects

175. *Designing Integrated Conservation and*

Development Projects. 1992. French, Spanish, and English. Michael Brown and Barbara Wyckoff-Baird. 63 pp. Assesses the theory behind ICDPs, the extent to which development and conservation organizations have embraced the theory, and key issues in designing and implementing ICDPs. Draws extensively upon case studies from Africa, Asia and Latin America, and concludes with recommendations and tools for implementing effective ICDPs. Contact: Biodoversity Support Program, 1250 24th Street, NW, 6th Floor, Washington, DC 20037, USA; tel: (202) 293-9211/fax: (202) 293-4800.

Land Tenure

176. "The International Community and Land Rights for Indigenous and Tribal Peoples." 1992. Roger Plant. In *Development 4*, pp. 18-23. Contact: Society for International Development (see no. 48 above).

Non-Governmental Organizations in NRM

177. *Enhancing the Effectiveness of Governmental and Non-Governmental Partnership in Natural Resource Management*. 1990. K.L. McKay and D. Gow. Washington, DC: Energy/Development International and Development Alternatives, Inc. 41 pp., $18.40. Examines the role of NGOs as resource stewards in sub-Saharan Africa and explores the relationships between NGOs and donors, identifying key constraints to as well as necessary conditions for enhanced partnerships. Contact: Development Alternatives, Inc., 7250 Woodmont Avenue, Suite 200, Bethesda, MD 20814, USA.

178. *Non-Governmental Organizations and Natural Resources Management: An Assessment of Eighteen African Countries*. 1993. English and French. Assesses the general context for and issues concerning NGOs and community groups working in NRM, organizational needs of NGOs, feasible activities for NGOs in particular countries, and general donor trends. PVO-NGO/NRMS Project country studies are available for Benin, Burundi, Central African Republic, Congo, Eritrea, Ethiopia, The Gambia, Ghana, Guinea, Mauritius, Namibia, Niger, Rwanda, Senegal, Seychelles, Tanzania, Togo, and Zambia. (World Learning, p. 163)

179. *Non-Governmental Organizations and Natural Resources Management in Africa/Organisations Non-Gouvernementales et Gestion des Ressources Naturelles en Afrique: A Literature Review and A Discussion of Issues and Priorities*. 1992. Vol. 1 contains a comprehensive list of technical, research, and policy papers concerning NRM, NGO development, institutional strengthening, and policy reform in Africa. Vol. 2 discusses NRM issues in Africa and the role of local, national, and international NGOs and donor agencies. (USDA/FSP, p. 162)

180. *Resources for Success: A Manual for Conservation Organizations*. 1993. Ruth Norris, Richard Devine, and Monique Zegarra. $22.00. For NGOs interested in fund-raising and the critical institutional structures needed to be successful, this guide presents proven methods for successful organizational management and financial development. Topics include operational and strategic planning, improved human resource development, different fund-raising techniques — membership drives, foundation proposals, corporate fund raising — and effective financial management. Though based largely on case studies from Latin America and the Caribbean, the guide contains principles and practical methods for NGO institutional strengthening that could easily apply to many African situations. Contact: LACD/Training, The Nature Conservancy, 1815 North Lynn Street, Arlington, VA 22209, USA; tel: (703) 841-4188.

181. *The Road from Rio: Sustainable Development and the NGO Movement in the Third World*. Julie Fisher. Praeger Publishers (ISBN# 0-275-94715-7).

182. Technical papers on community institutions/NGOs and NRM in Burkina Faso, Cape Verde, Ethiopia, The Gambia, Ghana, Kenya, Mali, Niger, Rwanda, Senegal, Sudan, Uganda, and Zimbabwe. (USAID Development Information Services Clearinghouse, p. 169)

NRM Policy

183. *African NGO Participation in Natural Resource Policy Reform/Participation des ONG Africaines*

à la Reforme des Politiques en Matière de Ressources Naturelles. 1993. This analytical report examines the current context for NGO participation in development and NRM activities, as well as the many obstacles they face in effecting policy reform. Assesses public policymaking processes in Africa; tools and techniques used by NGOs and USAID to influence policy; and the necessary conditions for improving NGO participation in policy reform. (USDA/FSP, p. 162)

184. *Implementing Natural Resources Management Policy in Africa: A Document and Literature Review.* 1992. D.W. Brinkerhoff, J.D. Gage, and J.A. Yeager. 74 pp. Analyzes NGO organizational management issues, and necessary tasks and conditions for effective NRM policy implementation in Africa. (USAID Development Information Services Clearinghouse, p. 169)

Participation

185. *Coming Full Circle: Farmers' Participation in the Development of Technology.* 1984. Peter Matlon et al, eds. 176 pp. Proceedings of meeting held in Ouagadougou. Contact: International Development Research Centre, PO Box 8500, 250 Albert Street, Ottawa ON K1G 3H9, Canada; tel: (613) 236-6163/fax: (613) 563-0815.

186. *The Community's Toolbox: The Ideas, Methods, and Tools for Participatory Assessment Monitoring, and Evaluation in Community Forestry.* Community Forestry Field Manual #2. 1990. (FTPP/FAO, p. 164)

187. *Farmer First: Farmer Innovation and Agricultural Research.* 1989. R. Chambers, A. Pacey, and L.A. Thrupp, eds. 218 pp. Looks at farmers as innovators and adapters in resource-poor areas of the world, and the implications of including them in research. (Intermediate Technology Publications, p. 169)

188. *Guide to Community Environmental Action.* 1995. 150 pp., $13.00 plus shipping costs. How to launch a community-based environmental action project, involve the public in environmental projects, identify and establish environmental priorities, and develop an environmental action plan. (ISC, p. 160)

189. *Partnership and Popular Participation in Natural Resource Management in the Sahel.* 1990. Report of the Conference at Levis, Quebec, Canada. 13 pp. African NGO discussions and evaluations of how to build effective partnerships around issues of NRM in Africa; key issues of administrative decentralization, territorial management, and popular participation. (PACT, p. 161)

190. *People's Participation in Rural Development in the Philippines: FAO's Partnership with NGOs in Project Formulation.* (FTPP/FAO, p. 164)

191. *Power from the People — Innovation, User Participation, and Forest Energy Development.* 1988. Matthew S. Gamser (ISBN# 0-946-68894-X). 160 pp., $24.95. Analyzes forest energy technology development and the importance of user participation in developing new technologies; also, how to manage technological change. (Intermediate Technology Publications, p. 169)

Pastoralism

192. *Non-Governmental Organizations and Natural Resources Management in Africa's Pastoral Sector: Where to Go from Here?* 1993. English and French. Summarizes the work of NGOs in Africa's pastoral sector and examines the future directions for NGO NRM programs. Draws on case studies from Ethiopia, Kenya, and Mali. (World Learning, p. 163)

Protected Areas

193. *Protected Area and Wild Service Project: Kenya Wildlife Service.* Includes preproject actions following the creation of Kenya Wildlife Service. Available from the IUCN Protected Area Program/CNPPA. (IUCN, p. 168)

C. ELECTRONIC COMMUNICATIONS

The following list gives contact information for organizations that have some level of electronic communications capabilities in Africa. Connectivity in Africa is increasing at a rapid pace, and therefore the list of organizations is also increasing. Contact the organizations below for more information about the type of electronic communication capacities that exist, what the connectivity requirements are, and whether or not your organization qualifies.

Algeria

CERIST
Rue des Trois Frères Aissiou
Ben-Aknoun
BP 47 Hydra
Algiers
Tel: (213) 2-792136
Fax: (213) 2-792126

Algeria Net
06 rue Frederic Mistral Telemy
Algiers
Tel: (213) 2-612715
Node name: algeria.gn.apc.org

Algerian Unix User Group
Lotissement Benhaddadi
Lot No. 58, Villa No. 27
Cheraga
Tipasa
Tel: (213) 2-369791
Fax: (213) 2-369995
Node name: algeria.eu.net

Angola

ANGONET
Development Workshop
Rua rei Katyavala 113
Luanda
Tel: (244) 2-348371/396107/330243
Fax: (244) 2-393445
Node Name: angonet.gn.apc.org

SDN-Ridsang
PO Box 3110
Luanda
Tel: (244) 2-396107
Fax: (244) 2-335609

Botswana

University of Botswana
Mobuto Drive
Gaborone
Tel: (267) 35-1151/6364
Fax: (267) 35-7573
Node name: pula.ub.bw or motswedi.ub.bw

Burkina Faso

ORSTOM
01 BP 182
Ouagadougou
Tel: (226) 306737/306739
Fax: (226) 310385
Node name: ouaga.orstom.bf

ORSTOM
01 BP 171
Bobo-Dioulasso 01
Tel: (226) 971269
Fax: (226) 970942
Node name: bobo.orstom.bf

Cameroon

ORSTOM
BP 1857
Yaoundé
Tel: (237) 201508
Fax: (237) 201854
Node name: yaounde.orstom.fr

Healthnet Cameroon
Center for Health Technology
Automation and Control Laboratory
National Polytechnic
University of Yaoundé
Yaoundé 1
Tel: (237) 230113
Fax: (237) 230103

LETS, ENSP
University of Yaoundé I
BP 8390
Yaoundé
Tel: (237) 224547/231226
Fax: (237) 231841
Node name: ensp.cm

Congo

ORSTOM
BP 181
Brazzaville
Tel: (242) 832680/81/82
Fax: (242) 832977
Node name: brazza.orstom.fr

Côte d'Ivoire

ORSTOM
15 BP 917
Abidjan 15
Tel: (225) 243779
Fax: (225) 246504
Node name: abidjan.orstom.fr

CRO
29 rue des pecheurs
BP V18
Abidjan
Tel: (225) 355014/5880
Fax: (225) 351155
Node name: cro.orstom.fr

Adiopodoume
06 BP 1203
Abidjan Cedex 1
Tel: (225) 454170/4475/3161
Fax: (225) 456829
Node name: adiopi.srtom.fr

FidoNet
African Development Bank
BP V316
Rue Joseph Anoma
Abidjan
Tel: (225) 204206
Fax: (225) 204053
Node name: adbabjacos.gn.apc.org

Africom
BP V316
Rue Joseph
Abidjan
Tel: (225) 204206
Fax: (225) 204053
Node name: africom.com

Egypt

Egyptian Universities Network
FRCU Computer Center
Supreme Council of Universities
Cairo University
Cairo
Tel: (202) 5735405
Fax: (202) 5728174
Node name: frcu.eun.eg

Cabinet Information and Decision Support Center
Regional Information Technology and Software Engineering Center
11 A Hassan Sabry Street
Zamalek
Cairo
Tel: (202) 3551551/3403538
Fax: (202) 3412139
Node name: ritsec.com.eg

Egyptian National STI Network
Academy of Scientific Research and Technology
101 Kasr Al-Ainy Street
Cairo
Tel: (202) 3557253
Fax: (202) 3547807
Node name: estinet.uucp

Ethiopia

APC FidoNet-PADISnet
ECA Addis Ababa
Box 3001
Addis Ababa
Tel: (251) 1-517200/511167
Fax: (251) 1-514416
Node name: padis.gn.apc.org

APC FidoNet-Hornet
Box 3001
Addis Ababa
Tel: (251) 1-517200
Fax: (251) 1-514416

The Gambia

APC FidoNet
African Centre for Human Rights
Raymond Sock, Okairaba Avenue
Banjul
Tel: (220) 94525
Node name: achrds.gn.apc.org

Medical Research Council
Box 273
Banjul
Tel: (220) 495442
Fax: (220) 495919
Node name: gam.healthnet.org

Ghana

APC FidoNet - FOE-Ghana
Accra
Tel: (233) 21-225963
Node name: foe-ghana.gn.apc.org

APC FidoNet-Ghastinet
Council for Scientific and Industrial Research
PO Box M32
Accra
Tel: (233) 21-77352
Node name: ghastinet.gn.apc.org

Association of African Universities
Accra
Tel: (233) 21-774495
Fax: (233) 21-774821
Node name: aau.org

Guinea

National Public Network
PADES
Ministry of Higher Education and Scientific Research
Conakry
Tel: (224) 414141
Fax: (224) 414141
Node name: pades.ac.gn

Kenya

Public FidoNet
Environmental Liaison Centre International
PO Box 72461
Nairobi
Tel: (254) 2-562015/567802
Fax: (254) 2-562175
Node name: elci.gn.apc.org

Public FidoNet
University of Nairobi
Computer Science Department
Box 30197
Nairobi
Node name: unics.gn.apc.org

African Regional Standards Organization
PO Box 58638
Nairobi Tel: (254) 2-224561
Node name: arso.gn.apc.org

African Regional Center for Computing
PO Box 58638
Nairobi
Tel: (254) 2-723552/8351
Fax: (254) 2-727810

ThornTree, Omega Micro Systems
Box 38941
Nairobi
Tel: (254) 2-229650/215095
Fax: (254) 2-229650

Lesotho

National University of Lesotho
PO Roma 180
Maseru
Tel: (266) 340601
Fax: (266) 340000
Node name: isas.nul.ls

Madagascar

ORSTOM
BP 434
101 Antananarivo
Tel/Fax: (261) 2-233098/ 242766
Node name: tana.orstom.fr

Centre d'Information Technique et Economique
BP 74
Rue Eahamefy
Antananarivo
Tel: (261) 2-25386
Node name: antana.rio.org

Malawi

FidoNet
University of Malawi, Chancellor College
PO Box 280
Zomba
Tel: (265) 522222
Fax: (265) 522046
Node name: fl.n7231.z5.Fidonet.org

Mali

ORSTOM
BP 2528
Bamako
Tel: (223) 224305/2774
Fax: (223) 227588
Node name: bamako.orstom.ml

MaliNet
c/o BINTTA
BP 5083
Bamako
Tel: (223) 220101/044
Fax: (223) 222252
Node name: djata.malinet.ml

Mauritius

ORSTOM
c/o Fisheries Research Center
Alsion, Port Louis
Tel: (230) 2334729
Node name: maurice.orstom.fr

Public FidoNet
University of Mauritius Computer Centre
Reduit
Tel: (230) 2335326/4651421
Mode name: umcc.gn.apc.org

AGAnet
183 Morcellemont Montreal
Beau Bassin
Tel: (230) 2335326/4651421
Modem: (230) 4651336
Node name: aganet.wn.apc.org

Morocco

ENDA-Maghreb
196 Quartier O.L.M.
Rabat
Tel: (212) 7-756414
Fax: (212) 7-756413

Ecole Mohammia d'Ingenieurs
BP 765
Rabat-Agdal
Tel: (212) 7-776563
Tel: (212) 7-778853

Institut Nationale de Recherche Agronomique
BP 415
Rabat, R.P.
Node name: inra-ma.cirad.fr

Mozambique

Internet Connection
University of Eduardo Mondlane
Center for Informatica
Avenue Jules Nyerere
University Main Campus
Maputo
Tel: (258) 1-492601
Fax: (258) 1-491557
Node name: dzowo.uem.mz

APC
c/o COCAMO
Box 185
Maputo
Tel: (258) 1-213980
Fax: (258) 1-213975

Namibia

Department of Computer Sciences
University of Namibia
Private Bag
Windhoek
Tel: (27) 61-3072428/9
Fax: (27) 61-3072286
Node name: cs.unam.na

Katatura State Hospital
Private Bag 13215
Windhoek
Tel: (27) 61-2032106
Node name: lisse.na

Niger

ORSTOM
BP 11 416
Niamey
Tel: (227) 753115/2610/3827
Fax: (227) 752804/2054
Node name: niamey.orstom.ne

Nigeria

APC FidoNet
Lagos/Ife-Ife
Tel: (234) 36-231262
Node name: lixy.gn.apc.org

Global Access
PO Box 72300
Victoria Island, Lagos
Tel/Fax: (234) 1-618060

Yaba College of Technology
Department of Computer Science
PO Box 2011
Yaba, Lagos
Tel: (234) 1 860754
Fax: (234) 1 823062
Node name: yaba.cnuce.cnr.it

Senegal

Public FidoNet
ENDA-Dakar

BP 3370
Dakar
Tel: (221) 216027/224229
Fax: (221) 222695
Node name: endadak.gn.apc.org

ORSTOM
BP 1386
Dakar
Tel: (221) 323476/80
Fax: (221) 324307
Node name: dakar.orstom.sn

Ecole Nationale Supérieure Universitaire de
Technologie a Dàkar
BP 5085
Dakar-Fann
Tel: (221) 257528
Fax: (221) 255594
Node name: ensut.ensut.sn

Centre Recherche Océanographique de Dakar
Thiaroye
BP 2241
Dakar
Tel: (221) 345489
Fax: (221) 432792
Node name: isra.isra.sn

Université de Cheik Anta Diop
Centre de Calcul
BP 5005
Dakar-Fann
Tel: (221) 241932
Node name: anta.univ-dakar.sn

Université de Saint Louis
Mathematiques Appliquées et Informatique
BP 234
Saint Louis
Tel: (221) 611906
Fax: (221) 611884
Node name: louis.univ-stl.sn

Ministère de la Modernisation et
de la Technologie
Centre National de la Documentation Scientifique
et Technique
BP 218
Dakar
Tel: (221) 237068
Fax: (221) 229764
Node name: mmet.rinaf.sn

Centre Suivi Ecologique
BP 154
Dakar
Tel: (221) 258066
Fax: (221) 258168
Node name: cse.orstom.sn

Institut Pasteur
BP 220
Dakar
Tel: (221) 235181
Node name: pasteur.pasteur.sn

Ministère de l'Education Nationale
Ecole Nationale d'Economie Appliquée
BP 5084
Dakar
Tel: (221) 252548
Fax: (221) 244206
Node name: enea.men.sn

Agence Panafricaine d'Information
BP 4056
Dakar
Tel: (221) 241395
Node name: pana.pana.sn

Conférence des Responsables
Africains en Agronomie
BP 3120
Dakar
Tel/Fax: (221) 255569
Node name: senegal.coraf.sn
Centre Culturel Americain
Tel: (221) 231185
Node name: cca.usis.sn

Conférence des Ministres de l'Education
Ayant le Français en Partage
BP 3220
Dakar
Tel: (221) 216022
Fax: (221) 213226
Node name: confemen.rio.org

South Zone Water Management Project
BP 24
Ziguinchor
Tel: (221) 912268
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ANNEX II
TECHNICAL ACRONYMS

AEA	agro-ecosystems analysis
AT/GT	approche aménagement/gestion de terroir (land use management approaches)
BZM	buffer zone management
CBNFM	community-based natural forest management
CBO	community-based organization
CWG	Country Working Group
D&D	diagnosis and design
DIP	diagnostic institutionnel participatif (participatory institutional diagnosis)
FPR	farmer participatory research
FSR	farming systems research
GIS	geographic information systems
ICDP	integrated conservation and development project
MARP	méthode accéléré de recherche participative (accelerated method of participatory research)
M&E	monitoring and evaluation
NEAP	National Environmental Action Plan
NGO	non-governmental organization
NGODE	non-governmental organizations working in development and the environment
NRM	natural resources management
NTFP	nontimber forest products
PALM	participatory learning methods
PLA	participatory learning and action
PNFV	National Village Forestry Program
PRA	participatory rural appraisal
PVO	private voluntary organization
RRA	rapid rural appraisal
VDO	village development organization

ANNEX III
ORGANIZATIONAL ACRONYMS

ACEEDAC	Association pour la Cooperation des Eglises, l'Environnement, et le Développement de l'Afrique Centrale/Association for the Cooperation of Churches, Environment, and Development in Central Africa (Congo)
ACORD	Agency for Cooperation and Development (Guinea)
ACTS	African Center for Technology Studies (Kenya)
ADF	African Development Foundation
AED	Academy for Educational Development, Inc.
AFAN	African Forest Action Network (Cameroon)
ALIN	Arid Lands Information Network (see also RITA)
ANGAP	Association Nationale pour la Gestion des Aires Protégées/National Association for the Management of Protected Areas
ANEN	African NGOs Environmental Network (Senegal)
APEC	Agence Panafricaine d'Etudes et Conseils/Pan-African Agency for Research and Assistance (Senegal)
APIC	Africa Policy Information Center
APPDC	Association Panafricaine pour le Développement Communautaire/Pan-African Association for Community Development (Senegal)
ARDI	Applied Research and Development Institute
ASDAG	African NGO Self-Reliance and Development Advocacy Group (Ethiopia)
ASTD	American Society for Training and Development
ATI	Appropriate Technology International
ATIC	Appropriate Technology Information Center (South Africa)
AVFP	Association des Volontaires Français de Progrès/Association of French Volunteers for Progress
AWF	African Wildlife Foundation
AWN	African Water Network (Kenya)
BCN	Biodiversity Conservation Network
BOSTID	Board on Science and Technology for International Development
BSONG	NGO Monitoring Office (Burkina Faso)
BSP	Biodiversity Support Program
CCA/ONG	Comité de Coordination des Actions des Organisations Non-Gouvernementales au Mali/The Coordination Committee for NGO Activities in Mali
CCCI	Conseil Canadien pour la Coopération Internationale/Canadian Council for International Cooperation

CCD	The United Nations Convention to Combat Desertification
CCI	Canadian Crossroads International
CGIAR	Consultative Group on International Agricultural Research
CIDA	Canadian International Development Agency
CIKARD	Center for Indigenous Knowledge for Agriculture and Rural Development
CIONGCA	Conseil Inter-Organisation Non-Gouvernementales en Centrafrique/The Interorganizational Council for NGOs in Central Africa (Central African Republic)
CIRAD	International Research Center on Environment and Development
CNA	Climate Network Africa (Kenya)
COMODE	Conseil Malgache des ONG pour le Développement et l'Environnement/The Malagasy Council of NGOs for Development and the Environment (Madagascar)
COPAD	Collectif des Organismes de Participation au Développement/ Collective of Participatory Organizations in Development (Cameroon)
CORE	Cooperative for Research and Education (South Africa)
DRC	Development Resources Centre (South Africa)
EAEN	East African Environmental Network
ECHO	Educational Concerns for Hunger Organization
ECP	Extended Cooperation Program of the International Fund for Agricultural Development
EDI	Economic Development Institute
EEB	European Environmental Bureau
ELCI	Environment Liaison Centre International (Kenya)
FAO	The United Nations Food and Agriculture Organization
FAVDO	Forum of Voluntary Development Organizations (Senegal)
FRAO	Fondation Rurale de l'Afrique de l'Ouest/West African Rural Foundation (Senegal)
FTPP	Forest, Trees, and People Program of the United Nations Food and Agriculture Organization
GAO	Réseau des Groupements, Associations Villageoises, et Organisations Paysannes/Network of Groups, Village Associations and Peasant Organizations
GATE	German Appropriate Technology Exchange
GEF	Global Environment Facility
GEM	Global Excellence in Management Initiative
GreenCOM	Environmental Education and Communication Project of the Academy for Educational Development
GRET	Groupement de Recherche et d'Echanges Technologiques
GTZ	Deutsche Geselleschaft für Technische Zusammenarbeit/German Agency for Technical Cooperation
HDRA	Henry Doubleday Research Association
HDS	Harmonie du Développement au Sahel/Development Harmony in the Sahel (Mali)
ICRAF	International Center for Research in Agroforestry (Kenya)

ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
ICVA	International Council of Voluntary Agencies
IDR	Institute for Development Research
IFAD	International Fund for Agricultural Development
IFPP	International Food Plants Programme (Kenya)
IIED	International Institute for Environment and Development
IIF	IBM International Foundation
IIRR	International Institute of Rural Reconstruction (Kenya/Philippines)
IITA	International Institute of Tropical Agriculture (Nigeria)
ILEIA	Information Centre for Low-External-Input and Sustainable Agriculture
ILO	International Labour Office
INADES	Institut Africain pour le Développement Economique et Social (Côte d'Ivoire)
InterAction	The American Council for Voluntary International Action
INTRAC	International NGO Training and Research Center
IRED	Innovations et Réseaux pour le Développement/Innovations and Networks for Development
ISC	Institute for Sustainable Communities
IT	Intermediate Technology
IUCN	The World Conservation Union
JEU	Joint Environment Unit (Cameroon)
KENGO	Kenya Energy and Environmental Organizations
MMC	Mananga Management Centre (Swaziland)
MWENGO	Mwelekeo Wa Nongovernment Organizations
NARM Forum	Natural Resources Management Forum (Uganda)
Naturama	The Friends of Nature Foundation/ Fondation des Amis de la Nature (Burkina Faso)
NCNB	National Center for Nonprofit Boards
NGLS	United Nations Non-Governmental Liaison Service
NWRSC	National Women's Resource and Service Centre (South Africa)
OECD	Organization for Economic Cooperation and Development
ORAP	Organisation of Rural Associations for Progress (Zimbabwe)
PAC	Partnership Africa Canada
PACT	Private Agencies Collaborating Together
PIDT	Projects in International Training and Development, World Learning Inc.
PNFV	National Village Forestry Program
PVO-NGO/NRMS	Private Voluntary Organizations and Non-Governmental Organizations in Natural Resources Management Support Project
RADI	Réseau Africain pour le Développement Intégré/African Network for Integrated Development (Senegal)
RAT	Réseau Arbres Tropicaux/Tropical Trees Network
RIOD	Réseau International des Organisations Non-Gouvernementales sur la Désertification/International NGO Network for Desertification

RITA	Réseau d'Information des Terres Arides (see also ALIN)
SAILD	Service d'Appui aux Initiatives Locales de Développement/Support for Local Development Initiatives Services (Cameroon)
SCS	Solidarité Canada Sahel/Solidarity Canada-Sahel
SIAPAC	Social Impact Assessment and Policy Analysis Corporation, Ltd.
SIS	Sahel Information System Network
SIT	School for International Training of World Learning Inc.
Six S	Se Servir de la Saison Seche en Savanne et au Sahel (Burkina Faso)
SPONG	Secréteriat Permanent des Organisations Non-Gouvernementales/Permanent Secretariat of Non-Governmental Organizations (Burkina Faso)
TRANET	Transnational Network for Appropriate Alternative Technologies
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNRISD	United Nations Research Institute for Social Development
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
UYPA	Uganda Youth in Production Association
VADA	Voluntary Agencies Development Assistance (Kenya)
VITA	Volunteers in Technical Assistance
VOCA	Volunteers in Overseas Cooperative Assistance
WARF	West African Rural Foundation (Senegal)
WEDNET	Women, Environment, and Development Network (Kenya)
WLI	World Learning Inc.
WOA	Washington Office on Africa
WRI	World Resources Institute
WWF-US	World Wildlife Fund-United States

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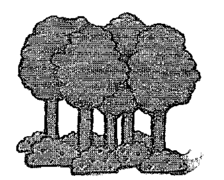
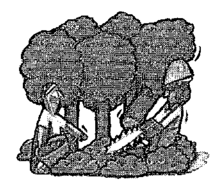
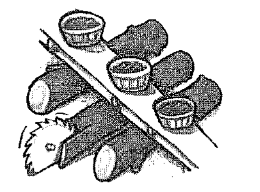
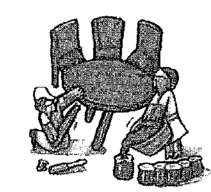
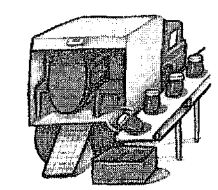
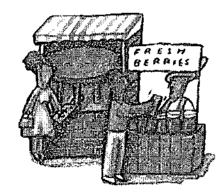
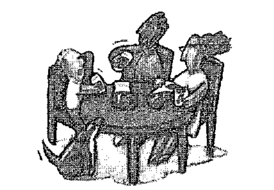
This matrix is designed as a tool to help in the analysis of the existing forest products market system and to encourage more systematic thinking about sustainable forest management (SFM).

Sustainable Forest Products: *Opportunity Within Crisis*

External Factors	Questions to Consider
Changes in Markets, Product Demand, and Economic Environment • Absolute demand for forest products is growing as a result of population increase and economic changes. • Increasing trend toward globalization of markets and sources of raw material. • Worsening poverty in some areas increases pressure on forest resources as people meet short-term survival objectives. • Increasing national debt encourages accelerated exploitation of natural resources. • Consumer acceptance of new or substitute products appears to be increasing (public attitudes, ethics and values are changing [e.g. conservation ethic]). • New market trends are emerging ("green" marketing and consumerism). • Certification movement is increasingly active.	• Will globalization accelerate depletion of forest resources as the market seeks lowest forest product costs? • Do current forestry practices match changes in market demand? • Can lead time for responding to market changes be estimated? • Are international trends in "green" marketing having an impact on SFM? • What amount of forest products become part of the market system versus local household use, etc.?
Changes in Quality and Size of Resource Base • Natural and human-made disasters, deforestation, climate change are reducing regenerative capacity of forests. • Competing uses for the forest resource base (forest conversion for agriculture, mining, and energy development) are stronger. • Common response to forest species scarcity is either to develop technology to harvest remaining population or to identify acceptable substitute species—both impact forest systems. • New resource substitution developments (under-utilized species, new management regimes) are insufficient.	• Is accurate description available of resource changes in the North and South? • What are positive resource changes? • Can improved use and management offset increasing stresses on the resource base?
Level of Unsustainable Forest Practice and Illegal Harvesting • Clear resource tenure/ownership is often lacking. • *Increased numbers of refugees and migrants* temporarily using forest systems. • Increasing use of extensive swidden agriculture among pioneering populations. • Alliances of powerful private interests and corrupt government officials are neutralizing positive impact of SFM policy, regulation, technology, and education, especially in Southern countries. • Legal systems appear impotent to control illegal logging by powerful vested interests and/or small-scale harvesters. • Some international logging companies disregard minimal SFM practice and ignore extraction agreements.	• To what extent can these kinds of issues influence SFM planning and practice? • *Are issues of tenure given appropriate attention*, and is the relationship between resource tenure and SFM understood? • How much of forest products trade moves through illegal channels? • Is illegal harvesting increasing as a result of international pressure for "green" products?
Changes in Policy Environment • New international treaties and conventions (GATT, NAFTA, ITTA, TFAP, Biodiversity Convention) have been adopted. • Local, national, and international development policies now include specific natural resource management (NRM) provisions. • SFM advocacy, programs, and pressure from international environmental non-government organizations are growing. • Policy support for short-term, profit-enhancing strategies that feature unsustainable forest use practices (e.g. monocultures) is increasing.	• What are the implications of the recent worldwide explosion in NRM policy and regulation? • What are the main obstacles to policy implementation? • Do current systems of incentives and sanctions support NRM policies?
Trends in Regulatory Environment • Tariffs and restrictions on trade and commerce, logging bans, and environmental standards. • Natural resource management laws and legislation that promote checks and balances. • Forest use guidelines and management requirements.	• Is SFM supported by the current regulatory environment? • What are the main obstacles to implementation of regulations? • What gaps exist in the regulatory environment?
Intensity of Research and Development Efforts/Access to Innovation • SFM research agendas are highly diverse and *uncoordinated.* • Inadequate mechanisms exist for SFM research and development (innovation funds, tax breaks, endowments). • SFM enhancing equipment for low impact wood/sustainable forest product production are ready but not commercially produced. • Commercializing innovations is difficult (economy of scale, unfavorable internal rate of return). • Wood industry is usually passive rather than active in developing and adopting innovations. • Technology trends lead to large, capital-intensive equipment.	• What technologies exist that actually contribute *to SFM?* • What new priority problems and opportunities need technical solutions? • How can identification of research topics be improved? • How can connection between research findings and implementation be strengthened? • How can the lag time between technology innovation and adoption be reduced? • What is needed to improve mechanisms to finance product and systems research and development?
Availability of Education and Information • Conventional media influence is profound and pervasive, and does not directly or indirectly support SFM. • Conservation education seldom addresses producers, wholesalers, and retailers. • Temporary conservation fads and trends oversimplify SFM issues.	• What are the most cost-effective means of educating the general public in the U.S.? • Which organizations and individuals are most effective in development and dissemination of information that has long-term impact on SFM?

Design: Lipman Hearne Chicago

Forest Resource Base

Actors		
Key Features	**Forest Resource** • Forest ecosystems are defined by: *ecological processes (nutrient, hydrological cycles);* *biophysical constraints (rainfall, soil fertility, topography);* *biological diversity.*	**Forest Resource Use** • Management of forest systems is usually based on: *human benefits (food, clothing, building material, livelihood, timber, environmental services);* *conservation benefits (maintenance of flora and fauna populations, environmental services for all species).*
Differing Opinions	**Forest Resource** • "Tree plantations are forests." • "Pristine forests contain highest levels of biodiversity." • "Managed forests are the most productive." **Forest Resource Use** • "True SFM is unattainable." • "No existing projects have demonstrated SFM." • "Human impacts are necessarily negative."	• "Traditional knowledge is unscientific." • "SFM cannot wait for conclusive scientific data before being applied." • "Utilization of more species or all species will lead to SFM." (Others contend that utilization of all species utilization will lead to greater forest destruction.)
Issues	**Forest Resource** • Incomplete knowledge of minimal threshold for maintaining system integrity, including: *ecosystem dynamics;* *flora/fauna interdependence;* *regeneration mechanisms;* *species interactions;* *disturbances.* • General lack of biological inventories. • Knowledge of species interaction is weak. • Research skewed toward megafauna and economic species. **Forest Resource Use** • Lack of generally accepted definition of SFM. • Sustained yield confused with SFM. • Questionable appropriateness of plantation forestry and other intensive timber management methods .	• Serious lack of empirical data on SFM in practice. • Social and economic needs outweigh ecological considerations in resource decisions. • Only foresters have designed management schemes. Insufficient broad-based input into forest management design (ecosystem perspective). • Indigenous knowledge on forest composition and management practices under-utilized. • Forest managers lack market intelligence about lesser known species. • Conflicting interests (resource management vs. bottom-line economics) can create tension between forest managers and harvesters. • Little linkage between forest managers and secondary processors except in vertically integrated operations.
Consequences	**Forest Resource** • In the absence of knowledge and appropriate consultative processes, conclusions about *forest systems often made* on invalid basic assumptions and paradigms. • Natural forest systems are poorly managed. **Forest Resource Use** • Natural and social systems not seen as interconnected. • Deterioration of forest site productivity, functional integrity, critical habitats, and biological diversity. • Management ramifications not seen at regional landscape level.	• Too much focus placed on timber commodities as management objective. • Criteria for SFM too varied. • Little experience with SFM practices • Inadequate measures of human and natural impacts on natural systems. • SFM applications do not achieve full potential due to under-utilization of traditional knowledge. • Misuse of species. Wood does not achieve its highest and best use. • Oversimplified perception of natural resource management complexities.
Strategies	**Forest Resource** • Reduce problems caused by information scarcity by supporting research related to: *base-line biological inventories;* *systems approach management;* *landscape-scale management.* **Forest Resource Use** • Demonstrate cost-efficient industrial-scale SFM through larger-scale pilot projects supported by coalitions of funders. • Increase knowledge of marketable special forest products by funding additional research.	• Compile, assess, and exchange knowledge and databases/inventories of SFM practices and products. • Foster regional definition of SFM by identifying all stakeholders, pooling perspectives, *and attempting consensus.* • Improve linkage between forest practitioners and forest researchers by supporting unconventional partnerships that combine research and practice. • Improve SFM designs by encouraging interdisciplinary teams that include social and cultural perspectives.

Extraction / Harvesting

Actors	• Individuals • Families • Communities • Clan, Ethnic, Geographically Associated Groups • Local Enterprises (public and private)	• Outsider Enterprises (public and private) • Multi-nationals • Governments
Key Features	• *Primary harvesters* cut trees and forage special forest products (the complete range of enterprise forms, resource and land ownership patterns, and forest-related activities and practices are represented). • May or may not own the land from which they harvest the raw material. • May or may not be primary product producers. • Best positioned to see all resources in the forest and identify which resources are used or under-used.	• SFM is influenced by: *primary processor's resource needs;* *local use of resources (vs. resources harvested for export);* *local/national/foreign company involvement;* *subsistence needs (vs. commercial or profit motives);* *degree of monetized (vs. non-monetized) activity;* *size of operation;* *land ownership patterns.*
Differing Opinions	• "Land ownership will result in better stewardship." • "Indigenous people practice sustainable livelihood strategies and have a SFM tradition." • "Small is beautiful." • "In a free market economy, the marketplace will properly value forest products." • "All producers share common interests and goals." • "Forests are a renewable resource."	
Issues	• Harvesters lack access to information and capital for new/appropriate harvesting technologies and practices. • Loggers compete against loggers, often at the expense of improved forest management practices and buying and selling power. • Financial returns sometimes too low to be profitable. • An exploitative relationship often exists between small-scale harvesters and wholesalers/processors. • Factors outside of profit and effort affect resource harvest decisions (e.g. sense of place, dependence on resource base).	• Impact of inappropriate harvesting practices on the future value of residual forests is underestimated. • Impact of forest access roads is underestimated. • Buying and selling arrangements can artificially inflate the value of raw material (e.g. bid vs. negotiated stumpage price). • Harvester choice of product completely dependent on transport distance to market (usually a primary processing facility). • Furthest removed from end-user information and access (market needs, preferences, etc.).
Consequences	• Small profit margins and lack of incentives discourage harvesters from adopting SFM practices. • Continued inefficient harvesting practices and damage to the forest resource base. • SFM failure because of oversimplification of harvester livelihood arrangements and relationship to processors. • Collateral damage to ecosystems is enormous and growing (e.g. from road-building).	• Resource use decisions not always driven by market logic. • Harvest damage can severely limit future sustainable economic development options, including SFM. • Inadequate communication between harvesters and processors leads to poor communication of limits of resource base to wholesalers/retailers.
Strategies	• Identify how improved technical and scientific information about resource base management can be made more accessible to the harvesters. • Identify and document successful forest capitalization *strategies for smaller-scale* harvesters. • Support the establishment of coalitions between innovative practitioners and decision-makers that result in sustainable forest resource use. • Increase logger influence by supporting activities that return higher value to forest products at the harvester level (sorting, grading, certified product).	• Match resource sustainability with optimal capture of income to local communities (e.g. through regional planning efforts that actively attract high value industries). • Encourage projects that *evaluate system differences* between the North and the South, focusing on information flows, vested interest pressures, access to capital, livelihood issues, access to technology, and SFM opportunity.

Primary Processing

Actors	• Sawmills, Plywood Producers, and Veneer Producers (in the solid wood industry) • First-stage Bulk Processors (in the special forest products industry) • Pulp and Paper Producers	
Key Features	• *Primary processors* take base resources (logs, botanicals, evergreens, bark, etc.) and complete first-line processing of that resource to produce a commodity product (a product that is not ready for consumer use). • First-in-line information link to resource harvesters (loggers, wildcrafters, foragers, etc.).	• *Business strategy is production-* rather than market-driven. • For solid wood producers, most small to mid-sized operations do not own their own timberlands and draw from multiple sources for log access. • Typically primary processors have no linkage to end-users.
Differing Opinions	• "The only profitable resource *from the forest is the wood.*" • "Industry doesn't have to change, it just needs to educate the public." (Others contend that the wood industry needs a major restructuring.) • "To improve productivity technology should be devoted to maximizing output (vs. incorporating and maximizing value-added output)." • "Manufacturing technologies employed in operations limit	variety and size of natural *resource(s) being processed.*" • "All species that can be used for product development are being used." (Others contend that there is little recognition of unused or under-utilized species.) • "Current wood manufacturing operations are very efficient in reducing wood waste." • "SFM is important, but many differing definitions of SFM exist. How does one choose?"
Issues	• Manufacturing baseline is volume production. • Oftentimes caught in tight profit margin mode with wholesalers who distribute commodity products to retailers. • Softwood product producers think and operate differently than hardwood producers. • Far removed from end-user information and access (market needs, preferences, etc.). • Producers lack access to capital and new production technologies. • Small to mid-sized producers rarely collaborate to gain buying power for SFM resources.	• Primary processors dictate resource needs directly to harvesters. • Information exchange about the forest's unused and under-utilized species for product development seldom occurs between primary processors and harvesters, who are most knowledgeable regarding under-utilized species. • Lowest value of product at this level; heavy competition because of non-differentiation of product. • "Traditional" species employed in manufacturing (especially true for solid wood producers).
Consequences	• Small to mid-sized producers most negatively affected and in powerless position due to lack of political and financial resources. • Operations often viewed by environmental community as "culprits" and are excluded from SFM planning. • Understanding of issues and implementation of action typically reactive vs. proactive.	• SFM initiatives often fail due to lack of understanding of issues separating hardwood and softwood manufacturing. • Since profit margins are often tight and volume is manufacturing baseline, concerns for SFM practices and costs associated with those practices are low priority.
Strategies	• Develop mechanisms that increase market intelligence of SFM product demand (from end-users to primary processors). • Encourage identification of key wood-based and non-wood-*based products with market* potential from hardwood and softwood forests by developing a mechanism to assist forest land owners, concession holders, and primary processors to take the lead in the process.	• Accelerate product development potential from unused and under-utilized species from forests by creating alternative uses of these materials. • Optimize resource use to match market demands by *evaluating new, more appropriate* processing technologies (i.e. making more product with less resource.). • Reduce process demand on wood supply by identifying alternative resources that can be used.

Secondary Processing

Actors	• Manufacturers (that add value to commodity products) • Furniture, Flooring, Molding, and Millwork Producers • Craftspeople (musical instruments, jewelry, hand-made paper, etc.)	
Key Features	• *Secondary Processors (SPs)* take a commodity product from primary producers and produce either a component product or a product ready for consumer use. • SPs usually are small businesses. • SPs typically are willing to use non-traditional species in product manufacturing as long as end-user expectations for product quality are satisfied. • SPs typically use equipment and technology that adapt to multiple species product manufacturing and reduction of wood waste. • SPs in wood production typically bear lower up-front costs for new equipment and	*technology than do primary* producers. This is often reversed in special forest products production. • SPs employ business strategies that are market- rather than production-driven (value vs. volume). • Profits per unit produced are larger at the secondary processor level than at the primary producer level. • Small to mid-sized SPs generally do not link with each other to gain buying power. • SPs have little, if any, linkage to harvesters and are typically not involved in resource management decisions.
Differing Opinions	• "All species that can be used *are being used.*" (Others contend that there is little recognition of unused or under-utilized species.) • "SFM is important but the value of certification is unproven and probably slight." • "Craftspeople are ecologically sensitive businesspeople."	
Issues	• Secondary processors lack access to capital for new production technologies and market intelligence for value-added product development. • Chain-of-custody problems, certification costs, and production logistics are most difficult at this level because raw materials are received from multiple primary producers. • Secondary processors are rarely active supporters of SFM since they are several steps removed from the resource base.	• Manufacturers lack access to information on effective product distribution channels that maximize market opportunities. • Industry associations at this level are typically based on specific product development (furniture producers, millwork manufacturers, etc.). Few, if any, associations exist to help manufacturers gain access to SFM raw materials.
Consequences	• SFM issues and opportunities are often disregarded due to lack of SFM raw materials, chain-of-custody costs, certification costs, and lack of access to market intelligence. • Efforts to increase the manufacture of products from waste are often derailed due to lack of access to capital for new production technologies.	
Strategies	• Develop mechanisms that increase market intelligence about SFM product demand from end-users to secondary processors. • Increase secondary processor knowledge about new process*ing technologies that maximize* use of the resource (i.e. making more product with less resource). • Demonstrate strategies for increasing buying power of small to mid-sized companies for SFM raw materials. • Demonstrate streamlining of secondary processor chain of custody costs and logistics.	• Accelerate new product development by evaluating unused and under-utilized species from the forest. • Develop "green" product designs and marketing strategies that reflect key features *of end-users.* • Provide consumers with information about existing resource substitutes. • Identify how fair and appropriate certification can gain public trust.

Wholesale

Actors	• Commodity Brokers • Importers/Exporters • Freight Handlers • Intermediary Traders • Transporters/Shippers	
Key Features	• *Wholesalers act as important* intermediaries in the supply/demand system, aggregate diverse supply sources, organize supply and distribution networks, and sometimes mobilize capital for harvesters and producers. • Wholesalers are sometimes organized as vertically integrated cartels, controlling transportation and credit. • In the South, wholesalers may be very powerful and can strongly influence forest harvesting decisions. In the North, wholesalers have little relationship with harvesting practices and basically respond to retailer-manufacturer needs.	• *Unless they also engage in or* have strong associations with retail or brand name marketing, wholesalers are usually invisible or unrelated to end-users. • Wholesalers have a strong link to retailers and respond quickly to their changing needs.
Differing Opinions	• "Wholesalers monopolize *prices, products, and profits.*" (Others contend that wholesalers are the most effective means of channeling goods and services.) • "Regulations and restrictions on wholesalers by governments and citizen organizations are necessary." (Others contend that unrestricted free trade provides maximum benefits and returns for all concerned.)	
Issues	• Depending on geographic locations and product, significant information gaps exist on wholesaler systems. Gaps include: *life-cycle efficiency of product processing;* *service functions provided by wholesalers;* *profit margins;* *the structure and impact of wholesale systems (monopolies/cartels in the South, independent operations in the U.S., keiretsu/chabbols in the Pacific Rim).*	• Wholesalers usually have limited understanding or incentives to support SFM • If wholesalers control transport, they can have a strong influence on prices. • Prices at wholesale stage may bear minimal relation to harvesting and production costs and pressures on the resource base.
Consequences	• Wholesalers are rarely a part of SFM dialogue. • Wholesalers typically do not assume the cost of SFM practices in their product price structure, unless dictated by retailers and end-users. (Wholesalers are frequently not responsive to upward pressure from resource and processing levels.)	• Efforts to control, compete with, or circumvent wholesalers are often unsuccessful due to lack of understanding of *the service functions provided* and the resources administered by wholesalers. • Certification efforts are difficult to undertake and sustain at this level.
Strategies	• Support applied research by capable organizations (non-governmental organizations, trade associations, consultants, etc.) that address wholesale system information gaps and identify issues and opportuni*ties for promoting SFM within* the wholesale stage. The research should focus on specific forest producers and geographic areas where efforts are either underway or have strong prospects.	• Design, initiate, and finance a small number of pilot projects that influence wholesalers to support SFM objectives through collaboration, encouraged competition, and appropriate incentives.

Retail

Actors	• Lumber Yards • Discount Stores, Do-it-yourself Centers • Specialty Product Retailers • Mail Order Merchandisers (special forest products)	• Food, Drug, Beverage, Cosmetic Industries • Personal Care/Accessories Industry
Key Features	• *Retailers move finished* products to end-users. • Retailers are most sensitive to end-user demands. • Retailers are interested in SFM potential but don't want responsibility for documenting SFM product claims. • Retailers are beginning to select products which respond to end-user/marketplace demands for SFM products.	• *Retailers are market-driven* but will not absorb SFM development costs. • Retailers are the main source of SFM marketing activity. • Market mechanisms are currently incompatible with requirements of natural forest systems (e.g. sustainable production regimes and utilization of a full menu of species available—woods and sustainable forest products).
Differing Opinions	• "Sustainably-produced *products tend to be sub-*standard and nobody wants to buy inferior products." • "Retailers always know what the end-users want."	
Issues	• Retailers generally unaware of forest conditions or of social and economic forces involved in unsustainable forest product extraction. • Currently, SFM products only occupy niche markets due to higher price points and limited supply.	• Retailers lack an efficient system to transfer end-user market intelligence to product manufacturers. • Alternative trading systems are established at retail level but have limited influence on SFM product development.
Consequences	• Opportunity lost for retailer participation in promoting end-user and producer investment in SFM products. • Producer ability to respond to end-user demand is diminished.	
Strategies	• Support research into resource substitutions favoring highest/best use of wood products. • Identify how to increase retailer participation in SFM certification processes. • Create a framework for information transfer from retailers to producers on the importance of SFM products and establishing chain of custody.	• Determine how "green" producers can work with main stream, mass marketers on SFM issues. • Implement strategic alliances or collective partnerships among retailers, wholesalers, *and producers to enhance* sourcing of sustainable forest products. • Improve quality of information on consumer behavior, attitudes, and willingness to bear SFM costs.

End-Use

Actors	• Individuals • Families • Retail Businesses • Service Industries • Institutions (schools, hospitals, churches) • Manufacturers	• Transportation Industry • Independent Sector (non-profit) • Local Governments (public works) • National Governments
Key Features	• *Includes anyone who directly* or indirectly uses forest products in end-use form. • Buying power/product preference depends on: *gender;* *geographic location;* *age;* *family structure;* *disposable income;* *education;* *ethnic, cultural background.*	• *Price and convenience dominate* purchaser decisions. Product must meet end-user needs (structure, function, safety). • End-user awareness about and demand for SFM increasing.
Differing Opinions	• "End-users may favor SFM *but unwilling to pay true cost* of SFM or certification costs." • "Access to information and education will change consumer behavior in favor of SFM."	• "U.S. consumers are more *responsive to environmental* concerns than to social concerns." • "End-users want defect-free products." (However, some experience indicates consumers have flexibility and would like more choices.)
Issues	• End-user values/attitudes are different from purchasing behavior. • Wood is not being used to its highest and best use. • Forest connection to commodity products (paper, building materials, etc.) is less obvious than to high-end solid wood products. • Certification credibility is threatened at early stages by consumer suspicion.	• Prices paid for SFM forest products frequently do not represent the true costs of SFM. • Information about availability of SFM products and substitute products is scarce (e.g. extruded lumber from hemp).
Consequences	• End-user purchasing patterns relative to SFM are difficult to predict. • Economic forces promote waste of wood resources. • End-users are unaware of the source of raw material. • End-users often not aware of extent of forest products in commodities.	• End-user stated values/attitudes are different from purchasing behavior. • SFM practices not adequately supported by end-users and not competitive economically. • End-users not being given sufficient product options.
Strategies	• Support end-user common interest groups to improve communications with manufacturers. • Establish recognition awards for manufacturers that most notably respond to end-user *interest in sustainable* harvested forest products (e.g. end-user selection committees).	• Support marketing research that more accurately tracks changes in end-user preferences.

The sustainable forest products matrix was developed by Michael Jenkins, Thomas Fricke, Catherine Maser, David Richards, and Bob Simeone and supported by the John D. and Catherine T. MacArthur Foundation. Since this matrix is a work in progress, comments and questions are welcome. For further information or additional copies, please contact: Michael Jenkins, Associate Director, World Environment and Resources Program, The John D. and Catherine T. MacArthur Foundation, 140 South Dearborn Street, Suite 1100, Chicago, Illinois 60603. Telephone 312-726-8000

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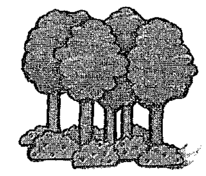
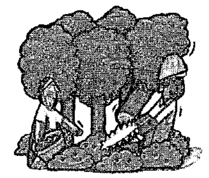
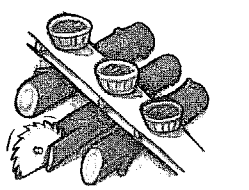
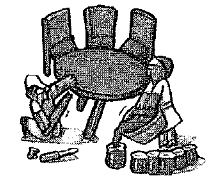
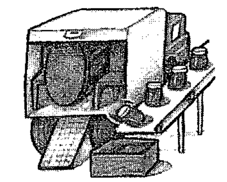
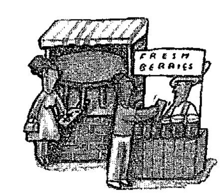
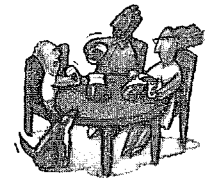
Sustainable Forest Products: *Opportunity Within Crisis*

This matrix is designed as a tool to help in the analysis of the existing forest products market system and to encourage more systematic thinking about sustainable forest management (SFM).

External Factors	Questions to Consider
Changes in Markets, Product Demand, and Economic Environment • Absolute demand for forest products is growing as a result of population increase and economic changes. • Increasing trend toward globalization of markets and sources of raw material. • Worsening poverty in some areas increases pressure on forest resources as people meet short-term survival objectives. • Increasing national debt encourages accelerated exploitation of natural resources. • Consumer acceptance of new or substitute products appears to be increasing (public attitudes, ethics and values are changing [e.g. conservation ethic]). • New market trends are emerging ("green" marketing and consumerism). • Certification movement is increasingly active.	• Will globalization accelerate depletion of forest resources as the market seeks lowest forest product costs? • Do current forestry practices match changes in market demand? • Can lead time for responding to market changes be estimated? • Are international trends in "green" marketing having an impact on SFM? • What amount of forest products become part of the market system versus local household use, etc.?
Changes in Quality and Size of Resource Base • Natural and human-made disasters, deforestation, climate change are reducing regenerative capacity of forests. • Competing uses for the forest resource base (forest conversion for agriculture, mining, and energy development) are stronger. • Common response to forest species scarcity is either to develop technology to harvest remaining population or to identify acceptable substitute species—both impact forest systems. • New resource substitution developments (under-utilized species, new management regimes) are insufficient.	• Is accurate description available of resource changes in the North and South? • What are positive resource changes? • Can improved use and management offset increasing stresses on the resource base?
Level of Unsustainable Forest Practice and Illegal Harvesting • Clear resource tenure/ownership is often lacking. • Increased numbers of refugees and migrants temporarily using forest systems. • Increasing use of extensive swidden agriculture among pioneering populations. • Alliances of powerful private interests and corrupt government officials are neutralizing positive impact of SFM policy, regulation, technology, and education, especially in Southern countries. • Legal systems appear impotent to control illegal logging by powerful vested interests and/or small-scale harvesters. • Some international logging companies disregard minimal SFM practice and ignore extraction agreements.	• To what extent can these kinds of issues influence SFM planning and practice? • Are issues of tenure given appropriate attention, and is the relationship between resource tenure and SFM understood? • How much of forest products trade moves through illegal channels? • Is illegal harvesting increasing as a result of international pressure for "green" products?
Changes in Policy Environment • New international treaties and conventions (GATT, NAFTA, ITTA, TFAP, Biodiversity Convention) have been adopted. • Local, national, and international development policies now include specific natural resource management (NRM) provisions. • SFM advocacy, programs, and pressure from international environmental non-government organizations are growing. • Policy support for short-term, profit-enhancing strategies that feature unsustainable forest use practices (e.g. monocultures) is increasing.	• What are the implications of the recent worldwide explosion in NRM policy and regulation? • What are the main obstacles to policy implementation? • Do current systems of incentives and sanctions support NRM policies?
Trends in Regulatory Environment • Tariffs and restrictions on trade and commerce, logging bans, and environmental standards. • Natural resource management laws and legislation that promote checks and balances. • Forest use guidelines and management requirements.	• Is SFM supported by the current regulatory environment? • What are the main obstacles to implementation of regulations? • What gaps exist in the regulatory environment?
Intensity of Research and Development Efforts/Access to Innovation • SFM research agendas are highly diverse and uncoordinated. • Inadequate mechanisms exist for SFM research and development (innovation funds, tax breaks, endowments). • SFM enhancing equipment for low-impact wood/sustainable forest product production are ready but not commercially produced. • Commercializing innovations is difficult (economy of scale, unfavorable internal rate of return). • Wood industry is usually passive rather than active in developing and adopting innovations. • Technology trends lead to large, capital-intensive equipment.	• What technologies exist that actually contribute to SFM? • What new priority problems and opportunities need technical solutions? • How can identification of research topics be improved? • How can connection between research findings and implementation be strengthened? • How can the lag time between technology innovation and adoption be reduced? • What is needed to improve mechanisms to finance product and systems research and development?
Availability of Education and Information • Conventional media influence is profound and pervasive, and does not directly or indirectly support SFM. • Conservation education seldom addresses producers, wholesalers, and retailers. • Temporary conservation fads and trends oversimplify SFM issues.	• What are the most cost-effective means of educating the general public in the U.S.? • Which organizations and individuals are most effective in development and dissemination of information that has long-term impact on SFM?

Design: Lipman Hearne Chicago

	Forest Resource Base	Extraction / Harvesting	Primary Processing	Secondary Processing	Wholesale	Retail	End-Use
Actors		• Individuals • Families • Communities • Clan, Ethnic, Geographically Associated Groups • Local Enterprises (public and private) • Outsider Enterprises (public and private) • Multi-nationals • Governments	• Sawmills, Plywood Producers, and Veneer Producers (in the solid wood industry) • First-stage Bulk Processors (in the special forest products industry) • Pulp and Paper Producers	• Manufacturers (that add value to commodity products) • Furniture, Flooring, Molding, and Millwork Producers • Craftspeople (musical instruments, jewelry, hand-made paper, etc.)	• Commodity Brokers • Importers/Exporters • Freight Handlers • Intermediary Traders • Transporters/Shippers	• Lumber Yards • Discount Stores, Do-it-yourself Centers • Specialty Product Retailers • Mail Order Merchandisers (special forest products) • Food, Drug, Beverage, Cosmetic Industries • Personal Care/Accessories Industry	• Individuals • Families • Retail Businesses • Service Industries • Institutions (schools, hospitals, churches) • Manufacturers • Transportation Industry • Independent Sector (non-profit) • Local Governments (public works) • National Governments
Key Features	**Forest Resource** • Forest ecosystems are defined by: *ecological processes (nutrient, hydrological cycles);* *biophysical constraints (rainfall, soil fertility, topography);* *biological diversity.* **Forest Resource Use** • Management of forest systems is usually based on: *human benefits (food, clothing, building material, livelihood, timber, environmental services);* *conservation benefits (maintenance of flora and fauna populations, environmental services for all species).*	• Primary harvesters cut trees and forage special forest products (the complete range of enterprise forms, resource and land ownership patterns, and forest-related activities and practices are represented). • May or may not own the land from which they harvest the raw material. • May or may not be primary product producers. • Best positioned to see all resources in the forest and identify which resources are used or under-used. • SFM is influenced by: *primary processor's resource needs;* *local use of resources (vs. resources harvested for export);* *local/national/foreign company involvement;* *subsistence needs (vs. commercial or profit motives);* *degree of monetized (vs. non-monetized) activity;* *size of operation;* *land ownership patterns.*	• Primary processors take base resources (logs, botanicals, evergreens, bark, etc.) and complete first-line processing of that resource to produce a commodity product (a product that is not ready for consumer use). • First-in-line information link to resource harvesters (loggers, wildcrafters, foragers, etc.). • Business strategy is production- rather than market-driven. • For solid wood producers, most small to mid-sized operations do not own their own timberlands and draw from multiple sources for log access. • Typically primary processors have no linkage to end-users.	• Secondary Processors (SPs) take a commodity product from primary producers and produce either a component product or a product ready for consumer use. • SPs usually are small businesses. • SPs typically are willing to use non-traditional species in product manufacturing as long as end-user expectations for product quality are satisfied. • SPs typically use equipment and technology that adapt to multiple species product manufacturing and reduction of wood waste. • SPs in wood production typically bear lower up-front costs for new equipment and technology than do primary producers. This is often reversed in special forest products production. • SPs employ business strategies that are market- rather than production-driven (value vs. volume). • Profits per unit produced are larger at the secondary processor level than at the primary producer level. • Small to mid-sized SPs generally do not link with each other to gain buying power. • SPs have little, if any, linkage to harvesters and are typically not involved in resource management decisions.	• Wholesalers act as important intermediaries in the supply/demand system, aggregate diverse supply sources, organize supply and distribution networks, and sometimes mobilize capital for harvesters and producers. • Wholesalers are sometimes organized as vertically integrated cartels, controlling transportation and credit. • In the South, wholesalers may be very powerful and can strongly influence forest harvesting decisions. In the North, wholesalers have little relationship with harvesting practices and basically respond to retailer-manufacturer needs. • Unless they also engage in or have strong associations with retail or brand name marketing, wholesalers are usually invisible or unrelated to end-users. • Wholesalers have a strong link to retailers and respond quickly to their changing needs.	• Retailers move finished products to end-users. • Retailers are most sensitive to end-user demands. • Retailers are interested in SFM potential but don't want responsibility for documenting SFM product claims. • Retailers are beginning to select products which respond to end-user/marketplace demands for SFM products. • Retailers are market-driven but will not absorb SFM development costs. • Retailers are the main source of SFM marketing activity. • Market mechanisms are currently incompatible with requirements of natural forest systems (e.g. sustainable production regimes and utilization of a full menu of species available—woods and sustainable forest products).	• Includes anyone who directly or indirectly uses forest products in end-use form. • Buying power/product preference depends on: *gender;* *geographic location;* *age;* *family structure;* *disposable income;* *education;* *ethnic, cultural background.* • Price and convenience dominate purchaser decisions. Product must meet end-user needs (structure, function, safety). • End-user awareness about and demand for SFM increasing.
Differing Opinions	**Forest Resource** • "Tree plantations are forests." • "Pristine forests contain highest levels of biodiversity." • "Managed forests are the most productive." **Forest Resource Use** • "True SFM is unattainable." • "No existing projects have demonstrated SFM." • "Human impacts are necessarily negative." • "Traditional knowledge is unscientific." • "SFM cannot wait for conclusive scientific data before being applied." • "Utilization of more species or all species will lead to SFM." (Others contend that utilization of all species utilization will lead to greater forest destruction.)	• "Land ownership will result in better stewardship." • "Indigenous people practice sustainable livelihood strategies and have a SFM tradition." • "Small is beautiful." • "In a free market economy, the marketplace will properly value forest products." • "All producers share common interests and goals." • "Forests are a renewable resource."	• "The only profitable resource from the forest is the wood." • "Industry doesn't have to change, it just needs to educate the public." (Others contend that the wood industry needs a major restructuring.) • "To improve productivity technology should be devoted to maximizing output (vs. incorporating and maximizing value-added output)." • "Manufacturing technologies employed in operations limit variety and size of natural resource(s) being processed." • "All species that can be used for product development are being used." (Others contend that there is little recognition of unused or under-utilized species.) • "Current wood manufacturing operations are very efficient in reducing wood waste." • "SFM is important, but many differing definitions of SFM exist. How does one choose?"	• "All species that can be used are being used." (Others contend that there is little recognition of unused or under-utilized species.) • "SFM is important but the value of certification is unproven and probably slight." • "Craftspeople are ecologically sensitive businesspeople."	• "Wholesalers monopolize prices, products, and profits." (Others contend that wholesalers are the most effective means of channeling goods and services.) • "Regulations and restrictions on wholesalers by governments and citizen organizations are necessary." (Others contend that unrestricted free trade provides maximum benefits and returns for all concerned.)	• "Sustainably-produced products tend to be substandard and nobody wants to buy inferior products." • "Retailers always know what the end-users want."	• "End-users may favor SFM but unwilling to pay true cost of SFM or certification costs." • "Access to information and education will change consumer behavior in favor of SFM." • "U.S. consumers are more responsive to environmental concerns than to social concerns." • "End-users want defect-free products." (However, some experience indicates consumers have flexibility and would like more choices.)
Issues	**Forest Resource** • Incomplete knowledge of minimal threshold for maintaining system integrity, including: *ecosystem dynamics;* *flora/fauna interdependence;* *regeneration mechanisms;* *species interactions;* *disturbances.* • General lack of biological inventories. • Knowledge of species interaction is weak. • Research skewed toward megafauna and economic species. **Forest Resource Use** • Lack of generally accepted definition of SFM. • Sustained yield confused with SFM. • Questionable appropriateness of plantation forestry and other intensive timber management methods. • Serious lack of empirical data on SFM in practice. • Social and economic needs outweigh ecological considerations in resource decisions. • Only foresters have designed management schemes: Insufficient broad-based input into forest management design (ecosystem perspective). • Indigenous knowledge on forest composition and management practices under-utilized. • Forest managers lack market intelligence about lesser known species. • Conflicting interests (resource management vs. bottom-line economics) can create tension between forest managers and harvesters. • Little linkage between forest managers and secondary processors except in vertically integrated operations.	• Harvesters lack access to information and capital for new/appropriate harvesting technologies and practices. • Loggers compete against loggers, often at the expense of improved forest management practices and buying and selling power. • Financial returns sometimes too low to be profitable. • An exploitative relationship often exists between small-scale harvesters and wholesalers/processors. • Factors outside of profit and effort affect resource harvest decisions (e.g. sense of place, dependence on resource base). • Impact of inappropriate harvesting practices on the future value of residual forests is underestimated. • Impact of forest access roads is underestimated. • Buying and selling arrangements can artificially inflate the value of raw material (e.g. bid vs. negotiated stumpage price). • Harvester choice of product completely dependent on transport distance to market (usually a primary processing facility). • Furthest removed from end-user information and access (market needs, preferences, etc.).	• Manufacturing baseline is volume production. • Oftentimes caught in tight profit margin mode with wholesalers who distribute commodity products to retailers. • Softwood product producers think and operate differently than hardwood producers. • Far removed from end-user information and access (market needs, preferences, etc.). • Producers lack access to capital and new production technologies. • Small to mid-sized producers rarely collaborate to gain buying power for SFM resources. • Primary processors dictate resource needs directly to harvesters. • Information exchange about the forest's unused and under-utilized species for product development seldom occurs between primary processors and harvesters, who are most knowledgeable regarding under-utilized species. • Lowest value of product at this level, heavy competition because of non-differentiation of product. • "Traditional" species employed in manufacturing (especially true for solid wood producers).	• Secondary processors lack access to capital for new production technologies and market intelligence for value-added product development. • Chain-of-custody problems, certification costs, and production logistics are most difficult at this level because raw materials are received from multiple primary producers. • Secondary processors are rarely active supporters of SFM since they are several steps removed from the resource base. • Manufacturers lack access to information on effective product distribution channels that maximize market opportunities. • Industry associations at this level are typically based on specific product development (furniture producers, millwork manufacturers, etc.). Few, if any, associations exist to help manufacturers gain access to SFM raw materials.	• Depending on geographic locations and product, significant information gaps exist on wholesaler systems. Gaps include: *life-cycle efficiency of product processing;* *service functions provided by wholesalers;* *profit margins;* *the structure and impact of wholesale systems (monopolies/cartels in the South, independent operations in the U.S., keiretsu/chabbols in the Pacific Rim).* • Wholesalers usually have limited understanding or incentives to support SFM. • If wholesalers control transport, they can have a strong influence on prices. • Prices at wholesale stage may bear minimal relation to harvesting and production costs and pressures on the resource base.	• Retailers generally unaware of forest conditions or of social and economic forces involved in unsustainable forest product extraction. • Currently, SFM products only occupy niche markets due to higher price points and limited supply. • Retailers lack an efficient system to transfer end-user market intelligence to product manufacturers. • Alternative trading systems are established at retail level but have limited influence on SFM product development.	• End-user values/attitudes are different from purchasing behavior. • Wood is not being used to its highest and best use. • Forest connection to commodity products (paper, building materials, etc.) is less obvious than to high-end solid wood products. • Certification credibility is threatened at early stages by consumer suspicion. • Prices paid for SFM forest products frequently do not represent the true costs of SFM. • Information about availability of SFM products and substitute products is scarce (e.g. extruded lumber from hemp).
Consequences	**Forest Resource** • In the absence of knowledge and appropriate consultative processes, conclusions about forest systems often made on invalid basic assumptions and paradigms. • Natural forest systems are poorly managed. **Forest Resource Use** • Natural and social systems not seen as interconnected. • Deterioration of forest site productivity, functional integrity, critical habitats, and biological diversity. • Management ramifications not seen at regional landscape level. • Too much focus placed on timber commodities as management objective. • Criteria for SFM too varied. • Little experience with SFM practices • Inadequate measures of human and natural impacts on natural systems. • SFM applications do not achieve full potential due to under-utilization of traditional knowledge. • Misuse of species. Wood does not achieve its highest and best use. • Oversimplified perception of natural resource management complexities.	• Small profit margins and lack of incentives discourage harvesters from adopting SFM practices. • Continued inefficient harvesting practices and damage to the forest resource base. • SFM failure because of oversimplification of harvester livelihood arrangements and relationship to processors. • Collateral damage to ecosystems is enormous and growing (e.g. from road-building). • Resource use decisions not always driven by market logic. • Harvest damage can severely limit future sustainable economic development options, including SFM. • Inadequate communication between harvesters and processors leads to poor communication of limits of resource base to wholesalers/retailers.	• Small to mid-sized producers most negatively affected and in powerless position due to lack of political and financial resources. • Operations often viewed by environmental community as "culprits" and are excluded from SFM planning. • Understanding of issues and implementation of action typically reactive vs. proactive. • SFM initiatives often fail due to lack of understanding of issues separating hardwood and softwood manufacturing. • Since profit margins are often tight and volume is manufacturing baseline, concerns for SFM practices and costs associated with those practices are low priority.	• SFM issues and opportunities are often disregarded due to lack of SFM raw materials, chain-of-custody costs, certification costs, and lack of access to market intelligence. • Efforts to increase the manufacture of products from waste are often derailed due to lack of access to capital for new production technologies.	• Wholesalers are rarely a part of SFM dialogue. • Wholesalers typically do not assume the cost of SFM practices in their product price structure, unless dictated by retailers and end-users. (Wholesalers are frequently not responsive to upward pressure from resource and processing levels.) • Efforts to control, compete with, or circumvent wholesalers are often unsuccessful due to lack of understanding of the service functions provided and the resources administered by wholesalers. • Certification efforts are difficult to undertake and sustain at this level.	• Opportunity lost for retailer participation in promoting end-user and producer investment in SFM products. • Producer ability to respond to end-user demand is diminished.	• End-user purchasing patterns relative to SFM are difficult to predict. • Economic forces promote waste of wood resources. • End-users are unaware of the source of raw material. • End-users often not aware of extent of forest products in commodities. • End-user stated values/attitudes are different from purchasing behavior. • SFM practices not adequately supported by end-users and not competitive economically. • End-users not being given sufficient product options.
Strategies	**Forest Resource** • Reduce problems caused by information scarcity by supporting research related to: *base-line biological inventories;* *systems approach management;* *landscape-scale management.* **Forest Resource Use** • Demonstrate cost-efficient industrial-scale SFM through larger-scale pilot projects supported by coalitions of funders. • Increase knowledge of marketable special forest products by funding additional research. • Compile, assess, and exchange knowledge and databases/inventories of SFM practices and products. • Foster regional definition of SFM by identifying all stakeholders, pooling perspectives, and attempting consensus. • Improve linkage between forest practitioners and forest researchers by supporting unconventional partnerships that combine research and practice. • Improve SFM designs by encouraging interdisciplinary teams that include social and cultural perspectives.	• Identify how improved technical and scientific information about resource base management can be made more accessible to the harvesters. • Identify and document successful forest capitalization strategies for smaller-scale harvesters. • Support the establishment of coalitions between innovative practitioners and decision-makers that result in sustainable forest resource use. • Increase logger influence by supporting activities that return higher value to forest products at the harvester level (sorting, grading, certified product). • Match resource sustainability with optimal capture of income to local communities (e.g. through regional planning efforts that actively attract high value industries). • Encourage projects that evaluate system differences between the North and the South, focusing on information flows, vested interest pressures, access to capital, livelihood issues, access to technology, and SFM opportunity.	• Develop mechanisms that increase market intelligence of SFM product demand (from end-users to primary processors). • Encourage identification of key wood-based and non-wood-based products with market potential from hardwood and softwood forests by developing a mechanism to assist forest land owners, concession holders, and primary processors to take the lead in the process. • Accelerate product development potential from unused and under-utilized species from forests by creating alternative uses of these materials. • Optimize resource use to match market demands by evaluating new, more appropriate processing technologies (i.e. making more product with less resource.). • Reduce process demand on wood supply by identifying alternative resources that can be used.	• Develop mechanisms that increase market intelligence about SFM product demand from end-users to secondary processors. • Increase secondary processor knowledge about new processing technologies that maximize use of the resource (i.e. making more product with less resource). • Demonstrate strategies for increasing buying power of small to mid-sized companies for SFM raw materials. • Demonstrate streamlining of secondary processor chain of custody costs and logistics. • Accelerate new product development by evaluating unused and under-utilized species from the forest. • Develop "green" product designs and marketing strategies that reflect key features of end-users. • Provide consumers with information about existing resource substitutes. • Identify how fair and appropriate certification can gain public trust.	• Support applied research by capable organizations (non-governmental organizations, trade associations, consultants, etc.) that address wholesale system information gaps and identify issues and opportunities for promoting SFM within the wholesale stage. The research should focus on specific forest producers and geographic areas where efforts are either underway or have strong prospects. • Design, initiate, and finance a small number of pilot projects that influence wholesalers to support SFM objectives through collaboration, encouraged competition, and appropriate incentives.	• Support research into resource substitutions favoring highest/best use of wood products. • Identify how to increase retailer participation in SFM certification processes. • Create a framework for information transfer from retailers to producers on the importance of SFM products and establishing chain of custody. • Determine how "green" producers can work with main stream, mass marketers on SFM issues. • Implement strategic alliances or collective partnerships among retailers, wholesalers, and producers to enhance sourcing of sustainable forest products. • Improve quality of information on consumer behavior, attitudes, and willingness to bear SFM costs.	• Support end-user common interest groups to improve communications with manufacturers. • Establish recognition awards for manufacturers that most notably respond to end-user interest in sustainable harvested forest products (e.g. end-user selection committees). • Support marketing research that more accurately tracks changes in end-user preferences.

The sustainable forest products matrix was developed by Michael Jenkins, Thomas Fricke, Catherine Mater, David Richards, and Bob Simeone and supported by the John D. and Catherine T. MacArthur Foundation. Since this matrix is a work in progress, comments and questions are welcome. For further information or additional copies, please contact: Michael Jenkins, Associate Director, World Environment and Resources Program, The John D. and Catherine T. MacArthur Foundation, 140 South Dearborn Street, Suite 1100, Chicago, Illinois 60603. Telephone 312-726-8000

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