From Goodwill to Payments for Environmental Services

A Survey of Financing Options for Sustainable Natural Resource Management in Developing Countries

edited by Pablo Gutman

December, 2003

MACROECONOMICS FOR SUSTAINABLE DEVELOPMENT PROGRAM OFFICE

WWF

M/P/O

TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS

ADB	Asian Development Bank
AFDB	African Development Bank
BCLP	Biological Corridor Landscape Project (Bhutan)
BINP	Bwindi Impenetrable National Park (Uganda)
CAMPFIRE	Communal Areas Management Programme for Indigenous Resources (Zimbabwe)
CARE	Cooperative for Assistance and Relief Everywhere
CBA	Cost-Benefit Analysis
CBD	Convention on Biological Diversity
CBNRM	Community-based natural resource management
CDM	Clean Development Mechanism
CEDERENA	Corporación Ecológica para el Desarrollo de la Recursos Naturales (Ecological Corporation for Renewable Natural Resource Development -Ecuador)
CGIAR	Consultative Group on International Agricultural Research
CI	Conservation International
CIFOR	Center for International Forestry Research
DC	Description card
Danida	Danish Agency for Development Assistance. Danish Ministry of Foreign Affairs
DEA	Directorate of Environmental Affairs (Namibia)
DESCs	District development committee (Malawi)
DFC	Desarrollo Forestal Comunitario (Community Forestry Development -Ecuador)
DFID	Department for International Development (U.K.)
DPFA	Desarrollo Forestal Participative en los Andes (Andean Participative Forest Development project - Ecuador)
DNPWLM	Department of National Parks and Wildlife Management (Zimbabwe)
EBRD	European Bank for Reconstruction and Development
ECLAC	Economic Commission for Latin America and the Caribbean
EDO	Environmental district office (Malawi)
EF	Environmental Fund
FAO	Food and Agriculture Organization
FSC	Forest Stewardship Council
GEF	Global Environmental Facility
GTZ	German Technical Cooperation (Gesellschaft für Technische Zusammenarbeit - Germany)
HIPC	Heavily indebted poor country initiative
IAF	Inter-American Foundation
ICDP	Integrated conservation and development project
IDB	Inter-American Development Bank
IDS	Institute of Development Studies (U.K.)

IFAD	International Fund for Agricultural Development
ICMS	Imposto Sobre Circulação de Mercaderias e Serviços (sales tax – Brazil)
IIED	International Institute for Environment and Development
IRDNC	Integrated Rural Development and Nature Conservation
IUCN	World Conservation Union
IPG	Interagency Planning Group on Environmental Funds
JI	Joint Implementation
LSCS	Local Community Steering Committee (Uganda)
MBIFCT	Mgahinga and Bwindi Impenetrable Forest Conservation Trust (Uganda)
MDG	Millennium Development Goals
MES	Markets for environmental services
MSP	Medium-sized project grant program
MWLCT	Ministry of Wildlife, Conservation and Tourism (Namibia)
NIS	Newly Independent States (former Soviet Union countries)
NKMCAP	Noel Kempff Mercado Climate Action Project (Bolivia)
NR	Natural resource
NTFP	Non-timber forest product
ODA	Official Development Assistance
ODI	Overseas Development Institute
PCF	Prototype Carbon Fund
PES	Payments for environmental services
PROFOR	Program on Forests
RFF	Resources for the Future
SFM	Sustainable forest management
SNRM	Sustainable natural resource management
TSA	Technical Advisory Service (at the Danish Ministry of Foreign Affairs)
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
USAID	United States Agency for International Development
USIJI	United States Initiative on Joint Implementation
VAT	Value-added tax
WCS	Wildlife Conservation Society
WSN's	Wilderness Safaris (Namibia)
WWF-MPO	WWF Macroeconomic for Sustainable Development Program Office

PREFACE

During the first half of 2003, a team comprising staff from the WWF Macroeconomics for Sustainable Development Program Office (WWF-MPO); the Danish Agency for Development Assistance Technical Advisory Service, Environment and Natural Resource Program (Danida, TSA 6); the International Institute for Environment and Development (IIED); and Danida's Working Group on Sustainable Financing of Natural Resource Management reviewed financing options available to developing countries to pay for sustainable natural resource management projects and programs.

Each participant brought to the table different but complementary concerns. Danida was interested in producing a short guide for its own staff and for developing-country practitioners that would present as many financing options as possible, and highlight valuable experiences among Danida's focus countries. WWF was interested in exploring how financing for sustainable natural resource management (SNRM) has evolved and what these changes would entail with regard to the conservation movement and rural communities in the developing countries where WWF is present.[1] IIED was interested in disseminating the findings of several of its recent reviews of experiences with payments for environmental services and private business-community partnerships. Concerns among members of Danida's Working Group on Sustainable Financing ranged from how the local or national context may condition the choice of financing options, to the potential of new financing options, to highlighting the Danish experience in financing SNRM projects in developing countries.

The present report, and the accompanying electronic and training materials are the product of this endeavor, and provide:

- A user-friendly entry point to 52 financing Options for SNRM, together with clear indications of where to go next, either for more in-depth information and analysis, or to contact people from the financing sources themselves.
- A brief discussion and description that highlights which financing options might be more accessible to poor rural communities, or offer more opportunities for projects and programs to simultaneously address rural livelihood improvements and natural resources conservation.
- A summary of ongoing experiences and discussions regarding financing SNRM through payments for environmental services (PES) and private business-community partnerships, which have recently attracted much attention but whose potentials and limitations are still a matter of debate.
- A collection of recent SNRM financing cases and experiences, particularly, but not limited to cases in Danida's focus countries and countries where WWF is working.
- Web addresses to access many of the institutions and references mentioned in the survey, and a forthcoming powerpoint presentation (in the training material) that can be used as a self-tutorial or as an aid for a half-day training session.

This report is a composite of many contributions. Maryanne Grieg-Gran and Camille Bann from IIED are the authors of chapters 2 and 3 and also contributed several case studies to chapter 6. Other case studies were prepared by Lars Christensen, Søren Hastrup, and Karsten Raae, all of whom are members of Danida's Working Group on Sustainable Financing. Still other case studies came from Tom Blomley (CARE International), Therese Brinkate (WWF South Africa), Andreas Jensen (Danida), and Chado Tenzin (WWF

1. In recent years Danida's focus countries have included Bangladesh, Benin, Bhutan, Bolivia, Burkina Faso, Egypt, Ghana, Kenya, Mozambique, Nepal, Nicaragua, Tanzania, Uganda, Vietnam, and Zambia. Additionally, the following countries are also recipients of Danish environmental assistance: Botswana Cambodia, Ecuador, Laos, Lesotho, Malaysia, Namibia, South Africa, Swaziland, Thailand and Peru. WWF supports conservation and sustainable natural resource management in over 70 developing countries.

Bhutan). Pablo Gutman (from WWF-MPO) wrote the remaining chapters and edited this report and the related electronic materials.

Three meetings with Danida's Working Group on Sustainable Financing provided the venue for lively discussions and many suggestions. Several of the contributors mentioned above attended these meetings, as well as Anders Billeschou, Hanne Grolin, Michael Lindall, Michael Pearson, Christian Prip, Poul Buch-Hansen, John Carlsen, Thorikil Casse, Knud Elverskov, Martin Enghoff, Sven Hindkjær, Carsten Kaspersen, John Korenerup-Bang, Jørgen Korning, Ole Mertz, Helle Munk Ravnborg, Niels Palmvang, Karin Schultz, Sten Sverdrup Jensen, and Andrew Wardell. Valuable comments were provided by Lars Eskid Jensen, Herik Lerdof, Karsten Gasseholm, Ole Stubodrup, and Bo Shultz, all of whom are with Danida's overseas programs, and by Nola Chow. The support of WWF-MPO staff in general and of Sarah Janicke in particular is also acknowledged.

Kim Carstensen of WWF-Denmark brokered this whole project and saw it through its launch. Hans Hessel-Andersen and Andreas Jensen from Danida's Environment and Natural Resources program brought Danida's interest and support to the project. As Danida's officer overseeing the project, Andreas became a key partner and an important contributor. The project was directed by Pablo Gutman from WWF-MPO and was made possible by the financial support of Danida and WWF-MPO.

Pablo Gutman
December 2003

WWF/Alain Rudder

Asian forests are important sources of sustainable rattan production.

SUMMARY

by Pablo Gutman

Why focus on long-term financing for sustainable natural resource management?

To many development and conservation practitioners, a discussion of financing issues in natural resource management (NRM) is like putting the cart before the horse: "Where is the focus on poverty?" "What will happen to biodiversity?" "Does it make economic sense?" "What about gender and indigenous people issues?" "Who wants the project, anyhow?" "Has local ownership been considered?" "Have you taken a livelihood approach?" "Or would a human welfare ecology approach be better?" "Corruption and lack of transparency will swallow your proposal!" These and many other concerns are worthwhile issues in rural development and conservation, and the implicit message is, "Why discuss financing issues when more important concerns need to be addressed beforehand?"

It is true that no amount of financing will secure a project's success. Yet the lack of adequate financing will surely doom the best-crafted initiative. This apparent contradiction simply points to the fact that adequate financing—in terms of amount, conditions, and timing—is a necessity but not a sufficient condition for success. In focusing on financing issues this survey assumes that the interested parties have already addressed, or are simultaneously addressing, the many other concerns that make up a viable and potentially successful natural resource management project or program.

Then, even if we agree on the importance of financing for SNRM, why open a discussion about it? First there is the availability issue. Securing financing for SNRM projects is becoming increasingly difficult, as can be seen in the 1990s' worldwide downward trend of investment in rural development and conservation by countries, donors, and development banks. Hence, SNRM practitioners need to be more innovative and systematic in their search for financing options.

Second: the issue of new financing options. In spite of resources for SNRM drying up or perhaps because of it, since the 1990s new approaches to financing for development and sustainable natural resource management have been advocated. They include ecotourism, markets for green products, payments for environmental services, local-scale community-based NRM, environmental funds, international payments for carbon sequestration, the provision of global commons, and many more. At times, the same approach has been touted by some as best practice while dismissed by others as inconsequential.[2] With all of these new financing options there is room for discussion and learning.

Third: despite financing's critical importance, most SNRM projects and programs still give only cursory attention to financing prospects beyond the implementation period. In a review of seven of Danida's SNRM projects we found that five did not go beyond mentioning the amounts that Danida and the country's government would contribute to implement the project. Only two project documents added that the country's government would increase its funding as Danida's support phases out. Only one project document discussed the challenges of securing long-term financing, but did not advance any proposal as to how those challenges could be met. A similar review of 20 WWF-sponsored SNRM project documents fared only marginally better. This disregard for long-term financing issues is limited to neither Danida and WWF nor to NRM projects. In a recent OECD review of 66 development projects only one was found to discuss the project's financing sustainability.[3] There is a clear need to improve awareness of and literacy on sustainable financing issues and options among SNRM practitioners.

2. See, for example, the divergent opinions reported in Pagiola, Bishop, and Landell-Mills (2002); Landell-Mills and Porras (2002); and Spergel (2001).

3. See OECD, 2000, "Donor Support for Institutional Capacity Development in Environment: Lessons Learned." Evaluation and Effectiveness 3. Development Assistance Committee. OECD, Paris.

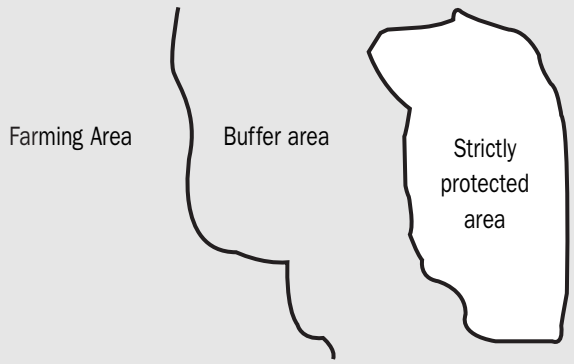
Financing for whom and for what?

The sustainable management of natural resources is an issue in rich and poor countries alike, and among large rural businesses as well as among small farmers—hence interesting experiences of financing arrangements for natural resource management can be found in many places around the world. Since the focus of this survey is on low-income developing countries, however, we limit our discussion of financing options to those that are available to developing countries. Likewise all the cases reviewed are from developing countries.[4] A second focus is on financing options that are best suited to support joint SNRM and poverty alleviation initiatives and are more accessible to the rural poor. These issues are highlighted in the discussion of each financing alternative reviewed.

Sustainable natural resource management (SNRM) can refer to many types of natural resources and management strategies. This survey takes a broad approach, and the financing options discussed address all three classic SNRM situations as depicted in figure 1, namely:

- Strictly protected natural resources, such as national parks and wildlife sanctuaries. In these cases the SNRM focus is on the protection of biodiversity and other important natural features. Improvements in local communities' livelihood should be achieved through natural resource uses such as recreation ecotourism and tourism services, and other activities that do not impinge on the protected areas.
- Partially protected or unprotected natural resources of high biodiversity value (e.g., protected area buffer zones, natural forests, wetlands, coral reefs, coastal areas, and fisheries). Here there is a wider choice of SNRM alternatives that can increase rural communities' livelihood while preserving the area's biodiversity or even increasing it through landscape restoration programs.
- Natural resources of low biodiversity value, encompassing land devoted to farming, ranching, forest plantations, and secondary forests. This is where most human settlements are located and most rural production takes place. In these cases SNRM is focused on offering rural communities productive ways to increase the income they obtain from their natural resources, while maintaining the long-term productivity of land and water, and protecting watershed-related environmental services.

FIGURE 1. THREE TYPICAL SETTINGS FOR SNRM



These three SNRM cases are archetypes and the task of SNRM practitioners can be much more complicated. Nevertheless, the distinction is useful when discussing available financing options as they may differ from one type of SNRM project to the other. These issues are also highlighted in the discussion of each financing option reviewed.

4. Nevertheless, many of the financing options discussed here are relevant both to developing and developed countries.

Potential users and uses of this survey

Throughout the text this survey refers to project or program developers. In all cases these terms are no more than conventional shortcuts to a much larger array of users, all of which can benefit from a better understanding of financing options for SNRM, as follows:[5]

5. Similarly, a large array of initiatives beyond projects and programs (e.g., sector and programmatic initiatives) may be involved; we discuss this in chapter 2.

DIFFERENT USERS	MAY FIND A SURVEY OF FINANCING OPTIONS FOR SNRM USEFUL TO:
Nongovernment project and program developers: • Local communities • National nongovernmental organizations (NGOs) • International NGOs	Identify potential sources of financing for their project and program proposals, and to adjust them to take advantage of funding opportunities.
Staff of developing countries' government and financing institutions: • Sectoral agencies (e.g., rural development, NR agency, etc.) • Economic or financial agencies • Development banks	(a) Identify potential sources of financing for their project and program beyond the agency current budgets. (b) Help review and assess proposals that third parties submit to their agency. (c) Help design the third parties' proposals that they will later review. Because staff of agencies and development banks usually advise their would-be clients, a survey of financing options can be used to improve the project design and identify opportunities to diversify the financing mix of the proposal. d) Make their own case. Many government agencies allocate their investment budget through a competition process in which their departments are required to present fully developed proposals including financing schemes. Here a better understanding of financing options can improve the proposal design and the identification of matching funding sources.
Staff of international agencies, donors and banks: • United Nations agencies (e.g., UNDP, FAO, UNEP, IFAD) • Rich country cooperation agencies (e.g., USAID, Danida, DFID, etc.) • International and regional development banks (e.g., WB, ADB, AFDB, IDB, etc.) • Foundations	(a) Identify potential sources of financing for their project and program beyond the agency's budgets. Although most of these agencies do not fundraise (some are actually forbidden to do so by their bylaws), some do (e.g., many United Nations agencies) and staff of the latter may use a survey such as this to identify potential sources of financing for their projects and programs beyond their agencies' budgets. (b) Help review and assess proposals that third parties submit to their agency. (c) Help design the third-party proposals that they will later review. Because the staff of agencies and development banks usually advise their would-be clients, a survey of financing options can be used to improve the proposal design and identify opportunities to diversify the financing mix of the proposal. d) Make their own case. Many international agencies and donors allocate their own investment budget through a competitive process whereby their own departments or units are required to present fully developed proposals including their financing schemes. Here a better understanding of financing options can improve the proposal design and the identification of matching funding sources.

What is in the survey?

The survey is divided in two sections—the first devoted to discussions and the second to descriptions.

Section 1 has four chapters:

Chapter 1 discusses financing issues in a generic initiative, and the particularities of long-term financing for SNRM. It presents and briefly discusses 52 financing options. Most of them are currently available in most countries (e.g., mobilizing local savings, grants, funds, loans, etc.). Some are still in a developmental stage (e.g., carbon sequestration trade, earmarking national or local taxes for SNRM, or developing systems of payments for environmental services). A few others are still hypothetical (e.g., an international system of payments for the global commons, a Tobin tax on international capital flows, or a global energy tax earmarked for SNRM, etc.). A detailed description of each financing alternative is left to the "description cards" in chapter 5.

Chapter 2 and 3 discuss in more detail experiences with markets for environmental services and private sector–community partnerships for SNRM. The discussion is based in recent work in this field conducted at the International Institute for Environment and Development (IIED).

Chapter 4 discusses recent trends and offers conclusions and recommendations (summarized below).

Section 2 has three chapters:

Chapter 5 presents 15 "description cards" that briefly describe each financial alternative; provide a qualitative score to their performance regarding several concerns (e.g., for which natural resources, for which project scale, for which type of stakeholders and transaction costs, etc.); and offer suggestions on where to go next in order to pursue funding from these sources or simply learn more about them.

Chapter 6 presents 12 case studies that describe financing arrangements for as many SNRM projects in developing countries. By examining the organizational and institutional frameworks of on-the-ground initiatives these case studies provide a context for some of the financing options discussed in the survey.

Chapter 7 offers links to references and resources, most of which are available online. Its first section, "Guides to and resources for financing for SNRM" lists Web sites and manuals designed to help the practitioner looking for sources of financing for SNRM. The second section, "Publications on financing SNRM" lists literature that reviews financing mechanisms and case studies. In both sections each entry is accompanied by a short description of what is found in each resource.

Some survey findings and lessons

After a decrease in financing for NRM in the 1990s, there have recently been some encouraging signs as societies in both developing and developed countries increasingly recognize the value of sustainable management of crops, watersheds, and forests. This process has spurred a wider use of traditional financing approaches such as the mobilization of local communities' own resources and growing markets for green products and services (e.g., organic crops and tourism). It has also spurred new financing options such as environmental funds; debt-for-nature swaps; payments for nontraditional environmental products and services (e.g., certified forest products, carbon sequestration schemes, and payments for other global environmental commons); and new financing arrangements (e.g., private sector–community partnerships, markets for environmental services). Furthermore, the Millennium Development Goals (MDG), which have been at the center of recent international development discussions, may help highlight the links between poverty and the environment in that MDG's list of goals begins with eradicating poverty and ends with ensuring environmental sustainability.

Many challenges remain, however. On top of a tighter financing market that affects all kinds of development initiatives, some development and

conservation views still oppose the very tenet of sustainable natural resource management, that is, the advantage of integrating environmental conservation and rural development. On the rural development and poverty alleviation side, SNRM is at times dismissed as an extra cost with low returns, or a desirable goal but with a low priority compared to other rural poverty alleviation needs such as health, education, infrastructure, water and sanitation, etc.[6] From the conservation side, some have given up on the integrated conservation and development projects (ICDP) concept of the 1970s, arguing that it costs too much and delivers few conservation results. Their solution is that money should be given up-front to whoever is able to provide conservation.

There is a modicum of truth to these arguments. That is, where there are few natural resources and many rural people, much more than SNRM will be needed to reduce rural poverty, although conserving the scarce natural resources available may still be a priority. Also, where there are abundant natural resources and few people, gazetting new protected areas and making them off-limits to the local population may aid in conserving biodiversity, although it may raise ethical and equity concerns. However, these are extreme situations. The general rule is that most rural areas of developing countries are home to both valuable environments and large numbers of rural poor, and in these cases the tenet of SNRM holds—we must integrate environmental conservation and poverty eradication.

Advancing this perspective requires much ingenuity and multitasking on the part of SNRM practitioners. First, it requires designing NRM projects that balance short-term poverty reduction needs with long-term sustainability of natural resources. Second, it requires convincing advocates of one or the other that there are good opportunities to jointly foster both. Last but not least, this perspective requires exploring financing arrangements that have a good chance of being both sustainable and accessible to the rural poor in developing countries. Box 1 suggests some common-sense principles to help in this endeavor.[7]

BOX 1. FIVE COMMON-SENSE PRINCIPLES WHEN CONSIDERING FINANCING FOR SNRM

Financing is important

Never undertake an SNRM project before its short-term financing needs are secured, its long-term financing needs are well understood, and it has good prospects.

Financing is not that important

Never undertake an SNRM project simply because the money is available.

Think short and long term

Everyone knows that you need to care about a project's start-up financing. Very few are clear why long-term financing should be an issue, considering that no one can know for sure what will happen in the future. Actually understanding long-term financing prospects is not about knowing what the future will be but what the future may be, so as to better prepare the project or program to cope with an uncertain future.

Financing is not an add-on or a "one size fits all"

It is an integral part of the project design. To a large degree, financing arrangements are case- and context-specific. The financing mix may affect issues such as ownership, dependency, equity, risk taking and risk sharing, income generation, and more. A mismatch between the project design and the project financing will lead to problems down the road. Mismatches may result from an SNRM project developer's lack of financial understanding, as much as from a financing expert's lack of understanding of the project's goals and context.

Financing SNRM projects requires more thinking than it used to

This is because there is a tendency to need multiple sources of financing, and because new financing options are more complex than traditional ones. Compare, for example, a simple grant-supported project with the complexities of a project entailing payments for environmental products and services, or a private sector–community commercial partnership.

6. A good example is the lack of consideration given to environmental and natural resource–related issues in some of the poverty alleviation literature and plans of the last decade: For example, in the World Bank's 2000/2001 World Development Report, "Attacking Poverty" neither natural resources nor the environment make it to the table of contents.

7. In a complementary approach the participants in Danida's Working Group on Sustainable Financing have put together a list of "Guiding Questions" (available from Ole Meretz [om@serverl.gogr.ku.dk] or Karsten Raae [info@dfextension.dk]).

SECTION 1.
FINANCING ALTERNATIVES: A DISCUSSION

CHAPTER 1. A SURVEY OF FINANCING ALTERNATIVES

by Pablo Gutman

What is the scale of applicability? Projects, programs, sectors, and more

Once upon a time "a project" was the main unit of design and discussion in the development and conservation world. That is no longer the case. Practitioners have scaled up from projects to programs. Governments and funding organizations have gone further, moving up from project funding to program funding, to sector funding, to programmatic funding, and finally to budget support. Although some disagreement regarding terminology exists, for the purposes of this survey:

- **A project** is an integral set of steps to deliver a specific product (e.g., from building a rural school to building a large dam)
- **A program** is a set of related projects and activities that together deliver a broad product or goal (e.g., a countrywide agricultural extension program, a program to create a national system of protected areas, etc.)
- **Sector funding** is the financing of a slice of a sector's programs over a specific period of time (e.g., financing for the budget of the rural agency, or the health agency). The deliverable is often measured in terms of achievement of objectives and milestones
- **Programmatic funding**, in the World Bank jargon, is funding for a program that cuts across sectors (e.g., a program to reduce poverty, which may entail projects related to health, rural production, infrastructure, education, etc.).
- **Budgetary support** (also called institutional support or unrestricted funding) usually refers to the financing of a slice of a government or institution budget over a period of time. The deliverable is often measured in terms of achievements of goals and milestones.

Moving from projects to programs, to sector funding and so on, entails more than a change of scale. For example, as deliverables move from a specific product to broader goals the need for monitoring increases since longer and more ambitious initiatives usually require adjustments and changes down the road. This dovetails well with long-term financing concerns where the needs for monitoring and adaptation are also high.

Among the financing instruments reviewed in this survey are some that can be used to support all of the types of intervention levels described above and others that are better suited to financing only some of them. In most cases we use the terms "project" or "program" to refer in general to the larger list of projects, programs, sector funding, programmatic funding, and budgetary support.

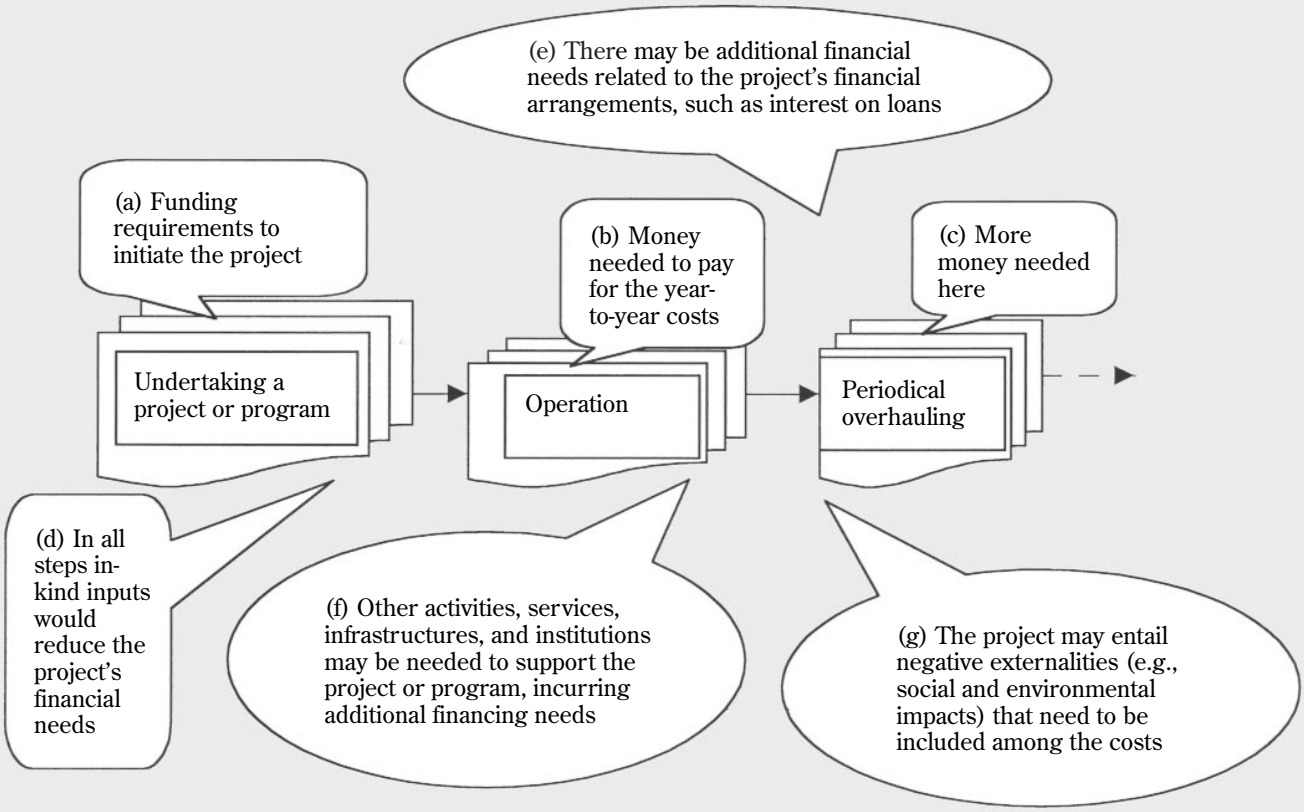
Financial requirements and financing options in general

Financial issues in most projects or programs relate to: (a) assessing the financial requirements of the project, that is, knowing how much and when money will be needed to put the project in place and keep it going; (b) financing, which concerns knowing where and how to get the needed money; and (c) financial planning, which encompasses both (a) and (b).

Figure 2 illustrates the financial requirements at three characteristic stages of most projects or programs: the initial investment requirements, operation costs, and the periodical replacement costs (boxes a, b, and c, respectively). To a good extent a project's financial requirements—the amount of money and the dates when it is needed—are related to the costs of the inputs it requires. But the financial requirements could be smaller or larger than the cost of these inputs. For example, some of the inputs may be supplied in-kind by project participants (e.g., farmer's labor, public lands, technical support from extension agencies, etc.), and would therefore not appear among the financial requirements (box d).[8] Furthermore, some of the financial requirements are not related to the project inputs but to financial

8. Some accounting approaches would assign a monetary value to the in-kind inputs to arrive at a financial grand total, and then subtract them to come up with the financial needs.

FIGURE 2. ASSESSING THE FINANCIAL REQUIREMENTS OF A PROJECT



arrangements themselves, such as the payment of loan interest (box e).

All projects require external support. This is needed for everything from the roads necessary for bringing commodities to the market to extension services that foster new conservation techniques among farmers, to institutions to protect rights and enforce rules (box f). If the project in question makes a small demand on external support activities already in place, the project designers may well take them for granted. On the other hand, if the project entails large demands on existing facilities and services, or if new ones are required, their cost should be included as part of the project's financial requirements.

To the extent that supporting activities provide resources and services to the project for free they represent positive externalities benefiting the project in question; and the project may reciprocate with positive externalities of its own (e.g., increasing the level of education or training of the local community, etc.). On the other hand, some projects may result in negative externalities, such as forced relocation of communities, loss of customary access to natural resources, environmental losses, etc. (box g). These costs should be acknowledged and included in the project's costs and the affected parties should be duly compensated (internalizing the externalities in economic parlance). Once the project's financial requirements are assessed, different financing options can be explored. Financing is about knowing where and how to get the money needed to initiate and support a project. In a nutshell there are only three alternatives, as depicted in figure 3: (a) use the internal money, that is, the money of

the project participants (e.g., the farmers' savings, the participant agencies' regular budgets, and other local stakeholders' money); or (b) pursue external funds such as a loan, a grant from the national or regional government, or any other source external to the project participants; or (c) use the funds the project itself creates, usually by producing and selling goods and services.[9]

Although, at this basic level, financing may seem straightforward, it is actually quite complicated. There is a multitude of different financing options and pursuing one, or a combination of several requires understanding the pros and cons of each, and how they match the project's characteristics and needs.

Financial requirements and financing options in SNRM

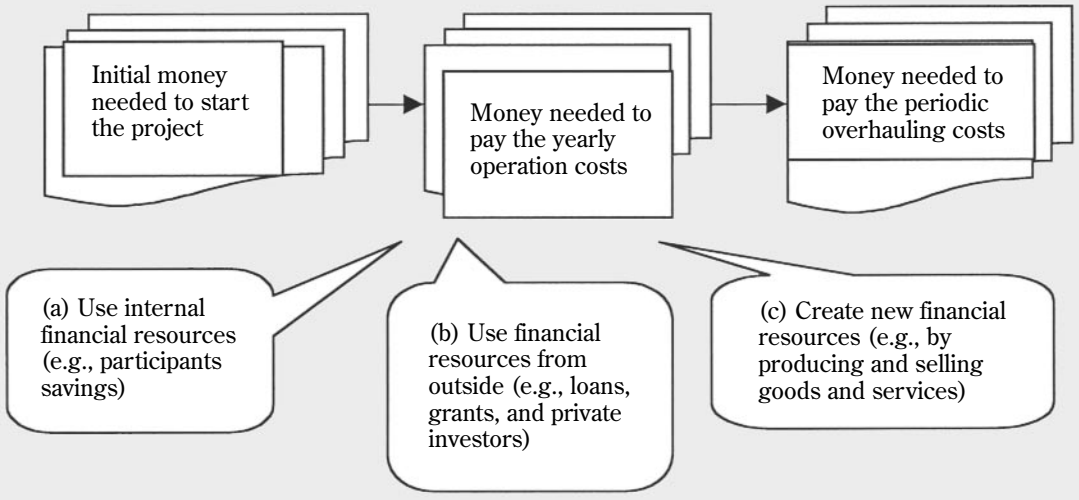
Compared with other types of development projects or business undertakings, SNRM projects and programs feature some specific traits:

- Some benefits may take an exceedingly long term to materialize. Even in cases in which benefits may rapidly appear, such as protecting endangered species from extinction, these benefits only make sense if they are maintained in the long run. Hence, short-term financing may not suit an SNRM project;
- Some natural resources, and their services, such as biodiversity, face imperfect markets or lack markets altogether.[10] As a result, they have no market prices—or the existing prices may grossly undervalue the natural resource in question. This in turn complicates securing financing for SNRM;

9. This alternative will not kick in on time to cover the initial costs; that aspect would still need financing, but in some cases the prospect of future earnings may attract would-be financiers, and if profits are realized they may be used to pay these investors back.

10. In economic jargon imperfect or nonexisting markets are called market failures and may arise from incomplete markets, externalities, nonexclusion, nonrivalry, nonconvexity, and asymmetric information, (Hanley, Shogren, and White, 1997, *Environmental Economics in Theory and Practice*. London: Basingtoke.)

FIGURE 3. FINANCING: THE THREE BASIC OPTIONS



- Some natural resources and their services are partially or wholly public goods.[11] Public goods are available to all in that no one can be prevented from using them (e.g., clean air) so there is very little incentive for an individual to voluntarily pay for them. In these cases there may be little or no monetary benefit for the investor or the would-be financier.

For these and other reasons financing SNRM may have special needs that call for one or the other type of financing. Therefore it is important to keep abreast of the options available and their pros and cons, which are discussed below.

A checklist of 52 financing options

Table 1 presents 52 financing options for SNRM projects or programs, grouped into six categories: (1) public sources, (2) private not-for-profit sources, (3) private for-profit sources, (4) payments for environmental products, (5) payments for environmental services, and (6) "you many need less money than you think." The matrix format helps show that many financing options may be classified under more than one of these six categories.

A list tends to be read as an "either or" menu, which should not be the case here, particularly at a time when "leverage," "partnership," and "matching funds" are popular catch phrases. With few exceptions, financiers prefer not to go into a project alone. Rather, they see their contribution as a way to leverage or mobilize other parties' resources. Hence, almost every SNRM project requires a combination of financing instruments: credits, plus grants, plus public money, plus local savings, and so on.

The majority of financing options discussed in the following chapters is currently available in most countries (e.g., mobilizing local savings, grants, funds, loans, etc.) Some others are still in their early development stage (e.g., trade on carbon sequestration, or developing systems of payments for environmental services). A few others are still conceptual but nonetheless merit discussion (e.g., an international system of payments for the global commons and a global energy tax earmarked for environmental projects). The discussion and description of the financing options in the table proceeds as follows:

- In the rest of this chapter we briefly discuss the six main groups of financing options mentioned above.
- Chapters 2 and 3 present a more detailed discussion of potentials and limitations of payments and markets for environmental services, and private sector–community partnerships.
- In chapter 6, the 52 financing options are presented in 15 description cards (DCs). For each group of related financing options the description card offers a short explanation of their main features, rates their suitability with regard to 11 SNRM concerns, and suggests (a) how to contact the funders, (b) where to go for country examples, and (c) where to go for more information.

"You may need less money than you think"

(Financing options 50, 51, and 52 and description card 6)

In most initiatives, and certainly in SNRM projects and programs, there is room to reduce financing needs, reduce the costs of financing, and increase accessibility to it. This is so much so that some practitioners refer to "zero financing" to describe the opportunities to save public or private resources and free them for investment in new endeavors.

Much has been said about the advantages of cutting subsidies to energy and water consumption or to agricultural inputs and outputs. According to their advocates such measures may result in reduced pressure on the environment

11. Again, in economic jargon a pure public good is one for which consumption is nonrivalrous (one's consumption does not reduce the amount available for another person to consume) and nonexcludable (it is impossible or very difficult to keep trespassers out).

TABLE 1. A CHECKLIST OF FINANCING OPTIONS FOR SUSTAINABLE NATURAL RESOURCE MANAGEMENT

FINANCING ALTERNATIVES	Public sources	Private not-for-profit sources	Private for-profit sources	Payments for environmental products	Payments for environmental services	"You may need less money than you think"
Mostly public sources						
1. Public budget funding of SNRM projects and programs (DC 1)	■					
2. Earmarking for SNRM financing a percentage of one or more general taxes collected at the national, state, or local level (DC 1)	■					
3. Special laws delivering extra-budgetary financial support to particular social groups, geographical areas, or activities (DC 1)	■					
4. Tax breaks or subsidies for SNRM activities (DC 1)	■					
5. Earmarking for SNRM financing a percentage of one or more selective taxes collected at the national, state, or local level. (e.g., taxes on alcohol, tobacco, energy, airports, ports, cruise ships, hotel and resorts charges, and others) (DC 2)	■					
6. Earmarking for SNRM financing a percentage of one or more charges, fees, fines, and penalties related to the use (or abuse) of the natural resource (e.g., water charges, groundwater charges, stumpage fees, and other natural resource extraction fees; hunting fees and entrance and user fees in protected areas; charges on emissions and feedstock, release or dumping of fertilizers and pesticides; charges related to solid waste, toxic waste, and environmental fines and penalties; etc.) (DC 2)	■			■	■	
7. National, state, and local development banks' loans (DC 3)	■					
8. Debt-for-nature swaps (DC 4)	■	■				
9. Environmental funds (endowment, sinking, and revolving) (DC 4)	■	■				
10. Multilateral aid and aid from development agencies (DC 5)	■					
11. International development banks' loans (DC 3)	■					
12. Bilateral aid and development agencies (DC 5)	■					

Note: "DC" indicates the description card in chapter 5 where the financing alternative is described in greater detail.

and natural resources, save public money, and free resources to invest elsewhere, such as in SNRM projects and programs. For example, some recent estimates of energy subsidies in developing countries are as high as 160 billion dollars per year. But these subsidies are concentrated in a handful of large (e.g., Russia, China, India, Indonesia) or energy-rich (e.g., Saudi Arabia, Iran) countries (see Pagiola et al. 2002). This large figure, however, is dwarfed by the size of agricultural subsidies in the European Union, Japan, and the United States. These agricultural subsidies may harm the countries' own natural resources, and surely harm markets and incomes of developing countries' farmers.

TABLE 1. A CHECKLIST OF FINANCING OPTIONS FOR SUSTAINABLE NATURAL RESOURCE MANAGEMENT (cont'd.)

FINANCING ALTERNATIVES	Public sources	Private not-for-profit sources	Private for-profit sources	Payments for environmental products	Payments for environmental services	"You may need less money than you think"
Mostly private not-for-profit sources						
13. Community self-support groups and other forms of social capital (DC 7)		■	■			
14. Secular and faith-based charities (DC 7)		■				
15. Special fundraising campaigns (e.g., "Save the pandas," "Friends of the national park," etc.) (DC 8)		■				
16. Merchandising and good cause marketing (DC 8)		■				
17. Lotteries (DC 8)		■				
18. Social and environmental NGOs (DC 9)		■				
19. Foundations (DC 9)		■				
Mostly private for-profit sources						
20. Household saving and labor assets (DC 10)			■			
21. Community-based enterprises—formal (co-ops) and informal (DC 10)			■			
22. Micro-saving, micro-credit, and micro-insurance (DC 10)			■			
23. Semiformal and informal micro-finance institutions(DC 10)			■			
24. Private investment by local businesses (DC 10)			■			
25. Commercial bank loans (DC 3)			■			
26. Direct investment by nonlocal investors (DC 11)			■			
27. Private-public partnerships (DC 11)	■	■	■			
28 Private sector–community partnerships (DC 11)		■	■			
29. Compensatory environmental investment of large developments (DC 11)			■			
30. Venture capital (DC 11)			■			
31. Portfolio investors (green funds) (DC 11)			■			

Note: "DC" indicates the description card in chapter 5 where the financing alternative is described in greater detail.

Changes in public regulations may also free private resources or encourage would-be investors. For example, there is a large body of evidence supporting the fact that clarifying and securing participants' rights to natural resources will increase their willingness to invest their own time and savings in the resources' sustainable management, hence, reducing the needs for external financing.

TABLE 1. A CHECKLIST OF FINANCING OPTIONS FOR SUSTAINABLE NATURAL RESOURCE MANAGEMENT (cont'd.)

FINANCING ALTERNATIVES	Public sources	Private not-for-profit sources	Private for-profit sources	Payments for environmental products	Payments for environmental services	"You may need less money than you think"
Mostly payments for environmental products						
32. Markets for organic agricultural products (DC 12)				■	■	
33. Markets for sustainably harvested non-timber forest products (DC 12)				■	■	
34. Markets for certified forest products (DC 12)				■	■	
35. Markets for certified fishery products (DC 12)				■	■	
36. Resource extraction charges directly collected by the SNRM project (DC 14)				■	■	
37. Allocating part of national, state, or local extraction fees to SNRM projects in the extraction areas (DC 14)	■				■	
Mostly payments for environmental services						
38. Markets for biodiversity conservation and bioprospecting (DC 13)		■		■		■
39. Markets for carbon offsets (DC 13)				■		■
40. Markets for watershed protection (DC 13)				■		■
41. Markets for landscape beauty, including ecotourism and tourism (DC 13)		■		■		■
42. Markets for development rights and conservation easements (DC 13)		■		■		■
43. Quasi-markets and non-market systems of payments for environmental services (DC 13)	■			■		■
44. Users fees and entry fees directly collected by the SNRM project (DC 14)				■		■
45. Allocating part of national, state, or local user fees to SNRM projects in the area providing the environmental services (DC 14)	■					■
46. Global Environmental Facility (GEF) payments for the global commons (DC 15)	■					■
47. Funds for SNRM associated with international treaties (DC 15)	■					■
48. Other possible systems of international payments for global commons (DC 15)	■					■
49. Earmarking for SNRM part of one or more international taxes (DC 15)	■					■

Note: "DC" indicates the description card in chapter 5 where the financing alternative is described in greater detail.

While eliminating developing and developed countries' harmful subsides may be beyond the scope of most NRM initiatives, there are other opportunities, at the program or project level, to reduce cost and increase access to financial resources. Several of them are presented in description card 6 (e.g., pooling, insurance, guarantees, leverage, charettes, financial training). The main lesson here is that it pays to go over the initial financing assessment, think creatively, and

TABLE 1. A CHECKLIST OF FINANCING OPTIONS FOR SUSTAINABLE NATURAL RESOURCE MANAGEMENT (cont'd.)

FINANCING ALTERNATIVES	Public sources	Private not-for-profit sources	Private for-profit sources	Payments for environmental products	Payments for environmental services	"You may need less money than you think"
Mostly reducing the need for additional financing						
50. Freeing up existing public resources (e.g., redirecting money from harmful public subsidies to SNRM projects) (DC 6)	■					■
51. Encouraging the mobilization of private resources (e.g., securing tenure, promotion, regulation streamlining) (DC 6)	■	■	■	■	■	■
52. Mechanisms to increase the accessibility to and reduce the need for and cost of financing (pooling, insurance, guarantees, leverage, charrettes, financial literacy training) (DC 6)	■	■	■	■	■	■

Note: "DC" indicates the description card in chapter 5 where the financing alternative is described in greater detail.

ask for advice—because it is probable that you may need less money than you think.

Financing from public budget, taxes, and revenues

(Financing options 1–6 and description cards 1 and 2)

Public money is the largest source of financing for SNRM throughout the world, and probably will remain so for a long time. There are many arrangements by which SNRM initiatives may receive public funding, and we go over six of them in description cards 1 and 2. They range from annual budgetary allocations, to SNRM financing through earmarking a portion of general or specific taxes, to special laws and funds, and to financing SNRM through earmarking a portion of the fees, fines, and penalties related to the use (or abuse) of natural resources.

The latter—financing SNRM from fees, fines, and penalties related to the use (or abuse) of natural resources—is particularly attractive in that a clear cause-effect relation can be advocated in support of it. However, it may not be free of problems if it negatively impacts the rural and urban poor whose livelihood in many cases depends on free or low-cost access to natural resources.

There is a trend in some quarters to label "financially unsustainable" any project or program that depends on the public budget rather than market-based financing, the latter touted as more sustainable or truly sustainable. This is simply not true. Depending solely on public money may not be wise and surely is not sufficient to pay for SNRM requirements in most countries. But markets fluctuate widely and businesses come and go much faster than public budgets.[12]

Also in many SNRM initiatives public sector participation is not sought after solely as a potential funder, but also as a potential provider of legal and institutional support and as an enabler and facilitator. Some amount of public funding was part of half the cases discussed in chapter 6, and in all of them the public sector played an important supporting role.

12. For example, in the United States, 8 out of 10 start-up businesses close up shop by their fifth year.

Banks and loans

(Financing options 7, 11, and 25 description card 3)

Development banks, both national and international, are an important source of SNRM financing owing to their special focus on development lending, long-term loans, and lower interest rates. In middle-income and large developing countries, national, state, and local development banks are the major source of developing lending, while international development banks' lending is more important for low-income developing countries. Besides their direct financing role, international development banks, particularly the larger ones (e.g., the World Bank and the four regional development banks) are important sources of technical advice, fund leverage capability, and policy development, making them—for better or for worse—major reference points for rural development and conservation.

In contrast to development banks, commercial banks thus far have played a limited role financing SNRM projects in developing countries. Both banks and would-be borrowers have been wary that high risks and long maturing periods of SNRM projects may make them unfit for commercial bank loans. Yet there are examples in which commercial banks have participated in financing SNRM projects as intermediaries to disburse public moneys and also as co-lenders or lenders where collateral, government warranty schemes, and pooling money from several sources reduces the risks both for lenders and borrowers. An interesting developing-country experience with commercial-bank lending for SNRM is Brazil's "Green Protocol," a description of which may be found in Bayon (2002). Looking ahead, some new financing arrangements such as private sector–community partnerships (discussed in chapter 3) may open new opportunities to commercial banks' financing of SNRM.

Multilateral and bilateral donors

(Financing options 10 and 12 and description card 5)

Most multilateral aid and development agencies are part of the United Nations (UN) family. The United Nations Development Programme (UNDP) is the UN's overall development agency, and the UN also has several agencies with a specific focus on natural resources. Among them are the Food and Agriculture Organization (FAO), the International Fund for Agricultural Development (IFAD), and the United Nations Environment Programme (UNEP). IFAD has resources to grant funds but that is not the case with UNDP, FAO, and UNEP, which are usually low on funds. The UNDP also manages other donors' grants and programs. Similarly to international development banks, UN agencies are important sources of technical advice, and they may help leverage third-party financing resources.

In addition to funding multilateral agencies, rich countries channel much of their international aid and development grants on a bilateral, country-by-country basis, and through their own development agency, which in most cases is part of the foreign affairs ministry. Bilateral aid is a significant source of resources in less developed and small countries where it may represent a substantial percentage of the public investment capacity and of the funds available to NGOs and other civil society organizations. There is a sort of division of labor among donors with some focusing on a particular group of countries, or a particular group of activities to be supported. There are also various strings attached to bilateral aid that may make it more or less attractive for a particular SNRM project.

Five of the cases discussed in chapter 6 were recipients of Danida's grants and two other cases were recipients of bilateral aid from the United States and the Netherlands.

Private not-for-profit sources

(Financing options 8, 9, and 13–19 and description cards 4, 7, 8, and 9)

Private not-for-profit financing for SNRM includes an array of financing options and arrangements from local communities to international foundations and NGOs. It ranges from small in-kind contributions to substantial investments. Our checklist includes eight of these financing options, which are reviewed in four description cards in chapter 6.

International NGOs have played an important role in the development of two relatively new financing options: environmental funds and debt-for-nature swaps. National and international foundations are an important source of grants for small and medium-size projects. Secular and faith-based charities are often able to reach the more destitute people and places. They can all be important brokers to engage other funding sources as well.

Even in cases in which the financing contribution of not-for-profit sources is small their participation, particularly the participation of locally based institutions, may be crucial to increase local buying-in and ownership of the SNRM initiative. Private non-for-profit sources helped finance five of the cases presented in chapter 6.

Private for-profit sources

(Financing options 20–31 and description cards 10 and 11)

Private for-profit financing also encompasses very different stakeholders and scales. It ranges from local peasants and communities investing their savings and labor, to small and medium-size local businesses, to large businesses and international corporations.

At the local level, almost all SNRM projects will require the investment of participating households' savings or labor. Oddly, most development projects and programs assume local investment but seldom acknowledge and quantify it in the project design. Two of the cases reviewed in chapter 6 do so. Beyond the financing requirements, mobilizing participant resources is crucial to the local ownership of the SNRM project. Experience shows that in order to motivate rural households to invest in SNRM, projects need to offer good prospects of short-term benefits within the levels of risk acceptable to the participants. New activities generated by the SNRM project may also spur investment by local businesses, ranging from local investments in lodging for tourists to the roadside sale of handicrafts.

At the large-scale end, there are many reasons to try to attract extra-local private investors to the financing of SNRM projects in the poor rural areas of developing countries: they may contribute resources far larger than those available locally; they may bring much needed technical and commercial knowledge; they can bridge local SNRM projects with countrywide or worldwide markets, and so on. There are also legitimate concerns regarding large extra-local investors. In particular practitioners need to be concerned about the distribution of costs and benefits among the would-be partners and also the risk of natural resource overexploitation in order to meet the benefit expectations of both the private businesses and the local communities.

Private business financing of SNRM projects in rural areas of developing countries may include direct investments that take up one or more components of the SNRM project (e.g., the hospitality component of an ecotourism project), private-public partnerships (e.g., developing publicly owned natural resources), or private sector–community partnerships (e.g., a forestry or wildlife management project). Recent experiences with the latter are discussed in detail in chapter 3 and are illustrated by two cases in chapter 6.

A different, more grant-type financing arises when large private developments—such as dams, oil and mining companies—pay for environmental or social projects as compensation for the environ-

mental or social disruption they may cause. Yet another source is private business financing of environmental initiatives as part of its public relation campaign, or its business ethics, as in the case of the South Africa Green Fund, described in chapter 6.

Payments for environmental products

(Financing options 32–37 and description cards 12 and 14)

Financing SNRM projects with the sale of green products is undoubtedly attractive in that it would match SNRM efforts with markets willing to pay for them. Many examples of successes and failures are available, feeding a lively polemic as to the potentials and limitations of green products to foster environmental conservation and improve rural livelihoods. There has also been a learning curve as SNRM practitioners realize the importance of understanding or even creating the markets and overcoming the institutional and commercial barriers that may hinder participation of the rural poor in markets for environmental products and services.

The Forest Stewardship Council's (FSC) effort to develop a market for sustainably produced wood and wood products is an exciting example. In the few years since its inception, the FSC has been remarkably successful in enlisting large wood producers and users in developed countries. FSC penetration in developing countries and among small forest owners is still very limited but growing. More recently, the FSC experience has fostered a similar initiative, this one regarding sustainable fisheries.

One drawback of market-based financing that SNRM project developers should be aware of is that money will come late in the project cycle, when the goods have been produced and sold. Thus, the need to secure financing for the start-up costs remains. A project with a very good market prospect may be able to leverage financing for start-up costs, but few SNRM projects are willing to repay initial costs out of market sales, instead they will usually reserve the market incomes to pay for operation costs and to increase the participants' income.

Payments for environmental services

(Financing options 38–45 and description cards 13 and 14)

Many SNRM schemes are not economically viable because a substantial part of what they would deliver are environmental services that are not paid for, be they at local scale (e.g., soils and water protection); national scale (e.g., watershed protection, biodiversity, landscapes); or international scale (e.g., biodiversity, carbon sequestration). Should these services be accounted for and paid for, SNRM would be much more attractive and rewarding to those that bear the cost of it, particularly the rural poor. That is the rationale behind the many existing schemes of payments for environmental services (PES).

Markets for environmental services (MES) are one type of PES, characterized by their free-wheeling transactions between would-be sellers and would-be buyers of environmental services. That is not to say that governments' rules and third-party facilitation do not play an important role in establishing and developing MES, considering that no industry would be interested in buying carbon sequestration rights were it not for the international treaties and national regulations that force them to reduce their carbon emissions. Some PES schemes could be labeled as quasi-markets in that they combine non-market systems on the demand side and market approaches on the supply side (e.g., Costa Rica's and Colombia's systems of PES). Still other PES rely almost entirely on regulatory schemes both on the demand and on the supply side (e.g., Brazil's ICMS Ecológico). PES and particularly MES are further discussed in chapter 2, and chapter 6 describes several MES and PES experiences.

Recently, some MES have raised the expectations of practitioners and, in some cases, been touted as the new solution to SNRM financing. The

outcome thus far and the estimated prospects suggest a more cautious attitude—namely, to consider markets for environmental services as one among many systems of payments for environmental services, each one with pros and cons that makes it more or less suitable to a particular SNRM project or program.

Similarly to payments for environmental products, in PES schemes the money is received only when the service has been provided—and this may take time. Thus, the need to secure financing for the start-up costs remains. Very good PES prospects may help attract financing for start-up costs, however to this day few start-up costs have been repaid out of PES incomes. Typically PES projects have benefited from other sources of initial support and have used the PES to pay for operational costs and to increase participants' income.

International systems of payments for the environmental commons

(Financing options 46–49 and description card 15)

From a worldwide perspective the atmosphere, the oceans, biodiversity, and the tropical forests are all global commons, environmental components of the world's global public goods. The latter, according to a UNDP definition (Faust et al. 2001) are public goods whose benefits are strongly universal in terms of countries, people, and generations.

As mentioned before, the adequate provision of public goods is always difficult to achieve, and at a national scale it usually requires government interventions to force the beneficiaries to pay the suppliers (e.g., through regulations, taxes, the creation of special markets, etc.). Securing the provision of global public goods on the international scale is even more difficult since there is no world authority to regulate, tax, or create markets worldwide.

Yet there has been progress in acknowledging and paying for the global commons, mostly, but not exclusively, through international treaties. The best known case is the Global Environmental Facility (GEF). Created in 1991 and funded mostly by voluntary contributions from rich countries GEF mandate is to support developing countries' provision of global commons.[13] International treaties have also created mechanisms for the financing of global commons that do not entail international agencies such as GEF. For example, private trade in bioprospecting and on carbon sequestration is the result of international regulations on biodiversity property rights (Convention on Biological Diversity) and the control of climate change (Convention on Climate Change).

Beyond the limited resources currently available for financing the provision of the global commons, there is an ongoing international discussion that began in the early 1990s regarding what more should or could be done. Proposals to raise money to pay for the provision of global commons include international environment-related taxes and charges, such as an international carbon tax, an international charge on the use of the ocean, an international air transport tax, or an up-front international income tax. Also proposals have been made to earmark part of non-environment-related international taxes, of which the most debated thus far is the Tobin tax (a tax on international currency transactions, proposed by the economist and Nobel laureate James Tobin). Although all of these alternatives may look farfetched their discussion recently reached the preparatory meetings of the 2002 UN Conference on Financing for Development—but facing strong opposition from OECD countries, they were excised from the final Conference document.

13. The GEF is also the permanent or temporary financing mechanism for the international agreements on biodiversity, climate change, protection of the ozone layer, and persistent organic pollutants.

CHAPTER 2. A CLOSER LOOK AT PAYMENTS AND MARKETS FOR ENVIRONMENTAL SERVICES

by Maryanne Grieg-Gran and Camille Bann / IIED[14]

The basic principle of payments for environmental services (PES) is that those who provide environmental services should be compensated for the cost of doing so, whether these are direct costs of specific land use practices or more indirect opportunity costs of avoiding certain activities or types of land use. Payments may be monetary or in-kind, may involve private sector or government financing, and can be made at local, national, and global levels. There are numerous examples of PES in practice. Lower watershed users may pay upper watershed communities for land management. Governments may give tax breaks to people setting aside land for conservation. And companies may pay in other countries for activities that provide global environmental benefits such as carbon sequestration or biodiversity conservation.[15]

There are a number of different approaches to PES, some of which are transactions between private companies or individuals while others have more government involvement. While the term markets for environmental service (MES) is applied by some—for example, Landell-Mills and Porras (2002)—to all of these approaches, others—for example Pagiola et al. (2002)—prefer to restrict the use of this term to schemes with the following key characteristics:

- Buyers and sellers come together on a voluntary basis; and
- Prices are set through the interaction of supply and demand.

Some schemes may have various characteristics of markets in that they allow suppliers of environmental services to respond to financial incentives and decide how much of the service they want to supply in response to the payment offered. But in some schemes the transaction from the buyer side may not be voluntary. That is the case, for instance, when a municipality increases the price of water supply to users in order to pay landowners to conserve forests. The payment may also be administratively determined, as when a government agency sets the price. These types of initiatives can be considered partially market-based but not markets in a strict sense and are therefore often referred to as PES.

The distinction between PES and MES can be rather blurred particularly where markets are imperfectly competitive, involving only one or a few players on either the buying or supplying side, or where governments are involved as the seller or buyer of environmental services.

There is also a certain degree of overlap between the term PES and the term private sector–community partnership. Not all such partnerships relate to the financing of natural resource management, but when they do they can often be considered a type of payment for environmental products or services. This is because they often involve a community providing access to land or wildlife or refraining from activities that detract from conservation or landscape beauty in exchange for a variety of inputs from the private sector, both financial and nonfinancial. Direct negotiation is the most common approach for developing such partnerships and much of the research on them has focused on how to improve this aspect, rather than the broader market issues (partnership approaches are discussed in chapter 3).

14. This chapter draws heavily on IIED's recent research in the same subject, particularly by Landell-Mills and Porras (2002) and papers from Pagiola, et al (2002).

15. There is some overlap between markets for environmental products (MEP) and MES; for example, buyers of organic coffee may be paying either for the quality of the product or for the service of protecting the forest where the coffee was produced (or for both).

In this chapter we examine the experience with different types of PES with a particular focus on market initiatives. Except where otherwise stated, the discussion is largely based on Landell-Mills and Porras (2002).

Overview of the main types of environmental services

The four main types of environmental services that have been addressed by PES and MES are discussed below.[16]

Carbon sequestration

Forests sequester and store carbon and thereby play an important role in regulating global climate. There are two main approaches to increasing the amount of carbon sequestered by forests—the planting of new trees (afforestation, reforestation, and agroforestry), and the avoidance of emissions by retaining trees (through actions such as conservation or improved management practices that prevent or reduce deforestation, forest fires, and conversion of forest to other land uses).

The signing of the Kyoto protocol in 1997 (as part of the United Nations' Convention on Climate Change) set the stage for the emergence of a market for carbon offsets, including those based on forest sequestration and storage. The carbon offset market has been evolving quickly. Not only are national governments passing laws to ensure emission targets are met, but greenhouse gas emitters, brokers, consultants, NGOs, communities, and potential suppliers are responding directly to international policy processes. However, the process has not been smooth and many of the initiatives can still be characterized as experimental, aimed at gaining experience and improving public image of the companies concerned. Nor is there a single unified trading platform. Rather, transactions have occurred at a number of levels (i.e., local, national, regional, and international), through a variety of payment mechanisms (from bilateral to exchange based), and with varying degrees of government participation. Trading of forest-based offsets has been hampered by the uncertainties over the rules at the international level. Although some clarification was attained at the Conference of the Parties in Marrakesh in November 2001, there are still many challenging issues, such as determination of baselines and additionality, that constrain the development of payment and market systems. Transaction costs are also very high.

The most sophisticated systems are being set up in industrialized countries as a result of concerted government efforts to introduce emission caps and establish clear rules and regulations to guide market development. For example, the United Kingdom and Denmark have their own trading system. In these countries, ad hoc transactions aimed at gaining experience and generating favorable publicity are being replaced with more systematic trading of a defined carbon commodity (typically one ton of carbon dioxide equivalent), aimed at minimizing the costs of compliance with the Kyoto Protocol targets.

Developing countries' participation in the emerging international carbon sequestration market is based in the Joint Implementation (JI) and the Clean Development Mechanism (CDM) of the Kyoto Protocol. Thus far these market initiatives have been primarily generated through complex and individually negotiated projects. Investment in the development of an international market architecture remains limited. The ratification of the Kyoto Protocol and the inclusion of more favorable conditions for forestry, would be a great impetus to the international market for forest-based carbon offsets.

16. Landall-Mills and Porras review 75 examples of payments for forest-based carbon offsets, 61 examples related to the establishment of markets for watershed services, 51 cases related to landscape beauty, and 72 emerging payment schemes for biodiversity

To give one example of North-South carbon sequestration trade, by September 1999, Climate Care had offset 4,335 metric tons of carbon through two investments in Uganda. The most important investment is in a FACE Foundation project on Mount Elgon.

In an effort to become market leaders, an increasing number of organizations (businesses, public agencies, and NGOs) are setting up international brokerage services, investments funds, clearinghouse markets and even exchanges. Insurance companies, consultants, and certification suppliers have been quick to offer potential buyers and sellers services to support international trade. A number of these ventures cater to forest-based offsets initiatives.

Watershed protection

While forest watershed services vary from site to site, forests are credited with protecting water quality, regulating water flows, preventing floods, controlling soil salinization, and maintaining aquatic habitats. Whereas historically the protection of watersheds was the responsibility of governments, the role of private companies, individual landowners, NGOs, and communities in delivering and financing watershed services is growing.

Watershed services generally benefit downstream activities and are characterized by threshold effects. Owing to these features, market development depends on strengthening cooperative and hierarchical arrangements to allow the beneficiaries demanding the service and the providers of the service to come together to formulate group payment strategies and to tackle free-riding. At the same time, where cooperative or hierarchical arrangements exist, and are under strain from inequitable benefit sharing and high costs, markets are being introduced to ease tensions and facilitate financial and in-kind transfers. The emergence of markets for watershed services has not been associated with significant competition in supply or demand.

A range of watershed service commodities has developed, depending on the type of service demanded. Those interested in maintaining water quality purchase this service, in some schemes, through best management practice contracts with watershed landholders, and in others, through water quality credits. Water table regulation is being commoditized in a number of ways including salinity credits, transpiration credits, and stream flow reduction licenses. What landholders have to do to provide these commoditized services varies according to the scheme and the service but may involve refraining from certain types of activity such as pesticide use, maintaining natural forests or vegetation, or carrying out specific activities such as tree planting.

Given the large number of stakeholders involved in watershed protection, payments need to be channeled through intermediaries, allowing buyers and sellers to contract out the negotiations and conclusions of deals, overseeing implementation and enforcing contracts. Intermediaries are also valuable mechanisms for pooling funds from a group of beneficiaries and/or collecting user fees. In more advanced countries, over-the-counter trading using prepackaged commodities is being promoted, in some cases alongside clearinghouse systems.

Until recently, because of the difficulties of excluding non-payers, suppliers of watershed services have generally lacked leverage for demanding payment. In more developed countries, new government regulations for improved water quality have been the major force behind payments for watershed protection. Also, improved understanding of the benefits provided by watersheds and the growing threats that they are facing have increased beneficiaries' willingness to pay for watershed conservation. As commodities and payment mechanisms become increasingly sophisticated, supply-driven markets are no longer improbable.

It is not clear whether markets provide a preferable mechanism for delivering watershed services compared to regulatory systems that have already been tried and tested. For the most part, studies offer superficial reviews of economic, social, and environmental benefits with virtually no assessment of costs. Moreover, scientific uncertainty remains regarding the forest-hydrology link, which may undermine market development.

Environmentalists and conservation-minded local authorities are proposing payments to landowners to protect the forest cover and therefore maintain or improve a watershed's hydrological integrity. For example, Malawi's national electricity supplier has been paying local NGOs since 1994 to protect watersheds surrounding key hydroelectricity plants to ensure protection against sedimentation.

Another example of payments for watershed protection regards tree planting in salinity-prone areas as a way to drive the water table down, thereby reducing the risk of soil salinization. Salinity credits are being developed in Australia as part of a regulatory scheme aimed at reducing soil salinity. Salinity limits are imposed to point source polluters, who can only exceed the limits when they offset soil salinity with salinity credits. Land users who invest in activities that reduce soil and water salinity, e.g., tree planting, are issued salinity credits that they can sell to polluters.

© WWF-Canon / Michel GUNTHER

Landscape beauty

Landscape beauty has a market that is the most recognizable of the four environmental services considered here, but one that remains relatively immature. Generally, there is little effort to set prices for access to landscape beauty according to demand and supply conditions, payment mechanisms are unsophisticated, and there is little participation by private and community landholders. As long as tour agencies resist paying for landscape beauty, land stewards' opportunities for being rewarded for the service they provide rests in establishing themselves as tourist enterprises. Yet, without the skills to administer and manage complex international businesses, this route is fraught with difficulties—particularly for poor people. Some agencies and communities believe that ecotourism must ultimately involve a joint effort and the pooling of skills and resources. Whatever the model for landscape beauty to be protected into the future, it is clear that providers must receive fair compensation for their inputs.

The provision of landscape beauty represents a key attribute in the market for ecotourism. However, payment systems for this service have been slow to develop. Tour operators have often considered landscape beauty as a free input, while on the supply side, entrance fees for government-controlled protected areas have rarely reflected consumers' willingness to pay for even the costs of management. This has made it hard for private or community-owned areas of natural beauty to compete with government-controlled areas.

In this framework market evolution is not a simple process. The introduction of payment mechanisms where none existed before involves the creation of new institutional arrangements and the involvement of new stakeholders. As tour operators begin to establish themselves as paying customers, communities and private landowners

Qi Li Hai Nature Reserve. Coastal swamps surrounded by maize fields. Professional fishing is allowed in these freshwater swamps. Yellow Sea, North of Tianjin, Tianjin Province, China

are seeking to compete with publicly owned protected areas. At the same time, intermediary organizations are responding to the demand for support in seeking, negotiating, and implementing deals.

For the most part, payments are based on site-specific negotiations or reformed entrance fees; little progress has been made in developing sophisticated payment mechanisms such as auctions or clearinghouse mechanisms. More recently, the establishment of community-based ecotourism operators and joint ventures has allowed land stewards to tap tourists' demand directly. Creative marketing by community groups, often with the support of international NGOs and donors, has begun to create a niche market for community-based nature tourism. Rather than selling access to landscape beauty via tour operators, communities are setting up their own businesses. Examples of such ventures are found in Belize, Costa Rica, Fiji, Guatemala, Indonesia, Kenya, Mexico, Nepal, Thailand, and Uganda. Tour operators that see a future in community-based ecotourism are seeking to form joint ventures with land stewards. This is the case in Ecuador and Peru. Gradually, the market for landscape beauty is evolving from one dominated by government provisions and characterized by below-cost pricing, to a more competitive situation involving a wide range of suppliers, the development of niche products, and increased consumer choice. However, as with mainstream tourism, this market is subject to fluctuations in demand, with preferences of ecotourists often being more influenced by security considerations than by the physical attributes of a destination.

In an example of payments for landscape values, the Government of Rwanda was quick to recognize its monopolistic position as home to Africa's last remaining mountain gorillas and the potential for charging higher tourism fees. In the 1980s it introduced charges of US$250 per tourist for entrance into its Parc National des Volcans.

Ecuador provides a different example of payments for landscape beauty. In 1995, one of Ecuador's first joint ecotourism ventures was established between the Cofan people and the Transturi Tourist Company in the Cuyabeno Wildlife Reserve. The venture, "Aguarico Trekking," promised to reward the Cofans for their careful maintenance of the area's famous scenic beauty, which draws tourists from around the world.

Ditches dug on both sides of a fence in order to keep rhinos away, so that they do not damage the fence. Village area on the outskirts of Royal Chitwan National Park, Nepal.

Biodiversity conservation

The services provided by biodiversity range from the maintenance of ecosystem functions to option and existence values. However, most of the services are intangible, which makes them difficult to package for sale. They are rarely consumed by a clearly identifiable clientele and there are threshold effects in their supply (e.g., forest areas below a certain size will fail to deliver the demanded biodiversity) making it difficult to portion out the services to individual buyers.

Despite these problems, governments, NGOs, and private companies are paying for forest biodiversity conservation. The growing public awareness of biodiversity benefits and threats of loss are the main drivers. As funds have started to flow toward biodiversity protection, individual community and land stewards have become increasingly proactive sellers of their services.

The growth and diversification in market participation has produced significant innovation in the design of commodities and payment mechanisms. Expensive and complex project-based deals are giving way to intermediary-based transactions (especially trust funds), pooled investment funds, transactions that piggyback on retail sales (e.g., shade coffee), and even over-the-counter sales of standardized products. Each mechanism seeks to reduce market risks, overcome threshold effects, and minimize transaction costs. As risks and costs come down, market participation is likely to continue to rise.

Despite significant progress in recent years, payments for biodiversity services remain nascent for the most part and to a large degree, experimental. Major constraints to market development remain, not least of which are the significant transaction costs associated with the set-up and implementation of trades. Box 2 outlines several recent initiatives of payments for biodiversity services.

BOX 2. EXAMPLES OF PAYMENTS FOR BIODIVERSITY SERVICES

The **Critical Ecosystem Partnership** is a trust fund which pools finance for biodiversity conservation in critical ecosystems around the world. It was launched in February 2001 by Conservation International (CI), the World Bank, and GEF. CI recently launched an initiative to promote biodiversity-friendly cocoa through the combination of cocoa with tree planting (shade cocoa) in the Upper Guinean forest in West Africa. Shade cocoa protects biodiversity by maintaining tree ecosystems on farms and by preventing the conversion of tropical forests to cocoa plantations. Local benefits include weed control, maintenance of soil fertility through the provision of organic matter, soil erosion control, reduced requirements for chemical fertilizer and pesticides, and additional sources of income and sustenance in the form of timber and non-timber forest products (NTFPs). CI is also seeking to tap the organic products market.

The **International Finance Corporation** has been the forerunner of multilateral efforts to develop innovative approaches to biodiversity venture capital and is currently managing two major programs: the Small and Medium- Size Enterprise program and the Terra Capital Fund.

And finally, in 2000, **Earthcall Telecommunications Ltd.** put into practice in the United Kingdom its plan to capture public willingness to pay for biodiversity protection through biodiversity-friendly telephone calls.

Implications of PES and MES for SNRM

PES schemes offer a way of leveraging funds for environmental protection. However, documentation of their impacts in practice is lacking so, to a large extent, their effect on natural resources is yet to be determined.

Pagiola et al. (2002) in a review of 12 case studies of market-based initiatives for forest conservation adopt two basic criteria to examine their effectiveness in promoting conservation: the extent to which they attract participants and influence their behavior, and the extent and nature of the forests that are ultimately conserved. The authors conclude that most of the 12 initiatives have been successful in attracting participants. They stress, however, that the extent to which a specific mechanism provides incentives to forest managers to undertake conservation depends not only on the amount and form of payments but also on the opportunity cost of conservation. The cases that have been most effective are in relatively remote areas with limited alternative land uses where opportunity costs are low. In these circumstances, the payments do not have to be very high to bring a clear net benefit for the sellers of environmental services. A summary of the potential environmental costs and benefits associated with some PES and MES in the four environmental services previously discussed is presented below.

Biodiversity. The impact of shade-grown coffee initiatives on biodiversity conservation has been well studied and there is evidence of a positive effect on species counts for endemic and endangered species (Pagiola et al. 2002). There is less documentation of the environmental effects of other types of payment systems for biodiversity. In some cases it may be possible to identify a change in a proxy indicator such as an increase in the area designated as protected, as in the case of the ICMS Ecológico in Brazil. This says little, however, about changes in biodiversity conservation on the ground. Another constraint is that new areas protected under market-based initiatives may be of insufficient size to ensure long-term, genetically viable populations of many species. The private protected area scheme in Chile is an example (Pagiola et al. 2002).

Apart from biodiversity improvements, four main environmental benefits may also be associated with payments for biodiversity conservation—water benefits (water quality maintenance, reduced chemical pollution); soil benefits (reduced soil erosion and maintenance of fertility, moisture, and nutrients); air benefits (controlled air pollution and carbon sequestration); and landscape beauty. But these potential benefits from biodiversity conservation have rarely been measured and valued.

Carbon. The potential environmental benefits of forest-based carbon trade include increased biodiversity; more regular water supplies and higher water quality (as a result of the positive impacts of forests on local hydrology and the diminishing agricultural area subject to fertilizer and pesticide use); controlled flooding; and increased scenic beauty. Possible costs include reduced biodiversity where monoculture plantations are used; increased erosion and siltation where plantations are associated with poor land management and road building; reduced water supplies associated with fast-growing trees such as eucalyptus; and increased greenhouse gas emissions where emitters feel that by investing in offsets they gain a "license" to pollute and actually increase carbon emissions. Few studies have measured these impacts or highlighted their potentially negative repercussions. While none of the case studies reviewed relates to the clearing of natural forests for fast-growing plantations, this is a real concern to environmentalists given that the Kyoto Protocol acknowledges carbon offsets for plantations, but not for forest protection. Despite these concerns there is a clear opportunity for carefully designed carbon offset projects to promote a package of forest-centered environmental services (see the case study of the Noel Kempff Climate Action Project in chapter 6).

Watersheds. The effectiveness of markets for watersheds as a way to protect the environment is still being assessed. Even though claims about environmental benefits have been recorded, little data have been produced to back those claims. Moreover, the benefits claimed tend to be associated with watershed protection itself, not with the introduction of markets. The main reported benefits may be split between watershed benefits and spin-offs. Watershed benefits include improved water quality, flood protection, maintained base flows through groundwater recharge, soil erosion control, and soil fertility maintenance. Positive spin-offs include biodiversity protection, landscape beauty/aesthetic benefits, and carbon sequestration. Yet the lack of field data on most of these benefits is disturbing, especially in light of the scientific uncertainty about forest-water linkages.

Since 1994 forestland in upland Vietnam (above 600 meters) has been regulated by the government's "People's Forestry" initiative, an example of a national program of payments for watershed protection services. The initiative involves the transfer of forest management from the state to households and individuals. Barren forestland is being allocated to households through land tenure certificates and contracts for protection. Financing for forest protection is provided through a "National Programme to Create and Protect Watershed Protection and Special Use Forest." Payments of up to VND 50,000/hectare/year (US$3.34/hectare/year) are channeled to households through "Forest Protection Units," which monitor implementation. By the end of 1996, about 6 million hectares of forestland was allocated for protection (about 5 percent of the country's total forestland).

Landscape beauty. In a number of cases ecotourism operations are promoted as mechanisms for generating finance for conservation of local environments, particularly in areas with high levels of biodiversity. Biodiversity is thus often cited as a positive spin-off from the sale of landscape beauty for ecotourism ((e.g. through hunting bans). Another benefit is improved local water quality due to reduced erosion and sedimentation.

Implications of PES and MES for poverty reduction

There are many potential advantages of PES. They generate new sources of income for sellers, improve service delivery for buyers, raise the efficiency with which resources are being used and allocated, and promote new investments in a range of assets. Yet, the use of PES, and market creation in particular, to provide local sustainable development benefits is contentious. There is little in-depth research on the impacts of market incentives on small or marginalized communities, and anecdotal evidence indicates that the impacts on the poor can in fact be negative. Research and guidance is therefore needed on how payment systems and markets can be created so as to benefit poor communities.

In theory, the poor may reap many benefits following the introduction of PES that could help them transform natural capital embodied in natural resources into real financial flows. Such initiatives are praised for providing local people with increased income while reducing their vulnerability by diversifying their income (assets) base. For example, in Kerala, India the development of a local plant-based drug has spurred payments by pharmaceutical companies to forest communities. PES can also provide an effective mechanism for ensuring a sustained flow of services to beneficiaries—these services are often critical for the livelihoods of poorer groups. Furthermore, PES can have positive consequences for welfare because they can stimulate the development of new skills and the strengthening of cooperative and hierarchical arrangements on which the poor often depend.

However, evidence on the impacts of PES on poor communities is scarce and where information

does exist it is often biased in the sense that while benefits are widely applauded, costs are poorly recorded. It is not clear, therefore, how much or even whether these payment and market schemes for environmental services can actually contribute to poverty reduction while protecting the environment.

A concern is that MES may actually cause damage to poorer groups whose access to markets may be restricted for a variety of reasons. For example, emerging evidence suggests that poor smallholders in developing countries face serious constraints in accessing carbon markets.

By spurring competition, markets may lead to further marginalization or exclusion of weaker groups from natural resources on which they have traditionally depended. Moreover, because markets introduce a monetary-based system for allocating resources, those with less money have reduced influence over service delivery. Apart from the moral issues raised, the inequitable distribution of benefits can make market expansion difficult.

There are several reasons why the development of markets for environmental services may not always benefit the poor:

Tsimihety child carrying forest products to the market. Near Belambo, Madagascar

Based on the Kyoto Protocol's targets, Bosello and Roson (1999) use an integrated assessment model to analyze the impact of global trading of carbon sequestration on the per capita income of Annex B countries (the rich ones) and non–Annex B countries (developing countries). While all countries show a positive welfare gain from global trading, the gain is spread disproportionately—with Annex B countries gaining far more than developing countries. When banking (the right to accumulate carbon credits and gain future credits on them) is incorporated into the analysis, incomes for non–Annex B and former USSR countries are actually negative in early years, turning positive only around 2040.

Norwatch, a Norwegian NGO, undertook an assessment of a forest carbon offsets scheme in Uganda by the company Tree Farms AS (2000). The review highlighted a number of social concerns including (i) threatened eviction of about 8,000 people who depended on the area for farming, collection of non-timber forest products, cattle grazing, and fishing; (ii) poor labor relations even though only 43 people were employed by the company; and (iii) potential impacts on local water supplies as fast-growing plantations absorb increasing amounts of groundwater.

From F. Bosello and R. Roson, 1999, "Carbon Emission Trading and Equity in International Agreements." FEEM working paper 57.99, Fondazione Eni Enrico Matteri, Milan, Italy.

- Because poor people often lack property rights, they are likely to struggle for a share of a business, and to fight to retain control over, and access to, the resource on which they depend.
- Poor individuals lack the requisite skills and knowledge for participating in emerging markets, such as managerial skills for organizing supply, negotiating and contracting skills for structuring deals, scientific understanding of environmental services, and technical skills to deliver services.
- Inadequate finance. Participation in emerging markets requires up-front investment. With respect to supply, service providers will need to invest in searching for clients, acquiring skills, bringing the service to market, insurance, etc. On the demand side, buyers need financing to conclude a deal but poor groups tend to lack access to affordable finance.
- Poor market information and contacts.
- Insufficient communications infrastructure. Transportation and communication infrastructures are important in bringing parties together.
- Inappropriate commodity design. In general the provision of environmental services is a long-term commitment (e.g., carbon deals tend to span decades rather than months or years). However, poor communities rely on livelihood strategies that are flexible and able to cope with unexpected shocks. Thus, even where new markets offer opportunities for increasing income, if they require extended commitments, they are unlikely to attract participation of vulnerable groups. Where poor people accept long-term contracts, there are serious risks that these contracts will decrease their ability to respond to shocks and would damage their welfare.
- High coordination costs: Transaction costs associated with establishing and running market mechanisms are high (seeking, negotiating, agreeing, implementing, monitoring, and certifying deals). These transaction costs will be higher the greater the number of buyers and sellers involved (as in the case of a watershed where a number of individuals live). Poor households with small plots will tend to face high coordination costs as part of any deal.
- Minimal power. Where poor groups have little voice in the development of markets, there is a real risk that they might be marginalized from market benefits. Even when poor communities can participate in markets, they

tend to be the weakest party. Where power balances are unequal, achieving a level playing field is very difficult.

These constraints are also mutually reinforcing. Poor market information and lack of contacts, for instance, raise the transaction costs facing marginalized groups.

From a buyer's perspective, a further concern is that poor groups will be harmed by new demands for payments for services that they have previously received for free. While in the long term markets are being put in place to benefit all those who depend on continued supply of services, there may be short-term trade-offs. Furthermore, the distribution of benefits may not reflect the distribution of payment obligations. Where poorer groups are asked to pay for environmental services but lack the assets to benefit from improved environmental conditions, there may be serious negative equity impacts. For example, if a community negotiates payments for watershed protection to improve the quality and dependability of water supplies, landless households are likely to benefit least since they do not use water to the same extent as local farmers.

In an example of the high transaction costs that the poor may face when trying to compete in MES, Chopra et al.'s (1990) evaluation of Sukhomajri's watershed protection project in India incorporates transaction costs into the cost-benefit analysis. Transaction costs were those associated with establishing a functioning cooperative network and included the training of villages in soil and water conservation techniques and organizational leadership, and the cost of "motivational inputs." The benefit-cost ratio fell from 1.33 to 0.73 when transaction costs were included. If the local communities were to pay those costs their benefits would be negative.

From K. Chopra, G. Kadekodi, and M. N. Murty, 1990, Participatory Development, People and Common Property Resources. New Delhi: Sage Publications.

Actions to ensure that MES are pro-poor

While the hurdles facing poor people's participation in emerging markets for environmental services are high, they are not insurmountable. Seven possible steps for promoting pro-poor markets are identified below:

- Secure resource tenure. Formalization of natural resource rights is essential to give marginalized groups control over, and rights to returns from environmental services. There are already signs that market development has spurred forest land tenure formalization in some disadvantaged communities in Bolivia, Costa Rica, Peru, Ecuador, and India.
- Define appropriate commodities. Simple and flexible commodities that can be self-enforced, that fit with existing legislation, and that suit local livelihood strategies need to be developed in poorer areas.
- Devise cost-effective payment mechanisms. In areas where regulatory capacity is weak, trading skills are in short supply, and market infrastructure (e.g., communications, information systems, transport, monitoring) is underdeveloped, simpler payment mechanisms are likely to be more effective. Innovative techniques to lower transaction costs such as systems for pooling demand and supply and intermediary-based transactions should be actively encouraged.
- Support cooperative institutions of service providers to increase bargaining power. While landowners with small plots are unlikely to find a market for their carbon offsets, biodiversity conservation, watershed protection, or landscape beauty, a group of landowners may attract investment. Cooperation is critical in allowing poor landowners and service beneficiaries to share the costs associated with market participation. It is also essential for achieving a minimum level of supply and demand, thereby permitting market participation.

- Invest in training and education. Training in marketing, negotiation, management, financial accounting, contract formulation, and conflict resolution are important prerequisites for effective participation. Technical skills relating to forest management for environmental services are also needed.
- Establish a market support center. To improve poor people's ability to participate in emerging markets, a central support center could offer free access to market information, and an advice bureau could support the design and implementation of contracts.
- Provide start-up finance to ensure participation of poorer groups. Where finance is needed to negotiate and conclude environmental service deals, the government may have a role to play in providing start-up funds.

The sustainability of PES and MES as financing mechanisms

The sustainability of PES and particularly MES as financing mechanisms is hard to assess empirically given that most initiatives are relatively new. Pagiola et al. (2002) identify three crucial factors for sustainability:

- Continued demand for the services being sold;
- Continued ability of suppliers to provide the services; and
- Maintenance of the necessary institutional structure.

Demand for environmental services is partly exogenous, depending on such factors as population, economic growth, and competition from low-cost alternative technologies. All of these factors can result in changes in demand. For some services such as drinking water, it is likely that demand will continue to grow. Demand for other services such as biodiversity is perhaps less certain. For example, as Pagiola et al. ask: Will consumers be willing to pay a premium for biodiversity-friendly coffee in a recession?

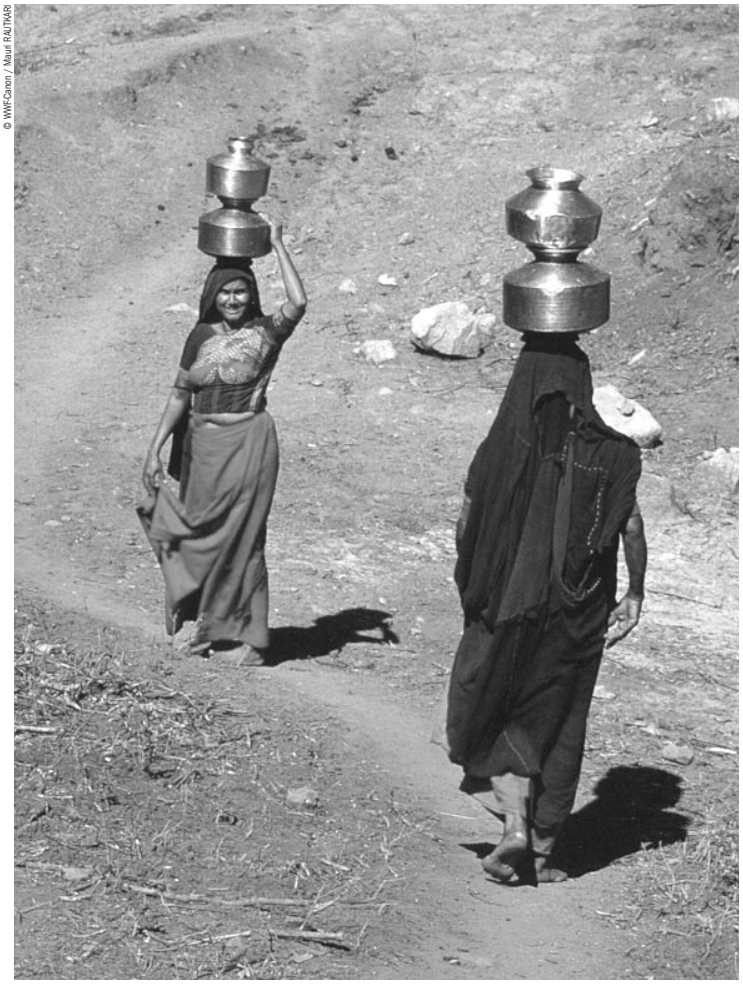
Ability to supply the service depends on the reliability of the scientific links made between activities carried out and services provided, as well as the nature of the economic incentives created. The risk of poor scientific evidence is perhaps greatest in the watershed service market where the forest-hydrology links are not certain. This in turn could affect demand; if expected services are not delivered, payments will be abandoned. Even where the linkages are clear, it is possible that the payment made is insufficient to compensate for the opportunity costs involved. As this becomes clear to the suppliers of services, they may lose interest. This is more likely to happen where the payment level is determined administratively or as a result of political negotiation, rather than on the basis of cost-benefit analysis.

The sustainability of the institutional framework in which markets evolve is important but it should be noted that this framework rarely remains static. There is a constant process of change and adaptation of institutions—be they market, regulatory, or cooperative—in response to changing preferences and power balances. Where market mechanisms gain support from more powerful groups and generate greater payments, it is likely that they will be associated with increased investment in supporting institutions and that they will become more sophisticated. Efforts to promote payment for environmental services should, therefore, seek to capitalize on a range of stakeholders' interests and avoid alienating particular groups that may block market development. The impacts on poor households, for example, are of particular interest, not just for equity reasons, but for ensuring that markets are sustainable. Monitoring (both to document service delivery to buyers and in order to improve the operating procedures), independent verification, and investment in supporting institutions are all actions that can be undertaken to enhance sustainability.

When should a project developer choose a MES approach?

What are the choices that an SNRM practitioner faces in deciding whether an MES is a good or feasible approach to the financing of a particular natural resource management project? Under what circumstances could a market-based approach be a good option? Some key questions that a practitioner should consider are set out below.

- Is there a clear demand for an environmental service associated with the project? Many analysts believe that demand-driven initiatives have the greatest chance of success. Practitioners that begin on the supply side run the risk of developing mechanisms that supply the wrong services in the wrong place, or at prices that buyers are unwilling to pay.
- Can a clear link be established between the activities of the project and the provision of environmental services demanded? Buyers of environmental services need to have evidence that they are getting what they are paying for, otherwise their willingness to pay may be as best temporary.
- Does the community have formalized rights to the resource and to the environmental services associated with it? If rights to the resource are unclear or informal, it may be difficult to negotiate deals with prospective buyers as they want to be sure of delivery. The creation of an MES may also have unintended effects of stimulating others' interest in the resource, leading to expropriation and further marginalization of the community.
- Do strong cooperative institutions exist? Many market-based initiatives require pooling of supplies in order to reduce transaction costs, and in the case of watershed services and biodiversity conservation, to provide a minimum threshold of environmental services.
- Would a market-based initiative be compatible with the existing legislative framework? A number of initiatives have required legislative change in order to be feasible. This goes further than formalizing property rights particularly where governments are involved as sellers or buyers of services. In Costa Rica, water companies needed regulatory approval in order to charge additional fees to water users to cover environmental services.



Maldhari women carrying water Near Sasan Gir Gujarat, India

- Are supporting institutions (intermediaries and ancillary service providers) in place? Most market-based initiatives require the involvement of a number of organizations to provide different support activities: to bring suppliers into contact with buyers, to facilitate negotiations, and to certify service delivery. Establishing a new initiative will be much easier where such organizations are already in existence locally and able to extend their support.

If the answers to the questions above are all negative, it may be more fruitful to concentrate on changing these contextual conditions first, either directly or through lobbying governments (see box 3). If there is little potential for changing these conditions, alternative approaches for financing the project need to be pursued.

BOX 3. THE ROLE OF GOVERNMENT IN DEVELOPING MES

Governments clearly have a role to play in fostering the market's development and in shaping markets in order to maximize welfare by establishing appropriate policies and regulations. There are a number of ways by which policymakers might jumpstart market development such as:

- **Raising awareness.** Suppliers need to learn about the value of their service and buyers' potential willingness to pay for its delivery, while beneficiaries need to learn about the value of the service and threats to its continued provision. General environmental education can help to stimulate public demand for action.
- **Reducing transaction costs and trading risks.** Governments play an important role in providing an enabling environment for market development. Investment in market infrastructure, efficient communication systems, research on service delivery and measurement, and training and investment in supporting regulations and standards all contribute to lowering transaction costs and risks for potential market participants.
- **Providing secure property rights.** Tenure security is essential for the implementation of MES and for market creation. Without clear and defendable rights to land, forest, or the environmental service itself, suppliers cannot make a credible commitment to supply an environmental service. Actions that can improve secure tenure include formalization and registration of rights, maintenance of a central public registry, coordination of government departments involved in allocating rights, and the strengthening of the dispute resolution mechanism. Monitoring and enforcement systems will also need to be improved in order to ensure that rights can be defended where challenged.
- **Introducing stricter environmental standards.** Stricter environmental standards, where effectively enforced, often stimulate the establishment of MES.

Notwithstanding the importance of broad participation, policymakers may catalyze market development by targeting individuals or groups early in the process. In general, market development will move forward most quickly where powerful stakeholders are supportive; however, the distributional impacts of various courses of action need to be considered to avoid the marginalization of weaker groups.

CHAPTER 3. A CLOSER LOOK AT PRIVATE SECTOR–COMMUNITY PARTNERSHIPS

by Maryanne Grieg-Gran and Camille Bann / IIED[17]

The term "partnership" is widely used and variously defined. To some it is a legally based contractual agreement, while to others it is any form of dialogue between two parties. Some use the term in a normative sense, implying that for an arrangement to qualify as a partnership it needs to have certain characteristics (e.g. be equitable to all parties). In this chapter we use the term private sector–community partnership in a purely descriptive sense to refer to a wide range of deals, contracts, and informal arrangements that are entered into by companies, be those large transnationals or small family-run enterprises, and communities in the expectation of benefit. Partnerships between the private sector and local communities are a growing phenomenon in a number of natural resource sectors worldwide, particularly in tourism and forestry.

Tourism is one of the world's largest industries and nature-based tourism and tourism in developing countries are among its fastest-growing sectors. To date, most benefits from tourism have gone to commercial operators in the tourist-originating countries or in metropolitan centers of the host country. Tourism has therefore contributed much less than might have been expected to social and economic development in rural destinations. Private sector–community tourism partnerships offer potential for rectifying this. In a number of developing countries, tourism partnerships between the private sector and local communities are becoming more common, especially as communities are increasingly gaining rights to wildlife and other valuable tourism assets on their land, through national policy changes on land tenure. Partnerships are developing even in cases where the tourist operators are the landowners. This happens because operators increasingly recognize not only that local support is essential for the long-term maintenance of tourism assets on which the industry depends, but also that many communities have cultural resources that can greatly enhance or diversify the existing tourism product.

In the forest sector, a wide range of deals have been made over the years between forestry companies and local communities. Companies have sought access to land, labor, and continuous supplies of wood while communities have sought employment, technology, infrastructure, social services, sources of income, and secure access to a wide range of forest products. What has been less common is the incorporation of sustainable forest management and social responsibility considerations in such relationships, although this is an emerging trend.

With defensible property rights and a policy framework that allows flexible development of partnerships, companies and communities can collaborate for direct mutual gains (both financial and nonfinancial) plus broader benefits to the environment and society. Well-structured partnerships can, therefore, represent a means of achieving sustainable natural resource management.

Partnerships as a financing mechanism for SNRM

Not all partnerships between communities and the private sector relate to natural resource management. They may be purely focused on production or may involve a company contributing to local development in return for community goodwill or a "social license to operate." For a partnership to be considered a financing mechanism for natural resource management it should involve a private company entering into an agreement with a community by which the latter will be provided with certain financial and nonfinancial benefits in return for the former's access to natural resources held by the community and/or conservation resource management activities and avoidance of activities

17. This chapter draws heavily on recent IIED research on this issue, particularly Mayers and Vermuelen (2002) and Roe et al. (2001).

damaging to the resource. Thus, a company may effectively be paying a community for resource management activities, providing indirect incentives for such activities, or in some cases bringing the community into contact with buyers of environmental services.

There is some overlap between the concepts of "partnerships" and "payments for environmental services" in that partnerships can be considered as one type of PES where the payment mechanism involves direct negotiation between the parties. But this is just one of a number of issues in a partnership. Other important aspects of a partnership include the way partnership opportunities are identified; the way partners are selected; the negotiation of the terms of the partnership, covering both inputs from and benefits to each party, risk-sharing, and duration; and the procedures in place for monitoring and review. This chapter gives particular emphasis to these aspects of a partnership.

What motivates companies and communities to form partnerships?

A range of factors may determine whether companies and communities are motivated to form partnerships together or actively avoid them. Reasons why companies may aim for partnerships with communities include the following:

- *Public and political pressure.* Intolerance of irresponsible corporate behavior and demands to demonstrate social responsibility are growing in many countries. This has driven a number of forest and tourism companies to adopt corporate social responsibility policies. For example, tourism companies in Namibia have found that a visible commitment to working with local communities is strategically important, particularly in a post-independence political climate. In South Africa, the outgrower schemes operated by the country's largest forestry companies, Sappi and Mondi, provide these companies with a progressive image at a time when the distribution of land rights is being called into question.
- *Market advantages.* The growing strength of the "fair trade movement" and ethical consumerism mean that increasingly, consumers want to be assured that the products they buy benefit local communities and are not damaging to the environment. For tourism companies partnerships with communities offer the potential to utilize communal resources and create unique selling points that are able to attract new customers. This is important as market trends in tourism are demanding increasingly sophisticated and varied products. Entering into an agreement with a local community is a way of ensuring exclusive access to a particular area and, hence, enhancing the quality of the product.
- *Land and resource access advantages.* For forestry companies there may be access restrictions to wood sources and land. These restrictions may be avoided, and resource security and diversity of sources of supply increased through partnerships with local land and resource owners. Similarly, as tourism grows it is necessary for private operators to seek new opportunities in new areas—notably on land controlled by local communities.
- *Local risks that the community can help minimize.* Local risks include tenurial and land-use conflicts, the destruction of company property, violence against company employees, and interference from local politicians. These risks are important in forestry. Similarly, ensuring that local people benefit from tourism is a way of reducing hostility to tourists and hence increasing the security of the enterprise as well. By providing an incentive to manage the resource base upon which the tourism product depends, the partnership reduces the risk of environmentally damaging activities.

BOX 4. DRIVERS OF TOURISM PARTNERSHIPS IN NAMIBIA

A major driving force for the development of tourism partnerships in Namibia has been the recently introduced communal conservancies legislation which gives local people user rights to wildlife and tourism on communal land.* As rights to land and wildlife resources are increasingly being devolved at the local level, the private sector is recognizing the need to work with local people and to acknowledge their central role in maintaining cultural and natural heritage assets that attract tourists. Previously, private operators could negotiate with government ministries for access to tourism resources on state or communal land. They now find themselves in the position of having to deal directly with communities. The communal conservancies legislation, coupled with a national program on community-based natural resource management, provides a framework through which both biodiversity conservation and rural development goals can be achieved by enabling communities to benefit from commercial ventures on their land. Giving communities power to negotiate with the private sector, through the devolution of rights to tourism assets and advice on how to use that power, is a mechanism for ensuring that they receive a more equitable deal for the use of their natural resources.

For this reason tourism partnerships are being encouraged by agencies and NGOs through the national community-based natural resource management (CBNRM) program as a way of accessing private sector financing for rural development, which can make the new conservancies more financially viable and self-sustaining. Government agencies, principally the Directorate of Environmental Affairs (DEA), and development and conservation NGOs are promoting more formal partnerships by acting as facilitators or advisors to communities.

(*) In 1992, the then-Ministry of Wildlife, Conservation and Tourism (MWLCT) approved a policy document that made provision for the establishment of wildlife management units called conservancies. Conservancies were defined as: "...a group of farms and/or area of communal land on which neighboring landowners/members have pooled their resources for the purpose of conserving and utilizing wildlife on their combined properties and/or area of communal land"

As with the private sector, communities may have a variety of short-term and long-term motivations for entering into partnerships, including the following:

- *Visible benefits.* Other individuals or communities have already been seen to benefit from such relationships. This applies especially to tourism.
- *Secure land tenure and resource rights.* There is a potential for "cashing in" on newly acquired rights to land and wildlife resources rather than just using them for subsistence purposes. This was a major factor in Namibia (see box 4). Moreover, partnerships can represent an easy form of benefits as they may require only passive involvement, such as authorizing a private company to conduct an activity on communal lands.
- *Access to private operator skills, technology, capital markets, and assets.* For example, forest companies may bring to the partnership new technologies, services or scientific knowledge on the characteristics of alternative tree species, or access to international markets.

Woman retuning from the field with animal fodder. Annapurna conservation area, Nepal.

Types of partnerships

Company-community forestry partnerships cover a range of partners (from large-scale corporations to small-scale private enterprises on the private sector side; and farmers, individual local actors, community-level units of social organizations such as farmers' groups, product user groups, and cooperatives on the community side); forest types (dense forest, open woodland, agroforestry, smallholder woodlots, and commercial scale plantations); and relationships. The types of community forestry deals, categorized by forest product, are summarized in table 2.

Similarly to the forestry sector, a variety of private sector–community partnerships can be found in ecotourism or wildlife, ranging from the very formal and contractual to the informal. Some involve ecotourism, others hunting, while still others focus on complementary activities such as cultural villages and craft production. These can be found on communal, private, or state land. For each type of partnership there are a variety of different types of inputs to be made (including capital investment, land, labor, time) and benefits to be received (e.g., exclusive rights, equity shares, employment, training). Box 5 presents a profile of private sector–community partnerships in Namibia to illustrate the types of tourism partnerships that are emerging in that specific context.

Implications for SNRM

Research on the impact of private sector–community partnerships has focused on equity aspects and the costs and benefits to communities. There is relatively little evidence on whether partnerships improve natural resource management in the long-term. Impacts seem to be very case-specific.

In the forestry sector partnerships have been shown, in some cases, to provide incentives for natural resource management—for example through the promotion of sustainable multipurpose forest management or the reclamation of degraded land, which is considered a major benefit of the Xylo Inda Pratam (Faber Castell) outgrower scheme in Indonesia; and the XIP farm forestry schemes in India. They have also been associated with micro-scale improvements in erosion and climate where trees are intercropped or planted on boundaries—for example, in India. However, negative environmental effects are possible where plantations are badly managed or promote the spread of alien species such as wattle, which has been a problem in some of the South African outgrower schemes. Partnerships have also been considered to provide new opportunities for large-scale logging in natural forests or to provide incentives for clearing natural forests for monoculture. This is a major concern in Papua New Guinea where arrangements to facilitate the leasing of communal land to private companies are encouraging the conversion of forest to oil palm plantations.

In the tourism sector, it is often assumed that the involvement of communities in tourism and the benefits they receive from the partnership will provide incentives for management of the natural resource base. But in some cases, the link between the benefits from the partnership and the desired behavior is not all that transparent. This applies particularly to partnerships where the community input is against certain land uses. In practice, it is the combination of partnerships with other factors such as regulations on natural resource management that has the greatest impact. In Namibia, the underlying regulatory framework confers rights and responsibilities for natural resource management to communities. This is not just a case of avoiding certain land use activities, which is a cost in itself; it also requires expenditure by communities on fencing, water holes, game guards, vehicles, and an office. The financial benefits from partnerships with private companies provide a means to cover these costs and in some cases generate a surplus. The key issues are whether such partnerships can

TABLE 2. THE TYPOLOGY OF COMPANY-COMMUNITY FORESTRY PARTNERSHIPS (BY MAIN FOREST PRODUCTS)

Product	Type of partnership
High-quality timber	**Joint venture**—forest communities manage timber in partnership with private company. **Concessions leased from communities**—forest communities lease concessions to private industry, communities retain substantial control. **Outgrower schemes**—small farms or communities participate in outgrower or crop share schemes with private companies planting improved high-value timber. **Corporate social responsibility project**—company contributes to local development in return for "social license to operate."
Industrial pulpwood	**Outgrower schemes**—industry assists farmers in establishing and managing pulpwood planting, using guaranteed supply contracts. **Farm forestry support**—farmers establish plantings with technical support from industry, and sell output with purchase contracts. **Farm forestry crop share**—plantings established on farmers' land with support from industry, and crop profits shared. **Joint ventures**—communities and companies share equity in pulpwood production venture. **Land leased from farmers/communities**—forest owners lease to private companies for pulpwood production. **Corporate social responsibility project**—company contributes to local development.
Commodity wood	**Outgrower scheme/farm forestry support**—schemes that directly link producers with commodity wholesalers or final users. **Contracts from communities**—contracts or agreements for wood-using or logging companies to harvest wood from community forests.
Certified wood	**Group/community certification with company support**—forest communities or farm producer organizations with contacts or agreements with certified wood buyers or intermediaries to market products.
Non-timber forest products	**Co-management for non-timber forest products (NTFPs)**—communities manage/benefit from NTFPs in company-controlled areas producing wood or pulp. **Outgrower schemes**—small-scale farmers grow and sell NTFPs through outgrower schemes with private industry.
Forest product processing	**Community processing or farmer out-processing**—community or farmer cooperative sawmill, supplying markets in which large-scale, high efficiency mills do not compete.
Environmental services	**Forest environmental services agreements**—payments and other benefits to communities or farmer groups from municipalities or conservation agencies, to provide forest environmental services such as biodiversity conservation, watershed protection, carbon storage, and landscape amenity.

BOX 5. A PROFILE OF PRIVATE SECTOR–COMMUNITY PARTNERSHIPS IN NAMIBIA

Who is involved?

- Increasingly conservancies, but also traditional authorities and individual community members
- Large international companies and individual owners of lodges

Inputs from both sides

- Community input: access to land, wildlife, or cultural attractions and tourism rights (some of these may be intangible inputs that are difficult to value)
- Private sector input: land rent, payment of bed-night levies, payment for hunting quotas, employment, training

Who owns the partnership enterprise?

- Primarily privately owned; a few are community owned and none are jointly owned
- Community-owned ventures tend to be complementary activities (e.g., traditional villages, craft production).

Who initiates the process?

- A majority initiated by the private sector partner but conservancies are beginning to take the initiative

Formal or informal?

- A majority of partnerships are formal

How are partners selected?

- Primarily through one-to-one negotiation
- Tendering only for hunting so far

continue to generate sufficient returns to make resource management worthwhile in the longer term and whether the market is large enough to support more than a few conservancies.

Some tourism partnerships have specifically built in resource management concerns. For instance, Lianshulu Lodge in Mudumu National Park in northern Namibia agreed to compensate neighboring communities for any cattle killed by lions. It also provided cattle for community feasts in lieu of them hunting buffalo, a decision that would help the growth of the wild buffalo population. Another company, Skeleton Coast Fly Safaris indicated that it would negotiate a revenue-sharing agreement with the Marienfluss Conservancy if certain conservation goals were met. For instance, local people would be asked not to grow vegetables on the pristine banks of the river as it interferes with tourism activities.

Social impact of partnerships

Partnerships can yield a wide range of financial and nonfinancial benefits for communities. However, the experience so far has been mixed, and for every positive outcome noted there are caveats as to its general applicability and the actual level of achievement. These are summarized below.

- *Financial benefits:* Hard evidence from several countries indicates that for many small-scale farmers growing trees under partnership is more profitable in the short term than alternative crops (e.g., outgrowing eucalyptus and bamboo is a more profitable option in Thailand than competing cash crops).[18] In tourism there are cases where communities have received appreciable amounts from land rental and other revenue-sharing arrangements. The Torra Conservancy in Namibia has a partnership arrangement with Wilderness Safaris for Damaraland Camp, a luxury tented camp. The revenue received by the community from bednight levies agreed under this partnership amounted in 1998/99 to the equivalent of three months' wages per community member from casual agricultural labor. But for most communities, partnership activities, whether in forestry or in tourism, are supplementary rather than central to livelihoods. In South Africa, for instance, it is clear that company-community

18. On the other hand, it is difficult to forecast the long-term economic prospects of wood-related products versus agricultural crops.

outgrower schemes are not enough, on their own, to lift households out of poverty. The main positive impact of these partnerships is their contribution to livelihood diversification.

- *Employment and training:* Partnerships have been appreciated by communities because of their potential to create jobs for local people. For the Torra Conservancy, employment of community members at the Damaraland Camp is considered a significant benefit as the pay is relatively good and reliable. Some training has also been provided. But the numbers employed under tourism partnerships are generally small and the work is mainly unskilled. In the forestry sector, while partnerships can provide some guaranteed employment, there is little evidence that they have delivered better working conditions to forestry employees.
- *Capacity building and strengthening of local institutions:* Some partnerships have resulted in greater cohesion and organization among community groups. In the forestry sector, however, there is little evidence at this point of a substantial increase in the bargaining power of communities.

Partnerships have at times also raised social concerns. Such concerns, in the case of forestry sector partnerships include the following:

- Low-wage labor and inequitable land distribution have been perpetuated in deals that entrench existing patterns of ownership and control.
- Disadvantaged community members have been excluded from some schemes that require possession of land and some initial capital resources. The eucalyptus-growing schemes promoted by the company ITC BPL in Andra Pradesh, India, for example, have not attracted the participation of small farmers as they cannot meet the initial and recurring costs of tree plantations.

Women plant rice on slopes that have been cleared and burned (tavy method). Near Belambo, Madagascar

TABLE 3. MUTUAL BENEFITS FROM FORESTRY PARTNERSHIPS

Case	Community benefits	Company benefits
Sappi and Mondi (South Africa): outgrower schemes	Cash returns compare well with alternative land uses	Supply of 10 percent raw materials critical to economies of scale in processing
Wimco and JK Corp (India): farm forestry support	Evolution of competitive farm forestry	Sustained raw material supply
PT Perhutani (Indonesia): tenant agroforestry scheme	Easing of land shortage	Cheap labor supply, less conflict
Babine (Canada): joint venture	Expanding joint venture share	Development into industry leader

- Few partnerships have given the community a share in the ownership, and by implication, the management and control of the partnership enterprise. However, the risks involved in such arrangements are considerable and no particular ownership structure is necessarily better than another. Much depends on the priorities and capacity of the community and the level of risk it is comfortable with.

Sustainability of partnerships as a financing mechanism

The sustainability of partnerships as a financing mechanism is primarily a function of their success in meeting expectations and generating net benefits on both sides. Some deals collapse because of misunderstandings between parties, resulting in heavy losses and recrimination and even violence as was the case with the Boise Cascade forestry joint venture in Mexico. When partnerships last, this is usually a reflection of mutual benefits that keep the company interested in providing or facilitating the financing, and the community's interest in managing the resource. Table 3 has some examples of these mutual benefits in the context of forestry.

Factors external to the partnership can also play an important role, most notably in affecting demand for the product around which the partnership revolves. This was the case of the Picop outgrower scheme in the Philippines, which collapsed after 30 years as other sources of pulp became much cheaper. In Namibia political and security hardships have severely disrupted the progress of tourism partnerships. For example, secessionist disturbances in the Caprivi Region of Namibia since 2000 forced the government to call a state of emergency in the area, and tourism has since come to a complete halt. Land disputes have also affected developments in some areas.

The support given to the community is also important. If communities are to be able to negotiate as equal partners they will need a considerable amount of support in the preparation of the partnership. In Namibia, the support given by NGOs such as the Integrated Rural Development and Nature Conservation (IRDNC) and the Legal Assistance Centre to communities in the facilitation of negotiations, the drawing up of contracts, etc. has been crucial. Government agencies have also provided support. Once a partnership is in operation a community will still need some level

of support, for example, in reviewing the partnership agreement or in dealing with disputes. Such support can be costly, therefore government or aid funds are often necessary to enable partnerships to happen and can be crucial in how they impact communities. This lessens the self-sufficiency of partnerships. While they offer a way of tapping into private sector resources to meet environmental and community development goals, other sources of funds are still required.

Another issue is that the company involvement in partnerships with communities may be partially motivated by the availability of government financial incentives. In Indonesia, for example, the government has a policy of promoting partnerships between companies and smallholders or communities with support from a Reforestation Fund. Thus, only some of the financing provided by a company is additional. This is not an issue where government incentives play a catalytic role in getting partnerships started. But problems may arise where the partnership is so dependent on these incentives that their withdrawal results in the termination of the collaboration between company and community. The implication is that partnerships will not replace government or donor financing; at best they will reduce the amount required.

Actions to encourage successful partnerships

Criteria for success inevitably entails some subjectivity. Mayers and Vermeulen (2002) define a perfect deal as one that is equitable, efficient, and sustainable and that has been returning benefits to company, community, and forest on a long-term basis. Roe et al. (2001) place the emphasis on managing and meeting expectations so that both sides are satisfied with the outcome. Their study defines a successful partnership as one that meets expectations on both sides with regard to the following: duration, extent of financial and nonfinancial benefits generated by the partnership, division between the partners of financial and nonfinancial costs and benefits, and division between the partners of responsibility for running the partnership enterprise.

A number of actions can be undertaken at different stages of the partnership process in order to promote a successful outcome. These include assistance to communities—e.g., advice on evaluating their resources and the offers made by private companies, legal advice for contract scrutiny, capacity building, "matchmaking" services to link potential partners, and provision of facilitation services for negotiations. Third parties such as governments, NGOs, banks, and donors may have important roles to play in these actions.

Community preparation in establishing priorities and analyzing the full range of land use options (both the land use around which the proposed partnership revolves and alternatives) is essential as a precursor to negotiation. Expert advice may be necessary for analyzing potential returns from different land uses, particularly where an activity that is new to the community, such as tourism, is involved. Because the value of tourism assets and hence the potential returns varies according to the characteristics of the resource, communities will need assistance from tourism specialists to understand the value of their tourism assets. Where communities have no previous experience of an activity outside facilitators can ensure that false expectations are not raised and that business plans are realistic. Forestry partnerships face similar challenges, exacerbated by the fact that they are necessarily long-term arrangements given the slow-growing cycle of trees. Long-term forestry arrangements present big challenges to both sides, but particularly to the community, which may have to deal with such alien issues as forecasts of forest growth rates and productivity, national policies, market opportunities and prices—and understand how these will affect returns.

Most partnerships involve direct negotiation and the process is usually initiated by the company. In

some cases it may be possible for the community to invite proposals from more than one company through an auction or tendering process in order to encourage competition and increase its access to information. Some communities in Namibia such as the Khoadi-Hoas Conservancy have benefited from adopting a tendering process for their wildlife hunting quotas in that this allows the community to choose from a number of bidders.

Some steps in negotiating the terms of a partnership

Ownership of the partnership enterprise: Enterprises based on partnerships might be wholly owned by the private sector or the community, or jointly owned. There are advantages and disadvantages to each ownership structure and the "best" option will largely depend on the nature of the enterprise and the priorities and capacities of both sides. Formal ownership may also not be the issue for some communities but rather aspects such as management and control, which are closely linked with it. The community needs to be clear on what it wants in relation to management involvement, income, and risk. The best approach is to build-in some flexibility to allow change. If the community does opt for partial or full ownership at some stage it may be important to include in the partnership explicit provisions for training in management and other skills to increase the chances that the ownership will translate into involvement in running the enterprise, rather than simply taking on more risk.

Payment structure: The choice of payment structure and the degree to which it is linked to the success of the enterprise through revenue or profit-sharing depends on the level of risk the community is willing to take on. A minimum payment should also be incorporated to ensure that the community receives something in the event the operator does not start the activity or operates at a very low level. It is advisable that partnerships allow for changes in the payment structure after a specified period.

Determining how much the overall package should be: The community needs to weigh all of the costs involved in resource management, including the opportunity cost of forgone land uses, and in the case of wildlife-related tourism projects, the costs of the increased risk of damage to crops and livestock from wildlife. If the agreement involves restrictions on other development within a certain radius the community should be compensated for this.

Employment and training: If the community is keen on its members taking on higher-level employment in the partnership enterprise, realistic targets for this should be incorporated in the agreement regarding:

- Recruitment: Community institutions should be involved in recruitment.
- Determining a fair wage: The community members should expect to receive at least as much as they do from their traditional activities. Wages or salaries paid by other enterprises engaged in the same activity are a useful benchmark but differences in skills and education level need to be taken into account.

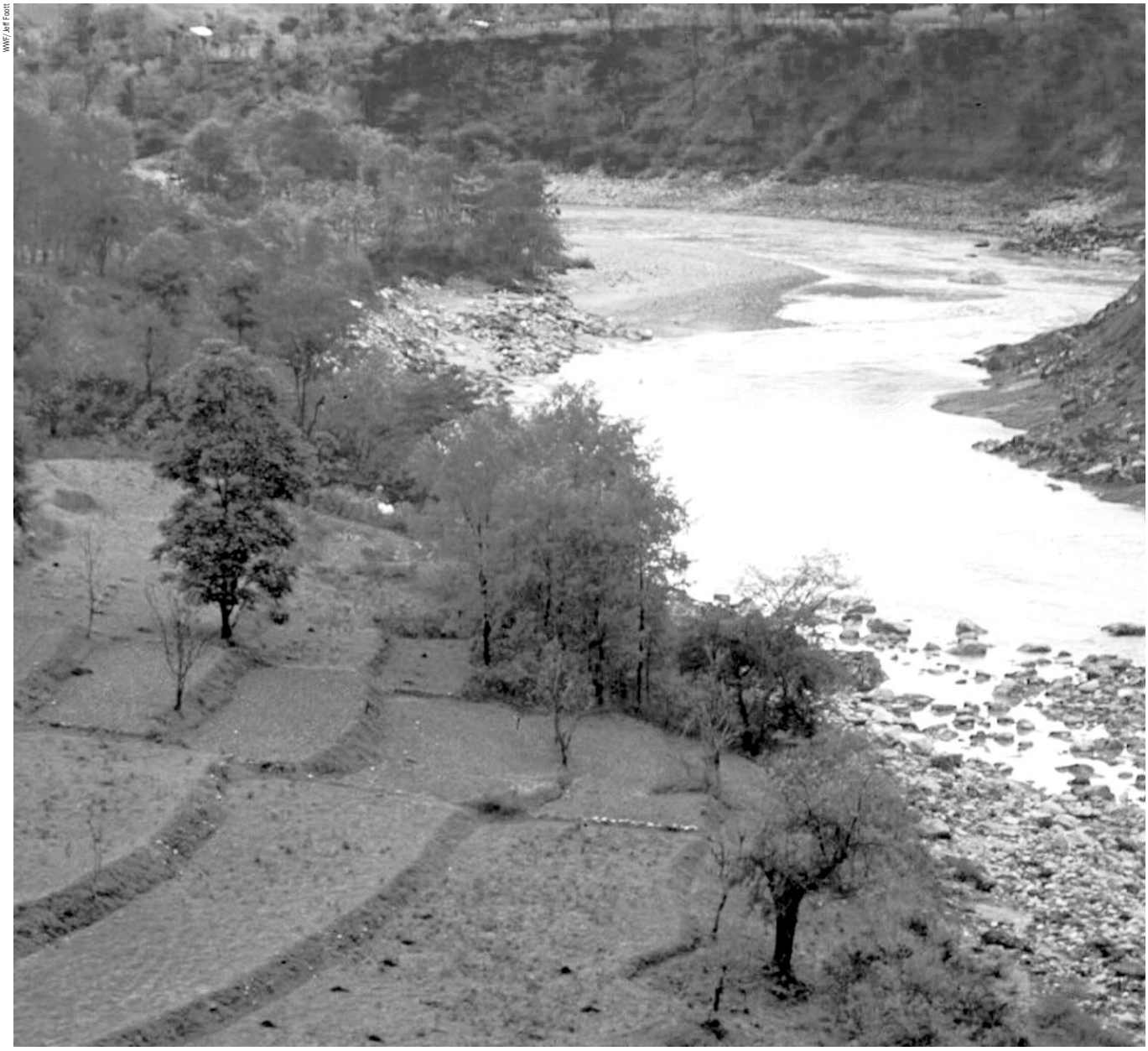
Formalizing the partnership: All partnerships should be based on a written agreement with clearly defined rights and responsibilities on both sides. It should be legally binding but not overly complicated. It should include resource management practices that are expected from each side. At the operational level it can be useful to have, in addition, a joint work plan with a clear schedule of activities within an overall management framework.

Contract length: It is suggested that contracts be long enough to provide security on investments, 10–15 years in the case of tourism, but not so long as to lock either side into unfavorable conditions. In response to failure to meet agreed conditions

or performance targets as well as renewal clauses, an exit strategy should be built in to enhance the security of both sides.

Monitoring and review: While many partnerships use a formalized contract, in the forestry sector it has been found that such agreements often do not include provisions for review, renegotiations, or dispute resolution mechanisms. In order to address unforeseen difficulties, as partnerships tend to require some mutual learning-by-doing and adaptation, it is important to make provisions for review. Some of the tourism agreements in Namibia make explicit provisions for joint company/community management committees to meet periodically and discuss issues arising from the partnership.

Mechanisms for sharing information are also needed. One of the concerns of landowners



WWF/ Jeff Foott

Terracing agriculture near river in Nepal.

TABLE 4. STEPS IN DEVELOPING PRIVATE SECTOR–COMMUNITY TOURISM PARTNERSHIPS IN NAMIBIA

	Points to consider	
Steps	**Community**	**Company**
1. Identifying a partnership opportunity	*Have we got what it takes?* • How does tourism compare with other land uses? • What are our land use priorities? • What tourism assets do we have? • How much will it cost? • Do we have the capacity?	*Have we got what it takes?* • Are we prepared for face-to-face meetings with the community? • Do we have someone with a personal commitment to make this work? • Do we have experience working with communities or do we need to get someone to help?
2. Finding out about prospective partners	*Is the company likely to be suitable?* • Does it have a track record in tourism development? • Does it have experience in dealing with communities? • Can it produce a sound business plan?	*Is the community likely to be suitable?* • Is it too big? • Does it have previous tourism experience? • Does it have a strong institutional structure? • How dependent is it on tourism? • What is the skills base like? • Does it have access to external support and/or facilitation?
3. Selecting partners	*How can we make sure we get the best partner?* • Competitive tendering? • Auction? • Direct, one-to-one negotiations?	*How can we make sure we get the best partner?* • Are there other communities with similar tourism assets? • Do they meet the suitability criteria above? • Are there any other companies bidding with the same community?
4. Getting assistance	*Do we need external help?* • A facilitator who knows the tourism business? • Help determining a fair return?	*Do we need external help?* • A facilitator who understands community concerns? • Someone who speaks the local language?

TABLE 4. STEPS IN DEVELOPING PRIVATE SECTOR–COMMUNITY TOURISM PARTNERSHIPS IN NAMIBIA (cont'd.)

	Points to consider	
Steps	**Community**	**Company**
5. Negotiating the components of a deal	*What do we need to think about in the deal?* • Should the enterprise be owned by us, them, or jointly? • If they own it, do we get a say in a management? • Should we opt for a fixed payment or a more risky but potentially more lucrative success-linked structure? • What are the minimum costs we need to cover and how much more on top should we expect? • Is our payment fair and protected against inflation, etc.? • Are we getting a premium for allowing exclusive use? • How many people are employed and in what sort of jobs? • Who decides about recruitment? • How much will employees get paid? • Should there be a minimum payment clause?	*What do we need to think about in the deal?* • Should the enterprise be owned by us, them, or jointly? • If they own it, do we get a say in management? • Does the community understand the implications of different types of payment options? • Are we paying the community enough to at least cover their costs—direct and indirect? • Do they understand how the overall value of the deal has been calculated? • Have we ensured that payments are fair and easily verifiable to the community? • Does the community understand the implications of granting us exclusive use? • Does the community have realistic expectations about how many people we can employ and in what types of jobs? • Have we ensured that an appropriate community structure is involved in recruitment? • Are we paying a fair wage compared to their enterprises?
6. Deciding on the duration of a partnership	*Are we in this forever?* • What is the normal length of contract for a tourism or hunting enterprise? • Can we get out of the contract if the company fails to perform? • Can we have a renewable contract clause?	*How long a contract can we secure?* • Does the community understand that we need security in terms of a contract of reasonable length if we are to be able to make a significant capital investment? • Can we balance our need for security with the community's wish for flexibility in the face of uncertainty?

TABLE 4. STEPS IN DEVELOPING PRIVATE SECTOR–COMMUNITY TOURISM PARTNERSHIPS IN NAMIBIA (cont'd.)

	Points to consider	
Steps	**Community**	**Company**
7. Formalizing the partnership	*How can we prevent any misunderstanding?* • Have we got it in writing? • Are the rights and responsibilities of both sides clearly understood and agreed?	*How can we prevent any misunderstanding?* • Have we got it in writing? • Are the rights and responsibilities of both sides clearly understood and agreed?
8. Monitoring, reviewing, and amending a deal	*How can we ensure that we continue to get a fair deal?* • Can we access company records? • Is there a provision for a joint management committee? • Does the contract allow for changes to the deal?	*How can we reassure the community that it is getting a fair deal?* • Are we being transparent with our accounting and reporting to the community? • Is there a provision for a joint management committee?

involved in a partnership with XIP in Indonesia was that they had not been given copies of the agreement they had signed. Moreover, after the original planning meetings, communication from the company virtually ceased.

Table 4 provides a summary of guidelines designed for tourism partnerships in Namibia to provide advice on how both parties can get a favorable deal out of the partnership.

When should a project developer choose a partnership approach?

For the SNRM project developer to opt for a partnership approach, certain prerequisites must be in place; the most critical being secure land and/or resource tenure and enabling government policies. The experience in Namibia has shown the importance of clarifying the rights over wildlife and tourism development on communal land. In the forestry sector there is no single model of property rights for partnerships—they can work just as well on communally or individually held land—and the interplay between company-community deals and land tenure has many variations. As with the tourism sector, the key requirement is that the rights to the land and the associated resources be secure.

Government enabling policies can be specific such as the requirement for forestry companies in Ghana to enter into social responsibility agreements, but a broader base of "carrots and sticks" in policy and institutional frameworks is also required. Particularly important, policies relating to the provision of start-up funds and favorable loans and insurance packages.

Communities need to have a strong and representative institutional structure to provide a focus for

negotiations. This also facilitates community preparation. With strong community institutions, it is more likely that community members can discuss the different options and support the decisions made. Even where contracts are made with individuals, as is often the case for forestry partnerships, it may be worthwhile both for the community and the company to invest in effective and representative community institutions to oversee the workings of the partnership.

It is necessary to be clear about the level of demand for the partnership product, particularly in niche markets where the first partnerships may be very successful and create expectations among other communities, but the demand may not be there for subsequent partnerships.

Would-be partners need to be realistic regarding the conditions that will attract private companies, particularly foreign ones. Where political risk is high and initial investment requirements are substantial, there have to be clear benefits of working with communities to offset the high transaction costs involved. For tourism, close community involvement can be an asset, for instance contributing to unique selling points of the activity/venture, albeit in a niche market. Where the community has something unique to offer (e.g., access to a certain wildlife species or a rare habitat), the chances of attracting private sector interest are much higher. In a more commodity-focused sector such as forestry, any premiums will typically be for quality, particular high quality species, and for sustainable forest management. Community involvement in forestry is less likely to be associated with direct market benefits for the company concerned although there are broader benefits, such as reputation improvement.

Support for communities from NGOs and/or government agencies needs to be available on an ongoing basis and not just during the preparation and negotiation of the contract. They should be available to address issues that come up later (e.g., reviews and amendments to the contract, and dispute settlement). There are also a number of community and company characteristics that are important to the outcome of partnerships. Issues rooted in these characteristics need to be addressed during the negotiations.

Community characteristics that are important to the design of the partnership

Skills base: A high level of skill is not essential but where skills are lacking, training is a crucial component of a partnership contract, particularly for tourism partnerships.

Size: With small groups, individual rather than community benefits may be more significant for encouraging commitment to the venture. If the community is large, an emphasis on community payments rather than individual payments can extend financial benefits or increase their impacts. Where per capita cash payments are likely to be small, an emphasis on nonfinancial benefits is also important. For large communities it is also important to allow extra time for negotiations.

Dependence on the partnership: Communities that have few livelihood options are at risk of becoming too heavily dependent on a partnership. Conversely, if the partnership is of little significance to the livelihoods of the community, then the community's level of commitment to it is likely to be low.

Lifestyle: Communities may often have a diverse range of livelihood activities (e.g., agricultural or seminomadic activities). For a partnership to succeed it must complement, not conflict with these other activities.

Company characteristics that are important to the design of the partnership

Experience with the community: If the company has no previous track record of working with communities, it will be important to seek advice from or use the facilitation services of community development organizations and to accept a slow process.

Experience in the sector: There is a higher risk of failure if the company has little or no previous experience in the activity around which the partnership revolves. If a community goes into a partnership with an inexperienced company it should consider ways of reducing the risk to itself. Possible measures include: more secure returns, for example, fixed monthly payments rather than a percentage of turnover or profit; shorter contract period; escape clauses in the contract based, for example, on nonperformance or poor performance of the operator.

Target market: A company that has an established track record in niche markets, for example, among special-interest tourists, is more likely to be able to make a community-based product work. Companies whose traditional clientele has more generic interests may have a difficult time selling the partnership's product.

WWF/Michael Kiernan

Small-scale artesanal wood processing

4. FINANCING FOR SNRM: FROM GOODWILL TO PAYMENTS FOR ENVIRONMENTAL SERVICES

by Pablo Gutman

Shifting the approach to financing SNRM

Until the 1980s the traditional approach to financing SNRM could be described in relation to the three basic types of NRM, as depicted in figure 4. At one extreme, strict natural resources conservation was viewed as a public good, usually a national public good, dependent on government resources for its financing. At the other extreme, sustainable agriculture practices were supposed to lead to larger harvests and increases in farmers' income; therefore farmers were expected to pay a significant part of the SNRM costs. This approach has produced some win-win stories of protected areas adequately budgeted from public money, and successful farmers practicing sustainable agriculture.

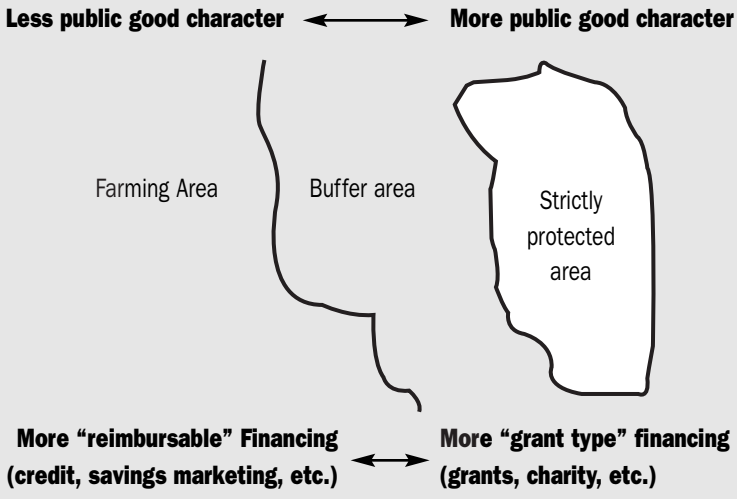
However, there are also many cases in which national budgets for conservation are far below corresponding needs, and many sustainable agriculture initiatives that fail because they do not deliver enough profits to make them an attractive option for the local population (see Gutman 2001). For this and other reasons, the last 15 years have witnessed a reduction of differences in the financing approaches for these three SNRM archetypes. On the one hand, protected areas are increasingly marketing their services and trying to retain for their own budgets at least part of what users are willing to pay (entrance and users fees, tourism charges, environmental service charges). On the other hand, SNRM programs in buffer zones and farming areas are increasingly aware of the potential of new markets for green products and environmental services that used to go unnoticed and unpaid (ecotourism, wildlife conservancies, water and forest conservation). All of this entails new opportunities for financing SNRM but also requires more efforts devoted to designing more complex projects and financing arrangements.

New financing instruments

The discussion in the previous chapters shows that a substantial number of new financing instruments for SNRM have been introduced and tried since the early 1990s. These financing options have many different origins. They range from international agreements to pay for the protection of the global commons (e.g., GEF) or to condone debt in exchange of poverty alleviation programs (the heavily indebted poor country initiative, HIPC) to country-level earmarking of taxes to pay for conservation programs (e.g., Costa Rica's oil tax); and from not-for-profit initiatives (environmental funds) to market-based approaches (e.g., markets for green coffee or certified wood products). They also entail new forms of private-public and private sector–community partnerships.

Some critics have dismissed these new financing options as being a mere name change. What is the difference, they argue, among Brazil's ICMS

FIGURE 4. THE TRADITIONAL FINANCING APPROACH TO SNRM



Ecológico, Costa Rica's tax funded PES scheme, and traditional public transfers? Does it make any difference if we called it foreign aid or payments for the global commons? We submit that it makes a great difference—the difference between a gift and a right; between goodwill and payments for environmental products and services.

There is a long way to go and we still need both goodwill money and payments for environmental products and services, but there is a significant trend at work toward a broader acknowledgement of the many environmental products and services that result from SNRM. This is a process that simultaneously increases our awareness of the services that the environment provides, our responsibility to care for them, and the rights of those who act as stewards of the environment to be duly compensated.

Less money

Even if there are more financing options, the harsh truth is that throughout the 1990s there has been a significant reduction in the flows of world investment for rural development, natural resource management, and environmental conservation in developing countries. This trend has been reported in several recent World Bank reviews. For instance, the annual World Bank lending for agriculture, which was on average $6.8 billion in the early 1980s, plummeted to an annual average of $2.5 billion in the late 1990s.[19] A similar dismal trend regarding expenditures in forest management by African governments and donors is reported in the FAO's recent (2003) *State of the World Forests*.

To some extent this decline accompanies the decline in overall foreign aid, and the reduction of government budgets in developing countries. But investment in SNRM has plummeted deeper than the average for several reasons, among them donors' fatigue with the real or perceived lack of success of many rural development projects, and a shift in the international interest from the 1980s' focus on sustainable development to the late-1990s' focus on poverty reduction and HIV/AIDS. Environmental conservation and social development do go together, but the international community seems able to address only a limited number of issues at a time.

Financing conservation, rural poverty alleviation, or both?

Do we have to choose between rural poverty alleviation and sustainable natural resource management? Some people seem to think so. On the rural development and poverty alleviation side, SNRM is at times dismissed as an extra cost with low returns, or a desirable goal but with low priority compared to rural poverty alleviation needs such as, health, education, infrastructure, water and sanitation, etc.[20] From the conservation side, some have given up on the integrated conservation and development projects (ICDP) concept of the 1970s, arguing that it costs too much and delivers too little in terms of conservation. Their solution is that money should be given up-front to whoever is able to provide conservation.[21]

There is some truth in these arguments. Given few natural resources and a lot of people, much more than SNRM will be needed to reduce rural poverty (although conserving the scarce natural resources available may still be a priority). Where there are abundant natural resources and few people, gazetting new protected areas and making them off-limits to the local population may aid in conserving biodiversity (although it may raise

19. From figure 3 in the 2003 World Bank Operation Evaluation Department Precis bulletin No. 232. See other examples of the same trend in the World Bank's 2002 Rural Development Strategy and its 2001 Review of the Bank's Performance on the Environment.

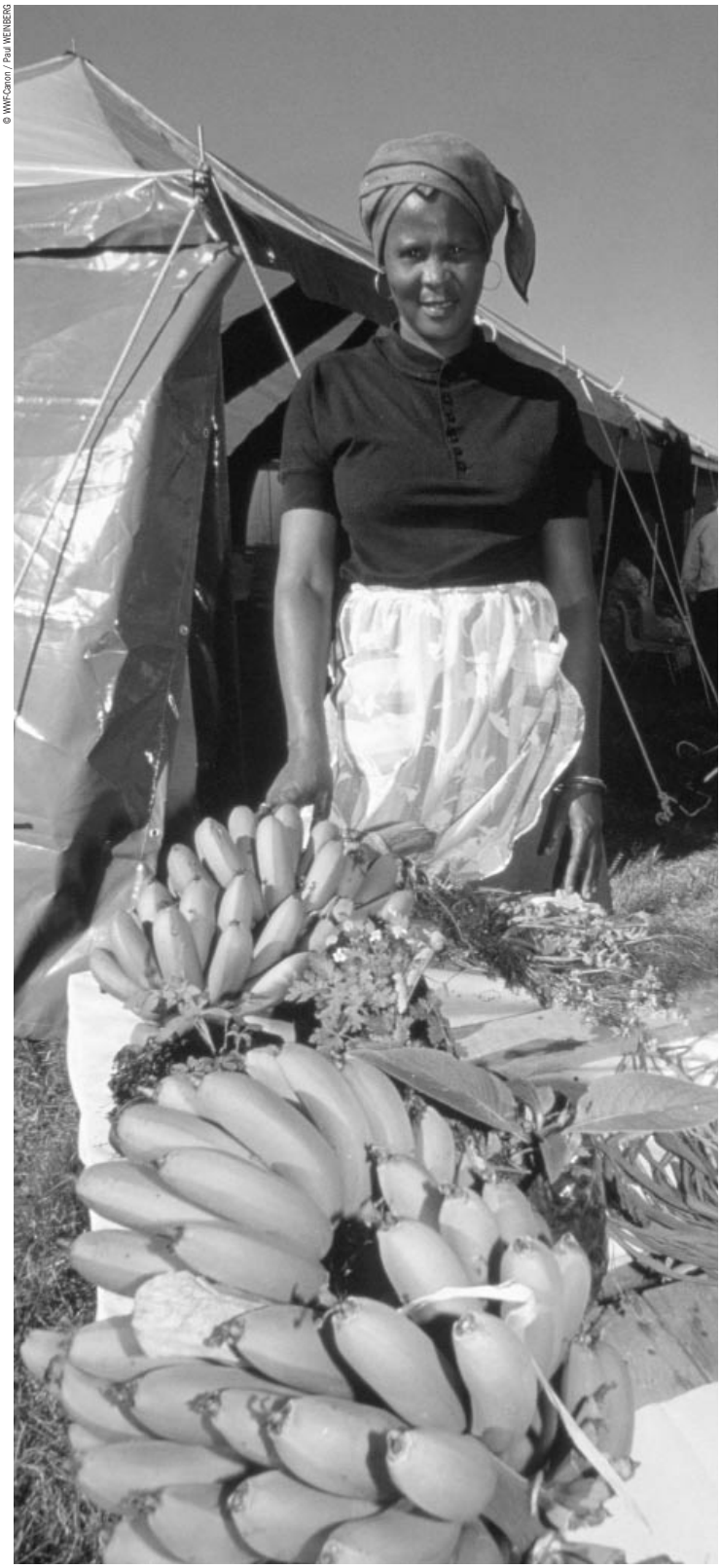
20. A good example is the lack of consideration given to environmental and natural resource issues in the poverty alleviation literature and plans of the last decade. As noted in our Summary above, for instance, the World Bank's 2000/2001 World Development Report, "Attacking Poverty" does not include the terms "natural resources" or the "environment" in its table of contents.

21. Among the academic supporters of this approach are Ferraro (2001) and Hardner and Rice (2002). Conservation International (CI) and The Nature Conservancy have tried it in several Latin American countries. See, for example, the Noel Kempff Climate Action Plan (Bolivia) case study in chapter 6.

ethical and equity concerns). However, these extreme situations are the exceptions, not the rule. In most cases the rural areas of developing countries are home to valuable environments and large numbers of rural poor. There, the tenet of sustainable natural resource management—that is, the advantage of integrating environmental conservation and poverty alleviation—holds true.

To some extent the Millennium Development Goals (MDG), which have been at the center of recent international development discussions, acknowledge these links between poverty and the environment: the list of goals begins with eradicating poverty and ends with ensuring environmental sustainability. Actually, while links and opportunities for positive reinforcement between poverty eradication and several other goals in the MDG list are well established, the truth is that development agencies, governments, and NGOs are still at odds in terms of the best way of integrating poverty eradication and environmental sustainability.[22]

Keeping the rural development focus on integrating rural poverty alleviation and natural resources conservation will surely require all the ingenuity of SNRM practitioners and a lot of multitasking: first, to design NRM projects that balance short-term poverty reduction needs with long-term sustainability of natural resources; second, to convince advocates of one or the other that there are opportunities to jointly foster both; and last but not least, to explore financing arrangements that have a good chance of being sustainable and accessible to the rural poor. Box 1 in our Summary (p. 11) suggests some common-sense principles to help in this endeavor.[23]



Farmer woman presenting her produce on the market during Master Farmer's agricultural day in South Africa.

22. Among recent calls to integrate poverty alleviation and environmental conservation, see the declarations of the Poverty-Environment Partnership, a network of donor agencies that includes, among others United Kingdom's DFID, the European Union, UNDP, and the World Bank.

23. In a complementary approach, the participants in Danida's Working Group on Sustainable Financing have put together a list of "Guiding Questions" (available from Ole Meretz [om@serverl.gogr.ku.dk] or Karsten Raae [info@dfextension.dk]).

SECTION 2.
FINANCING ALTERNATIVES: A DESCRIPTION

CHAPTER 5. FINANCING ALTERNATIVES: THE DESCRIPTION CARDS (DCs)

by Pablo Gutman

Box 6 shows the 52 financing options discussed in chapter 3, which are described in this chapter in more detail and grouped under 15 description cards.[24] For each group of related financing options the description card offers a short explanation of their main features, rates their suitability in regard to 11 SNRM concerns, and suggests where to go for (a) the money, (b) country examples, and (c) more information.[25]

24. To avoid repetition, each description card groups several similar financing options. The ID numbers in the description cards are the same as the numbers on the checklist in chapter one.

25. A number of good guides to financing for conservation and environmental projects have appeared recently, for example, Kloss (2002), The Conservation Finance Alliance (2002), and EPA (1999). We have tried to avoid duplication of this literature and throughout these description cards the reader will be referred several times to these and similar guides (see a detailed list in chapter 7).

BOX 6. LIST OF FINANCING OPTIONS AND WHERE TO FIND THEM IN THE DESCRIPTION CARDS

1. Public budget funding of SNRM projects and programs (DC 1)
2. Earmarking for SNRM financing a percentage of one or more general taxes collected at the national, state, or local level (DC 1)
3. Special laws delivering extra-budgetary financial support to particular social groups, geographical areas, or activities. (DC 1)
4. Tax breaks or subsidies for SNRM activities (DC 1)
5. Earmarking for SNRM financing a percentage of one or more selective taxes collected at the national, state, or local level. (e.g., taxes on alcohol, tobacco, energy, airports, ports, cruise ships, hotel and resorts charges, and others) (DC 2)
6. Earmarking for SNRM financing a percentage of one or more charges, fees, fines, and penalties related to the use (or abuse) of natural resources (e.g., water charges, groundwater charges, stumpage fees, and other natural resources extraction fees; hunting fees, entrance and user fees in protected areas; charges for emissions and feedstock, release or dumping of fertilizers, pesticides, solid wastes, toxic wastes; and environmental fines and penalties; etc.) (DC 2)
7. National, state, and local development banks' loans (DC 3)
8. Debt-for-nature swaps (DC 4)
9. Environmental funds (endowment, sinking, and revolving) (DC 4)
10. Multilateral aid and development agencies (DC 5)
11. International development banks' loans (DC 3)
12. Bilateral aid and development agencies (DC 5)
13. Community self-support groups and other forms of social capital (DC 7)
14. Secular and faith-based charities (DC 7)
15. Special fundraising campaigns (e.g., "Save the pandas," "Friends of the national park," etc.) (DC 8)
16. Merchandising and good cause marketing (DC 8)
17. Lotteries (DC 8)
18. Social and environmental NGOs (DC 9)
19. Foundations (DC 9)
20. Household saving and labor assets (DC 10)
21. Community-based enterprises, formal (co-ops) and informal (DC 10)
22. Micro-saving, micro-credit, and micro insurance (DC 10)
23. Semiformal and informal micro-finance institutions (DC 10)
24. Private investment by local businesses (DC 10)
25. Commercial banks' loans (DC 3)

BOX 6. LIST OF FINANCING OPTIONS AND WHERE TO FIND THEM IN THE DESCRIPTION CARDS (cont'd.)

26. Direct investment by nonlocal investors (e.g., in ecotourism, sustainable forestry, etc.) (DC 11)
27. Private-public partnerships (DC 11)
28. Private sector–community partnerships (DC 11)
29. Compensatory environmental investment of large developments (DC 11)
30. Venture capital (DC 11)
31. Portfolio investors (green funds) (DC 11)
32. Markets for organic, agricultural products (DC 12)
33. Markets for sustainably harvested non-timber forest products (DC 12)
34. Markets for certified forest products (DC 12)
35. Markets for certified fishery products (DC 12)
36. Resource extraction charges directly collected by the SNRM project (DC 14)
37. Allocating part of national, state, or local extraction fees to SNRM projects in the extraction areas (DC 14)
38. Markets for biodiversity conservation and bioprospecting (DC 13)
39. Markets for carbon offsets (DC 13)
40. Markets for watershed protection (DC 13)
41. Markets for landscape beauty, including ecotourism and tourism (DC 13)
42. Markets for development rights and conservation easements (DC 13)
43. Quasi-markets and non-market systems of payments for environmental services (DC 13)
44. User fees, entry fees directly collected by the SNRM project (DC 14)
45. Allocating part of national, state, or local user fees to SNRM projects in the area providing the environmental services (DC 14)
46. GEF payments for the global commons (DC 15)
47. Funds for SNRM associated with international treaties (DC 15)
48. Other possible systems of international payments for global commons (DC 15)
49. Earmarking for SNRM part of one or more international taxes (DC 15)
50. Freeing up existing public resources (e.g., redirecting money from harmful public subsidies to SNRM projects) (DC 6)
51. Encouraging the mobilization of private resources (e.g., securing tenure, promotion, regulation streamlining) (DC 6)
52. Mechanisms to increase the accessibility to and reduce the need for and cost of financing (pooling, insurance, guarantees, leverage, charrettes, financial literacy training) (DC 6)

DESCRIPTION CARD 1

1. **Public budget funding of SNRM projects and programs**
2. **Earmarking for SNRM financing a percentage of one or more general taxes collected at the national, state, or local level**
3. **Special laws to delivering extra-budgetary financial support to particular social groups, geographical areas, or activities**
4. **Tax breaks or subsidies for SNRM activities**

Public money is the largest source of financing for SNRM around the world, and probably will remain so for a long time. The four alternatives listed above are transfer payments, in that beneficiaries are not expected to reimburse the money they receive. The alternatives differ mostly in the time frame and predictability of the funding they provide.

Public budgets are negotiated annually; hence there is uncertainty regarding the amount, and period for which the financing will be available. Earmarking part of one or more general taxes such as corporate taxes, income taxes, property taxes, sale taxes, value-added tax (VAT), real state taxes, and others, may be more difficult to achieve but increases significantly long-term funding prospects. Still the amount of yearly funding available will vary with the amount of the tax collected.

Special laws delivering financial support to particular SNRM programs usually specify the amount of financing and the period for which it will be available. One drawback is that most of these laws are enacted for a limited period of time. Tax breaks or subsidies for SNRM work similarly to a budgetary support or a special law, but because they are specifically targeted to support SNRM activities they may be easier to negotiate.

- Available at what level? Mostly national or state level. Local governments in most developing countries have little tax authority.
- Mostly available to which type of developing country? To middle-income developing countries. Least-developed countries usually have little budgetary leeway and a small tax base (e.g., one cannot offer tax breaks to those who pay no taxes).
- Mostly used for which type of SNRM? Protected areas / buffer zones / rural production areas. 1 and 2 are used for all of them; 3 and 4 are more commonly used in rural production and buffer zones.
- Mostly used for which type of natural resource? Forests / wetlands / coastal areas / watersheds / agricultural lands.
- Mostly used with which type of project participant? Rural communities / landless rural poor / peasants and small farmers / large commercial farmers / local businesses / national-scale firms / government agencies / international corporations. Usually government agencies play an important role.
- Degree of difficulty in starting up: From low to high, see below under "Where to go."
- Need for government facilitation: High.
- Need for third-party facilitation or brokerage: Low to high. Vying for public money usually requires a lot of lobbying , but see below under "Where to go."
- Potential in terms of SNRM achievements: Medium.
- Potential in terms of rural poverty alleviation: Medium.

(continued)

DESCRIPTION CARD 1 (cont'd.)

- Transaction costs: from low to high, see below under "Where to go."

Where to go for the money: If the budget or the tax funds earmarked for SNRM financing are already in place early in the project design, the project developers should contact the agency responsible for the allocation of those resources (e.g., department of agriculture, environmental agency, ministry of natural resources, etc.) to check the conditions to qualify for financing and to make the case for the particular project. If the budget line is not there, the project developers can still engage in a discussion with the responsible agencies to try to include the project's financing needs in future budgets. The timeframe is completely different if the tax laws are there but no earmarking for financing SNRM programs is in place, or worse if the tax laws are not there. Passing new tax legislation requires a lot of lobbying and engaging the legislative branch of government, and it is a multiyear process. It is a full program in itself, one that may be worth pursuing on its own, but surely it will not be available to finance next year's SNRM project.

Where to go for country examples: Almost every country has some public budget for SNRM financing, usually administered by the national or state agencies in charge of rural or environmental issues. (See the case of Trinidad and Tobago in Conservation Finance Alliance [2002]). Earmarking for environmental purposes small percentages of a variety of local and state taxes, including sales taxes, personal income, and property taxes is a common practice among U.S. states and European countries. Brazil's "ICMS Ecológico" has been widely cited as a case of distributing tax revenues according to environmental criteria. Thus far, it is an initiative in 10 states, where a portion of the state collected VAT is distributed to municipalities according to an environmental index. (See case study 3 in chapter 6.)

Where to go for more information: Information on public budget allocation for SNRM with the details required to make it useful to project developers is in most cases available only in-country. When it reaches international publications it is too aggregated to be of much use. See, for example, the report by ECLAC-UNDP (2002) on financing for sustainable development in Latin America; see also an aggregate picture in McNeely (1999) and Pagiola et al. (2002). The EPA's "Guidebook of Financial Tools" (1999) discusses in detail tax earmarking for environmental purposes in the United States that, all differences accounted for, still may be of interest to developing countries' practitioners.

DESCRIPTION CARD 2

5. Earmarking for SNRM financing a percentage of one or more selective taxes collected at the national, state, or local level

6. Earmarking for SNRM financing a percentage of one or more charges, fees, fines, and penalties related to the use (or abuse) of natural resources

For many years selective taxes have been in place in most countries because they are easy to collect (custom taxes, oil and mining taxes), or they are easy to justify as a tax on social "sins" (alcohol and tobacco taxes), or a tax on the rich (airport, cars, luxury goods taxes). Selective taxes may also have a special appeal to less-developed countries, in that they can target the wealth that exists even in the poorest countries. They may even target foreigners (taxes on airports, hotels, cruse ships, rental cars, foreign corporations, luxury goods, tourist taxes). From an environmental perspective, it is doubly appealing to enforce selective taxes on activities that harm the environment, such as dirty energy or hazardous products and waste (green taxes). First, by increasing the cost of the activity in question the tax will promote a reduction on its use and second, it can represent a source of funds to invest in environmental goods.

Earmarking a percentage of these special taxes to invest in development or conservation is a widespread practice. A stronger case can be made regarding earmarking for SNRM financing a percentage of one or more fees, fines, and penalties related to the use (or abuse) of natural resources and actually, in many cases, these fines, fees, and penalties have been enacted specifically with the purpose of financing the management of the natural resource in question. There are many of these types of fees: water charges, groundwater charges, minerals and oil extraction fees, stumpage fees, and other natural resource extraction fees; hunting fees, entrance and user fees in protected areas; emission charges; feedstock charges; and charges on fertilizers, pesticide, solid wastes, and toxic wastes.

Specific taxes and charges for natural resources may also have drawbacks that need to be addressed. First, taxes and charges on natural resources may negatively impact the rural and urban poor whose livelihood depends on free or low-cost access to natural resources. Second, although most charges for natural resources use are considered low, there are also examples of cash-thirsty national or local governments that, through overcharging, have chased away the golden goose.

- Available at what level? National, state, and local. In many cases decentralization processes have given local governments the right to tax and charge for natural resource extraction.
- Mostly available to which type of developing country? All types.
- Mostly used for which type of SNRM? Protected areas / buffer zones / rural production areas.
- Mostly used for which type of natural resource? Forests / wetlands / coastal areas / watersheds / agricultural lands.
- Mostly used with which type of project participant? Rural communities / landless rural poor / peasants and small farmers / large commercial farmers / local businesses / national-scale firms government agencies / international corporations.
- Degree of difficulty in starting up? From low to high, see below under "Where to go."

(continued)

DESCRIPTION CARD 2 (cont'd.)

- Need for government facilitation: high.
- Need for third-party facilitation or brokerage: low to high. Vying for public moneys usually requires a lot of lobbying, but see below under "Where to go."
- Potential in terms of SNRM achievements: medium.
- Potential in terms of rural poverty alleviation: medium, but see caveat above.
- Transaction costs: from low to high, see below under "Where to go."

Where to go for the money: If the selective tax or the charges and fees are in place and portions of them are already earmarked for SNRM financing, the project developers should contact the agency responsible for the allocation of those resources early on (e.g., department of agriculture, environmental agency, ministry of natural resources, etc.) to check the conditions to qualify for financing and to make the case for the particular project. The timeframe is completely different if the selective tax laws are there but no earmarking for financing SNRM programs is in place, or worse, if the tax laws or charge systems are not there. Passing new tax legislation requires a lot of lobbying, engaging the legislative branch of government, and it is a multiyear process. It is a full program in itself, and one that may be worth pursuing on its own, but practitioners should not count it among the possible financing sources for next year's SNRM project. This may apply also when trying to enact new charges and fees for natural resources or trying to earmark a portion of the existing ones for SNRM financing, but in many countries levying charges and fees is an administrative decision that does not require a new law; therefore it may be easier to pursue.

Where to go for country examples: Some variety of specific taxes, and charges, fees, and fines for natural resource use and abuse are in place in most countries, although experts agree that in most cases charges and fees for renewable natural resource use are below what they should be. Information regarding earmarking is more fragmentary. A well known case is Costa Rica's FONAFIFO (National Fund for Forest Financing), which receives one-third of the country's fuel sales tax. See also the Quito water payments system in Conservation Finance Alliance Guide (2002), and the Niger fuel taxes in Richards (1999).

Where to go for more information: The detailed information required by a project developer looking for financing is only available in-country. On the other hand, there are many references available about tax earmarking in general. OECDs Environmental Financial Strategy (2002) gives many leads for developing countries, and the OECD Environmental Directorate has published a great deal about charges, fees, and specific taxes in OECD country members. The EPA's "Guidebook of Financial Tools" (1999) has a detailed discussion of U.S. experiences in earmarking specific taxes, charges, and fees at local and state levels for environmental purposes. FONAFIFO's Web site, http://www.go.cr/fs/sa.html (in Spanish) has the updated information on Costa Rica's experience, which is also reviewed in chapter 3 of Pagiola et al. (2002).

DESCRIPTION CARD 3

7. National, state, and local development banks' loans

11. International development banks' loans

25. Commercial banks' loans

Commercial bank loans have thus far played a limited role in financing SNRM projects in developing countries. Both banks and would-be borrowers have been wary that the high risks and long maturing periods of SNRM projects make them unfit for commercial bank loans. Yet there are examples in which commercial banks have participated in financing SNRM projects, as intermediaries to disburse public moneys and also as co-lenders or lenders where collateral, government warranty schemes, and pulling money from several sources all reduce the risks both for lenders and borrowers. By contrast, development banks, both national or international, are a more active source of SNRM financing, owing to their special focus on development lending, long-term loans, and lower interest rates.

In middle-income and large developing countries, national, state, and local development banks are a major source of financing. For instance, in several years during the 1990s the annual money loaned by Brazil's development banks surpassed the money loaned worldwide by the World Bank. International development banks play a more important role for low-income developing countries. The major players here are the World Bank, and the four continent-wide banks, IDB in Latin America, ADB in Asia, AFD in Africa, and EBRD in Europe. There are also some 30 regional development banks that lend to smaller groups of countries. Traditionally international and regional development banks lend only to governments to invest in specific projects and programs. Recently there has been a move among these banks to lend for sectoral or budgetary support and also to lend directly to private businesses.

- Available at what level?: National, state, and local but in many cases requires going through the national headquarters, or government department in charge of the loan program.
- Mostly available to which type of developing country? In-country development banking is more important in middle-income and large countries. International and regional banks are more important to low-income and less-developed countries.
- Mostly used for which type of SNRM? To the extent that loans must be repaid from the project revenues they may appeal more to rural production and buffer zone projects. But in many cases the government pays back the loans out of its regular budget. In such cases, this is not a loan but a budgetary transfer from the point of view of the SNRM project (see Description card 1).
- Mostly used for which type of natural resource? Forests / wetlands / coastal areas / watersheds / agricultural lands.
- Mostly used with which type of project participant? Rural communities / landless rural poor / peasants and small farmers / large commercial farmers / local businesses / national-scale firms / government agencies / international corporations. Government agencies are involved in most cases.
- Degree of difficulty in starting up? From low to medium.
- Need for government facilitation: High if loan comes through a government agency.

(continued)

DESCRIPTION CARD 3 (cont'd.)

- Need for third-party facilitation or brokerage: Low.
- Potential in terms of SNRM achievements: Medium.
- Potential in terms of rural poverty alleviation: Medium.
- Transaction costs: Low.

Where to go for the money: Procedures to borrow from in-country public and commercial banks vary from bank to bank. Usually the staff of public agencies that work in rural development and conservation are aware of opportunities to obtain financing from public or commercial banks, but project developers may want to check directly with the banks' Web sites or offices. Most international development banks have a well-developed Web presence and offices in many developing countries. Most of the money from international development banks is channeled through the government, and the staff of public agencies that work in rural development and conservation are aware of existing credit lines. But the staff of government agencies may be unaware of the many small funds and grants that are disbursed by international development banks directly to local undertakings, so going directly to the sources may improve the outcome.

Where to go for country examples: Lenders are more outspoken than borrowers, and the Web sites and bookshops of international development banks are the best place to find country examples including information on ongoing projects. An interesting developing-country experience with commercial banks' lending for SNRM is Brazil's "Green Protocol." (A description may be found in Bayon et al 2002).

Where to go for more information: There is no single source of information. The Web sites of the large international development banks are good points of reference (www.worldbank.org; www.iadb.org; www.adb.org; www.afd.org). Information on country-level public and private banks should be searched locally, but may be difficult to find, since in most developing countries, banks, be they public or private, have little public relations tradition.

DESCRIPTION CARD 4

8. Debt-for-nature swaps

9. Environmental funds (endowment, sinking, and revolving)

Debt-for-nature swaps have been extensively used since the 1980s, particularly in Latin America. They entail redeeming a portion of a government's external debt in exchange for the developing country's government using an equivalent amount of local currency to finance SNRM projects, usually through an environmental fund. They may be government-driven initiatives; for example, the U.S. government has several of these initiatives for Latin American countries and in tropical forest countries. More commonly, debt-for-nature swaps have been pursued by international NGOs that either act as a broker among the several participants—creditor country, debtor country, local NGOs—or directly pay a portion of a developing country's external debt in exchange for the country investing in SNRM. Debt-for-nature swaps amounted to approximately 1 billion dollars by early 2000 (see Kloss 2002) and although this is a fairly small amount when compared with developing countries' foreign debt, it still is significant in terms of SNRM project financing. The ongoing international negotiations to cancel the external debt of a group of approximately 40 highly indebted poor countries (HIPCs) opens an opportunity to further promote debt-for-nature agreements.

There is a large variety of Environmental Funds (EFs) around the world. They may get their money as a lump sum initial endowment, have some ongoing sources of income (e.g., earmarked taxes, charge fees, fines, etc.), or a combination of both. EFs include:

- Large public or public-private EFs, investing in many types of projects and programs, as is the case with many national EFs in Eastern European countries.
- Small, single-purpose EFs, devoted to financing one SNRM project.
- Endowment funds, where only the income from the capital may be used.
- Revolving funds where all the money in the fund is used in the form of loans that will eventually be collected and available for a next cycle of financing.
- Sinking funds, to be entirely used up in a designated period of time.

Money for EFs can come from country sources, bilateral donors, international NGOs, international agencies (e.g., GEF has contributed to several EFs), debt-for-nature swaps, and more. Some international agencies such as the International Fund for Agricultural Development (IFAD) and the Global Environmental Facility (GEF) are a type of international fund. The former finances rural development projects including SNRM, and the latter is mandated to finance environmental projects. Both of these funds get their resources from periodical contributions from rich countries.

- Available at what level? Debt-for-nature swaps are an international financing alternative. EFs are usually national or local, but they may get funds from international sources.
- Mostly available to which type of developing country? All, but there are more opportunities for swaps in less-developed countries and more opportunities of in-country EFs in middle-income or large developing countries that have more resources available.
- Mostly used for which type of SNRM? Protected areas / buffer zones / rural production areas.

(continued)

DESCRIPTION CARD 4 (cont'd.)

- Mostly used for which type of natural resource? Forests / wetlands / coastal areas / watersheds / agricultural lands.
- Mostly used with which type of project participant? Since EFs and swap-based schemes usually give grants, they are expected to do so to the benefit of the worse-off.
- Degree of difficulty in starting up? Medium to high.
- Need for government facilitation: High in swaps, low to medium in EFs.
- Need for third-party facilitation or brokerage: High in swaps, medium to high in EFs.
- Potential in terms of SNRM achievements: Medium.
- Potential in terms of rural poverty alleviation: Medium.
- Transaction costs: Medium to high.

Where to go for the money: SNRM project developers should inquire whether or not the project qualifies for financing from an ongoing or soon-to-be debt-for-nature swap, EFs in the country in question, or an international fund (e.g., IFAD, GEF). But if debt-for-nature swaps or EFs do not already exist, it may be possible to build them up as part of the SNRM project. There are good examples and there is sufficient expertise to refer to when engaging in a discussion of the pros, cons, and methods (see below).

Where to go for country examples: In the next chapter we discuss two cases of environmental funds (Uganda and South Africa), but many more are available at the Interagency Planning Group on Environmental Funds (http://www.biodiversityeconomics.org/pdf/topics-222-00.pdf). See also the Conservation Finance Alliance Guide (2002) at www.conservationfinance.org. Several cases of debt-for-nature swaps are presented in Quintela et al (2002) and in Kloss (2002).

Where to go for more information: Two international NGOs with headquarters in the United States, The Nature Conservancy and Conservation International (CI) have been very active brokering debt-for-nature operations, and their Web sites are a good point of entrance (www.tnc.org; www.ic.org). WWF has pioneered the establishment of EFs (www.panda.org). See also the the Conservation Finance Alliance Guide (2002) (www.conservationfinance.org) and the Web site of the Planning Group on Environmental Funds mentioned above.

DESCRIPTION CARD 5

10. Multilateral aid and development agencies

12. Bilateral aid and development agencies

Multilateral and bilateral sources of nonreimbursable financing are known, in the international policy parlance, as Official Development Assistance (ODA). As if to complicate things, many statistics also count loans from the International Development Agency (operated by the World Bank) and other soft credit lines as ODA. In regard to loans or credits, even the softest of them eventually must be repaid, so it is better to think of them as loans (as discussed in chapter 3).

Most multilateral aid and development agencies are part of the UN family. UNDP is UN's overall development agency, whereas FAO and IFAD focus on agriculture and UNEP on the environment. IFAD has resources to grant but that is not the case with UNDP, FAO, and UNEP, which are usually low on funds (UNDP sometimes manages third-party resources). The GEF and other international treaties that provide funds for environmental projects are also multilateral sources of financing (and are discussed in DC 15).

Although rich countries do fund multilateral agencies, they channel most of their international aid and development grants through their own development agencies—usually located at their foreign affairs ministry—on a bilateral, country-by-country basis. Bilateral aid is a significant source of resources in less-developed and small countries where it may represent a substantial percentage of the public investment capacity. There is a sort of division of labor among donor countries with some focusing on a particular group of countries, or a particular group of activities to be supported. There is also some coordination through periodical country donor meetings (in many cases chaired by the UNDP country office). There are different kinds and number of strings attached to bilateral aid that may make it more or less attractive to a particular SNRM project (e.g., money only to buy in the donor country). Apart from its member-country aid agencies the European Union has its own aid program.

As another sort of international donor we may include public or semipublic international institutions or networks, such as the Consultative Group on International Agricultural Research (CGIAR), which do not provide money but can be an important source of technical advice for an SNRM initiative.

- Available at what level? All the above are international sources of grant money.
- Mostly available to which type of developing country? Multilateral development aid is unevenly distributed among developing countries. Small, rich countries tend to spend their bilateral aid in the least-developed countries (e.g., sub-Saharan Africa). Large, rich countries tend to use their bilateral aid as part of their foreign policy agenda: the United Kingdom favors the Commonwealth, France the French-speaking countries, the United States the hot spots of its foreign policy, and so on.
- Mostly used for which type of SNRM? Protected areas / buffer zones / rural production areas.
- Mostly used for which type of natural resource? Forests / wetlands / coastal areas / watersheds / agricultural lands.
- Mostly used with which type of project participant? International and bilateral aid purports to get to the poor but usually local and foreign providers and governmental agencies claim part of it.

(continued)

DESCRIPTION CARD 5 (cont'd.)

- Degree of difficulty in starting up? From low to medium.
- Need for government facilitation: Low if aid can be directly disbursed to local stakeholders, medium to high if it needs to go through the recipient country's government.
- Need for third-party facilitation or brokerage: Low to medium.
- Potential in terms of SNRM achievements: Medium.
- Potential in terms of rural poverty alleviation: Medium.
- Transaction costs: Low.

Where to go for the money: All multilateral and bilateral donors have well-developed Internet resources that may provide initial information regarding funding availability and procedures to submit proposals. UNDP country offices are a good entry point for checking the availability of financing from multilateral aid programs for your country and type of project. Other UN agencies usually have regional offices or representatives affiliated with the UNDP country office, or staff assigned to ongoing regional projects. Most donor countries' embassies have personnel to handle queries about their country aid programs. Large donors may also have offices of their aid agency in recipient countries (e.g., USAID offices). Project developers may contact the head offices of all the above, but increasingly, project level funding decisions are delegated to the country offices.

Where to go for country examples: Several of the cases presented in the next chapter have been partially financed by multilateral or bilateral donors. Many more examples can be found on multilateral and bilateral donor Web sites.

Where to go for more information: The best overall analysis and information regarding Official Development Assistance, both bilateral and multilateral, comes from the OECD Development Assistance Committee and can be found at www.oecd.org/dac. But OECD/DAC information and analysis are at the country or sector level, so they may be of little assistance in looking for project-level financing information. For the latter, is best to go to the Web site of each individual donor. A complete list of addresses can be found on the GEF Web site at http://www.gefweb.org/.

DESCRIPTION CARD 6

50. Freeing up existing public resources

51. Encouraging the mobilization of private resources

52. Mechanisms to increase the accessibility to and reduce the need for and cost of financing

Freeing up existing resources and redirecting them to better uses may be an important source of government money for SNRM. Some have called this and similar saving and redirection schemes "zero financing" opportunities. Pundits have focused on the potential of eliminating harmful subsides, such as energy and agricultural input and output subsidies. They argue that these subsidies have little social benefit and encourage natural resources misuses. Unfortunately eliminating existing subsidies is not a simple task. What looks like a waste of money to many, surely does not look that way to its beneficiaries. To complicate the issue, the beneficiaries of the subsidies and the would-be beneficiaries of the subsidies' elimination may even be in different countries (e.g., the farmers in Europe, the United States, and Japan, and the farmers of developing countries).

Another avenue for reducing financing needs rests with measures to encourage the mobilization of private resources. For example, regarding SNRM projects, there is a large body of evidence supporting the fact that clarifying and securing participants' rights to natural resources will increase their willingness to invest their own time and savings in the resources' sustainable management, hence reducing the needs for external financing. The range of possible systems is wide—from individual ownership of agricultural plots to communal ownership of pastures and forest areas, to rights to use, harvest, or collect wild species in buffer zones and protected areas, etc. These rights to natural resources can be what the local community brings to a partnership with external sources of capital, or may be used as collateral to a loan reducing the cost of borrowing.

Finally, there is a large array of instruments to reduce the cost of and increase the accessibility to financing—among them pooling financing, which consists of combining several projects in the search for financing. The benefits of pooling include the following: (a) the presence of more profitable components may facilitate the financing of the less profitable ones, (b) it reduces transaction costs, (c) it gives access to financing sources for which each individual project may not qualify, and (d) it increases visibility and public relation outreach.

Private or public insurance or guaranteed schemes reduce the cost of borrowing, increase the availability of loans, and may also attract investors. They are widely used in private businesses and international lending but thus far have been little used in SNRM projects.

Leveraging has a kind of "domino effect" on project financing—if the project obtains financing from x, z will be more willing to finance the project. Leveraging may be formal or informal, with the latter being a little confusing for the project developer since it is not always clear who is leveraging whom. In any case, leveraging is a standard in SNRM financing in that few financial sources want to participate alone.

According to EPA's "Guidebook of Financial Tools" (1999), a charrette is a forum where agencies or project developers meet finance experts from the public and private sectors to request advice on financing issues. Public sector

(continued)

DESCRIPTION CARD 6 (cont'd.)

participants may come from national or state agencies involved in the project. Private sector experts may come from business and industry, banks and other financial institutions, and the consulting firms. Typically, a charrette lasts a half-day beginning with a description of the project's financing needs, followed by questions and answers and recommendations by participant experts as individuals and/or as a group. The proceedings are taped and the results are summarized.

Finally increasing financial literacy, financial training of project developers, and financial advice from experts will usually result in better financing arrangements for SNRM projects, and there are many ways formal and informal, to pursue it (see below and also chapter 7, "Accessing references and resources").

- Available at what level? Freeing public resources and encouraging the mobilization of private resources is mostly a national government endeavor, but the same approach can be useful at state and local levels and the conceptual approach may even be useful to audit nongovernment institutions. Mechanisms to increase accessibility and reduce the need for and cost of financing are available at all levels, but may be more significant at the project or program level.
- Mostly available to which type of developing country? All types.
- Mostly used for which type of SNRM? Protected areas / buffer zones / rural production areas.
- Mostly used for which type of natural resource? Forests / wetlands / coastal areas / watersheds / agricultural lands.
- Mostly used with which type of project participant? All types.
- Degree of difficulty in starting up? Low (Mechanisms to increase….) to high (Freeing up public resources…).
- Need for government facilitation: Low (Mechanisms to increase….) to high (Freeing up public resources…).
- Need for third-party facilitation or brokerage: Medium to high.
- Potential in terms of SNRM achievements: Medium to high.
- Potential in terms of rural poverty alleviation: Medium to high.
- Transaction costs: Low (Mechanisms to increase….) to high (Freeing up public resources…).

Where to go for the money: These alternatives are not about new money but about how to access (or how to better access) existing money.

Where to go for country examples and for more information and support: Pagiola et al. (2002) give some examples of recent reductions in energy and water subsidies in several developing countries (and more can be found on the World Bank's Web site). Unfortunately there is no indication that the freed money went to support SNRM initiatives (actually there is no indication where it went). EPA's "Guidebook of Financial Tools" (2002) (www.epa.gov/efinpage/guidebk) is a good source of examples on how to save on financing needs. To increase SNRM financing literacy refer to the Training Guide of the Conservation Finance Alliance at www.conservationfinance.org. Other guidebooks and Web resources listed in chapter 7 offer detailed financing guidelines, in some cases even providing the spreadsheets for the number-crunching of a financial plan. SNRM practitioners looking for accessible advice may find it in nearby universities' business schools that usually have free consultation programs, or with international rural development and conservation agencies and NGOs.

DESCRIPTION CARD 7

13. Community self-support groups and other forms of social capital

14. Secular and faith-based charities

Community self-support groups and local secular and faith-based charities may be a source of money and in-kind financing for an SNRM project. Even if these contributions are small they may be crucial in that they will increase the local community's buying-in and ownership of the SNRM project.

From a broader perspective, community self-support groups and local secular and faith-based charities are just two of the many possible expressions of a community's social capital. A community's social capital encompasses all types of local organizations that increase the community's capacity to discuss, agree on, and implement shared goals, as well as its capacity to campaign for its goals and to leverage support and resources. Social capital is an important component in most SNRM projects because, in many cases, a natural resource management project will involve the management of common resources (a local forest, a watershed, a conservation area). Hence, SNRM projects usually require community-level decisions regarding land uses, natural resource management practices, and so on. In turn, these decisions require community-level discussions, agreements, and actions. In addition, most rural development or conservation projects need to leverage external resources, and here again a high level of social organization can increase the visibility and appeal of the SNRM project among potential funders.

- Available at what level? Mostly local level (but in some cases there are national federations of local organizations).
- Mostly available to which type of developing country? All types.
- Mostly used for which type of SNRM? Protected areas / buffer zones / rural production areas.
- Mostly used for which type of natural resource? Forests / wetlands / coastal areas / watersheds / agricultural lands.
- Mostly used with which type of project participant? Rural communities, landless rural poor peasants, and small farmers.
- Degree of difficulty in starting up? Low to medium.
- Need for government facilitation: Low.
- Need for third-party facilitation or brokerage: Low.
- Potential in terms of SNRM achievements: Medium.
- Potential in terms of rural poverty alleviation: Medium.
- Transaction costs: Low.

Where to go for the money: The investment of community resources needs to be brokered as part of the consultations with the local project participants. Secular and faith-based charities may already be established in the community or the SNRM promoters may scout them based in their thematic or geographic focus.

Where to go for country examples: All international and national agencies and NGOs that work on SNRM or ICDPs in developing countries' rural areas have examples of local stakeholders' co-financing of rural conservation and development programs. See, for example, in chapter 6 the case of Ecuador's participative forest development in the Andes, and the case of the El Pital Agroforestry project on CARE's

(continued)

DESCRIPTION CARD 7 (cont'd.)

Web site (http://www.care.dk/eng/projects/nicara.htm).

Where to go for more information: Check the Web sites of FAO, IFAD, Oxfam, WWF, CI, and CARE for examples and guidelines on how to mobilize local community support for SNRM projects. You may also visit the GDRC Virtual Library of Micro Credit at http://www.biodiversityeconomics.org/pdf/topics-222-00.pdf.

Elephants conveying a load of elephant grass fodder. Manas National Park. Bhutan.

DESCRIPTION CARD 8

15. Special fundraising campaigns ("Save the pandas," "Friends of the national park," etc.)

16. Merchandising and good cause marketing

17. Lotteries

Special fundraising campaigns (to save the pandas, support a national park, adopt a village, etc.); merchandizing (e.g., selling products associated with the SNRM project, in park shops or NGO shops); and good cause marketing (e.g., selling standard products with a mark-up to people willing to pay a premium to support a good cause) are all fund raising strategies extensively used by NGOs, government agencies (e.g., national parks), and international agencies (e.g., UNICEF). Sometimes the money collected will support the full array of activities undertaken by the fundraising institutions, but there are also many cases where the drive is in support of a particular SNRM project. However, these financing options are seldom available to pay for the initial SNRM project costs; they are typically a source of income after the project is well established.

According to the WWF-US's Center for Conservation Finance (see Spergel 2001) earmarking a percentage of national or state lotteries for conservation has raised large amounts of money for SNRM projects in many countries. For example, in the United States the Colorado State Lottery raises over 60 million dollars a year for conservation programs in that state and WWF-Netherlands has received tens of millions of dollars from the Dutch national lottery to finance SNRM projects in developing countries.

- Available at what level? International and national levels.
- Mostly available to which type of developing country? Middle-income developing countries may target their own wealthy populations, but poorer countries may find a market in foreign tourists and foreign countries. Playing the lottery, however, is popular at all income levels.
- Mostly used for which type of SNRM? Protected areas, or other conservation programs in that they are more "marketable" than rural development, but highlighting the social dimension of SNRM projects may make them marketable as well.
- Mostly used for which type of natural resource? Any one of them where a well known feature (e.g., a flagship species) attracts support.
- Mostly used with which type of project participant? Rural communities, as the final recipients, and NGOs and government agencies as the intermediaries.
- Degree of difficulty in starting up? Low to high depending on the scale.
- Need for government facilitation: High in the case of earmarking part of public lottery revenues, low for all others.
- Need for third-party facilitation or brokerage: Medium to high to reach a national or international audience, low if it is an on-site initiative.
- Potential in terms of SNRM achievements: Low to medium.
- Potential in terms of rural poverty alleviation: Low to medium.
- Transaction costs: Low.

(continued)

(*) To avoid repetition, each description card groups several similar financing options. The ID numbers in the description cards are the same as the numbers on the checklist.

DESCRIPTION CARD 8 (cont'd.)

Where to go for the money: For the SNRM project developer there are the options of (a) tapping into the income of an ongoing system of fundraising campaigns, merchandizing, good cause marketing, or lotteries; (b) asking for the support of these ongoing programs to help set up a fundraising scheme for the new SNRM project in question; and (c) trying to put a scheme in place on her/his own. We strongly suggest first trying options (a) and (b).

Where to go for country examples: Rich countries such as the United States, the Netherlands, and the United Kingdom have more examples of earmarking a portion of lottery incomes for conservation programs than poor countries. Several developing countries, such as South Africa, and NGOs such as WWF have had good experiences with special fundraising campaigns, merchandizing, and good cause marketing. (See www.panda.org).

Where to go for more information: Consult EPA's "Guidebook of Financial Tools" (1999) (www.epa.gov/efinpage/guidebk); the Training Guide of the Conservation Finance Alliance at www.conservationfinance.org; and the Web sites of WWF and The Nature Conservancy for more on these alternatives.

DESCRIPTION CARD 9

18. Social and Environmental NGOs

19. Foundations

Most SNRM projects in developing countries include among their stakeholders a local or national NGO. Teams and resources from international NGOs also support many SNRM projects in developing countries. NGOs may bring their own financing resources and leverage financing from other sources or channel resources from governments, donor agencies, and the public at large. NGOs are also an important source of expertise, training, and advocacy for SNRM. Several NGOs have been in the forefront of developing and applying innovative financing instruments including environmental funds, debt-for-nature swaps, integrated conservation and development projects, certification of green products, fundraising campaigns, and PES schemes.

Several middle-income and large developing countries have national foundations that grant money to a variety of initiatives and projects, and there is a large number of foundations in rich countries that support social and environmental initiatives in developing countries. There are thousands of NGOs and foundations in the world, but the major players (in terms of budget and projects) number in the dozens, and are mostly headquartered in rich countries.

Foundations provide money in accordance with their priorities regarding issues, countries, institutions, and beneficiaries. It is rare that an NGO would give as much money as a foundation does. NGOs prefer to be an active partner in the project, so it may be sensible to approach them much earlier in the SNRM project development.

- Available at what level? Local, state, national, and international.
- Mostly available in which type of developing country? NGOs are present in all developing countries. Foundations tend to concentrate in rich countries.
- Mostly used for which type of SNRM? Protected areas / buffer zones / rural production areas. But priorities vary widely among foundations and NGOs.
- Mostly used for which type of natural resource? Forests / wetlands / coastal areas / watersheds / agricultural lands.
- Mostly used with which type of project participant? Usually NGOs and foundations focus on the poor and tend to bypass government agencies.
- Degree of difficulty in starting up? From low to medium.
- Need for government facilitation: Low.
- Need for third-party facilitation or brokerage: Low to medium.
- Potential in terms of SNRM achievements: Medium.
- Potential in terms of rural poverty alleviation: Medium.
- Transaction costs: Low to medium.

Where to go for the money: Expect stiff competition for grant money. We suggest that the SNRM project developer undertake both a bottom-up and top-down approach. The bottom-up approach would consist of an assessment of which NGOs or foundations are or have been active in the local area of the project, and then pursuing this lead up to the headquarters of these institutions. The top-down approach involves contacting the headquarters of large NGOs and foundations and assessing their

(continued)

DESCRIPTION CARD 9 (cont'd.)

interest in the goals and locations of the SNRM project.

Where to go for country examples: Most of the SNRM projects discussed in the following chapter have included national and international NGOs. A few mention receiving money from private foundations. Large NGOs and foundations (e.g., Oxfam, CARE, WWF, CI, The Nature Conservancy, and the Ford Foundation) discuss many such cases on their Web sites. (Visit www.panda.org or www.conservation.org.) An example of a project partially funded by the Ford Foundation is the Zimbabwe Maheney wildlife project, which is discussed in http://www.fordfound.org/publications/recent_articles/docs/Solutions_68-73.pdf.

Where to go for more information: The Foundation Center (www.fdncenter.org) has an abundance of information about thousands of foundations including what they fund and which countries they invest in, as well as links to Web sites. Although it mostly focuses on the over-70,000 U.S. foundations, it also has information on non-U.S. ones. The web site of the Worldwide Initiative for Grantmakers Support www.wengeb.org is also a point of entrance to numerous foundation sites. A directory of Web sites of conservation NGOs around the world can be found at http://www.lib.kth.se/~lg/front.htm. The National Wildlife Federation–U.S. (www.nwf.org) has published an extremely comprehensive guide to U.S. conservation NGOs.

DESCRIPTION CARD 10

20. Household savings and labor assets

21. Community-based enterprises, formal (co-ops) and informal

22. Micro-saving, micro-credit, and micro-insurance

23. Semiformal and informal micro-finance institutions

24. Private investment by local businesses

Mobilizing the participant households' resources is crucial to the local ownership of the SNRM project. In the last 20 years, rural development projects have had many experiences in this. For example, households may invest in improvements of their own plot in order to benefit from the new opportunities that the SNRM project would bring to the area. Cooperatives may be organized to sell the new products that the SNRM project will deliver. Revolving credit schemes based in formal and informal financing arrangements such as the well-known Grameen bank from Bangladesh can be put in place. Participants can also contribute their labor—for example by working in their plots and in communal lands, operating and maintaining new or existing infrastructures, and more. New activities generated by the SNRM project may also spur investment by current or would-be local businesses ranging from local capital investing in lodging for tourists to the roadside sale of handicrafts. According to the SNRM project design these fringe commercial activities may be seen as part of the project and as such be included in its financing schemes or may be considered as positive spillover of the SNRM project but not part of it.

Experience shows that in order to motivate rural households to invest in SNRM, projects need to feature a good prospect for short-term benefits within the levels of risk acceptable to the participants. There is a trade-off here in that the smaller the share of the family income invested in the success of the SNRM project the smaller the risk it entails, but as the prospective benefits decrease so may the interest of the local participants.

- Available at what level? Local.
- Mostly available to which type of developing country? All types.
- Mostly used for which type of SNRM? Rural production areas and buffer zones where chances of investment in SNRM projects having a clear return to local dwellers are larger.
- Mostly used for which type of natural resource? Forests / wetlands / coastal areas / watersheds / agricultural lands.
- Mostly used with which type of project participant? Peasants and small farmers / large commercial farmers / local businesses.
- Degree of difficulty in starting up? From low to medium.
- Need for government facilitation: Low.
- Need for third-party facilitation or brokerage: Low.
- Potential in terms of SNRM achievements: Medium.
- Potential in terms of rural poverty alleviation: Medium.
- Transaction costs: Low.

Where to go for the money: This is a locally based activity to be developed by the SNRM project team. Similar experiences in the project

(continued)

DESCRIPTION CARD 10 (cont'd.)

area or elsewhere can be sources of ideas on how to proceed when trying to get local households to invest in the project.

Where to go for country examples: Several projects discussed in the following chapter include financing from the local population. Most cases of green production or local ecotourism will include partial financing by the local participants. See also Pagiola et al. (2002) for the description of shade-grown coffee in Mexico and El Salvador; Mayers and Vermulen (2002) for a discussion of India and Nepal's community forest projects; and the IFAD and FAO Web sites for more experiences and ways to organize local financing schemes.

Where to go for more information: Look in FAO's People Participation Program at http://www.fao.org/sd/Ppdirect/PPre0004.htm for a discussion on how to mobilize local savings, and at http://www.fao.org/sd/Ppdirect/PPan0015.htm for experiences with informal local financing. See IFAD's experience with financing in rural areas at www.ifad.org/pub/other/rural_e.pdf.

DESCRIPTION CARD 11

26. Direct investment by nonlocal investors (e.g., ecotourism, sustainable forestry, etc.)

27. Private-public partnerships

28. Private sector–community partnerships

29. Compensatory environmental investment of large developments

30. Venture capital

31. Portfolio investors (green funds)

When discussing private financing of SNRM in developing countries we may refer to two different issues. One is private businesses' (national or transnational) financing of SNRM on part or all of the large tract of natural resources they directly own, control, or use in developing countries (these resources may involve or include minerals, oils, forests, plantations, ranching, large farming, food and feed industry, tourism and hotel chains, etc.) The other is private businesses' financing of SNRM projects that have participation from small farmers, the rural poor, and rural communities. Perhaps needless to say, the former dwarfs the latter in terms of the money and in many cases also in terms of the natural resources involved. However, we are not addressing it here since this survey focuses on financing SNRM projects among the rural poor.

There are many reasons to try to attract extra-local private investors to the financing of SNRM projects in the poor rural areas of developing countries: these investors may contribute resources far larger than the ones available elsewhere; they can bring much-needed technical and commercial knowledge; they can bridge local SNRM projects with countrywide or worldwide markets; and so on. There are also legitimate concerns, particularly regarding the distribution of costs and benefits among the would-be partners, and also regarding the risk of natural resource overexploitation in order to meet the benefit expectations of the private businesses and the local communities.

Private business financing of SNRM projects in rural areas of developing countries may include direct investments that take up one or more components of the SNRM project (e.g., the hospitality component of an ecotourism project); or private-public partnerships (e.g., developing publicly owned natural resources); or private sector–community partnerships (e.g., private industries supporting and buying a community forest production). A different, more grant-type financing emerges when large private developments—such as dams, oil and mining companies—pay for environmental or social projects as a compensation for the environmental or social disruption they may cause. Yet another source is private business financing of environmental initiatives as part of its public relation campaign, or business ethics.

In rich countries there is an increasing number of investment funds that keep "green portfolios." These are funds that invest in shares of green or socially conscious businesses, but there are few similar endeavors in developing countries (see below for a reference to Brazil's green fund). Even more farfetched is the prospect of venture capitals financing SNRM projects (venture capital funds high-risk investments in new and promising businesses in exchange for a share of future earnings). Still, some future breakthrough, for example in the profitability of bioprospecting, may put these financing mechanisms within the reach of SNRM projects.

(continued)

DESCRIPTION CARD 11 (cont'd.)

- Available at what level? International and national.
- Mostly available to which type of developing country? All, although less-developed countries may have to rely more on transnational business.
- Mostly used for which type of SNRM? To the extent that the financing is profit-oriented, these mechanisms may appeal more to rural production and buffer zone projects, and protected areas with high tourism potential.
- Mostly used for which type of natural resource? Forests / wetlands / coastal areas / watersheds / agricultural lands.
- Mostly used with which type of project participant? Rural communities / small farmers / large commercial farmers / national-scale firms / government agencies / transnational businesses.
- Degree of difficulty in starting up? Medium to high.
- Need for government facilitation: Low for direct private investment. For private-public partnership and private sector–community partnership it can go from low (if the legal framework and institutions to support these types of partnerships are already in place) to high (if those are missing).
- Need for third-party facilitation or brokerage: Medium to high.
- Potential in terms of SNRM achievements: Low to medium.
- Potential in terms of rural poverty alleviation: Low to medium.
- Transaction costs: Low for direct private investment, high for all others.

Where to go for the money: Engaging private businesses in financing SNRM projects in poor rural areas is case-by-case work. Project developers should look around to see which businesses are already active in the project area and/or in the products and services the SNRM project will deliver (from tourism to sustainable forest management). On the national level they should check which private businesses have invested in similar projects elsewhere in the country; look for ideas in other countries' experiences (e.g., which type of firms were more interested? who sold them the SNRM project idea?); ask business chambers and public agencies for leads to potentially interested private firms, and establish exploratory contacts with potential private investors. Even if those individuals decline to invest in the project, the discussion may give the SNRM project developers a better understanding of how to make the project proposal more appealing to private investors.

Where to go for country examples: Chapter 6 presents summaries of several private business- community projects, such as South Africa's outgrower schemes, Bolivia's Noel Kempff Climate Action project, and Namibia's Torra Conservancy. Bayon et al. (2000) discuss The Terra Capital Fund and EcoEnterprise funds, both green funds consisting of private, public, and NGO capital to invest in environmental projects in Latin America.

Where to go for more information: Chapter 3 discusses private sector–community partnerships based in the recent Mayers and Vermulen 2002 review of company-community forestry partnerships and Roe, Grieg-Gran, and Schalken's (2001) review of private sector–community tourism. Both texts can be accessed at www.iied.org.

DESCRIPTION CARD 12

32. Markets for organic agricultural products

33. Markets for sustainably harvested non-timber forest products

34. Markets for certified forest products

35. Markets for certified fishery products

From early on, project developers have been aware that SNRM may not just produce more goods but different goods as well, green goods that may attract a premium at the marketplace. Organic food, ecological coffee, non-timber forest products, certified timber, certified fish, and many other sustainably produced goods compete today in the global marketplace, in some cases aiming to conquer a small market niche, in other cases vying to become tomorrow's market standard.

Financing SNRM projects with the sale of green products is undoubtedly attractive in that it would match SNRM efforts with markets willing to pay for them. Many examples of successes and failures are offered, feeding a lively polemic as to the potential and limitation of green products to foster environmental conservation and improve rural livelihoods. There has also been a learning curve as SNRM practitioners realize the importance of understanding or even creating the markets (e.g., developing markets for certified wood), and also understanding the institutional and commercial barriers that may hinder the rural poor's participation in markets for environmental products and services (more on this can be found in chapters 2 and 3).

One drawback of market-based financing is that money will come late in the project cycle, once the goods have been produced and sold. Thus, the need to raise financing for the start-up costs remains. A project with a very good market prospect may be able to leverage financing for start-up costs, but few SNRM projects dare to repay initial costs out of market sales; instead they will usually reserve the market incomes to pay for the operation costs and to increase the participant's income.

- Mostly available to which type of developing country? All types.
- Mostly used for which type of SNRM? Rural production and buffer zones.
- Mostly used for which type of natural resource? Forests / wetlands / coastal areas / watersheds / agricultural lands.
- Mostly used with which type of project participant? Rural communities / landless rural poor / peasants and small farmers / large commercial farmers / local businesses.
- Degree of difficulty in starting up? From low to high depending on the scale of the production and the market.
- Need for government facilitation: Low to reach local markets, high to reach national or international markets.
- Need for third-party facilitation or brokerage: Low to high.
- Potential in terms of SNRM achievements: Medium to high.
- Potential in terms of rural poverty alleviation: Medium.
- Transaction costs: Medium to high.

Where to go for the money: For those planning to finance part or all of an SNRM project through the sale of green products, it must be noted that profits are not immediately

(continued)

DESCRIPTION CARD 12 (cont'd.)

available (sometimes not for years). So even if an SNRM project is about marketing green products it will probably have to begin by searching for start-up financing from any of the other sources we have discussed before (local people's savings, a grant, public support, etc.). The difference is that here the project developer may use the prospect of the future sales of green products to leverage the start-up financing. In order to do so a solid production and marketing plan may be required. Project developers may want to (a) look around to see which markets for the would-be green products already exists at the local, national, and international levels; (b) get solid marketing advice; (c) study similar successful schemes; and (d) avoid overselling the market prospects to the local participants or would-be financiers.

Where to go for country examples: Look for several of them in chapter 6. The reader is referred also to the experience of the Forest Stewardship Council, the most important scheme of forest product certification, which can be accessed at www.fscoax.org.

Where to go for more information: Forest Trends (www.forests-trends.org) has produced interesting research outcomes and guidelines on what is needed for the rural poor to participate in green forest markets. Also from Forest Trends see Sherr et al. (2002).

DESCRIPTION CARD 13

38. Markets for biodiversity conservation and bioprospecting

39. Markets for carbon offsets

40. Markets for watershed protection

41. Markets for landscape beauty, including ecotourism and tourism

42. Markets for development rights and conservation easements

43. Quasi-markets and non-market systems of payments for environmental services

The rationale for payments for environmental services is straightforward. Many SNRM schemes do not yield returns because what they deliver largely consists of environmental services that are not currently paid for, be they at local scale (e.g., soils and water protection); national scale (e.g., watershed protection, biodiversity, landscapes); or international scale (e.g., biodiversity, carbon sequestration). Should these services be accounted for and paid for, SNRM would be much more attractive and rewarding to those that bear the cost of it, particularly the rural poor.

Although the amount of money that has thus far been raised for SNRM through PES in general and MES in particular is small, there are high hopes that scaling-up may be possible, particularly through carbon trading (based on the Kyoto Protocol of the International Climate Change Convention). In relation to the Kyoto Protocol, Denmark, Norway, and other European countries have been active in financing Clean Development Mechanism projects, namely projects in developing countries that are beneficial to the recipient country and at the same time result in a net reduction in greenhouse gasses emissions.

One drawback of financing SNRM projects through PES is that money is received once the service has been provided, which often takes time. Consequently the need to raise financing for the start up costs remains. Extremely promising PES prospects may be able to attract financing for start-up costs, but to this day few start-up costs have been repaid out of PES incomes. Typically PES projects have benefited from other sources of initial support and have used the PES incomes to cover the operation costs and increase the participant's income.

- Available at what level? Regional, national and international. The local scale will usually prove very small to encompass both providers and users of environmental services.
- Mostly available to which type of developing country? All for international schemes of PES but large and middle income developing countries mostly in the case of in-country PES schemes.
- Mostly used for which type of SNRM? Protected areas / buffer zones / rural production areas.
- Mostly used for which type of natural resource? Forests / wetlands / coastal areas / watersheds / agricultural lands.
- Mostly used with which type of project participant? Rural communities / landless rural poor / peasants and small farmers / large commercial farmers / local businesses / national-scale firms / government agencies / international corporations.
- Degree of difficulty in starting up? Medium to high.

(continued)

DESCRIPTION CARD 13 (cont'd.)

- Need for government facilitation: Medium to high.
- Need for third-party facilitation or brokerage: High.
- Potential in terms of SNRM achievements: Low in the short run to medium in the long run.
- Potential in terms of rural poverty alleviation: Low in the short run to medium in the long run.
- Transaction costs: High in the short run, may decrease in the long run.

Where to go for the money: When considering financing part or all of an SNRM project through a PES approach the project developers should look around to see if a related PES scheme to which the project could be integrated already exists at the subnational, national, or international level. If that is not the case practitioners should be aware that developing a PES scheme from scratch may take several years (though the same can be said of trying to put in place many other financing mechanisms such as trying to pass a law to earmark public funds for SNRM). Even when a PES scheme is already in place, actual payments may take a long time to materialize since the SNRM project may be asked to deliver these services to some agreed standard before collecting payments. In that case the SNRM project developer needs to look for other financing sources to pay for the SNRM project's start up costs. The difference is that now the SNRM project may be able to use the prospect of future sales of environmental services to leverage the initial money requirements.

Where to go for country examples: Look for several of them in chapter 2. IIED (www.iied.org) has an extensive portfolio of PES case studies available through its Forestry and Land Use Program. Chomitz et al. (1998) discuss in detail Costa Rica's experience with PES. Hardner and Rice (2002) briefly discuss conservation concessions in Guatemala, Indonesia, and Peru. Also, the World Bank's Environmental Department features case studies of PES on its Web site.

Where to go for more information: Chapter 2 of this survey summarizes the extensive research on PES recently published by IIED. See Landell-Mills and Porras (2002) and visit www.iied.org. More information is available at the World Bank's Environmental Department (www.worldbank.org/eadvisor).

DESCRIPTION CARD 14

36. Resource extraction charges directly collected by the SNRM project

37. Allocating part of national, state, or local extraction fees to SNRM projects in the extraction areas

44. User fees and entry fees directly collected by the SNRM project

45. Allocating part of national, state, or local user charges to SNRM projects in the area providing the environmental services

Applying all or part of natural resources–related incomes to SNRM, can be seen as a form of payment for environmental products or services. The relation may be direct—for example, national parks keeping the money collected as entrance fees, or local communities engaged in wildlife conservation receiving all or part of the incomes generated by safaris and ecotourism. Or it may be indirect; for example, in many countries the central government or the state government collects extraction and user fees and redistributes them to state and local governments, which, in turn, may use all or part of these fees to finance SNRM projects. There may be good reasons for concentrating and redistributing schemes (e.g., supporting the most remote or poor areas); unfortunately, in most of these cases a substantial portion of these incomes get diverted to uses not related to the sustainable management of the natural resource base that generates them.

Most countries have well-developed systems of charges for the extraction of oil and minerals but charges for extraction or use of renewable natural resources (e.g., forest, water, effluent discharges) or environmental services (e.g., watershed management, biodiversity conservation) may range from very low (e.g., stumpage and grazing fees) to nonexistent (e.g., water, biodiversity). In the last 20 years many countries have either put in place or have considered putting in place more comprehensive systems of charges for extraction and use of natural resources, either at the local, state, or national level. So these charges have become or may become an important source of financing for SNRM projects.

Developing countries (and the international advisors that some times oversell these schemes) should carefully weigh the impact that charging extraction or user fees may have on the poor, and if needed put in place buffering measures to protect their livelihood.

- Available at what level? National, state, and local.
- Mostly available to which type of developing country? All, but see above on equity and livelihood concerns.
- Mostly used for which type of SNRM? Protected areas / buffer zones / rural production areas.
- Mostly used for which type of natural resource? Forests / wetlands / coastal areas / watersheds / agricultural lands.
- Mostly used with which type of project participant? Rural communities / landless rural poor / peasants and small farmers / large commercial farmers.
- Degree of difficulty in starting up? From low to medium.
- Need for government facilitation: Medium to high.
- Need for third-party facilitation or brokerage: Low.
- Potential in terms of SNRM achievements: Medium to high.

(continued)

DESCRIPTION CARD 14 (cont'd.)

- Potential in terms of rural poverty alleviation: Low to medium.
- Transaction costs: Low.

Where to go for the money: If the legal framework already exists, the SNRM project developer should make sure that the project participants are either eligible to receive part of the money that is being collected or are entitled to collect it themselves. In many cases clarifying and strengthening the property and user rights is a precondition for the local community to be able to claim the rights to collect natural resource–related fees, or to receive a portion of the fees collected by the state. If the legal framework is missing it may still be possible to develop it as part of the SNRM project, but it would be worthwhile to carefully assess how complicated that would be. In any case there will usually be some activities that the SNRM project needs to undertake before it is able to collect the would-be fees, and the financing for these activities may need to be secured from other sources.

Where to go for country examples: Many African countries have systems in place whereby communities are engaged as stewards of the local wildlife and receive all or part of the safari fees collected. See in the next chapter the case study on Zimbabwe's Campfire and Namibia's Torra Conservancy. See also the Conservation Finance Alliance Guide (2002) for discussions of Suriname's bioprospecting scheme. Shilling and Oscha (2003) briefly discusses several more cases.

Where to go for more information: IIED has evaluated and discussed many cases of community-based biodiversity and wildlife conservation projects of this type. See them at www.iied.org. WWF has been a promoter and partner of similar schemes around the world, one of the largest being the Namibia LIFE project, which can be accessed at www.panda.org.

DESCRIPTION CARD 15

46. GEF payments for the global commons

47. Funds for SNRM associated with international treaties

48. Other possible systems of international payments for global commons

49. Earmarking for SNRM part of one or more international taxes (so far hypothetical)

The term "global commons" refers to the environmental components of global public goods. The latter, following a UNDP definition (Faust et al. 2001), are public goods whose benefits are strongly universal in terms of countries, people, and generations. The atmosphere, the oceans, biodiversity, and tropical forests are all examples of global commons. International peace, the control of pandemics, and the eradication of poverty are all examples of nonenvironmental global public goods. The adequate provision of public goods is difficult to achieve even at a national scale, usually requiring government interventions to force the beneficiaries to pay the suppliers (e.g., through regulations, taxes, the creation of special markets, etc.). Imagine the difficulties in securing the provision of global public goods on the international scale where there is no world authority to regulate, tax, or create markets. Yet there has been progress in acknowledging and paying for the global commons, mostly, but not exclusively, through international treaties.

The best known case is the Global Environmental Facility (GEF) created in 1991 and funded mostly by voluntary contributions from rich countries, with the purpose of financing the provision of global commons. Furthermore, GEF is the designated financial mechanism for the international agreements on biodiversity, climate change, protection of the ozone layer, and persistent organics.

International treaties also create sources of financing the provision of global commons that need not go through international entities. For example, trade in bioprospecting and on carbon sequestration are the result of international regulations about biodiversity property rights (Convention on Biological Diversity) and control of climate change (Climate Change Convention).

Beyond the limited resources currently available to finance the provision of the global commons, there is an ongoing international discussion that began in the early 1990s regarding what more should or could be done. Proposals to raise money to pay for the global commons include environment-related taxes and charges, such as a world carbon tax, a world charge on the use of the ocean, an international air transport tax, or an up-front tax for global commons conservation. As well, proposals have been made to earmark part of non-environmental-related world taxes. The most debated thus far is the Tobin tax (a tax on international currency transactions, proposed by the economist and Nobel laureate James Tobin).

- Available at what level? International.
- Mostly available to which type of developing country? All, but particularly those that harbor an important piece of the global commons.
- Mostly used for which type of SNRM? Protected areas / buffer zones / rural production areas.
- Mostly used for which type of natural resource? All but many agricultural areas may not qualify.
- Mostly used with which type of project participant? All landowners and land users.

(continued)

DESCRIPTION CARD 15 (cont'd.)

- Degree of difficulty in starting up? From low to medium.
- Need for government facilitation: Low to medium.
- Need for third-party facilitation or brokerage: Low to medium.
- Potential in terms of SNRM achievements: Low to high.
- Potential in terms of rural poverty alleviation: Low to high.
- Transaction costs: Low.

Where to go for the money: GEF funds are jointly managed by the World Bank (www.worldbank.org), UNDP (www.undp.org), and UNEP (www.unep.org). The World Bank oversees GEF grants for investment projects and programs (which is where most of the money is), UNDP oversees regional policy development projects, and UNEP manages scientific projects. The best information source, including how to contact the GEF countries' reference office, is found on the GEF Web site (www.gefweb.org). Other financing opportunities for SNRM projects associated with international treaties were mentioned earlier in description card 13, and are also discussed in more detail in chapter 2. Other international charges and tax schemes are still in a conceptual phase, but don't discount them!

Where to go for country examples: Several of the case studies described in the next chapter had partial financing from GEF (e.g., the Uganda Forest Conservation Trust Fund). Quintela et al (2002) discusses GEF-funded projects in Côte d'Ivoire, Burkina Faso, Romania, and others. The GEF Web site mentioned above will lead you to case-by-case descriptions of all the projects in its portfolio.

Where to go for more information: For money that is currently available, information is found in the sources mentioned above (particularly GEF and World Bank). For what is not here yet but may be in the future the best reference is the ongoing discussions on global public goods fostered by the United Nations in the late 1990s (search for the Zedillo report at http://www.un.org/esa/ffd/a55-1000.pdf) and for UNDP contributions see Faust et al. (2001) and Kaul et al. (1999). See also Bezanson and Sagasti (2001) (downloadable from www.ids.ac.uk/ids).

CHAPTER 6. CASE STUDIES OF FINANCING FOR SNRM

by Camille Bann, Tom Blomley, Therese Brinkate, Lars Christensen, Maryanne Grieg-Gran, Søren Hastrup, Andreas Jensen, Karsten Raae, and Chado Tenzin

The 12 case studies presented below offer brief illustrations of many of the financing options discussed in the previous chapters and the contextual issues they raise. They have been prepared for this survey by members of Danida's Working Group on Sustainable Financing, by the International Institute for Environment and Development, and by WWF country offices. Table 5 lists the projects, the financing issues that each raises, and identifies the authors.

There are several ways to group and relate these case studies. Brazil, Bolivia, Ecuador, Namibia, Tanzania, and Zimbabwe may all be read as cases of financing through payments for environmental services (PES) schemes. Still there are many differences among them. Brazil's ICMS Ecológico and the Ecuador and Zimbabwe cases are government-led PES schemes. The Bolivia and Zimbabwe cases are NGO-driven PES schemes. Namibia, and to a lesser extent Zimbabwe can be considered examples of markets for environmental services (MES). The South African outgrower program is a case of financing through payments for environmental products. The two South African cases and the Namibian case are also examples of private businesses' partnership with communities and NGOs. Ecuador's DPFA case and Malawi are two small successes in the difficult transitions from external donors' financing to participants' self-financing. The Uganda Impenetrable Conservation Fund conveys the lessons of Africa's first conservation fund, and together with Bhutan shows the need and difficulties of multisource financing.

TABLE 5. LIST OF CASE STUDIES

Country / Project or program name	Financing scheme or related issue of interest	Author / Affiliation
1. Bhutan / Biological corridor Landscape Project	A strategy of financing diversification to support a complex conservation project encompassing 9 percent of the country's territory. Financing from NGOs, bilateral aid, development aid agencies, foundations, and public budget.	Chado Tenzin / WWF-Bhutan
2. Bolivia/ Noel Kempff Climate Action Project	Payments for carbon sequestration. Financing from markets for carbon offsets, NGOs, nonlocal investors, public budget.	Summary by Camille Bann / IIED
3. Brazil / ICMS Ecológico	Payments for environmental services. Financing through the earmarking and distribution of state-level taxes.	Maryanne Grieg-Gran / IIED
4. Ecuador / DPFA (Andean Participative Forest Development Project)	Very poor communities are still willing to invest in SNRM project. Financing from bilateral aid and household savings and labor assets.	Lars Christensen / LC Consult / member of Danida Working Group on Sustainable Financing

TABLE 5. LIST OF CASE STUDIES (cont'd.)

Country / Project or program name	Financing scheme or related issue of interest	Author / Affiliation
5. Ecuador / Pimampiro program	Payments for watershed conservation. Financing from water charges.	Summary by Camille Bann / IIED
6. Malawi / Community-based natural resource management, Lake Chilwa Wetland	The foreign financing ends and the local beneficiaries take up the project. Financing from bilateral aid, public budget, and local not-for profit and for-profit sources.	Andreas Jensen / Danida
7. Namibia / The Torra Conservancy	Private sector–community partnership for tourism and safari.	Summary by Camille Bann / IIED
8. South Africa / The Green Trust Fund	A NGO–private financing program.	Therese Brinkate / WWF-South Africa
9. South Africa / Outgrower schemes	Private sector–community partnership for wood production.	Summary by Camille Bann / IIED
10. Tanzania / MEMA project	This case illustrates how an SNRM project branches out to a new initiative that requires new partners and new financing arrangements. Financing from bilateral and private investment by local and non-local businesses.	Karsten Raae / Danish Forestry Extension / member of Danida Working Group on Sustainable Financing
11. Uganda / Mgahinga and Bwindi Impenetrable Forest Conservation Trust	A prime ecosystem, many funding sources, many institutions, and a trust fund. Financing from NGOs, bilateral aid, GEF, and public budget.	Tom Blomley, CARE International
12. Zimbabwe / CAMPFIRE project	Community-based wildlife management. Financing from NGOs, bilateral aid, and public budget.	Søren Hastrup / PFF Consult / member of Danida Working Group on Sustainable Financing

Case study 1. Bhutan—Biological Corridor Landscape Project (BCLP)

Reported by Chado Tenzin / WWF-Bhutan

This case illustrates a strategy of diversifying financing to support a complex conservation project encompassing 9 percent of the country's territory.

Background

Bhutan is a small and sparsely populated—658,000 people in 2000—country with a tradition of small-scale agriculture in the relatively few areas of good agricultural soils. As of 2000 some 7 percent of the territory is cultivated. The communities in the alpine region are mostly herders, while the communities in the temperate and subtropical regions are farmers although they also own a few heads of animals. Bhutan is situated at the convergence of the Palearctic and the Indo-Malayan biogeographical areas that together create a varied geography with altitudes ranging from 150 meters in the southern foothills to over 7,000 meters in the north with annual rains varying from 500 mm in the north to over 5,000 mm in the south. These contrasts nurture a rich and unique biodiversity.

During the 1990s WWF-Bhutan was an important stakeholder in facilitating sweeping changes in the country's natural resource management. These included the devolution of natural resource management rights to local communities, and the establishment of a comprehensive system of protected areas and biological corridors that as of 2003 encompassed 35 percent of the country's territory. WWF also helped in putting in place the world's first Environmental Trust Fund in 1992. The other contributors were the Royal Bhutan Government, GEF, UNDP, Denmark, Finland, the Netherlands, Norway, and Switzerland. The fund's capital is 20 million dollars and in recent years it has financed between 15 and 19 SNRM projects a year for an annual total of approximately 1.3 million dollars (see detailed information about the fund at www.bhutantrustfund.org).

Biological corridors are the new addition to Bhutan's protected areas system. They were designated in 1999 as "Gifts to the Earth" from the people of Bhutan under WWF's People and Plants campaign program. The biological corridors comprise 9 percent of the country's land area and are spread throughout the country to connect protected areas, allowing the flow of genes between otherwise isolated populations of plants and animals and ensuring the continued survival and evolution of Bhutan's unique biological resources. Over 70,000 people, most of them subsistence farmers, reside in and around the BCLP. They graze their cattle in the nearby forest, extract timber for construction and roofing and fuelwood and for cooking and heating. They also collect non-wood forest products such as mushrooms, canes, and medicinal herbs.

Financial arrangements

The sustainable management of the biological corridors encompasses an array of different activities, from basic research to protected areas management plans, to community-based integrated conservation and development programs in the areas near the corridors. All of these require financing. Early on, Bhutan's government and WWF-Bhutan realized that it was necessary to look for a variety of funding sources, since the sheer magnitude of the project's financial needs made it improbable to derive them from a single source, and also because a multisource financing strategy would allow a better match between a specific subproject and the would-be funder priorities. Progress as of early 2003 included the following:

- The Field Museum of Chicago, the MacArthur Foundation, and WWF-Bhutan are financing biological research in the corridors. Two rounds of joint surveys have been carried out, in 2001 and 2002. When the research program is completed all of the equipment and other facilities purchased with the MacArthur Foundation money will be transferred to the Bhutanese Government.
- The GEF medium-sized project grant program (MSP) will finance the five-year "LINKPA—Linking Protected Areas Project" to prepare corridor management plans beginning in March 2003. Bhutan's Nature Conservation Division of the Ministry of Agriculture and WWF-Bhutan will be in charge of this project.
- WWF developed a three-year proposal for crafting a management plan for Sakten Wildlife Sanctuary and its Biological Corridors (SWS-BC). The MacArthur Foundation will support surveys—ecological, wildlife, and socioeconomic—to generate information for drafting the management plan. The MacArthur grant will also support capacity development of the park staff and the local authorities and establish basic infrastructure network so that the park staff can start implementation of the management plan.
- The Netherlands is financing an 18-month pilot Integrated Conservation and Development Project (ICDP) that is being carried out by the government and WWF-Bhutan. The project will focus on three sites

Terraced slopes in valley near Punakha, Bhutan

within or adjacent to the corridors. It is expected that the experience from the pilot project will be scaled up into a larger five-year project.

- The pilot ICDP will focus on community-centered activities. Some of the common activities for the sites are protecting drinking water sources; greenhouses on pilot scale; creating plantations of multipurpose trees in degraded areas; intensifying agriculture and livestock production through improved seeds and breeds; developing pasture to check cattle migration and grazing in the wild; installing improved stoves to reduce fuelwood consumption; supplying corrugated metal sheets for replacing shingles in roofing houses; cash-earning activities (supplying billets for mushroom cultivation, supplying pullets for backyard poultry, and promoting traditional crafts); supplying solar panels for lighting; starting nonformal education; and conducting training and workshops to educate the communities in sustaining the project activities.
- The Bhutanese Government, WWF, and UNDP have partnered for a 1.8 million-dollar project to manage several of the corridors with the twin objectives of nature conservation and poverty reduction. Funds for this project came from WWF, Bhutan's government, and GEF.

Project lessons

Although more needs to be done to support Bhutan's protected areas system and to enhance the livelihood of the neighboring rural comminutes, what has been accomplished bears testimony to the country's positive context for SNRM, including:

- The government's policies and legislation strongly support conservation efforts, and the conservation programs make up part of the country's economic and social development goals.
- The government is strong and stable, and development partners are confident that planned activities will get implemented. Further, the bureaucracy is relatively small and the government's financial management is efficient and transparent.
- Bhutan is willing to explore new and innovative political, socioeconomic, and environmental development mechanisms—for example, the devolution of power from the throne to the people. Bhutan also started the first Environment Trust Fund, devoted to the long-term financing of conservation efforts.
- Foreign development agencies and NGOs share a positive view of Bhutan's commitment to conservation and social development.
- WWF has a strong relationship with the Bhutan's royal government, and is seen as a reliable development partner with no hidden agenda.

A lesson for both the Bhutan government and WWF-Bhutan is that in a world of increasing competition for conservation and development, funding the conventional approach, "one project, one donor" does not work, particularly for conservation projects that lack immediate tangible outputs. The alternative is to develop a clear understanding of the macro-program, and then look for different funders for each component.

Additional references and contacts

For further information visit WWF-Bhutan's Web site at www.wwfbhutan.org.bt or contact the author of this case study, Chadho Tenzin, at ctenzin@wwfbhutan.org.bt.

Case study 2. Bolivia—Noel Kempff Climate Action Project

Summarized by Camille Bann / IIED from works by P. May, E. Boyd, F. Vega and M. Chang

This project illustrates payment for carbon sequestration services.

Background

The Noel Kempff Mercado Climate Action Project (NKMCAP) in Bolivia was established in the 1990s as part of the United States Initiative on Joint Implementation (USIJI) pilot phase. The project aims to promote carbon sequestration, biodiversity enhancement, and local benefits. It seeks to avoid carbon emissions through forest conservation, the monitoring of indemnified logging companies,[26] and community assistance in sustainable agriculture and forest management. The project includes a forestry program and a community development program. The NKMCAP has been at the center of international debate on whether to include certain land use activities in international climate agreements. However, in light of the March 2001 U.S. withdrawal from the Kyoto Protocol and the exclusion of avoided deforestation from the CDM, the initial enthusiasm has waned somewhat.

The Noel Kempff Mercado Park has almost doubled in size since the inception of the project and now comprises 1,523,446 hectares of diverse lowland and upland forests. By avoiding and reducing greenhouse gas emissions from logging and agriculture it is expected to lock-in up to 7 million metric tonnes of carbon (t/C) over 30 years at a cost of US$1.00 t/C. It is also argued that the project will contribute to a reduction in the pace of deforestation in this frontier area. The project developed an offset-sharing system that provides 49 percent of the offset credits to the Government of Bolivia, 49 percent to the industry contributors, and 2 percent to American Electric Power (AEP), the lead investor, as a project development "bonus." The government is required by contract to spend the proceeds from the sale of offset credits on park management activities in Noel Kempff and throughout Bolivia, and on other biodiversity preservation activities. The environmental benefits associated with the project therefore appear to be encouraging.

Financial arrangements

There have been many actors involved in the development of the project including private sector investors, international and local NGOs, local government, and communities. The Nature Conservancy and a consortium of companies including AEP, with the Bolivian government, acquired logging concessions, in order to reduce deforestation, thereby reducing carbon emissions. The project provides funds and support to the Joint Implementation (JI) Office in Bolivia, and the park administration is financed through an endowment fund administered by the Nature Conservancy.

As part of the project, in 1998 an incentive credit and rotational fund was established to give credits to community members who undertook changes in land use practices and activities that reduced carbon emissions. These included the planting of economically useful palm species, agroforestry model farming, substitution of beef cattle with dairy cows, and ecotourism and small business initiatives. The average amount of credit provided was under US$200. The uptake was poor and the sense of indebtedness large at the end of the project cycle. Reasons for this include a lack of capacity, a lack of understanding of the repayment system, and a lack of enforcement for repayment. The organization of the credit committee and the management of funds proved difficult with corruption occurring in at least one of the

26 Indemnified logging companies are those that receive compensation for practicing sustainable forest management.

communities. When the loans were exhausted it was expected that carbon credits would help support the Park and provide financial assistance to the communities to avoid carbon leakage effects. However, the issue of direct credit distribution at the community level was not considered in the formal project design.

The adoption of more sustainable agricultural practices was poor due to limited technology transfer and a limited understanding of the concepts of leakage and conservation. Communities felt that the changes introduced were not compatible with local practices, and thus gave them a low priority. For example, the income generated by small-scale production of diary products or hens was not generally considered sufficient, and people expressed a need to generate income from "real activities" such as forestry, fishing, and tourism.

In hindsight it is possible to conclude that the provision of cash incentives was not the best choice given that the community functions through a barter and trade system of goods and services. Besides the fundamental problem of introducing credit into a barter economy, the incentives were focused on agricultural activities that affected the poorest members, yet the richer community members, who could take larger loans, chose to invest in activities unrelated to agriculture, such as shops and bakeries. Other reasons for the lack of success included high rates of loan default; limited employment generation alternatives; limited uptake of technology transfer; perception that the project caused job loss by removing timber activity; loss of financial resources due to an agreed period of fishing ban to allow for the preparation of a fish management plan; deterioration of roads formerly maintained by logging companies, which led to increased transport expenses; and the lack of enforcement of penalties.

Project lessons

- The project design was not sufficiently clear and inclusive of local partners. A clear set of guidelines for evaluating the social impacts of carbon projects needs to be devised or adapted to the specific context by communities and the national government.

Mahogany trees floated by bolivian woodcutters on lower Rio Heath. Bolivia

- The case study illustrates that multiple-level projects might encounter barriers owing to the complexity of bringing together the multiple interests of investors, governments, and NGOs.
- The project had unclear carbon, conservation, and development links. Clarification of how activities will contribute to carbon sequestration was needed. These activities should represent realistic opportunities for communities and be based on in-depth knowledge of the community livelihood strategies.
- The rights and responsibilities of the communities in relation to the rules established by park authorities and the project were not clear. In terms of the community it is recommended that local rules and dynamics be incorporated into project activities and clear rules be conveyed using information and awareness-raising through community outreach.

Additional references and contacts

For further information read the 2003 report, "Local Sustainable Development Effects of Carbon Sequestration Projects in Brazil and Bolivia: A View from the Field," available at www.iied.org. One of the paper's authors, Peter May, may be contacted at pmay@pronatural.org.br.

Case study 3. Brazil—The ICMS Ecológico

Reported by Maryanne Grieg-Gran / IIED

This case illustrates a payment for environmental services scheme based on the distribution of a percentage of states' sales tax.

Background

The ICMS Ecológico is a tax revenue–sharing scheme between different levels of government in Brazil,[27] designed to promote the conservation and management of protected areas. The ICMS (which stands for tax on circulation of goods and services) operates at the state level in Brazil and is an important source of revenue for local governments. The Federal Constitution of 1988 stipulates that 25 percent of the revenue raised by the ICMS should be allocated by the state government to the local governments. A further requirement of the Constitution is that 75 percent of the total passed on to local governments should be allocated according to the amount of value-added generated by each county. The state governments have the authority to set distribution criteria for the remaining 25 percent. Typically, the state governments have used criteria based on population, geographical area, and primary production. In 1992, the state of Paraná introduced an ecological criterion based on the area of land subject to protection. This was in response to pressure exerted by the mayors of certain counties that had large protected areas and watershed protection areas within their territories. They argued that they were losing out on the allocation of the ICMS revenue since so much of it depended on the amount of value-added generated and their counties were hampered by land use restrictions that limited the scope for developing activities and generating value-added.

The new system in Paraná became popularly known as the ICMS Ecológico. Other states observed Paraná's experience with this new approach and decided to introduce similar systems. By 1997, three more states—Rondonia, Minas Gerais, and São Paulo—had introduced the ICMS Ecológico. At this time WWF-Brazil began a campaign to promote the benefits of the program to other states. By 2002, another seven states had adopted this approach.

27 Brazil has 26 states, each with revenue-raising powers.

Financial arrangements

While the major motivating factor for the introduction of the ICMS Ecológico was the need to compensate counties subject to land use restrictions, it was envisaged that it could also act as an incentive for increasing the area of land set aside for protection and improving its management.

The share of ICMS revenue for each county is calculated by a consolidated index, which adds up the scores of that county for each criterion, with the relevant weight applied. The ecological index for each county is based on the total area set aside for protection in relation to the total area of the county. To be included in the calculation of the index the protected areas have to be registered and legally defined. Protected areas can be designated at federal, state, or county level. This is important since federal and state governments had previously designated the majority of protected areas and until ICMS local authorities had no strong incentives to do so. In Rondonia, for example, as much as 36 percent of the land area was subject to some sort of protection in 1997—and only 0.01 percent of this protected area had been designated by local governments.

In most of the states that have implemented the ICMS Ecológico the emphasis in revenue allocation is on the amount of protected land area. Some states such as Minas Gerais take into account the degree of land use restriction by using weighting factors. Paraná has gone further and introduced a system for evaluating the quality of management of protected areas. This addresses concerns expressed in the initial years of the scheme about a proliferation of "paper" parks. The assessment of management quality affects the overall score/ecological index for the county and, if necessary, protected areas that are not being adequately managed can be disqualified and removed from the register. Various types of protected areas qualify: those that involve indirect use or have considerable land use restrictions (e.g., biological reserves, ecological stations, and parks) as well as those involving direct use (such as indigenous areas, extractive reserves, and sustainably managed forests). In some states such as Minas Gerais, the latter categories are given lower weight in the calculation of the index to reflect the extent of land use restriction. Thus an ecological research station has a weighting factor of 1 while an indigenous reserve has a factor of 0.5. Privately owned protected areas also qualify although any ICMS revenue associated with them accrues to the local government and not to the owner of the land.

Project lessons

Early evaluations of the ICMS Ecológico emphasized the impact on attitudes and environmental awareness. Instead of regarding protected areas as an obstacle to development, local governments were starting to see them as an opportunity to raise revenue (Grieg-Gran 2000).

Later evaluations have been able to examine trends in the area designated for protection. In Paraná the area subject to protection grew by 165 percent between 1992 and 2000 (May et al. 2002). In Minas Gerais there was an increase of 65.4 percent in the first five years of the program, but some of this can be attributed to efforts made by municipalities to formalize conservation areas that had not been legally registered.

In both states, and particularly in Paraná, there has been a large increase in the amount of area of private land designated for protection, reflecting efforts made by the state governments to promote this approach through formal recognition in the legislation and more general promotion activities (May et al. 2002).

However, there has been little assessment that goes beyond statistics to look more in depth at the impact on biodiversity in protected areas. WWF-Brazil is promoting the idea of more

Iguaçu National Park - Iguaçu Falls Atlantic Rainforest Paraná, Brazil

systematic monitoring of the impact of the ICMS Ecológico, starting in two pilot states.

While the ICMS Ecológico was introduced to compensate municipalities for the loss of tax revenue from the use of land for conservation, it seems likely that it would also have a positive social impact. However, this tax is not an additional revenue; it is merely a redistribution of tax resulting from a change in allocation criteria. The inclusion of a new criterion implies that the weight given to one or several previously existing criterion have to be reduced. The net effect of these changes may favorably or unfavorably affect the poorest countries. An evaluation of the scheme (Grieg-Gran 2000) found that 40 percent of the counties with protected areas in Rondonia were worse-off in terms of tax revenue after the introduction of the ICMS Ecológico. The evaluation also found that the counties that lost out from the introduction of the ICMS Ecológico tended to be the poorer ones. As a group, the counties that did not benefit from the program had a lower level of value-added per capita prior to its introduction than the counties that benefited from it. Some counties with very large proportions of their territory set aside for conservation, however, experienced dramatic increases in revenue after the introduction of the ICMS Ecológico. In the state of Minas Gerais, the county of Marlieria experienced an increase in its share of ICMS revenues over 2,000 percent between 1995 and 1998 (Grieg-Gran 2000). In Paraná, the county of São Jorge do Patrocinio, which has 52 percent of its territory dedicated to conservation, derived 17.6 percent of its budget from the ICMS Ecológico in 1998 (May et al. 2002).

Much depends also on how the local governments use any additional revenue generated and the extent to which this expenditure favors the communities most closely involved with the conservation units. Paraná provides both positive and negative examples. In the faxinais (common property forest resources), efforts have been made to use the money to improve the living

standards of the communities concerned through expenditure on health and education services and road maintenance. In counties where many of the new protected areas have been created by private landowners, the attempt by local authorities to create incentives such as drainage improvement and road maintenance and access improvement has led to complaints that public money is being used to benefit just a few large landowners (May et al. 2002).

Future of the program

There is concern in Brazil that as governments set the revenue-sharing criteria, the system may fall victim to changes in political priorities following a change in government. More specifically, counties cannot know exactly how much they will receive as a result of creating a protected area since their benefit depends partly on what the other counties in the state are doing and the extent to which they are also creating additional protected areas. From the outset there has been concern that the incentive effect of the ICMS Ecológico will become diluted as numerous local governments respond to it and designate more conservation areas. Some counties—for example, Alto Caparão in Minas Gerais—have seen their ICMS Ecológico transfers decline over time because of actions taken by other local governments (May et al. 2002).

From a project developer's point of view, the ICMS Ecológico is not an ideal mechanism to fund specific conservation projects directly or in their initial stages. This is because local governments are not obliged to spend the revenue generated by the ICMS Ecológico on conservation activities—although the state of Paraná has entered into agreements for this purpose with some counties. Nor can the local authorities estimate with any great certainty how much they will receive as a result of a specific conservation action. Their share of the ICMS Ecológico transfers depends both on the actions taken by other local governments and on the amount of tax revenue collected across the state. But the ICMS Ecológico does have the advantage of stimulating political support at the local level for conservation. It can also strengthen community support for conservation areas where the revenue generated is perceived as being used by local governments for activities beneficial to them (May et al. 2002). The ICMS Ecológico should therefore be seen as a complement to other more direct sources of funding.

The program has developed in a specific political context, a federal country where subnational governments have revenue-raising powers and a constitutional requirement to share certain types of tax revenue with lower levels of government. However, most countries, whether they have a federal government or not, have systems for fiscal transfer between central and local governments often involving complex criteria and formulas for allocation. With the increasing emphasis on political decentralization and the decentralization of natural resource management, there is significant potential for adopting approaches that are similar to the ICMS Ecológico in other countries.

Additional references and contacts

For further information, consult M. Grieg-Gran, 2000, "Fiscal incentives for biodiversity conservation: The ICMS Ecológico in Brazil." Discussion Paper No. 00-01, IIED, London; or P. May, F. Veiga Neto, V. Denardin, and W. Loureiro, 2002, "Using Fiscal Instruments to Encourage Conservation: Municipal Responses to the 'Ecological' Value-added Tax in Paraná and Minas Gerais, Brazil." In S. Pagiola, J. Bishop, and N. Landell-Mills (eds.), "Selling Forest Environmental Services Market-Based Mechanisms for Conservation and Development." London: Earthscan. Maryanne Grieg-Gran may be contacted at maryanne@iied.org.

Case study 4. Ecuador—Participative Forest Development in the Andes (DFPA)

Reported by Lars Christensen / LC Consult / member of Danida's WGSF

This case illustrates local investment in SNRM made possible by low opportunity costs of labor and a strong community organization that is responsible for an equitable distribution of in-kind benefits and revenues.

Background

From 1992 to 1995 FAO ran the Andean Participatory Development Project (DFPA) in four South American countries—Colombia, Ecuador, Peru, and Bolivia. The project established national programs and tested participatory rural development approaches to rural extension services, agroforestry, community forestry, and small-scale forest-based enterprises. DFPA's aim was to empower the local community to identify its own measures of wealth and success-indicators and prepare natural resource management plans that reflected those community goals and values. Several of these plans were community forest management plans, where local resources were the main input to the project. This case study describes one such plan developed by the Chauzán San Alfonso community in Ecuador.

Chauzán San Alfonso is an indigenous community of some 100 families with a strong cultural identity. The community has a highly organized, democratic system. People are self-reliant and traditional forms of sharing labor through common work-days and "labor-lending"(minga, prestamano) are common. The mountain environment (slope, soil, wind, altitude) offers moderate to extremely difficult conditions for rural production. The local economy is based in subsistence agriculture with limited surpluses available for sale. Arable land is scarce. Only 15 percent of the families have holdings of more than 10 hectares. Another 60 percent have 1–10 hectares, and a quarter of the households have little or no land. The principal economic activities are agriculture and livestock (grazing). Gas or fuelwood is used for cooking; the latter is collected, mainly by the poorer families from the communal forest.

In late 1993 DFPA helped the Chauzán San Alfonso people to prepare a community forest plan. As part of this exercise the community identified its priorities including, in descending order: improving agricultural production for self-consumption; reclaiming more agricultural land; improving the ecology of the community lands; creating more work opportunities within the community; improving health conditions; improving educational opportunities; increasing income; and strengthening the community organization.

Consistent with the above priorities the community developed a forest management plan for the 83 hectares of communal forests, and began applying it in 1994. The management plan called for converting the best part of the forest—some 44 hectares—to a silvipastoral system, of pine cypresses and pastures. The plantation would create new work opportunities for the landless households and deliver pasture, fuelwood, improved ecological conditions, and increased incomes to the community. The forest plan employs a 30-year rotation scheme in two sections of the 44 hectares.

Financial arrangements

The first stage of the DFPA project, the development of the community-based management plans, was made possible by a grant from the Dutch government and administered by FAO. The actual implementation of the plan, however, is a community financed initiative. To this end a Community Forest Management Fund was estab-

lished within the existing community organizational structures, since members were accustomed to managing and distributing common earnings.

To manage the plantation, labor is hired from among local landless families for whom the offered salaries compare favorably with their daily income, making the arrangement attractive to both parties. Under this condition external evaluators have estimated an annual internal rate of return of 16 percent for a complete forest rotation cycle.

Through the Community Forest Management Fund the community distributes the revenues and benefits of the plantation as follows: (a) local laborers working in the plantation are paid; (b) plantation related expenses such as replanting are covered; (c) 10 percent of the annual profit is reserved for unforeseen expenses; (d) the net profit (revenues minus the first three items on this list) is distributed equally among the community households; and (e) use of the improved pasture in the silvicultural system as well as the other lands outside the plantation are annually apportioned among the community's households.

A group of men are helping build a new roof for a community house. Mataje, Awa Reserve. Awa Ethnic Forest Territory, Ecuador

Project lessons

The approach developed by DFPA ensured that the project responded to the community priorities and took into account the local socioeconomic context. This in turn made it possible to mobilize local investment and establish a plan for the long-term sustainable management of the natural resources in question anchored in the local community. As seen in the above analysis the entire community benefits from the management of the common natural resource. Some of the more specific lessons are summarized below:

- The presence of a strong community organization capable of managing investments as well as securing equal distribution of benefits is essential.
- The approach requires external technical assistance in the initial phase in order to support the community in developing and starting the management activities. This could impede replication where no funds for initial investments in technical assistance are available. On the other hand, the technical assistance costs are low.
- The case illustrates the importance of including an analysis of the local context. In this case the economic viability of the plan is tied to the opportunity cost of the landless households' labor. Incidentally, this fact may also work as a project liability, in that a significant increase in the income-earning opportunities available to the local landless elsewhere may jeopardize the plantation's economic viability.
- This methodology of participatory rural development planning could be replicated anywhere. However, whether that would lead to cases of sustainable financing of natural resource management depends very much on the local situation. In general, the potential would be significant in situations where the two key conditions are present: low opportunity costs of local resources and humanpower within the community, and a strong democratic tradition in the community.

Additional references and contacts

For more information on this project you may want to read "Proyecto FAO-Holanda, Desarrollo Forestal Participativo en los Andes," DFPA, 1994. You may also contact Charles B. Kenny-Jordan (former Chief Technical Adviser of DFPA) at cjordan@sdssa.com; FAO's representation in Ecuador (fao-eco@field.fao.org\or\) and Lars Christensen (larsoghanne@get2net.dk).

Case study 5. Ecuador—Pimampiro payments for watershed services scheme

Summarized by Camille Bann / IIED from works by M. Echeverria, J. Vogel, M. Alban, and F. Meneses

This case illustrates a municipal system of payments for watershed conservation.

Background

The town of Pimampiro is located in the municipality of San Pedro de Pimampiro, Imbabura province, Ecuador. The town is situated in the Pisque River watershed and the Palaurco River sub-watershed. The Palaurco River is used for irrigation and drinking. Approximately 25 percent of the population has limited access to drinking water, which is of poor quality because of agricultural discharge upstream. Despite the lack of detailed hydrological information, the common perception is that the forests ensure water quality and flow, particularly in the dry season.

Financial arrangements

Under a pioneering pilot project for Ecuador, landowners in Pimampiro are being paid to manage the forest in the watershed in order to protect water sources. Many actors are involved in this initiative, among them: Asociación Autónoma de Agricultura y Ganadería Nueva América (Nueva America Agriculture and Livestock Autonomous Association), which consists of 24 members, with property titles adding up to approximately 638 hectares of land, who are supplying the environmental service; Desarrollo Forestal Comunitario (DFC), an FAO-funded project for community forest management; CEDERENA (Ecological Corporation for Renewable Natural Resource Development), an NGO that evolved out of DFC; the Inter-American Foundation (IAF), a U.S. funding organization; and the municipality of Pimampiro.

In 1999, CEDERENA signed an agreement with the municipality to work on an IAF-funded project, "Sustainable Management of Renewable Natural Resources of the Pimampiro District for the Maintenance of Quantity and Quality of Water." As part of this project the UMAT (Pimampiro's Environment and Tourism Unit—part of the town's governmental structure) introduced an environmental payment system that provided incentives for forest conservation. This pilot scheme was implemented in Nueva America where 20 members of the Nueva America Association are receiving payments for environmental services.

In 2001 the municipality approved a new ordinance that established a Water Regulation for the Payment of Environmental Services from Forest and Paramo Conservation, which became part of UMAT's responsibilities. A fund was created under this ordinance to channel payments by beneficiaries (domestic water users) to those investing in the continuous supply and quality of water through the maintenance of forest cover. The fund had an initial endowment of US$15,000 and it was expected to receive US$500 a month from a charge placed on drinking water fees.

The fund is managed by a committee composed of representatives from the municipality and CEDERENA. The committee verifies property titles, measures and inspects the holding, and then determines the amount that should be paid to each landholding family. Monthly payments range from US$0.50 to $1.00 per hectare depending on land category. These payments are a result of political negotiation rather than a technical analysis of the hydrology, water valuation, or financial planning of the fund. The payment amounts could increase as the market for watershed services is developed and more resources are generated. To receive payment each member of the association must sign an agreement with the municipality.

Project lessons

From the demand side there are concerns about the sustainability of the fund. The IAF funding ended in 2002 and it is not clear what will happen to the payment scheme. Because as of 2002 only 60 percent of water sold was paid for, the municipality does not provide the agreed-upon amount to the fund. In 2002 collection of the water tax amounted to approximately US$ 200 per month (a low amount compared with the originally estimated US$ 500 per month) and does not cover the payments for watershed services, which by 2002 amounted to US$ 455 per month. Furthermore, in order to protect all of the water sources (covering an area of 4,200 hectares), the payments would need to be around US$ 4,000 per month, far beyond the scheme's reach. Participation of the irrigation system's users would be vital to expand the scheme; however, this participation is not being pursued. There is also the possibility of involving agricultural producers through the property tax collected by the municipality. The lack of hydrological data demonstrating the hydrological benefits linked to forest cover further hampers the development and sustainability of the market.

From the supply side, a household survey has been undertaken in order to evaluate the social impacts of the compensation mechanism. The reliability of this survey is uncertain, however, owing to concerns that respondents may have answered strategically. The survey showed that payments contributed to family income and motivated participation in the scheme. Payments are commonly used to meet short-term needs (such as food, gas, and school fees). However, the payment scheme does not meet expectations—heads of households feel they should be paid more to protect the forest. The payment system has not strengthened the level of organization within the recipients. Association and transaction costs are high—conservatively estimated at three times the amount actually paid to farmers in the first year of the project. Payments have improved environmental awareness among recipients. However, CEDERENA believes that support for conservation is still underdeveloped and that people intend to change their land use in the future. It is also clear that sanctions are required, as violations such as slash-and-burn forest degradation and unauthorized wood extraction are common.

Additional references and contacts

For further information, read Ecodecision, 2002, "Impact Assessment of Watershed Environmental Services: Emerging Lessons from Pimampiro and Cuenca in Ecuador." IIED, London. Marta Echeverría can be contacted at mechavar@ecnet.ec.

Case study 6. Malawi—Lake Chilwa Wetland Project

Reported by Andreas Jensen / Danida (based on project completion report by Daimon Kambewa)

This case illustrates the phasing-out of an SNRM project's external financing, and its successful adoption by the local stakeholders.

Background

The long-term objective of this project was to ensure that the natural resources of the Lake Chilwa wetland and its catchment area were utilized and managed by local communities in a sustainable manner. With this long-term objective in mind, the project focused on empowering local communities to conserve and manage their natural resources through institutional capacity building and coordinated technical support by line ministries in the Zomba, Machinga, and Phalombe districts.

By the end of the first phase the project's achievements included the following:

- Three environmental district offices (EDOs) were established in the Machinga, Phalombe, and Zomba districts.
- Three district development committees (DESCs) were established in the above three districts and 45 members were trained.
- Twenty-three studies on wetland issues were conducted by consultants in preparation of the Wetland's State of the Environment Report.
- Five hundred copies of the Wetland's State of the Environment Report were produced and distributed.

Fisherman at Msaka fishing camp at Chimpamba Village, spreading his catch of fish to dry in the sun Malawi.

- A Wetland Management Plan was approved by riparian district assemblies.
- Forty-one awareness sessions, using a local band, a local drama group, and an NGO were conducted; these resulted in the establishment of 43 community working groups in the three districts combined. (Community working groups are a crucial part of the management plan since they are supposed to prepare and implement action plans.)
- Four hundred and fifty copies of the districts' State of the Environment Reports (DSOERs) and Environmental Action Plans (DEAPs) were produced and distributed (150 per district).
- Ten micro-project activities were implemented in 46 villages.
- A communication strategy was produced. This allowed the project to promote wise use through TV, a video documentary, newspapers, preaching manuals, radio programs, and project flyers.
- Sixteen bird breeding areas were established as sanctuaries respected by the local people.
- Forty-three Beach Village Committees were supported and trained.
- Two training manuals on community working groups were produced, packed, and distributed as a toolkit for 25 frontline staff to use when forming and training community-working groups.
- Staff from two EDOs attended a training session in Denmark in Integrated Water Management.
- Twenty-three journalists from print and electronic media were trained in investigative reporting, which resulted in more news coverage on environmental issues in Malawi.
- Seven Ramsar signposts were erected in all of the three districts around Lake Chilwa.
- A Lake Chilwa Inter-District Management Committee was established with a fully operating secretariat.

Lakeside village on the shores of Lake Malawi.

Financial arrangements

The project was funded by a Danida grant of 10.5 million DKK during a first phase of 36 months (October 1998 through September 2001). A second phase was anticipated, but never executed, because Denmark ceased development aid to Malawi in 2002.

As Danida support came to an end there was a concern about the sustainability of the program in terms of country ownership (that is, whether the country and particularly the local stakeholders were interested in using the project products) and financing (that is, whether they had the resources to pay for them). Two years after the project ended, reports from Zomba, Malawi indicate the following:

- Some project activities such as developing DSOERs and DEAPs were deemed sustainable because there were institutions that would continue to produce them. In this regard the District Environmental Subcommittee of DESC was viewed as the appropriate responsible body that could lead the process of developing and implementing district plans on natural resource management. DESC members in the three districts have received training in the planning process and as a result they have been able to develop DSOERs and DEAPs in their districts.
- Another institution that will sustain project activities is the Lake Chilwa Inter-District Management Committee for the three districts of Zomba, Machinga, and Phalombe. This body was expected to be a custodian of the wetland and ensure coordination and joint planning among the three districts surrounding the lake. However, the districts were not be able to financially support the secretariat for the Inter-District Management Committee because they themselves were struggling financially. Fortunately MBERU (a department of the local university) offered to support the secretariat until the districts were able to do so on their own.
- Local CBNRM committees established for bird catching and fisheries survived on their own. They have the support of the traditional leadership and generate small revenues from fines and licenses. The input required for their operation is minimal (books, ledgers, pencils, and expenses for meetings) and in view of the economic value of the Lake Chilwa fisheries there should be room for more support from the artisan fisheries industry (fisheries annual average yield of 11.000 tonnes, with an estimated value of US$ 11 million per year). Bird catching results in significantly more profits (1.2 million birds trapped and shot, with an estimated value of a quarter-million U.S. dollars). In spite of the positive outcome it is also evident that the relatively quick phase-out of Danida's assistance exposed weaknesses in many of the management structures that were solely dependent on foreign aid.

Project lessons

- The key context condition that helped the project to achieve community-based natural resource management on the ground within a relatively short period of time was the close linkages with traditional authorities combined with a very active media campaign to reach all villages in the catchment area. In addition, earlier work by the Fisheries Department and Germany's Gesellschaft für Technische Zusammenarbeit (GTZ) laid a strong foundation for promoting CBNRM among the lake communities. A general move toward decentralization and empowerment of local government in Malawi aided in the achievement.
- A Wetland Management Plan will not achieve anything alone. Local ownership of the process of preparing the plan is extremely important to ensure its implementation—

especially when foreign assistance pulls out before the implementation of the prepared management plan, as happened with this project.

- Economic benefits of management interventions should be very tangible, both locally as well as on a large scale and they should be communicated to all stakeholders.
- Active participation of resource user groups is the key to success (for instance, organized as beach village committees, bird committees, etc.).
- Using the communication element as a strategic tool to support the project and stakeholders' dialogue is critical.
- Linking all communities, traditional authorities, district assemblies, and national institutions is an exercise that is almost impossible to complete on a full-scale basis. Systematic planning should promote prioritization at different levels and enable interventions to be implemented in selected "hot spot" areas.
- Most development agencies—be they governmental institutions, nongovernmental organizations, or private firms—lack the requisite skills to plan, implement, and monitor micro-projects targeting natural resource management with communities. Therefore local institutions should handle micro-projects instead.
- Environmental planning should be mainstreamed locally as an integral part of the decentralization process, that is, DSOER should be part of the District Socioeconomic profile and DEAP part of the District Development Plan.
- DSOERs and DEAPs should ultimately include an analysis of economic values compared to management costs for various sectors.
- Duration of similar CBNRM projects should be longer than three years to allow full assimilation of the CBNRM processes by district assemblies, traditional authorities, and the like.
- As it happens in other cases, it was found that some training program participants were there only to collect daily allowances. Caution should be exercised when devising these types of interim payments because they may raise false expectations and jeopardize future participation.
- At the district level, the general movement toward a more decentralized public sector has enabled broad political discussions on the local management of natural resources. However the decentralization process was initiated as recently as 1998 (by the new Local Government Act) and the limited degree of on-the-ground decentralization thus far achieved may affect the practical implementation of CBNRM.
- Resources available at the district level were, in many respects, very limited, particularly concerning extension and government services delivered to the communities. The decentralization process must, therefore, be accompanied by increased resources available to district authorities either from the central level or from the increased local revenue, taxes, ground rent, levies, etc.

Additional references and contacts

For more information on this project, read some of these publications available from Danida: "Lake Chilwa Wetland and Catchment Management Project," Project Document, April 1998; "Lake Chilwa Wetland State of the Environment Report," June 2000; "Lake Chilwa Wetland and Catchment Management Project," October 2000; "Lake Chilwa Wetland Management Plan," September 2001; "Lake Chilwa Wetland and Catchment Management Project," Project completion report, December 2002. Or contact, in Malawi, the Director of the Environmental Affairs Department and in Danida, Andreas Jensen (andjen@um.dk).

Case study 7. Namibia—The Torra Conservancy

Summarized by Camille Bann / IIED from works by D. Roe, M. Grieg-Gran, and W. Schalken

This project illustrates a case of private sector–community partnership that runs a conservancy for tourism and hunting.

Background

The Torra Conservancy, established in 1998, was one of the first of its kind in Namibia. It is located in the Twyfelfontein region of the Kunene Province in northwest Namibia and covers 80,000 hectares. It has 300 members and an estimated population of 500 living within the conservancy. The conservancy is characterized by spectacular mountain scenery and a wide range of wildlife. The main production activity is livestock farming but because of the arid conditions cattle numbers are low. Opportunities for paid employment are limited in the area and many of the young people from the community migrate to urban areas to look for work. The need for jobs is one of the key factors influencing the conservancy committee's decisions.

Establishing and running a conservancy implies responsibilities and costs in addition to those explicitly specified in hunting and tourism agreements. In order to qualify for an annual hunting quota (issued by the government), the conservancy needs to demonstrate that it is managing the resource well. This requires expenditure on monitors to guard against poaching, surveys of wildlife resources, and maintenance of the conservancy (e.g., fencing and water holes). The conservancy, as of 2000, employed five game guards, one secretary, and a field officer. It maintains an office and a vehicle, with the conservancy committee putting in unpaid time. Running costs are estimated at N$ 137,000 annually, of which 20 percent is provided by Integrated Rural Development and Nature Conservation (IRDNC), an NGO. IRDNC also employs a field coordinator

Meeting to discuss the quota and charges of trophy hunting, Torra Conservancy, Kunene, Namibia

who acts as treasurer on an unpaid basis for the conservancy. The intention is for external assistance to be phased out so the conservancy will have a greater cost burden in the future. The conservancy is therefore keen on developing income-generating activities to cover these costs. Nevertheless, the community has showed, in the course of negotiations with companies, that other issues such as ownership, employment, and nonfinancial benefits are also high on its agenda.

In 2002 the Torra Conservancy was the only community in Namibia that had both tourism and hunting agreements. It also provided the only example in the country of a formal agreement between a large tourism company and a community—a good model for other communities to follow.

Financial arrangements

In 1996 the Residents Trust, which preceded the conservancy, signed an agreement with Wilderness Safaris (WSN's), a large African adventure travel company, for the establishment of a luxury tented camp, Damaraland. Direct financial benefits to the community from the Damaraland Camp include a lodging tax of 10 percent of the accommodation price (net of sales tax) and an annual rental of N$ 3,000 for the permission to occupy the land. Payments to the community from lodging taxes have been fairly significant despite low occupancy levels; between July 1998 and June 1999 they amounted to N$ 174,846, equivalent to N$ 582 per community member (although revenues have not been distributed this way). This would be comparable to about three months of pension payments or wages from casual agricultural labor.

Community representatives demanded that WSN's train employees and transfer its ownership rights rather than increase its revenue share. As a result of these negotiations, employment at Damaraland Camp is considered an important benefit for the community. It pays more and is more reliable than the other two employment opportunities available in the region. Fourteen people from various parts of the conservancy work and live at the camp. In addition, there is employment for people who live in the camp's vicinity. Payments of salaries (including salaries of those who do not live in the camp) are around N$ 200,000 per year. In addition, small amounts are paid to the community for laundry services (N$ 4,930 over the 12 months to June 1999). Ownership of the venture was a key issue in the negotiations and a flexible approach was adopted. The agreement states that WSN has ownership of the assets of the enterprise but allows for the possibility of the community purchasing the assets either at the end of the 10-year agreement, or extending the contract by five years and acquiring 20 percent of the assets each year through a corresponding reduction in the payments of rental and lodging tax levy. A training program was also negotiated. Thus, some community members benefited from the company's expenditure on training, estimated at N$ 23,812 in 1998/99.

Benefits from hunting agreements have been primarily financial but the conservancy is considering ways of increasing nonfinancial benefits as well. In 1998 Savannah Safaris, the company with the hunting concession, paid a lump sum or area fee of N$ 17,000 and fees per animal shot that amounted to N$ 120,000. It was also agreed that bushmeat from animals hunted by the safari company would be distributed locally. There was no provision for formal training in the agreement but people from the community were involved in skinning and thus learned by doing. In addition, one of the conservancy's game guards worked with the hunting company although the conservancy did not pay him. Part of the reason for the predominance of financial benefits is that hunting contracts have been only one year long. The conservancy committee intends to move to three-year contracts in order to increase the scope for

nonfinancial benefits. The short-term nature of the contract also explains why there has been no investment by the hunting company in lodging within the conservancy.

Project lessons

The Torra Conservancy has done very well in relation to similar initiatives in other Namibian communities. Some of the reasons for its success are the high value of its landscapes and wildlife, high level of interest from important travel companies, and the well-organized community. By 2001 the conservancy had two agreements with total revenues far exceeding the costs of running it, and it was also likely to benefit from a proposed agreement with Skeleton Coast Fly-In Safaris. However, as of 2002, conservancy representatives felt that nonfinancial issues, particularly local involvement in management, were more important (a training program agreed on as part of the Damaraland negotiations has been slow to develop). The conservancy committee turned down a proposal that did not sufficiently involve the community—the conservancy wanted the community to retain access to the land involved and for there to be a training component, while the investor wanted the site for his exclusive use. Wilderness Safaris submitted a proposal for a rhino-tracking venture at a site called Poacher's Camp. The conservancy requested a more detailed proposal with income projections over five years. They recognized Poacher's Camp as a site with great tourism potential and have considered starting their own enterprise there. Alternatives to a community-owned enterprise would therefore have to clearly demonstrate their means of generating income for the conservancy while involving the community.

Additional references and contacts

For further information, peruse the book by Roe et al. 2001 available at www.ieed.org; or contact Maryanne Grieg-Gran at maryanne@iied.org.

Case study 8. South Africa—The Green Trust

Reported by Thérèse Brinkcate / WWF–South Africa

This case illustrates an innovative partnership between an NGO and a private business, and the opportunities and challenges that it entails.

Background

In October 1990, a groundbreaking and innovative partnership between WWF–South Africa (WWF-SA) and a major South African bank, Nedbank, established an environmental fund known as "The Green Trust." Since its inception, the trust has raised over R47 million (approximately 5 million U.S. dollars) and has supported over 125 conservation projects with a strong emphasis on the involvement of local communities. The projects funded are primarily within South Africa but some have been funded in Mozambique, Malawi, and Namibia.

Back in 1990 when the Green Trust was founded conservation organizations in South Africa were seeking a new image for conservation. Although the country was still a few years away from free and fair elections, there was already a consciousness among conservation NGOs of the need to bridge the gap that existed between the NGOs and millions of disenfranchised people in the country. Conservation was at best unknown among many rural communities and at worst tainted with an image of a white middle-class playground fiercely protected by paramilitary game guards. It was only during the early 1990s that concepts such as "people and parks" and "community-based conservation" began to take form and to become entrenched in conservation policy. These were exciting times. The field was fresh and untested and the needs enormous.

Without a doubt it presented one of the most important challenges that South African conservationists had yet faced. But challenges lie in the foundations of conservation—and the creation of a new conservation fund, especially a fund specifically targeting community-based conservation, introduced financial muscle into the realm of lofty idealism. The vision of the partners in the Green Trust, WWF-SA and Nedbank, in creating the trust was a significant contribution to conservation in South Africa.

The Green Trust is a mutually beneficial business partnership and Nedbank's support of the trust is not simply charity. The benefits to Nedbank lie largely in the contribution that the trust adds to the bank's marketing strategy, which ultimately aims to establish new clients and maintain client loyalty by appealing to the clients' sense of contribution to a higher cause.

The projects funded by the Green Trust have covered a significant range and a diverse group of environmental interventions with a strong focus on community-based conservation. However, over time, there has been some pressure from the donor for more species-focused projects, the thought being that these might appeal to the Nedbank client. This has been dealt with by creating a broad-ranging portfolio of diverse projects that allows for high-profile flagship projects and less appealing but no less important conservation projects.

From 1998 to 2002 the trust's funding priorities have included sustainable use of renewable natural resources; species and habitats of special concern; protected areas; support to the development of legislation; policies and treaties related to SNRM; pollution control; and consumption of nonrenewable natural resources. In addition, three approaches are recognized as important processes in achieving environmental conservation and will, wherever possible, form part of the focal priorities—these are community-based conservation, environmental education, and capacity building in environmental conservation.

Projects funded by the Green Trust have encompassed both urban initiatives such as community-driven urban greening as well as rural community-based natural resource management initiatives. The trust has also facilitated the conservation of some highly endangered species, including the African wild dog, the cheetah, the blue swallow, the Kalahari lion, and the Brenton blue butterfly. All of these projects look closely at innovative ways of managing species-human conflict. On a more strategic level, the Green Trust has influence at the highest levels of the South African government through its support of advisors to four different Ministers: the Minister of Water Affairs and Forestry, the Minister of Land Affairs, the Minister of Environmental Affairs and Tourism, and the Minister of Education.

The Green Trust is administered by WWF-SA. It has a staff of two full time persons (a manager and an assistant) who are the direct link between the executors, Nedbank, and the board of directors. They handle daily business such as processing new applications for funding, designs for new projects, drafting contracts, approving reports, managing project payments, monitoring progress of projects, and maintaining communication with executors. An important additional role is maintaining the relationship with Nedbank and managing media links to get as much exposure of the trust and its projects as possible. These two staff members work as part of the whole team at WWF-SA and report directly to the trust's board of directors.

The board meets three times a year to evaluate the status of projects and to approve any funding for new projects. It consists of three members from WWF-SA and three members from Nedbank. The board of directors in turn reports

to a board of trustees who meet once a year to evaluate the status of the trust.

Financial arrangements

Nedbank initially donated seed money of R5 million when the Green Trust was established in 1990. In 1995, this pledge was renewed for an additional five years. In late 1999, Nedbank renewed its commitment to the trust with a pledge of R7 million over the next five years. In addition to this direct financial support, Nedbank implemented a unique and innovative way of providing ongoing financial support, namely a range of "Green" banking products, through which bank clients make contributions to the trust. These products include youth and adult savings accounts, checkbooks, ATM cards, and credit cards. The Nedbank Green home loan was added to the product range in early 1999, and the bank will also offer Green insurance (R1 per policy per month is donated to the Green Trust). The Green affinity banking products are the only banking products available that are aimed at restoring, preserving, and developing South Africa's wealth of natural resources. The "green" visuals on the checkbooks and cards indicate the client's contribution and commitment to the environment. All of the money accrued by Nedbank from these promotions is passed on to the Green Trust. The Green banking products allow Nedbank clients to support the aims of the trust and of WWF-SA through Nedbank, at little cost (and no additional effort) to themselves. These affinity products have enabled Nedbank, its clients, and other stakeholders to generate in excess of R47 million for the Green Trust from 1990 to 2002.

However, after 10 years, the bank reported stagnation in the amount of clients who support the various Green banking products. In May 2001, Nedbank revamped its "Green" brand with a whole new marketing campaign under the banners of Nedbank Green, Nedbank Arts, and Nedbank Sports to try to revitalize it. Nedbank also has tried to compensate for the decline in its brands approach by offering various "lifestyle–enhancing" packages to clients. In this framework a particular problem for the Green Trust is that the Green brand is only one of the many brands offered by the bank and is often not actively endorsed by regional branches. Clients may then assume that they are contributing to the Green Trust when, in fact, they are not.

Project lessons

This being a business-NGO partnership, Nedbank often had expectations that were beyond the capacity of a conservation NGO—for example, the assumption that the Green Trust would "market" itself, using funds designated for conservation. The lesson here is that expectations must be clearly spelled out from the beginning.

The original agreement between WWF-SA and Nedbank was a loose agreement which stood most definitely in the bank's favor. The agreement has now been restructured in order to achieve a more equitable partnership, but not before causing some damage to the partnership. The lesson here is that an explicit agreement must be made right from the start. A key issue is establishing a positive relationship between the partners and maintaining it through staff changes.

The demand for marketing profile from Nedbank has led to some pressure for certain types of projects to be funded, for example, species-focused projects that would appeal to the general clientele of Nedbank. The lesson here is that there is some need to provide a certain "give and take" in such a partnership but Nedbank has easily been accommodated by ensuring that the trust has a balanced portfolio with some key high-profile projects interspersed with less publicity worthy but no less important projects.

As a highly innovative and unique funding mechanism for conservation the Green Trust has achieved much since its inception. No matter how successful this fund is, though, its long-term sustainability is by no means guaranteed. The trust has been in place since 1990, but with the current agreement between WWF and Nedbank ending in 2005, the future is uncertain. A world economic slowdown, increased competition, and aggressive changes in branding and marketing may result in Nedbank taking a less favorable look at its involvement. Having said this, though, undoubtedly the trust would be able to continue on reserves for a certain amount of time, having established itself as an important conservation entity in its own right, and if necessary it might possibly find alternative donors. The lessons learned in terms of the business agreement, marketing strategies, and demands of business partners are crucially important for conservation organizations seeking to replicate this funding mechanism elsewhere.

Additional references and contacts

For more information on this project visit www.wwfsa.org.za.

Case study 9. South Africa—Outgrower schemes

Summarized by Camille Bann / IIED from works by J. Mayers and S. Vermulen

This case illustrates a private sector–community partnership for wood production.

Background

In an outgrower scheme a company provides marketing and production services to farmers to grow trees on their land under purchasing agreements laid out in a contract. By 2002 outgrower schemes in South Africa involved some 12,000 smallholder tree growers on about 27,000 hectares of land. The two schemes with the largest membership are operated by the country's biggest forestry companies, Sappi and Mondi. While outgrower timber only provides about 10 percent of the two companies' pulp mill output, and is more expensive per ton than wood from other sources, it provides the fiber that would otherwise be unavailable because of land tenure constraints. This allows the forestry companies to achieve a volume of production that reaches valuable economies of scale. The scheme also provides companies with a progressive image that is crucial at a time when the distribution of land rights in South Africa is being called into question.

Two other outgrower schemes provide alternatives to the private company schemes, one operated by the South African Wattle Growers' Union and the other by Natal Cooperative Timbers, which provides wood, fiber, and wattle bark to tanning extract factories.

Community motivations for joining outgrower schemes are primarily tied to the cash income at harvest; trees are also seen as a form of savings. Other minor incentives include ease of management compared with food crops, reliability of yield, and the possibility of obtaining fuel and selling wood to neighbors. The major barrier to households joining the scheme is inadequate landholdings. Other reasons include the long growing cycle, fear of cattle damage, and concern for what would happen if the timber companies no longer needed outgrowers' trees.

Competition with food crops for land or labor does not appear prevalent as yet in all the reviewed cases because trees are generally planted on land unsuitable for food crops and operations are carried out during times in the year when agricultural activities are minimal. But

there is evidence that outgrower woodlots have depleted water sources in some areas—and contrary to expectations, they also do not significantly improve fuelwood availability.

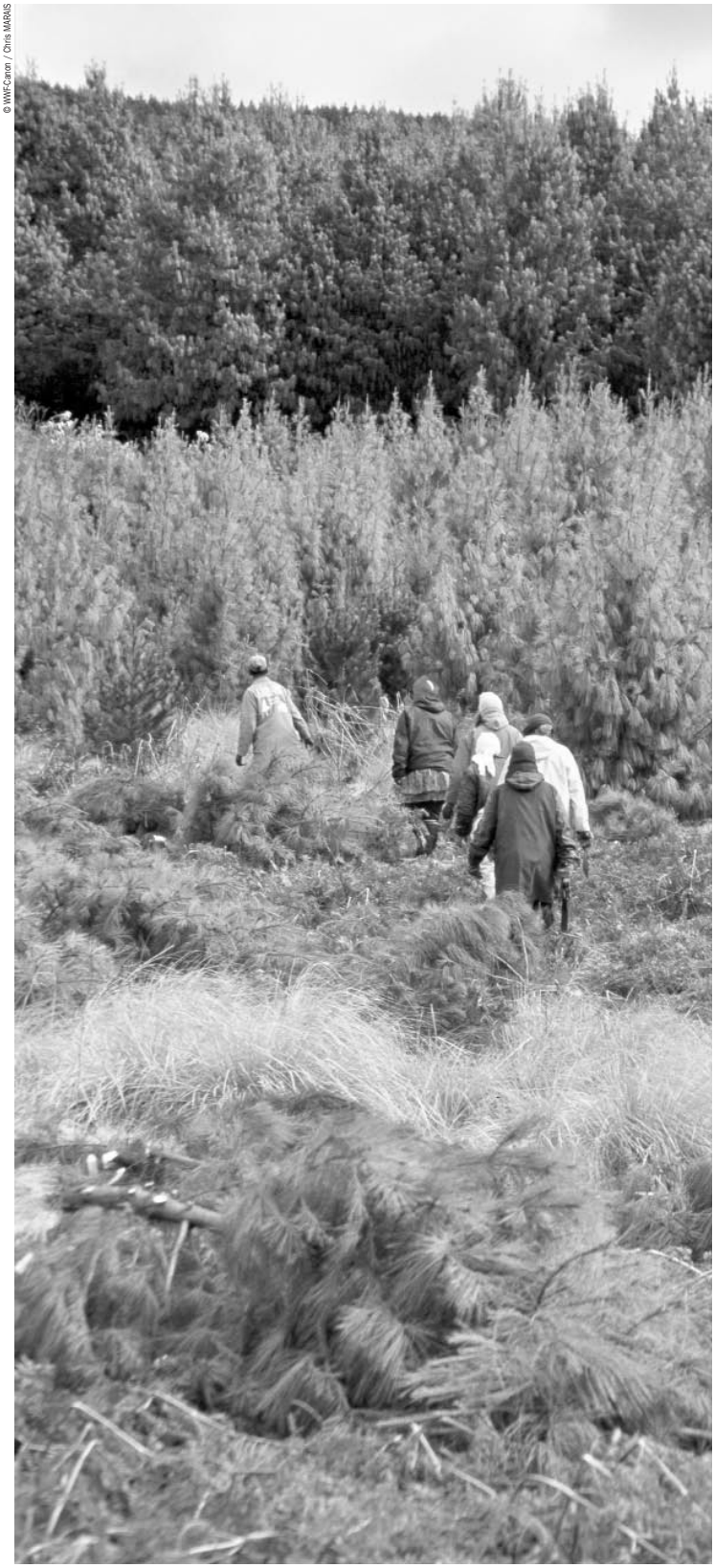
Financing arrangements

Smallholders grow eucalyptus trees with seedlings, credit, fertilizer, and extension advice from Sappi and Mondi, two forest companies. In return the companies expect to buy all the harvest at the end of the growing cycle.

The South African Wattle Growers' Union and the Natal Cooperative Timbers operate in a similar way but, in addition to financing the inputs' cost and marketing the output, they seek the best prices for the products and offer a share of the downstream tanning factory profits.

Project lessons

Outgrower schemes have substantially contributed to household income in communities, providing participating households with about 20 percent of the income needed to be just over the national "abject poverty line." But the schemes alone cannot take households out of poverty because access to land in communal areas is limited. Small growers also face problems with opaque government policies and uncoordinated service provisions from public agencies. Their associations lack the power to engage with the policies and institutions that affect their livelihoods. Nonetheless, outgrower schemes have had positive impacts on communities' asset bases. Land rights have been secured and infrastructure has been developed in some areas. The schemes have even been able to benefit the poorest and most labor-deficient of smallholders, through the credit extended by companies. The landless poor have benefited in some areas through employment—such as weeding, tending, harvesting, or transport. But some outgrowers are dissatisfied with being tied to supplying a single timber



Forestry workers in Mondi's Gilboa Plantation in South Africa's KwaZulu Natal province.

industry client. These South African experiences suggest the following lessons:

(a) A strong field staff giving sound technical advice is crucial;

(b) Competent administration saves money;

(c) Intercropping with legumes in the first two years gives growers income in the early stages and improves soil fertility;

(d) Consolidating should be preferred over spreading too thinly across areas—transport costs and other costs are prohibitive if volumes per area are too low;

(e) Strong relationships between growers are vital;

(f) Transparency is essential—e.g., allocation systems must be explained in terms of supply and demand. Reasons for cutbacks must be understood by all concerned;

(g) Management needs change over time—in the early years it is focused on silvicultural extension, later on managing timber supply, e.g., on quota systems and contractors' availability and pricing; and

(h) Reputation rather than heavy marketing spreads the word.

Additional references and contacts

For further information peruse Mayers and Vermeulen (2002), available at www.iied.org; or contact the author at James.Mayers@iied.org.

Case study 10. Tanzania—MEMA Project

Reported by Karsten Raae / Danish Forestry Extension / member of Danida's WGSF

This case illustrates how an SNRM project branches out to a new initiative that requires new partners and new financing arrangements, in this case a partnership between private businesses and the local community.

Background

This case study looks into a recent offshoot of the Danida-funded MEMA project in Tanzania. MEMA is a Swahili abbreviation for sustainable management of natural resources and protection of nature values. The project was initiated in 1999 and operates in the northern part of the Iringa region, a part of Tanzania's central highlands extending from the northern tip of Lake Malawi to approximately 100 km south of Morogoro and Dodoma. MEMA facilitates the transfer of user rights and ownership of natural woodlands and forest reserves to local communities. As of 2002 the forests involved included the Nyang'oro Forest Reserve (118,000 hectares), Kitapilimwa Forest Reserve (3,699 hectares), and village forests surrounding the Kitapilimwa Forest Reserve (12,042 hectares). MEMA encourages the establishment of village natural resource committees in charge of the management of the forests, based in a management plan developed by the villagers and facilitated by MEMA.

Overall MEMA objectives include the following: (a) to develop, test, and implement replicable community-based forest management models for environmentally sustainable management of natural forests and woodlands in the pilot areas; (b) to support capacity development in natural forest, woodlands, and biodiversity resource management in Iringa District; and (c) to support the marketing of products from the resources handed over to the villages. Ownership and the ability to generate income are crucial to the partnership.

With MEMA financing and technical advice from the District Lands, Natural Resources and Environment Office and the national Forest and

Beekeeping Division, villages in the project area have taken over the management of traditional commercial woodland products such as charcoal and fuelwood for tobacco and fish curing.

During a January 2002 mission to the MEMA project area a Danish consultant discussed with the local stakeholders the potential of the area to attract international ecotourism. Local and national partners were identified and the initial concept was developed. The Danish consultant followed up on the search for international partners and brought a group of full-paying guests to test the area. The test took place in September 2002. Encouraged by the positive results, the participants decided to establish an operation based on long-term business-to-business relations among three partners; the villagers (supported by the District Administration and MEMA); a locally based tour operating company, JGST (Jungle Giraffe Safari Tours ltd.); and a Danish travel agency, DJ (Dumas-Johansen Agricultural Tours). The three partners' responsibilities are as follows:

- Villagers—Providing services and renting out rights to use their natural resources for hunting, fishing, camping, etc.
- JGST—Hospitality and organization of all activities in Tanzania such as agreements with villagers, logistics, and safety.
- DJ—Marketing in Europe and providing a professional guide to accompany the groups.

The lush forest of the Udzungwa Mountains National Park, the largest remnant Eastern Arc forest, Tanzania

Financing arrangements

The January 2002 consultantancy was financed by Danida through the MEMA project, as was the consultant who accompanied the test group in order to monitor the concept and evaluate the capacity and performance of JGST. MEMA has supported the villagers in their efforts to deliver services and JGST in its efforts to become a serious partner with the Danish travel agency. For all of this MEMA has invested about 150,000 DKK and quite a number of hours from expatriate staff and regional staff, all financed by Danida.

The unanimous conclusion from the pilot run was that the concept was appropriate but improvements were needed especially on the quality of the camp established on community land. Hence, it was decided to apply to Danida's Private Sector Development Program for help with a start-up facility; 500,000 DKK was granted in January 2003. A Danish consultant will facilitate the handover of the concept, will act as a liaison between JGST and DJ, and will help with the marketing in Europe. The first tour was expected to take place in August 2003 on fully commercial terms, and there are good prospects that it will deliver substantial benefits to all three partners.

Project lessons

Through the ecotourism initiative a village natural resource committee has been established, and its capacity improved. Value has been added to local natural resources, which makes it more likely that they will not be overexploited and lose their ability to generate income—hence, nature protection has been improved. Through the Village Land Certification and Forest Management Agreements supported by MEMA, villagers are confident in their ownership of the natural resources and are more willing to participate in the tourism scheme. Jobs have been created resulting in substantial income.

A plan for tourism will be developed based on an arrangement that includes maximum involvement of locals on a regional and especially village level. That means training people to be involved in hospitality, guiding, scouting, production of handicrafts, and other services. Purchase of local goods will take place whenever possible. The use of nature will be based on sustainability principles and there is no deliberate intention of introducing mass tourism.

The game shot by tourists will be consumed in the camp and surplus meat will be distributed to the villagers; quotas are calculated by the authorities and built into the village's natural resource management plan. To a large extent this activity will replace poaching. Former village poachers have been hired as scouts.

Walking safaris in the area will have minimal impact on the woodlands except for the creation of a few primitive footpaths. The local fishers will organize fishing; hence, it will not hamper their opportunities, it will add to their income. The villages, according to what is allowed in the management plans, will provide firewood. The camp is built of local recyclable materials and the infrastructure will be built into the landscape. The camp is only planned to remain in service for four to seven years at the same location. Garbage, in cases where it cannot be decomposed locally, will be removed from the camp and enter the Iringa town solid waste management system.

Future of the program

In general, the potential is high for eco-tourism, which has been one of the fastest-growing industries in recent decades. The area selected for this project has many of the features vital to ecotourism: a distinctive and still unspoiled local culture, scenic beauty, reasonable infrastructure, national parks, mountainous rainforest, friendly population, safety, etc.

A number of potential markets (consumer groups) have been identified so far, including: (a) Danish groups of 10–12 coming six to nine times a year; (b) eventually similar groups from other European countries; (c) expatriates and upper middle-class households in the Iringa area using the camp for extended weekends; (d) expatriates and upper middle-class households in other parts of Tanzania; (e) educational institutions and groups of students from abroad and from Tanzania using the camp for training, courses, and "summer school"; and (f) organizations, institutions, companies, and the like using the camp for workshops, seminars, etc.

It is important to start up the business slowly so as not to overwhelm the capacity of the two Tanzanian partners (JGST and the villagers) and the carrying capacity of the area, which still needs to be assessed.

This is a very recent initiative and its success will depend, among other things, on the continued support of the MEMA project; retaining committed staff at the district administration office; good personal contact and mutual trust among district staff and villagers; local hospitality companies' willingness to innovate and upgrade services; and continued commitment from the Danish participants in the tourism scheme.

Many difficulties remain and must be dealt with. At the local level, although the MEMA program has fostered the devolution of resource ownership to villagers, titling is lagging and villagers are insecure about their rights. Also, villagers have low social capital[28] and a history of mistrusting public authorities, especially those at the national level. The project will have to deal with legislation that lacks transparency and also, with inconsistent enforcement. For example, hunting regulations have been passed by parliament but are not enforced. The tourism infrastructure is poor and both local tourist operators and villagers have little understanding of the importance of providing tourist services of quality and consistency to attract foreign ecotourism.

As for the barriers the project must negotiate at the national government level, the most serious is a lack of consistent support due to a certain degree of mismanagement, a laissez-faire attitude, carelessness, ignorance, and corruption.

Additional references and contacts

For more information on this project contact DFE's Karsten Raae (info@dfextension.dk); Iringa District Council's Jumanne Hanti (memairinga@twiga.com); FBD Iringa's John Massao (memairinga@twiga.com); MEMA/Danida's Henrik Lerdorf (memairinga@twiga.com); and JGST's Zabron Luvinga (mrhotels@hotmail.com).

28 Social capital is defined as the ability and willingness to cooperate. There must be a general level of trust, a tradition for networking, and confidence among members of society.

Case study 11. Uganda—Mgahinga and Bwindi Impenetrable Forest Conservation Trust

Reported by Tom Blomley / CARE International

This case illustrates the accomplishments and shortcomings of a trust fund and several institutions trying to protect a World Heritage Site.

Background

Mgahinga Gorilla and Bwindi Impenetrable National Parks are critical afro-montane habitats located in the southwestern corner of Uganda, close to the borders with the Democratic Republic of Congo and Rwanda. Previously forest reserves, both areas were upgraded to national park status in 1991. Bwindi Impenetrable National Park (BINP) is one of 29 forests in Africa accorded the highest conservation status and was declared a World Heritage Site in 1994. It serves as an enclave for at least 12 Red Data Book species that are endangered or threatened with extinction. It is the only forest in Africa with a continuum of low-to-high altitude forest types, and the rare afro-montane vegetation provides the richest habitats in east Africa for birds (346 species), butterflies (202), and trees (200). It also hosts 120 mammal species, seven of which are diurnal primates, including chimpanzees and just under half (circa 280) of the world's population of mountain gorillas. Like Bwindi, Mgahinga Gorilla National Park contains rare afro-montane rain forest vegetation, but owing to the elevations of three volcanoes, Muhabura (4,127 meters), Sabinyo (3,645 meters), and Gahinga (3,475 meters), it offers a particularly rich diversity of habitat that includes montane, bamboo, and alpine flora, and extensive marshes lying between the volcanoes. At 34 square kilometers, Mgahinga is Uganda's smallest park, but supports a great diversity of wildlife.

The Bwindi Trust is overseen by a board of trustees consisting of members of national government institutions; local community representatives; members of CARE (an international NGO), a local NGO, and a local research institute; and representatives of the private sector. On the local level, representatives drawn from communities surrounding the two protected areas have organized a Local Community Steering Committee (LSCS) to vet and select development projects for trust funding and increasing local conservation awareness.

According to its bylaws the trust's overall objective is to maintain the biodiversity and ecosystem health of the Mgahinga Gorilla and Bwindi Impenetrable National Parks. This is not a narrowly defined conservation project and a substantial portion of the annual expenditure actually goes toward supporting local development projects in the immediate vicinity of the two protected areas. In recent years the trust has invested in the following:

- Community development activities: This includes support to communities, groups, or individuals for social development projects or business activities. Sixty percent of the annual budget of the trust is spent on these activities.
- Research and ecological monitoring: Twenty percent of the trust's annual budget goes into supporting long-term ecological monitoring (via a local research institute) as well as studies undertaken by Ugandan students or other local researchers.
- Park management: Twenty percent of the annual budget goes to support increased management capacity of the two parks—through capital purchases, training support, and covering some recurrent costs as well as

supporting the Trust Administration Unit: This covers salaries, office rent, utilities, and other recurrent running costs as well as the costs of regular board and local community steering committee meetings.

The trust has been working alongside a number of other organizations united by a common interest in the conservation of the two protected areas and the sustainable development of the rural areas in the immediate vicinity. Other key players have included the CARE Development Through Conservation Project, the Institute for Tropical Forest Conservation, and the International Gorilla Conservation Program. Given the range of players working on similar issues together with district local governments and the Uganda Wildlife Authority, it is hard to assess or attribute to the trust all of the improvements witnessed in the area over the last decade. However, on a broad scale, the changes have been impressive. From a deeply conflictive situation in the early 1990s, following the establishment of the two national parks (and the associated loss of benefits to local people), there are increasing signs of acceptance of the two protected areas as well as signs of increasing collaboration between local communities and park management authorities. Some of the key indicators to date include:

- *Changes in local attitudes.* CARE and the trust have been tracking changes in local attitudes toward the two parks and the park authorities by randomly sampling households living in the immediate vicinity; these studies show dramatic positive changes.
- *Reversals in encroachment rates.* From the 1970s to the early 1990s agricultural encroachments over the boundaries of the two protected areas were significant and largely unchallenged. Much of this was caused by the breakdown of law and order in the country at the time and the effective "open access" nature of the two national parks. However, since 2000 there have been no recorded encroachments and the boundaries of the two parks are being entirely respected by local people, despite the limited ability of the parks' staff to effectively patrol these remote areas.
- *Reduction in fires.* In the early 1990s, following the establishment of the two national parks, arson was a common occurrence. Fires continue to be a problem, but this is largely because agricultural clearance at the end of the dry season is often facilitated by burning bush on fallow land, which can easily spread into forest areas. What is significant is that on many occasions since 2002, community members were quick to respond to fire outbreaks and assisted park management by swift reporting as well as active (and voluntary) assistance in extinguishing the fires before more serious damage was caused.
- *Improvements in health care.* The trust's rural development initiatives have made a clear impact. Clinics built in remote rural areas far from district health services have had a significant impact in reducing local mortality from diseases such as malaria and cholera, while enrollment in primary schools has been boosted following the construction of local primary schools. Local incomes have been raised as a result of income-generating activities such as beekeeping and tailoring. As a result of targeted information campaigns, local beneficiaries are able to clearly appreciate the links between local development projects and the continued existence and protection of the two national parks.

Financial arrangements

The main financing mechanism envisioned by the park stakeholders was a conservation trust fund. The Mgahinga and Bwindi Impenetrable Forest Conservation Trust (commonly known as the Bwindi Trust or MBIFCT) was established as an

Two game guards at Bwindi Impenetrable Forest National Park

independent organization in 1995, with an initial grant from GEF of US$ 4.3 million. This money became the trust's capital endowment, was invested in the London stock market, and managed by a U.K.-based asset management firm. The original idea was to let that capital compound to reach about US$ 10 million dollars at which level the interests on the principal would be enough to pay for the trust's annual budget—the underlying principle being that if the trust's capital base remained intact it would ensure the financial sustainability of its activities in the future. Hence, the original capital was not tapped and grew to 7.4 million dollars by late 2002 when plummeting stock markets reduced it to a current value of approximately 5.4 million dollars.

Since1995 several other sources have contributed to the trust's conservation activities in and around the parks. The United States Agency for International Development (USAID) and the Dutch government were major donors. Other donors or institutions directly working in the area included CARE, WWF, the International Gorilla Conservation Program, Uganda's Institute for Tropical Forest Conservation, Uganda's government, and Park's Revenue Sharing Program through which 20 percent of the parks' gate entry fees were spent on social projects in nearby communities. From 1995 to 2002 the trust was able to use these other sources of money and keep the trust fund untouched. However, in late 2002 the support from USAID and the Netherlands ended and the trust was forced to begin withdrawals from its capital account in London.

The main challenge that the trust faces is its long-term financial sustainability. Despite significant successes in terms of both environmental and

social development impacts, as well as the high profile of the two "gorilla-parks," obtaining additional funding beyond the original GEF grant and the two early large donors has proven difficult. This, combined with recent losses on the endowment due to falling stock markets, has resulted in a bleak financial outlook. If the trust is to have a long-term future the capital base needs to be significantly raised beyond its current levels. In the short term, the trust is attacking this problem on two fronts. First, cost reduction measures are being analyzed with a view to reducing operational running costs to a minimum. At the same time, a deliberate fundraising strategy is being pursued to raise the overall level of the endowment—from private donors in Europe and North America as well as from more traditional institutional and bilateral donors. Unfortunately, it has proven extremely hard to obtain funds from private foundations and trusts to supplement the Bwindi Trust endowment—largely because many of these grantmaking institutions question the sense in transferring funds from one endowment to another, particularly if rates of return are insecure.

In terms of reducing costs, significant challenges remain as well. The project's working area is large, remote, and inaccessible, necessitating four-wheel-drive vehicles and causing them significant wear and tear. In addition, the trust is based on principles of accountability and transparency, with a local steering committee drawn from locally elected representatives, which screens and selects funding proposals, and a national board of trustees, which oversees the organization as a whole; these institutional arrangements have costs and clearly there are trade-offs to be considered between high levels of accountability and overall cost levels.

Project lessons

The trust was the first of its kind in Africa and as such it has been a pioneer, providing much needed guidance to other emerging conservation trusts elsewhere on the continent. There have been frequent visits by representatives from emerging trust funds in countries such as Tanzania, Malawi, and Cameroon. Following the early successes of the Bwindi Trust, GEF has gone on to support the establishment of trust funds in other parts of the globe, including South America and Southeast Asia.

The basic fundamentals of the Bwindi Trust have high levels of replication—namely a locally run, transparently managed grantmaking body, supporting both conservation and local socioeconomic development, drawing funds from a capital endowment. However, some key lessons have emerged from the last decade which may be of

Bwindi Impenetrable Forest National Park Local people at tree nursery Part of CARE/WWF DTC project Uganda

use to others about to embark on a similar venture:

- The initial grant was too small to sustain the trust in the long term. It is essential to consider the size of the endowment needed to support the long-term operations of a conservation trust and ensure that the starting capital is not too far off this figure.
- A fundraising strategy was only seriously considered when finances became a major issue. It is essential to develop and fund a long-term fundraising strategy at the earliest possible stage to avoid funding and financing crunches later on.
- Measures should be put in place to reinforce the conservation-development linkage. In the early days of the Bwindi Trust it was assumed that if people were to make the conceptual link between trust-supported initiatives and conservation, micro-projects had to center around natural resource activities such as planting woodlots, handicraft projects, and energy-saving stoves. It became increasingly clear that, provided a good communication strategy was put in place, it was possible to meet people's priority development needs (such as health, education, or income) and still increase goodwill toward conservation.

Additional references and contacts

For more information on this project visit www.mbifct.org or contact Tom Blomley at blomley.pfm@cats-net.com.

Case study 12. Zimbabwe—CAMPFIRE Project

Reported by Søren Hastrup / PFF Consult / member of Danida's WGSF

This case summarizes one of the best-known—and still argued about—examples of community-based wildlife management in Africa.

Background

The Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) was formulated by Zimbabwe's Department of National Parks and Wildlife Management (DNPWLM) in 1986. Two rural districts (Guruve and Nyaminyami) were initially identified as suitable for the program and activities in them began in 1988. Following that start many other Zimbabwean rural districts joined the program and by 1996, 27 districts were actively engaged in it. The projects are run by the rural district councils involved, with advice from DNPWLM and technical expertise provided by various national and international NGOs, including WWF.

CAMPFIRE was developed as a tool to solve and avoid the many conflicts in the use of wildlife resources within Zimbabwe. The program's main objectives are as follows:

- Sustainably exploit wildlife in the communal areas;
- Curb land degradation caused by tilling by offering the alternative of sustainable wildlife management;
- Enable rural communities to benefit directly from indigenous wildlife; and
- Minimize the threat posed by wildlife to humans and vice versa.

CAMPFIRE depends on a number of interrelated ecological, economic, social, and institutional factors. Ecologically, it hinges on the proposition that the management of wildlife is an appropriate form of land use in areas that are of marginal interest for agriculture. Economically, it is based

on the assumption that markets exist for the goods and services that can be provided under the program. Institutionally, the program's success depends on the flexibility of government agencies and district authorities and their willingness to empower communities in communal areas to participate. Although CAMPFIRE is not a panacea for communal land development, it represents a bold change in the thinking of ecologists, environmentalists, planners, and policymakers with respect to their perceptions of natural resources and conservation.

CAMPFIRE projects have been implemented in sparsely populated areas where the tsetse threat was removed or in rugged terrain of little agricultural value. The program involves changing people's perceptions of wildlife, and fostering the notion that wild animals constitute a viable resource base to be protected and utilized.

Benefits that have been accrued from the program's activities—mostly the sale of hunting and fishing permits as well as leases for tourism purposes—are distributed among communities, and have been used in construction works (e.g., schools, rural clinics, electrical fencing, roads, and establishment of grinding mills) in provision of food and water as well as payment of household dividends and cash compensation.

CAMPFIRE very quickly became a success—to such a degree that the ruling party, ZANU-PF claimed in 1990 that the program had been a party innovation. In 1991, 12 districts generated US$ 1.1 million. In the seven years from 1989 to 1996, CAMPFIRE's revenues were around US$ 9.4 million.

A national CAMPFIRE Association has been formed with the objective of promoting the wildlife interests of the rural district councils in the political arena and serving as an association of producer communities. The association has been very successful in making communal-land wildlife producers an important political voice, but it has been less successful in its role as a producer association, since its membership is restricted to rural district council representatives and does not include representatives from the communal wards. CAMPFIRE has been able to attract strong support from donors.

Unfortunately, the recent years of political and economical turmoil in Zimbabwe have delivered a blow to all development programs, including CAMPFIRE, and it is fair to say that 10 years of CAMPFIRE success are in jeopardy.

The CAMPFIRE approach, endangered in Zimbabwe, has been actively replicated in several African countries including Zambia, Tanzania,

Antelope killed by subsistence hunters are displayed in the village. Central Africa

Namibia, and elsewhere. CAMPFIRE has become a paradigm and a point of departure when discussing community-based natural resource management projects (CBNRM) in Southern and Eastern Africa.

Financial arrangements

CAMPFIRE is an entrepreneurial approach to development based on wildlife management using market forces to achieve economic, ecological, and social sustainability. Potentially, it can satisfy many of the material needs of rural people without depleting wildlife populations or degrading the natural ecosystem on which their survival depends.

At its initial stage, funds for logistic and administrative purposes were provided by USAID and technical expertise was supplied by the government's DNPWLM, WWF, the University of Zimbabwe, and Zimbabwe Trust (ZIMTRUST, a public trust fund devoted to the promotion of rural economic and institutional development). Other NGOs, such as Denmark's MS came on board later.

For the first couple of years, the rural districts that had received "appropriate authority" to manage the CAMPFIRE concept were granted vehicles, motorbikes, and funds to cover salaries of personnel (administration as well as game guards) and initial training, which was all paid for by USAID. DNPWLM and the Zimbabwe Police Force provided the training of staff whereas WWF, World Conservation Union (IUCN), and ZIMTRUST conducted information and capacity-building activities with the Rural Council Administration, counselors, local communities, and CAMPFIRE staff.

This initial external support decreased after a couple of years (no standard procedure for the phase-out was in place, resulting in different trajectories among the districts) and increasingly the districts would have to pay for the CAMPFIRE costs out of the program revenues. Most rural district councils had no problems in negotiating this transition since CAMPFIRE revenues were considerably larger than costs incurred. In the early 1990s, rural district councils that had CAMPFIRE programs generated 65 percent of their own resources, whereas the country average was only 15 percent (with the rest coming from central government allocations).

The rural district councils manage CAMPFIRE revenues according to DNPWLM guidelines that recommend keeping 15 percent of revenue as a levy, using up to 35 percent for district wildlife management costs, and distributing not less that 50 percent of gross revenue to producer communities. The guidelines also specify that the community's wards should decide on the use of the dividend received from the rural district councils. These percentages were initially honored, and some of the councils were able to pay back to the community as much as 75 percent of the total revenue. However, over the years some rural district councils have retained an increasing portion of CAMPFIRE revenues and used them for purposes not related with CAMPFIRE costs or wildlife management.

Project lessons

In recent years the significance of CAMPFIRE revenues for the local population has decreased as a result of rapid population growth from increased immigration to rural areas. In real terms this has resulted in an average decline in financial benefit per household from US$ 19.40 in 1989 to 4.49 in 1996.

Some decline in the wildlife population has been noticed at some CAMPFIRE areas, a situation that is complicated by disagreements between the local communities and the rural district councils regarding each one's responsibility for wildlife management. Another issue has been the reap-

pearance of poaching. The intense poaching that took place in Zimbabwe in the 1980s was significantly stopped by the CAMPFIRE program with wildlife populations regaining their numbers by the end of the 1990s. But farmers saw this wildlife growth as a threat to their crops and have been using the Problem Animal Control legislation to encourage the return of poaching.

Additional references and contacts

For more information on this project peruse the following publications: ENDA-Zimbabwe and ZERO, 1992, "The Case for Sustainable Development in Zimbabwe: Conceptual Problems, Conflicts and Contradictions," CIDA; David Hulme and Marshall Murphree, 2001, "African Wildlife and Livelihoods." Or you may contact Søren Hastrup (sh@pffconsult.dk). Also, the IIED has coordinated a multicountry evaluation of community-based conservancies. The main publications are D. Roe et al., 2000, "Evaluating Eden: Exploring the Myths and Realities of Community-Based Wildlife Management"; and R. Hasler, 1999, "An Overview of the Social, Ecological and Economic Achievements and Challenges of Zimbabwe's CAMPFIRE Program," Evaluating Eden Discussion Paper No.3. These publications can be found at www.iied.org.

Villagers from Nyenyunga ward construct a teacher's house with their campfire wildlife earnings Gokwe district, Zimbabwe

7. ACCESSING RESOURCES AND REFERENCES

by Pablo Gutman, Nola Chow, and Sarah Janicke

This chapter offers links to most of the references mentioned in the previous six chapters and lists some additional ones that we think can be useful to the survey's users.[29] They are presented in two groups as follows:

Guides and resources to financing for SNRM: Each one of these guides or Web sites reviews a large number of financing mechanisms, offering examples and links. Most of them focus on all or some types of SNRM, but we have included some more general guides (e.g., on rural development financing, micro-financing, community-based financing) because they provide additional insight and leads to financing for SNRM. Each entry provides a short description of what the reader can expect to find in the institution or manual in question. It also provides the Internet addresses of institutions, when available.[30]

Publications on financing SNRM: These are publications and Web resources of a more analytical type, featuring in-depth discussions of one or several types of financing options, as well as case studies. Each entry provides a short description of what the reader can expect to find in the publication in question, mentioning which financing options are discussed and listing the case studies reviewed (many of them are mentioned in the description cards and elsewhere in this survey).

29 Some references that have little relevance as a source of information on financing SNRM have been kept as footnotes and are not reproduced in this chapter.

30 The accuracy of all the Internet addresses was checked during the preparation of this survey. However, because Web sites are changed often, long addresses tend to be short-lived. Thus it is probable that some of the publications' addresses in this chapter may not be in operation. In that case we suggest that users access the institution's Web site (the first part of the address). Once there, you should be able to use the site's search command to find the publication in question.

GUIDES TO AND RESOURCES FOR FINANCING FOR SNRM

Conservation Finance Alliance. 2002. **Mobilizing Funding for Biodiversity Conservation. A User-Friendly Training Guide for Understanding, Selecting and Implementing Conservation Finance Mechanisms** [an online guide].

To download: www.conservationfinance.org or http://guide.conservationfinance.org/.

Organization: The Conservation Finance Alliance is a partnership of CI, GEF, GTZ, IUCN, Ramsar, Redlac, The Nature Conservancy, UNDP, UNEP, USAID, The World Bank, Wildlife Conservation Society (WCS), and WWF.

Description: Created in 2002, the Conservation Finance Alliance, is a joint initiative of 13 institutions encompassing NGOs, international agencies, and donor agencies to foster the financing of conservation projects. Their Web site describes the Alliance's activities; provides links to related initiatives and institutions, including case studies; and provides links to the Training Guide mentioned above. The Guide is designed to help expand the use of sustainable finance mechanisms to support the conservation of biological diversity. The Guide is an interactive tool that also provides instructions for project financial planning and links to other similar training material.

Country case studies: Ecuador, Suriname, Trinidad and Tobago, Mexico, Uganda, Belize.

Financing options: Markets for watershed protection (DC 13), biodiversity conservation and bioprospecting (DC 13), public budget funding of SNRM projects and programs (DC 1), environmental funds (DC 4), debt-for-nature swaps (DC 4), international development banks' loans (DC 3).

(continued)

GUIDES TO AND RESOURCES FOR FINANCING FOR SNRM (cont'd.)

EPA-USA. 1999. **"A Guidebook of Financial Tools"** [an online guide].

To download: http://www.epa.gov/efinpage/.

Organization: U.S. Environmental Protection Agency (EPA) (http://www.epa.gov).

Description: This is a reference work intended to provide an overview of a wide range of payment mechanisms for environmental investments in the United States. The Guide features information on approximately 340 financial tools and references for further information. Although many of these tools may not be relevant for developing countries, many others are.

Country case studies: United States.

Financing options: Earmarking for SNRM a percentage of one or more general taxes collected at national, state, or local level (DC 1, DC 2), private-public partnerships (DC 11).

Global Development Research Center. 2003. **"Virtual Library of Micro-Credit"** [an online resource].

To download: http://www.gdrc.org/icm/index.html.

Organization: The Global Development Research Center is a virtual organization that carries out initiatives in education, research, and practices in the spheres of environment, urban, community, and information (www.gdrc.org).

Description: The Virtual Library on Micro-Credit contains tools, guides, strategies, courses, methodologies, success stories, best practices; articles, etc. Although not focused in SNRM it provides many useful guidelines for the SNRM practitioner.

Country case studies: Worldwide examples.

Financing options: Links to foundations and NGOs that are potential funding sources (DC 7). Links to active micro-finance institutions in Latin America and the Caribbean, Central and Eastern Europe and the Newly Independent States, and Africa (DC 10).

Interagency Planning Group on Environmental Funds (IPG) (2002. **The IPG Handbook on Environment Funds** [an online resource].

To download: http://www.biodiversityeconomics.org/pdf/topics-222-00.pdf.

Organization: IPG is a network of several public and private institutions.

Description: This is a resource book for the establishment and operation of environmental funds. It is intended to share with a wide audience the experience gained by directors and specialists who have been involved over the past 10 years in designing, setting up, managing, monitoring, and evaluating environmental funds.

Country case studies: Mexico (The Mexican Nature Conservation Fund), Costa Rica (FONAFIFO), Puerto Rico (Puerto Rico Community Foundation), Brazil (Abrinq Foundation for Children's Rights), Philippines (Foundation for the Philippine Environment).

Financing options: Environmental funds (DC 4), multilateral aid and development agencies (DC 5), and bilateral aid and development agencies (DC 5).

(continued)

GUIDES TO AND RESOURCES FOR FINANCING FOR SNRM (cont'd.)

IUCN. 2002. **Biodiversity Economics Library** [an online resource].

To download: http://www.biodiversityeconomics.org.

Organization: World Conservation Union (IUCN) (www.iucn.org).

Description: This site explores the economic dimensions of the global biodiversity agenda as reflected in the work of IUCN and the various biodiversity conventions, notably the Convention on Biological Diversity. The section on biodiversity finance features resources and links to the financing of biodiversity.

Kloss, D. 2002. **"Guide to Sustainable Financing of Biodiversity and Protected Areas."**

To download: http://www.conservationfinance.org/Documents/CFA%20Training%20Guide/GTZ-CF-Guide/guide.pdf.

Organization: Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ).

Description: A compilation and brief analysis of many financing mechanisms at different levels. Intended as a tool for practitioners, it briefly discusses the advantages and disadvantages of different financing mechanisms and lists sources for obtaining further information.

Country case studies: Countries in Africa, Asia, Latin America, Australia, New Zealand, North America, Europe.

Financing options: Earmarking for SNRM financing a percentage of one or more charges, fees, fines, and penalties related to the use (or abuse) of natural resources (DC 2); user fees, entry fees directly collected by the SNRM project (DC 14); markets for landscape beauty, including ecotourism and tourism (DC 13); earmarking for SNRM financing a percentage of one or more general taxes collected at the national, state, or local level (DC 1); environmental funds (DC 4); direct investment by nonlocal investors (DC 11); debt-for-nature swaps (DC 4); multilateral/bilateral aid and development agencies (DC 5); markets for carbon offsets (DC 13); markets for development rights and conservation easements (DC 13).

OECD. 2002. **"Environmental Financial Strategies."** OECD, Paris.

To download: http://www.oecd.org/EN/about_further_page/0,,EN-about_further_page-499-nodirectorate-no-no-8-no-no-3,FF.html.

Organization: Organisation for Economic Co-operation and Development (OECD) (www.oecd.org).

Description: OECD has been assisting the Newly Independent States (NIS) of the former Soviet Union in strengthening the capacity of their domestic environmental finance mechanisms. This site provides guides and resources to plan the financing of environmental programs on a national scale.

(continued)

GUIDES TO AND RESOURCES FOR FINANCING FOR SNRM (cont'd.)

PROFOR. 2002. **"Financing Sustainable Forest Management"** [an online resource].

Web addresses: http://www.profor.info/pages/publications/financing_SFM.html.

Organization: Program on Forests (PROFOR) is a multidonor partnership that provides knowledge and capacity building to strengthen national forest programs in the pursuit of sustainable forest management (www.profor.info).

Description: As one of PROFOR's analytical themes, the projects on financing sustainable forest management (SFM) report on developments in innovative financing strategies and marketing systems that support forest conservation and management.

Financing options: Markets for environmental products and services (DC 12–15).

Spergel, B. 2001. **"Raising Revenues for Protected Areas. A Menu of Options."**

To download: http://biodiversityeconomics.org/pdf/topics-226-00.pdf.

Organization: WWF (WWF-US), Washington, D.C.

Description: This paper describes 25 ways of raising revenue for protected areas. Intended as a tool for practitioners, it summarizes the methods' relative advantages and disadvantages.

Country case studies: Philippines, Botswana, Uganda, Zimbabwe.

Financing options: Public budget funding of SNRM projects and programs (DC 1); debt-for-nature swaps (DC 4); social and environmental NGOs (DC 9); foundations (DC 9); environmental funds (DC 4); earmarking for SNRM financing a percentage of one or more charges, fees, fines, and penalties related to the use (or abuse) of natural resources (DC 2); user fees, entry fees directly collected by the SNRM project (DC 14); markets for carbon offsets (DC 13).

(continued)

PUBLICATIONS ON FINANCING SNRM

Ashley, C. et al. 2002. **"Rethinking Wildlife for Livelihoods and Diversification in Rural Tanzania: A Case Study from Northern Selous."** DFID London.

To download: http://www.odg.uea.ac.uk/ladder/doc/wp15.pdf.

Description: This paper recommends approaches within community-based conservation that would enhance livelihood gains, including the contribution of wildlife-based enterprise to rural growth.

Country case studies: Tanzania.

Financing options: User fees, entry fees directly collected by the SNRM project (in this case trophy hunting) (DC 14); markets for landscape beauty including ecotourism and tourism (DC 13).

Ashley, C., and B. Jones. 2001. **"Joint Ventures Between Communities and Tourism Investors: Experience in Southern Africa."** *International Journal of Tourism Research*, special issue on fair trade in tourism, Vol. 3, No. 2.

To download: http://www.propoortourism.org.uk/ashley_jones.pdf.

Description: This article reviews experiences in Namibia, within the wider regional context, to identify some key principles and challenges. Several lessons can be learned from the eight Namibian negotiations, and the three negotiations on joint ventures.

Country case studies: Namibia (Damaraland Camp), Zimbabwe (CAMPFIRE), Botswana, South Africa.

Financing options: Markets for landscape beauty, including ecotourism and tourism (DC 13); private sector–community partnerships (DC 11); community-based enterprises, formal and informal (DC 10).

Bayon, R. et al. 2000. **"Financing Biodiversity Conservation."** Inter-American Development Bank, Washington, D.C.

To download: *http://www.iadb.org/sds/env/publication/publication_200_1887_e.htm.*

Description: This report provides an overview of existing and experimental financing mechanisms that can be used to encourage the conservation and sustainable use of biodiversity.

Country case studies: Mexico (FMCN), Brazil (FNMA, PROBEM), Ecuador (FONAG), Costa Rica (FONAFIFO, MIGA, and the Rainforest Tram), The Netherlands (Dutch Green Funds, The POPM Mechanism), Brazil (Terra Capital Fund).

Financing options: Environmental funds (DC 4); earmarking for SNRM financing a percentage of one or more general taxes collected at the national, state, or local level (DC 1); international development banks' loans (DC 3); commercial bank loans (DC 3); environmental fund supported by user fees (DC 4, DC 2); special laws delivering extra-budgetary financial support to particular social groups, geographical areas, or activities (DC 1); tax breaks or subsidies for SNRM activities (DC 1); venture capital (DC 11); biodiversity conservation and bioprospecting (DC 13).

(continued)

PUBLICATIONS ON FINANCING SNRM (cont'd.)

Bezanson K., and F. Sagasti. 2001. **"Financing International Public Goods: Challenges, Problems and a Way Forward."** Institute of Development Studies (IDS), Sussex, U.K.

To download: http://www.gm-unccd.org/FIELD/Bilaterals/Sweden/Sweden1.pdf.

Description: A study on the financing mechanisms for the provision of global public goods and supporting case studies. Two of the five case studies focus on natural resources: biodiversity conservation (developing useful products from biodiversity) and climate change mitigation (DC 13, 14, 15).

ECLAC-UNDP. 2002. **"Financing for Sustainable Development in Latin America and the Caribbean."** ECLAC Santiago, Chile.

To download: www.eclac.org.

Description: An overview of financing for sustainable development in Latin America and the Caribbean at the country level.

Case study countries: Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico, Trinidad and Tobago.

Financing options: Public budget funding of SNRM projects and programs (DC 1); special laws delivering extra-budgetary financial support to particular social groups, geographical areas, or activities (DC 1); PES (DC 12–14); GEF payments for the global commons (DC 15).

Chomitz, K. et al. 1998. **"Financing Environmental Services: The Costa Rican Experience and its Implications."** World Bank, Washington, D.C.

To download: http://lnweb18.worldbank.org/ESSD/essdext.nsf/44DocByUnid/6B8781730D0A31BA85256B750002812D/$FILE/FinancingEnvironmentalServicesTheCostaRicanExperienceandItsImplications1998.pdf.

Description: This report examines Costa Rica's efforts to develop systems of payments for environmental services where landowners can receive payments for adopting specified land uses. The program is financed in a variety of ways, including revenues from a fossil fuel sales tax, sales of certifiable carbon tradable offsets, and payments from private power plants.

Case study countries: Costa Rica.

Financing options: Markets for carbon offsets (DC 13); markets for watershed protection (DC 13); markets for landscape beauty, including ecotourism and tourism (DC 13); earmarking for SNRM financing a percentage of one or more selective taxes collected at the national, state, or local level (DC 2).

(continued)

PUBLICATIONS ON FINANCING SNRM (cont'd.)

Convention on Biological Diversity, Executive Secretary. 2002. **"Financial Resources and Mechanisms (Articles 20 and 21)."**

To download: http://www.biodiv.org/doc/meetings/cop/cop-06/official/cop-06-14-en.pdf.

Description: This report provides an overview of financing mechanisms that have been proposed as part of government activities related to the Convention on Biological Diversity (CBD).

Country case studies: General references to developing and developed countries.

Financing options: Tax breaks or subsidies for SNRM activities (DC 1); multilateral aid and development agencies (DC 5); bilateral aid and development agencies (DC 5); private investment by local businesses (DC 10).

Faust, Michael et al. 2001. **"Global Public Goods: Taking the Concept Forward."** UNDP, New York.

To download: http://www.undp.org/ods/pub-d17-online.html.

Description: This book addresses several issues of the global public goods debate, from rethinking the definition of public goods to applying the theory to global issues and to outlining steps for operationalization (DC 15).

Ferraro, P. J., and R. D. Simpson. 2000. **"Global Habitat Protection: Limitations of Development Interventions and a Role for Conservation Performance Payments."** RFF, Washington, D.C.

To download: http://epp.gsu.edu/pferraro/docs/globalhabitatprotectioncb.pdf.

Description: The author argues that paying individuals or communities directly for conservation performance may be a more effective approach than indirect initiatives such as ecotourism or green products.

Case study countries: Costa Rica (FONAFIFO).

Financing options: Environmental fund (DC 4), PES (DC 13).

Gutman, P. 2001. **"Forest Conservation and the Rural Poor: A Call to Broaden the Conservation Agenda."** WWF–MPO, Washington, D.C.

To download: http://www.panda.org/downloads/policy/Forest_and_Poverty.pdf.

Description: This paper addresses the causes of deforestation, and advocates paying the rural poor for their role as stewards of the world's biodiversity (DC 12, 13).

Hardner, J., and R. Rice. 2002. **"Rethinking Green Consumerism."** *Scientific American*, May.

To download: http://www.cciforum.org/pdfs/HardnerSciAmFinal.pdf.

Description: The authors argue that buying "green" products is not enough to save biodiversity in the tropics. They advocate up-front payments for conservation that they term "conservation concessions." The article provides some examples from Conservation International activities in Latin America.

Case study countries: Peru, Guyana, Guatemala.

Financing options: Markets for development rights and conservation easements (DC 13).

(continued)

PUBLICATIONS ON FINANCING SNRM (cont'd.)

IFAD. 2002. **"Rural Finance for the Poor. From Unsustainable Projects to Sustainable Institutions."** International Fund for Agricultural Development, Rome.

To download: http://www.ifad.org/pub/other/rural_e.pdf.

Description: Reviews IFAD's experience with financing peasants and small farmers in developing countries. A strong emphasis is put on self-financing and local credit schemes.

Case study countries: Indonesia, Guatemala, countries in Eastern Europe, Nepal, Tanzania, Philippines.

Financing options: Micro-saving, micro-credit, and micro-insurance (DC 10).

Johnson, N. et al. 2001. **"Developing Markets for Water Services from Forests: Issues and Lessons for Innovators."** Forest Trends, Washington, D.C

To download: http://www.foresttrends.org/resources/pdf/Developing_Markets_for_Water_Services.pdf.

Description: The report examines innovative international experiences in the emerging markets for hydrological services. It distills common issues and lessons from nine case studies and other experiences.

Case study countries: France, Colombia, United States.

Financing options: Payments for environmental services through self-organized private deals, water-user fees, trading schemes, and public payment schemes (DC 13–15).

Kaul, I. et al. 1999. **"Global Public Goods: International Cooperation in the 21st Century."** New York: Oxford University Press.

Description: Part of the works sponsored by UNDP to explore what global public goods are and how to pay for them (DC 15).

Landell-Mills, N., and I. Porras. 2002. **"Silver Bullet or Fools' Gold? A Global Review of Markets for Forest Environmental Services and Their Impact on the Poor."** IIED, UK

To download: : *http://www.iied.org/docs/enveco/MES_prelims.pdf* (executive summary only).

Description: This is a global review of emerging markets for carbon sequestration, biodiversity conservation, watershed protection, and landscape beauty. In total, 287 cases are reviewed from a range of developed and developing countries. Chapter 2 summarizes the findings.

Country case studies: Surinam, Africa, Costa Rica, Colombia, Ecuador, United States, Fiji, and others.

Financing options: Payments for environmental services (DC 13–15).

(continued)

PUBLICATIONS ON FINANCING SNRM (cont'd.)

McNeely, J. 1999 . **"Achieving Financial Sustainability in Biodiversity Conservation Programmes"** IUCN, Gland, Switzerland.

To download: http://economics.iucn.org.

Description: An overview of financing options for conservation.

Case study countries: Global examples.

Financing options: Markets for carbon off-sets (DC 13); earmarking for SNRM financing a percentage of one or more charges, fees, fines, and penalties related to the use or abuse of natural resources (DC 2); PES (DC 13); private investment by local businesses (DC 10); debt-for-nature swaps (DC 4); special fundraising campaigns (DC 8); environmental funds (DC 4).

Mayers, J., and S. Vermeulen. 2002. **"Company-Community Forestry Partnerships; From Raw Deals to Mutual Benefit."** IIED, London.

To download:, http://www.iied.org/psf/pdfdocs/partnershipsbook/PSF_prelims_partners.pdf (executive summary only).

Description: This report examines 57 cases of partnerships in forestry in 23 countries, from informal arrangements and social responsibility efforts to outgrower schemes and joint ventures.

Case study countries: South Africa, India, Indonesia, Papua New Guinea, Ghana, Canada.

Financing options: PES, PEP (DC 13–15), private sector–community partnership (DC 11).

Nasi, Robert et al. 2002. **"Forest Ecosystem Services: Can They Pay Our Way Out of Deforestation?"** Center for International Forestry Research (CIFOR), Bogor, Indonesia.

To download: http://www.catie.ac.cr/cecoeco/Forest percent20Ecosystem percent20Services.doc.

Description: This paper provides an overview of what forest ecosystem services are and what they represent, as well as the issues of price and valuation. Both private and public financing sources are considered.

Financing alternative: PES (DC 13, 15).

Pagiola, S., J. Bishop, and N. Landell-Mills. 2002. **"Selling Forest Environmental Services: Market Mechanisms for Conservation and Development."** London: Earthscan.

Description: The 12 articles contributed to this book are case studies of financing mechanisms for forest services.

Case study countries: Costa Rica, India, United States, Ecuador, El Salvador, Chile, Brazil, Mexico, Australia, Bolivia.

Financing options: Different types of payments for environmental services, and payments for environmental products (DC 12–15).

(continued)

PUBLICATIONS ON FINANCING SNRM (cont'd.)

Pagiola, S. et al. 2002. **"Generating Public Sector Resources to Finance Sustainable Development—Revenue and Incentive Effects."** World Bank, Washington, D.C.

To download: http://wwwwds.worldbank.org/servlet/WDS_Ibank_Servlet?pcont=details&eid=000094946_03020504033653.

Description: This paper discusses how developing countries can generate some of the resources they need for sustainable development, by eliminating harmful subsidies and better capturing natural resource rents. Besides providing a description of various alternatives, the paper attempts a rough estimate of the magnitude of resources that might be generated or made available by a variety of public sector actions.

Case study countries: Global examples.

Financing options: Freeing up existing public resources (DC 6); conservation concessions, ecotourism, and market-based instruments (DC 11, 12); environmental taxes, pollution charges, user-fees, value-added taxes, environmental funds (DC 1–4).

Perrot-Maitre, D. and P. Davis. 2001. **"Case Studies of Markets and Innovative Financial Mechanisms for Water Services from Forests."** Forests Trends, Washington D.C.

To download: http://www.forest-trends.org/resources/pdf/casesWSofF.pdf.

Description: This paper presents the background cases for the Johnson, N. et al. (2001) paper above. It is a detailed presentation of various types of financing mechanisms in various settings.

Case study countries: France, Costa Rica, Colombia, United States, Australia, Brazil.

Financing options: Different types of payments for environmental services (DC 12–15).

Powell. I. et al. 2002. **"Developing Markets for the Ecosystem Services of Forests."** Forest Trends, Washington, D.C

To download: http://www.forest-trends.org/resources/pdf/powellwhite_ecoservices.pdf

Description: An overview of opportunities to market forests' environmental services.

Case study countries: Colombia, Costa Rica, Australia, United States, France, China.

Financing options: Different types of payments for environmental services (DC 12–15).

Quintela, C et al. 2002a. **"Financing Arrangements in GEF-Supported Biodiversity Projects."** Conservation Finance Program, Wildlife Conservation Society (WCS), Washington, D.C.

Description: The study examined financing arrangements in support of the objectives of GEF biodiversity projects, including a review of the GEF portfolio and an in-depth review of 18 GEF-supported projects.

Case study countries: Côte d'Ivoire, Burkina Faso, Romania, Nepal, Costa Rica.

Financing options: Community-based enterprises, formal and informal (DC 10); different cases of payments for environmental services (DC 12–15).

(continued)

PUBLICATIONS ON FINANCING SNRM (cont'd.)

Quintela et al. 2002b. **"Literature Review of Financial Arrangements."** Draft, Conservation Finance Program, Wildlife Conservation Society (WCS), Washington, D.C.

Description: A review of the literature on financing mechanisms for biodiversity conservation.

Case study countries: Brazil (ICMS Ecológico), Mexico (FFEM), Nepal, Costa Rica, Mali.

Financing options: Earmarking for SNRM financing a percentage of one or more selective taxes collected at the national, state, or local level (DC 2); environmental funds (DC 4); community-based enterprises, formal and informal (DC 10); markets for non-timber forest products (DC 12).

Richards, Michael. 1999. **"Internalizing the Externalities of Tropical Forestry: A Review of Innovative Financing and Incentive Mechanisms."** Overseas Development Institute (ODI), London.

To download: http://www.odi.org.uk/fpeg/publications/papers/eutfp/eutfp-01.pdf.

Description: This paper assesses the potential and limitations of a range of "innovative" financing mechanisms. It finds that efforts to increase the incentives for sustainable forestry must be accompanied by effective regulation or control, whether at the national or international level, and should be complemented by policy measures to make forest-degradation activities less profitable.

Case study countries: Costa Rica, Niger, Nepal.

Financing options: Different payments for environmental products and payments for environmental services (DC 12–15).

Roe, D. et al. 2001. **"Getting the Lion's Share from Tourism: Private Sector–Community Partnerships in Namibia."** IIED, London.

To download: http://www.propoortourism.org.uk/namibia_vol1.pdf.

Description: This report reviews the current experience of private sector–community partnerships within the tourism industry in Namibia and provides guidelines and practical advice for the development of future partnerships. Chapter 6 summarizes the findings.

Case study countries: Namibia.

Financing options: Private sector–community partnerships (DC 11).

Scherr, S. et al. 2002. **"Making Markets Work for Forest Communities."** Forest Trends, CIFOR, Washington, D.C.

To download: http://www.futureharvest.org/pdf/Final_Report.pdf.

Description: This policy brief lays out strategies to improve the contributions of forest markets to local livelihoods.

Case study countries: Latin American countries.

Financing options: Different payments for environmental products and services (DC 12–15).

(continued)

PUBLICATIONS ON FINANCING SNRM (cont'd.)

Shilling, J., and J. Osha. 2003. **"Paying for Environmental Stewardship."** WWF–MPO, Washington, D.C.

To download: www.panda.org/mpo.

Description: This report reviews institutional arrangements that may support paying the rural poor for environmental stewardship.

Case study countries: India, Nepal, Costa Rica.

Financing options: Public sources, development banks (DC 1–3); earmarking fees (DC 2); encouraging the mobilization of private resources (DC 6).

Tognetti S. 2001. **"Creating Incentives for River Basin Management as a Conservation Strategy—A Survey of the Literature and Existing Initiatives."** WWF, Washington D.C.

To download: http://www.biodiversityeconomics.org/pdf/topics-336-00.PDF.

Description: This report provides an overview of existing initiatives to create economic incentives for river basin management as a strategy for protecting biodiversity. It also identifies key issues that need to be considered when evaluating the feasibility of this approach in a particular ecoregion, as part of an overall conservation strategy.

Case study countries: United States, Ecuador, Colombia, Costa Rica, China, South Africa, Chile.

Financing options: Different payments for environmental services and environmental products (DC 12–15); forestry funds (DC 4); government investment in conservation (DC 1); water source protection funded by the government and international donors (DC 1, 2); encouraging the mobilization of private resources (DC 6).

Whiteman, A. 2001. **"Financing Sustainable Forest Management: Constraints and Opportunities."** Working paper on financing sustainable forest management, FAO, Rome.

To download: www.fao.org.

Description: This is the summary of more than a dozen papers, produced as part of FAO's program on "Financing Sustainable Forest Management," that include several case studies in Central African countries.

Financing options: Public sources (DC 1–3).

World Bank Group. 2003a. **"Prototype Carbon Fund"** [an online resource].

Web address: http://prototypecarbonfund.org/router.cfm?Page=About.

Description: The operational objectives of PCF are mitigating climate change, demonstrating the possibilities of public-private partnerships, and offering a "learning-by-doing" opportunity to its stakeholders.

Case study countries: Worldwide examples.

Financing options: Market for carbon offsets (DC 13).

(continued)

PUBLICATIONS ON FINANCING SNRM (cont'd.)

World Bank Group. 2003b. **Environmental Economics Group** [an online resource].

Web address: http://www.worldbank.org/environmentaleconomics.

Description: The World Bank Environmental Economics Group's Web site offers conceptual and empirical information on systems of payments for environmental services.

Case study countries: Worldwide examples.

Financing options: Payments for environmental services (DC 13–15), international development banks' loans (DC 3).

Zedillo, E. et al. 2001. **"Recommendations of the High-Level Panel on Financing for Development."** UN, New York.

To download: http://www.un.org/esa/ffd/a55-1000.pdf.

Description: This is the report of a high-level expert group convened by the UN as part of the 2002 conference on Financing for Development. Among other recommendations the expert group suggested putting into place a system of payments for global commons, including environmental services.

Financing options: Funds for SNRM associated with international treaties, other possible systems of international payments for the global commons, earmarking for SNRM part of one or more international taxes (DC 15).

WHERE TO CONTACT US

Please direct your comments and suggestions regarding this Survey of Financing options for Sustainable Natural resource management to the following:

At WWF-MPO

Pablo Gutman
Senior Policy Advisor
WWF–MPO
1250 24th St. N.W.
Washington D.C. 20037-1193
USA
Tel: 1 202 778 9740
Fax: 1 202 293 9211
Email: pablo.gutman@wwfus.org

At Danida

Andreas Jensen, Technical Adviser
BFT.6 Environment and Natural Resources
Royal Danish Ministry of Foreign Affairs
Asiatisk Plads 2, DK-1448
Copenhagen K, Denmark
Tel: (+45) 3392 0220 or 3392 0207
Fax: (+45) 3392 0790
Email: andjen@um.dk

Danida's Working Group on Sustainable Financing of NRM, coordinator

Ole Meretz, Associate Professor, Ph.D.
Institute of Geography
University of Copenhagen
Oster Volgade 10, 1350
Conpenhagen K, Denmark
Switchboard: +45 35 32 25 00
Direct phone: +45 35 32 25 29
Fax: +45 35 32 25 01
Email: om@server1.gogr.ku.dk

At IIED

Maryanne Grieg-Gran, Acting Director
Environmental Economics Programme
IIED
3 Endsleigh Street
London WC1H 0DD
Tel: 20 7388 2117
Fax: 20 7388 2826
Email: Maryanne@iied.org

At WWF-DK

John Kornerup Bang, Policy Officer
Global Environment Program
WWF Denmark
Ryesgade 3F
DK – 2200 Copenhagen N
Switchboard: +45 35 36 36 35
Direct phone: +45 35 24 78 44
Fax: +45 35 24 78 68
j.bang@wwf.dk
www.panda.org
www.panda.dk