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Participation Series

Participation in Forest Management and Conservation

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Social Development Department Papers

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Participation in Forest Management and Conservation

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Acronyms and Abbreviations

FPC	Forest Protection Committee
GEF	Global Environment Facility
NGO	Nongovernmental Organization
NTFP	Non-Forest Timber Product
OD	Operational Directive
PRA	Participatory Rural Appraisal
SA	Social Assessment

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Executive Summary

Over the past decade, policymakers concerned with forest management for timber and biodiversity and with watersheds protection have become increasingly aware of the important public goods that forests provide to multiple, and often competing, users. Governments also realize that adequately managing and policing vast public forest lands is impossible because of budgetary constraints; lack of institutional capacity; and lack of incentives to regulate the large and growing number of local citizens, loggers, and other forest users.

The majority of people who currently occupy most government forest lands and protected areas are usually poor, vulnerable, and landless. Many of those who have migrated from other areas want to have a voice in forestry decisionmaking and management, but lack the rights, resources, and incentives to participate in managing forestry and biodiversity conservation projects.

Although governments are responsible for implementing World Bank- and Global Environment Facility (GEF)/Bank-financed forestry and biodiversity conservation projects, there are many ways for diverse stakeholders to participate in the various phases of policymaking and project development. The Bank and GEF recognize that the most important stakeholders are the intended beneficiaries and groups of people whose incomes and livelihood are affected by forestry and conservation policies and programs. This is reflected in increased Bank and GEF funding of reforms and activities that encourage broad-based stakeholder participation in project management.

Among the key lessons learned from implementation of Bank and GEF forestry and conservation projects are the following:

- stakeholder identification and involvement are critical to the success of forestry and conservation reforms and community-based projects;
- forestry and biodiversity projects require flexibility in design;
- nongovernmental organizations (NGOs) can play an important role in forestry and biodiversity project management and training; and
- participation incentives are created by providing secure tenure and rights to forest users, sharing benefits and management responsibilities, and using socially acceptable technologies.

There are many methods for promoting policy reforms. These include:

- *regional dialogues* to share international forestry and conservation reform experiences;
- *donor meetings* to coordinate activities that promote participation;
- *Bank-government policy dialogues* that share relevant Bank policies and experiences with in-country counterparts;
- *issues or position papers* by in-country NGOs that address concerns about stakeholder participation; and

- *forestry and conservation policy consultations and stakeholder workshops* for expanding stakeholder participation.

Participatory forestry and conservation approaches require basic changes in the institutional framework that governs policymaking and administration. Based on recent Bank and GEF experiences with stakeholder participation, this paper examines the importance of decentralized administration and devolution of authority to forest users (see World Bank, 1996). Features that help sustain stakeholder involvement in forestry include:

- *improving and stabilizing financing* that supports local participation;
- *reforming government structure and business practices* that facilitate participation by non-government institutions;

- *streamlining procurement* and other government procedures; and
- *adopting joint management, private contractual agreements*, and other new institutional arrangements, whereby forest users are given responsibilities for forestry and conservation project management.

This paper covers Bank-financed forestry projects and biodiversity conservation projects in forest areas cofinanced by the GEF and the World Bank. Biodiversity conservation projects in non-forest sites, such as marine and coastal environments, are not included in this paper. For an evaluation of biodiversity conservation projects, see World Bank (1995).

1. Introduction

The past decade has witnessed a fundamental shift in many areas of forestry and biodiversity conservation from centralized planning by government agencies to more participatory approaches that take into account the varying needs and interests of forest users. One reason for this shift is growing recognition by policymakers and planners of the multiple environmental, economic, and social values of forest resources. While national policymakers remain interested in generating economic benefits from forests, they also realize the important role that forests play in preserving biodiversity, protecting critical watersheds, and providing livelihoods. Thus, policymakers are becoming increasingly aware that forests are important public commodities that meet the demands of multiple, and often competing, users.

Participation in forestry and conservation management refers to the active involvement of various stakeholders in defining forest sector and conservation objectives, determining beneficiaries, managing forest resources, resolving conflicts over forest uses, and monitoring and evaluating the performance of forestry and biodiversity conservation projects. Stakeholders are those who have an interest in or are potentially affected by forest and conservation policies and projects. These include policymakers and staff members in central and provincial forest agencies; local government authorities; NGOs; forest research institutions; forest industry representatives; religious or civic leaders and forest community groups, including women and indigenous peoples.

Participatory management differs from government or centralized control of forests in many

ways (see Box 1). Gray areas and overlap exist in these two approaches. For purposes of discussion, the box highlights the differences between the two models. For example, governments view forest uses by indigenous peoples as obstacles to centralized or government management of forest resources. As a result, most forest policies are poorly adapted to foster local participation, generally limiting the rights of local users to low value secondary products and temporary concessions.

In contrast, participatory forestry management, which is generally designed and implemented with stakeholder groups, attempts to address the multiple needs of forest users, enables the involvement of people who are directly affected by the project, and provides the appropriate incentives and forestry and conservation technologies that encourage more sustainable forest management over the long term. Access and use rights to forests and conflicts arising from uses of forest resources are locally defined and managed.

The Benefits of Participation

Policymakers and planners realize that national governments cannot adequately manage and police large public forestry estates and protected areas without public involvement and support. Thus, the shift to more participatory approaches in forest and conservation management makes the mandate of government forest and environmental agencies easier to carry out. In areas with large and growing populations, participation is often the only viable way to conserve forest areas or ensure their sustainable use.

Box 1
Stylized Characteristics of Forest and Conservation Management Approaches

Category	Government Forestry and/or Conservation Projects	Participatory Forestry and Conservation Projects
Objective	Timber production or other single-use objective (e.g., watershed protection, short-rotation fuelwood) and government policing of biodiversity conservation sites paramount over other uses	Usually multiple production and biodiversity conservation objectives according to stake of all participants; developing local skills for forest and conservation management
Scale	Large-scale management units based on natural biophysical or political boundaries	Micromanagement units corresponding to self-selected or residential units
Local Use Rights	Usually very limited and frequently ambiguous or temporary	Extensive, clearly defined rights for local users
Protection	Policing by forest service guards and fencing; often ineffective and expensive	Policing by local community, frequently using social fencing; higher local costs but low government costs; local accountability
Typical Plan	Long rotation of even age stands for economies of scale in management and industrial supply; centralized management of protected areas and conservation sites	Short rotation of uneven age stands designed to supply diverse products for continuous income and subsistence needs; community management
Harvesting Contracts	Generally large government contracts with administrative pricing mechanisms and subsidized supply arrangements	Generally combine multiple household marketing arrangements with small-scale contracts for higher value products
Technical Basis	Based on results of scientific research and single product optimization models	Based on combination of traditional knowledge and use patterns with forest and conservation service guidance
Planning Process	Centralized management planning process carried out by forest and conservation service staff	Plan drawn up by community or household participants with guidance and approval from forest and conservation service
Plan Revisions	Generally limited flexibility in management prescriptions without cumbersome bureaucratic approvals	High flexibility in management prescriptions to adapt to changing conditions and needs

Often, people who live in the forest or surrounding agricultural areas are poor, vulnerable, and sometimes landless. They can include both locals and migrants. Increasingly, these people seek a voice in forestry and environment policy decisionmaking, as well as the benefits that flow from forestry development and commercialization. Participatory forestry and conservation strengthens their capacity to manage forests sustainably and realize a share of the benefits.

Participatory forestry involves a broader view of forest resources that takes into account the multiple values of forests, the limited resources and institutional capacity of governments, and the social and economic needs of forest users. This approach is one in which private sector and local participation replaces centralized planning, profit maximization is supplemented by more equitable sharing of forest revenues, and forestry development success is measured by its capacity to be environmentally and socially sustainable.

The Limitations of Participation

Participation is not a panacea for the many problems facing the forest sector, and like all approaches, has its limits. Participatory approaches have not worked in some areas because of conflicts over forest resources, dispersed population structure, or the history of forest ownership patterns and use.

At the national level, there may be powerful interests or prejudices against reforming forest and environmental policies and devolving authority to a broader range of forest users. Policy reform, in forestry as well as in other sectors, is a slow, difficult, and costly process that may not be consistent with the urgent need to slow forest loss and degradation.

Government agencies, the private sector, and nongovernmental organizations (NGOs) also have different capacities and different incentives for promoting broad stakeholder and local participation. For example, governments and

NGOs often need assistance in developing appropriate technologies and improving organizational skills, while forest industries may have the expertise, but perhaps limited interest in addressing environmental and social objectives. Using the proper mix of intermediaries in forestry projects and screening for representative stakeholders often requires additional time and resources.

Some of the most serious limitations exist at the local level, where forest users or communities are often unorganized and lack the capacity to manage large forest areas. Many forest communities in developing countries, for example, lack the interest or incentives to provide wise stewardship of forest resources. In addition, there may be conflicting interests among local social groups that make reaching a consensus difficult. Existing social inequalities may reinforce the control and reaping of forest benefits by powerful aristocrats or factions. Conflicts arising from differences in gender, ethnicity, social status, and political affiliation may also constrain broad stakeholder participation in forest management.

Many important questions in this area must be addressed, for example:

- What types of incentives can sustain participation?
- How are adequate forestry conservation incentives provided in countries with limited resources?
- How is a growing population in a given forest management system accommodated?
- How can participatory structures and practices apply to more industrialized forest extraction and processing activities?
- How can women's participation be assured despite insecure tenure and little traditional participation? and

- To what extent should governments intervene in resolving conflicts over forest uses as opposed to resolving disputes through local decisionmaking?

While there is much to learn from Bank experience, no single set of approaches can apply to all types of forest projects and circumstances.

2. Lessons from Bank and GEF Experiences

The World Bank has recognized the importance of using participatory approaches in forest policy, sector, and project work (see World Bank, 1991a) and in the GEF's biodiversity conservation program (see GEF and World Bank, 1994). Although the Bank continues to support industrial or plantation forestry, it has expanded the relative proportion of its lending targeted at forestry, biodiversity conservation, and natural resource management projects that have social and environmental objectives (see World Bank, 1994d). For example, the number of Bank- and GEF/Bank-financed forestry and biodiversity conservation projects in forest sites classified as social and environmental objectives increased from thirty-five projects during the ten-year interval from 1979 to 1989 to thirty-seven projects from 1990 to 1994 (see Annex 1).

Correspondingly, total Bank investments in these projects increased from US\$834 million to US\$1.2 billion. An assessment of Bank lending and GEF/Bank financing of forestry and biodiversity conservation projects during 1991-94 shows that financing of protective and restorative activities increased from 7 to 27 percent of total project funding. The share of financing for alternative livelihoods in forestry and biodiversity conservation projects grew from 1 to 14 percent (World Bank, 1994d, pp. 16-18).

Bank evaluation of forestry and biodiversity projects demonstrates that increasing stakeholder participation can be effective in achieving production and environmental protection objectives while addressing social needs. The projects have also shown that stakeholder involvement in forest and conservation policy and project decisionmaking improves manage-

ment, cost recovery, and project sustainability. Forestry and biodiversity conservation projects that are responsive to the needs and capacities of key stakeholders benefit from their technical knowledge and increased cooperation.

Over the past decade, a number of promising approaches have been tried in Bank-financed forestry and GEF/Bank-funded biodiversity conservation projects. Lessons from experimentation with these approaches are discussed below.

Lesson 1: Stakeholder identification and involvement are critical to the success of community-based forestry and biodiversity conservation projects.

When key stakeholders are identified at a very early stage of sector or project work, consultations and stakeholder group involvement in project preparation provided a more systematic way to include and omit stakeholders during later stages of project design and implementation. Ranking stakeholders by their contributions in improving forest and conservation management helped focus policy reforms and project activities on critical issues.

Having stakeholder groups write policy or position papers or engage in dialogue with government about policy changes has been positive in initiating forest sector reforms in Ethiopia. The expert consultations and meetings that are sometimes done at the village level have also led to greater decentralization of decision-making and implementation and devolution of management authority to local users in forestry projects in Nepal, India, and Morocco.

In many projects, broad consultations are needed to ensure that policy reforms address issues directly affecting vulnerable groups. For example, secure rights to forests granted to legitimate forest users encourage widespread planting. However, these rights are often not matched by corresponding national policies for controlling harvests, transport, and rules regarding the access of farmers to credit. Thus, strengthening the involvement of shareholders at various levels of project planning and implementation is necessary to enable forest users to participate equitably and share in the benefits of good forest and conservation management. Where enabling policies are not in place, appropriate stakeholder identification and involvement are useful in carrying out small-scale pilot forestry and conservation projects that test alternative approaches and build policymaker's confidence.

Stakeholder involvement is important in the long-term forest reform process, as demonstrated by the experience of forest and conservation planning in Mexico (see Box 2). Not only are forest and conservation issues discussed during the consultations, but the process itself strengthened stakeholder commitments to following through on needed reforms.

Lesson 2: Forestry projects require flexibility in design of institutional arrangements

Appropriate institutional arrangements ensure equitable participation and distribution of forest

and conservation benefits, costs, and management responsibilities. Because of the diversity in forest conditions (such as tenure, plant and tree growth regimes, and types of forest economies), a flexible approach is crucial to institutional arrangements for project management. Even when a particular institutional arrangement has been recommended during project preparation, there may be a need to adjust periodically to changes in stakeholder roles or to respond to increased demand for forest products.

Institutional arrangements also vary in terms of the level of economy in which forestry and conservation benefits are distributed. For example, village cooperation is often based upon cultural practices in more subsistence oriented forest production systems. These types of village based forest systems are dominant in India, Nepal, and most of Sub-Saharan Africa. Meanwhile, more complex arrangements are required when diverse villages with different demands for forest products are involved in a single project. Most such systems are found in industrial forest economies, such as the plantations and extractive reserves of Brazil and the large forests in Ecuador and Mexico.

The range of institutional arrangements tried in some Bank- and GEF/Bank-financed forestry and biodiversity conservation projects reflects the different roles of government and other stakeholders. Key features of these arrangements

Box 2
Stakeholder Consultations in Mexico's Resource Conservation and Forestry Review

Several consultations were held with a variety of stakeholders, and at different stages of preparation, in the Bank-assisted Resource and Conservation Forestry Review for Mexico. These included workshops with government and Bank teams to define terms of reference and budgetary allocations and agree on consultant needs. Consultants included specialists from NGOs involved in biodiversity conservation and community-based NGOs working on resource management programs. In addition, four states organized separate workshops to discuss attitudes of stakeholders toward government forestry services and regulations.

Expert consultations were held to discuss biodiversity conservation priorities and criteria for inclusion of areas in the National Protected Areas System. A workshop was organized to discuss the findings from consultant reports and to agree on recommendations for a forest and biodiversity conservation strategy.

are described below, starting from the least participatory and generally centralized models.

(a) Government Management with Stakeholder Involvement

Under this arrangement, the government continues to control decisionmaking and management of the forestry or biodiversity conservation project. It is the least participatory, even though various stakeholders are involved in consultations, as committee members or advisors, or conducting studies. These arrangements are prevalent in high value forests, protected areas, reserves, or parks.

(b) Joint Private-Private Arrangements Among Firms, NGOs, and Local Users

Partnerships among various stakeholder groups work well when private firms are required to share forestry benefits with local villagers (Sumba in Indonesia, Boscosa in Costa Rica, Dzanga-Sangha in Central African Republic). However, without capacity building among local partners, management responsibilities are often concentrated in the better trained private firms or NGOs.

Examples of private forest management by firms or households are found in:

- timber and fuelwood plantations, agroforestry, and extractive reserves;
- harvests of non-timber forest products (NTFPs) (Sabah timber industries in Malaysia, Picop in the Philippines, Carton de Colombia, Portico in Costa Rica, and Jarin in Brazil); and
- natural forest management by private groups, such as logging concessionaires (Cote d'Ivoire, Zimbabwe, Ghana, Mexico *ejido* forest industries).

Because of the lack of effective government controls, most private sector forestry projects are dominated by well-funded forest industries and influential logging companies.

(c) Joint Public-Private Partnerships, Such as Joint Forest Management

Joint management involves sharing management responsibilities between government and local groups of households, private firms, and NGOs (forest protection committees [FPCs] in India and Nepal, contract reforestation in Central African Republic and Côte d'Ivoire). Allocating benefits and defining accountability for forest management and conservation are defined through agreements or contracts between the cooperating parties. These agreements include procedures for conflict resolution and monitoring of forest uses. An example of an effective government and village partnership is the Joint Forest Management approach in India (see Box 3).

Lesson 3: NGOs Can Play an Important Role in Forest Management and Training

Few successful participatory forestry and conservation programs would have developed without the active instigation or pilot experimentation of small, intermediary organizations, many of which are international or national NGOs supported by donors. NGOs play valuable roles during the expansion phase of participatory forestry and conservation projects and the gradual reorientation of forest and environmental services. Some of the most effective roles for NGOs include:

- training service staff members and local leaders;
- carrying out village-level publicity and extension;
- developing microplanning tools and facilitating planning;
- assisting communities in developing organizational and management skills;
- conducting multidisciplinary policy and applied research;
- improving forest marketing information networks;

Box 3
Criteria for Design of Joint Forest Management in India

The following are the design criteria in joint forest management projects in India.

Viable social unit of organization. Membership consists of small groups, such as villages in close proximity, to ensure maximum communication and social interaction. The small size of groups ensures that members have a common interest around which to organize forestry activities. Membership in the groups is open to all residents regardless of gender or cultural grouping.

Organizational norms and procedures clearly defined. The local group defines the norms and procedures for regulating access to forests that are acceptable to the majority of members. The norms are based upon principles of equity and membership responsibility.

Accountability mechanisms. Each FPC determines rules for making leaders accountable to members. These include providing clear records of accounts, meetings, and collective decisions; conducting annual elections; empowering members to recall corrupt leaders; and enforcing penalties for violating forest use and access rules established by the community.

Conflict resolution mechanisms. Conflicts are resolved through majority participation by FPC members, elders, forestry officials, and other respected outsiders. Power of arbitration is given to a local conflict management committee or trusted individual group.

Autonomous status of FPCs. The FPCs are independent from government and have equal rights of access to forests. These conditions are written in all agreements between FPCs and state forest agencies. The groups have the ability to disband if local forest group rights are not respected. In many cases, written contracts or agreements make these rights and autonomous status legally binding.

Source: Adapted from Sarin (1993). See also Banerjee (1989).

- forming women's groups and farm forestry associations;
- providing technical support to small-scale forest product processing and development of energy alternatives; and
- monitoring village-based conservation efforts.

Many capacity building programs have been financed by the Bank and the GEF to strengthen management capability of NGOs and village groups (see Box 4). These programs address the needs of these groups in improving organizational and management skills, developing socially acceptable forestry technologies and conservation approaches, and improving mechanisms for conflict resolution.

Forestry and environmental curricula are now more sensitive to local needs. Training programs encourage hiring more women and tribal people as forestry extension technicians and forest and park guards.

Capacity building takes a variety of forms: formal forestry educational programs, forestry extension and in-service training, nonformal training, workshops, seminars and public education, and forestry outreach programs to women's groups, forest industry associations and other key stakeholders. Effective training programs relate the subject matter to stakeholders' concerns. They are developed through village meetings, participatory rural appraisals (PRAs), group consultations, and other participatory techniques. For example, workshops conducted by a management consulting firm

Box 4		
NGO and Local Capacity Building in GEF/Bank-Financed Biodiversity Conservation Projects		
Country	Amount (US\$000)	NGO and Local Capacity Building Programs
Slovak Republic	100.0	The project will provide 15 to 20 small grants to NGOs, including funding for workshops, village meetings, and training
Czech Republic	100.0	The European Trust for Cultural and Natural Wealth, through its Prague office, will administer a competitive grants program to local NGOs that covers such areas as conservation training, outreach, and technical studies
Congo	no amount given	Direct financial support will be given to local NGOs for local resource management, small-scale sustenance development, and organizing NGO coalitions and federations
Ukraine	45.7	The Danube Delta Project will support NGOs for ecological monitoring, conservation education, and socioeconomic studies. This will be administered through the Nature Protection and Regeneration Fund, the Ecological Club of Vilkova, and the World Wildlife Fund-Germany
Lao PDR	4,500.0	Grants will enable local NGOs and villages to participate in land use planning, support resource management technicians, and hire community organizers
Philippines	17,130.0	The project is a direct grant to The NGOs for Integrated Protected Areas, Inc., a consortium of national environmental NGOs and numerous other community-based NGOs. A US\$10.0 million Community Livelihood Fund will support NGO and village socioeconomic projects and employment activities with loans or grants.

during preparation of the Bank-financed West Bengal II and Andhra Pradesh forestry projects in India identified training priorities in new technologies, micro planning, group organization, financial management, use of PRAs and forestry and conservation project monitoring techniques.

Lesson 4: Appropriate Incentives are Needed to Sustain Stakeholder Participation

(a) Provide Secure Tenure and Rights to Forest Users

For community participation to work, beneficiaries should have secure tenure as an incentive for

investing the time and resources required to ensure sustainable forest uses. The long gestation period of forestry and conservation investments compared to other agricultural enterprises demands a greater security over returns on investments. Many traditionally used forests have been nationalized, and regulations restricting ownership and disposal of trees on community and private forest lands frequently undermine local or indigenous claims to resources. For example, in Honduras and India some laws prevent farmers from felling, transporting, or selling trees without government permission. Some traditional forest use rights are retained, but are usually limited to low value products

granted on a concessional basis. This reduces incentives for maintaining the resource.

However, efforts to provide tenure security face formidable constraints. The overlapping claims to forest resources by government, forest user groups, and industry make adjudicating tenure rights a complicated process. Legal rights are frequently unenforced or ambiguous. In addition, the government, as the nominal owner of most forest areas, is frequently reluctant to grant legal rights to local users for fear that they will lose control and income from forests. With increasing commercial value for mushrooms, medicinal plants, orchids, and other forest products, questions about tenure are constantly coming into contention. For example, publicly endorsed written agreements between government and forest user communities over the sharing of forest benefits and management responsibilities have been instrumental in resolving tenure conflicts in Bank-financed community forestry projects in Nepal and India (see Box 5).

(b) Share Benefits and Management Responsibilities

User investments in forestry are important in creating accountability for forest management. However, cost-sharing formulas used in some Bank forestry projects have been so arbitrary that benefits are not commensurate with stakehold-

ers' costs or actual returns expected from different forestry treatments and resources.

The lack of equitable allocation of costs and benefits between stakeholders often discourages participation and reduces incentives for sustained use of the resource. When costs and responsibilities of stakeholders are reasonably proportionate to rights and benefits, forestry projects will have a greater chance of success. The sharing arrangements are likely to motivate participation if widely understood and agreed upon by all stakeholders through an open negotiating process, especially among indigenous groups, women, and people from landless households, who are often left out. However, given the differences in stakeholder shares under various conditions, no single formula for sharing forest benefits can be applied to all tenure and management arrangements.

(c) Use Socially Acceptable Technologies

Attempts to encourage households, villages, and industry to invest in reforestation and planting highly degraded or unproductive lands or low value natural forests have often been stymied by the lack of workable, cost-effective, and appropriate forest technologies. Because of this, economically attractive alternative land uses, including slash-and-burn agriculture or grazing, are adopted.

**Box 5
Tenure and Access to Forests in Nepal and India**

Property Rights to Villages in Nepal. The forestry project in Nepal financed by the Bank allowed user communities to take over forest management. Forest users received certificates ensuring long-term rights to forest benefits, with approval of village forest management plans the only control wielded by the Nepal state forestry agency. However, before recognition of long-term tenure the project had to recognize the multiple, and often conflicting, rights to forests by local villagers.

Use-Rights to Forest Protection Committees in India. In the Bank financed West Bengal II forestry project in India, written agreements between the state and villages established ownership and use rights to forest protection committees. However, to maintain rights over forests, each committee had to provide evidence of sustainable forest use.

Source: World Bank. 1989. Nepal Hill Community Forestry; World Bank. 1992. West Bengal Forestry II.

Most forest technologies, which rely on traditional management approaches, create major constraints for local users. For example, the use of closely spaced fuelwood plantations such as *Eucalyptus*, *Luceanae*, *Albizza*, *Prosopis*, and other exotic species provide no returns because the trees have poor market value. As a result, the levels of community responsibility for these plantations and the survival rates of trees have been low.

In contrast, participation of communities remained high when there was an annual flow of income from non-timber forest products (NTFPs) such as agricultural intercrops, fodder or thatch grass, and commercially valuable seeds or leaves. These occurred in plantations large

enough to allow for intercropping and plantations with multitiered and diverse trees and shrubs. Adopting new silvicultural management systems was important to increasing local user participation in monitoring tree cutting and harvesting. Community-defined rules on determining tree cutting blocks were more effective than the standard approaches, which relied upon large forest areas, selective thinning, marking trees for felling, and harvesting quotas. Village monitoring systems deterred thefts by rotating community patrols and the use of other social sanctions. Villages restricted the amount of harvest in terms of species, size, area, and time. By using locally defined plantation management rules, the entire community understood and enforced the rules.

3. Creating an Enabling Environment

Defining a National Forestry and Conservation Agenda

Different approaches and techniques have been used to ensure government commitment to broad stakeholder participation in determining forest sector and national conservation objectives. Some examples are given below.

Regional Policy Dialogues

The Bank is involved in several international and regional forestry and conservation networks and programs (see Annex 2). This involvement has ranged from direct financing of workshops, special regional studies, and similar activities to representation in meetings. Regional policy dialogues are often conducted at the ministerial level. As such, they have been valuable in convincing governments to devolve greater authority to forest users. This is accomplished by highlighting the experiences of other countries that promote participatory forestry. For example, the Tropical Forestry Action Plan policy dialogues in Ethiopia facilitated reforms to promote social and community forestry (see

Box 6).

Donor Meetings

Multilateral and bilateral donor agencies play important roles in helping governments initiate activities that promote a broader forestry and conservation agenda. However, most activities that non-Bank donors finance tend to be smaller in scale, scientific or technical in nature, and generally geared to nongovernmental institutions. Donor meetings are important in coordinating initiatives to assist governments in defining a national forestry and conservation agenda.

Bank-Government Policy Dialogues

Most Bank-financed forest sector reviews and biodiversity conservation strategies include analysis of forestry and related land use priorities, thus providing important opportunities to initiate substantive policy discussions with government decisionmakers and key stakeholders. During such policy dialogues, new approaches to forestry and conservation development can be introduced

Box 6

The Ethiopia Forestry Action Plan

The Bank-supported Tropical Forestry Action Plan initiated a series of policy dialogues and studies with the government of Ethiopia. Throughout the three-year and largely country-driven process, the Ethiopia Forestry Action Plan made use of extensive, multisectoral consultations that included NGOs and representatives of forest communities as participants in stakeholder workshops. In addition to these consultations, the government of Ethiopia introduced several reforms to decentralize forestry project management, such as giving greater autonomy to local forestry units and allowing a percentage of locally generated forest benefits (for example, from harvest sales) to be used by forest communities.

Source: World Bank (1986, 1994a).

by citing global and regional forestry trends and discussing relevant Bank policies that support participatory approaches.¹

Issues or Position Papers

Issues or position papers prepared by research institutions, forest industry, conservation NGOs, and other experts are useful in building awareness among policymakers about key forestry and conservation issues. It is important to ensure that equity concerns and needs of disadvantaged populations are addressed in these papers. For example, in the Philippines, Thailand, and Zimbabwe, issue papers on forest population, poverty, and tenure provided the basis for social forestry legislation.² Other important policy documents include World Bank (1991b; 1994b, chapters 3, 5, 7; 1994c; 1994e) and GEF and World Bank (1994).

Stakeholder Workshops

Government agencies may be encouraged to sponsor and facilitate workshops to discuss key forestry and conservation policy issues. When governments are actively involved in policy discussions with stakeholders, forestry reforms are easier to introduce. NGOs are sometimes asked to organize such workshops. Workshop output may be supplemented with information from small group meetings and expert interviews with other stakeholders. For example, the multisectoral forest and tree farming stakeholder workshops in Mexico and Zimbabwe have been helpful in identifying key reforms in forest tenure policy, marketing regulations of non-wood products, and delineating protected areas for biodiversity conservation.

Devolving Resources and Authority

The following tools for designing a national institutional framework for forestry and conservation programs promote devolution of management authority to forest users through decentralized financing and other administrative reforms.

Decentralized Financing. Several alternatives have been used in Bank- and GEF/Bank-financed forestry and biodiversity conservation projects to

enable funds to reach beneficiaries and ensure that financing is available over a longer time period. These approaches include the following:

- *Increasing private sector involvement* by opening up lines of credit, underwriting private sector forestry investments, or endorsing joint contractual private management of forests, reserves, and parks (Indonesia Forestry II, Burma Forestry II, and the forestry development projects in Zambia, Philippines, Bangladesh, Costa Rica).
- *Direct funding to NGOs* instead of government agencies has sometimes been effective in delivering funds directly to communities. For example, the Bank/GEF-financed Conservation of Priority Protected Areas Project in the Philippines is set up as a grant to a consortium of NGOs for implementing biodiversity conservation programs.
- *Trust funds* to support community reforestation and protect biodiversity (Bhutan, Uganda) are useful when returns to investments in time and resources occur over the long term or require extended time horizons for sustaining activities. By ensuring that funds are available, local groups can establish and staff village-based extension services.
- *Debt-for-nature swap programs* generate the initial or start-up capital. The assets are invested in government securities, earning market rates of interest. Funds may be disbursed by government agencies, semi-autonomous public corporations, or private foundations and NGOs that are set up for conservation management.
- *Multiple funding through other donors* allows financing of activities that are normally difficult to implement under bureaucratic conditions. For example, it is easier to channel funds to NGOs and local villages through other donors who may have less bureaucratic procedures for funds disbursement, or who are not required to deal with national and local governments.

Administrative Reforms

Changes in government administrative procedures include streamlining project reporting and monitoring, expanding staff hiring (including more women and local hires as forest and introducing park guards), and more flexible procurement procedures (see Box 7). In practice, it is not necessary for local stakeholders to be directly involved in conducting procedural reforms. However, conducting such reforms saves time and resources and grants flexibility to NGOs and other intermediaries, improving chances for local involvement.

In some cases, there is a need for forestry and environmental agency restructuring to decentralize decisionmaking and implementation. Examples of restructuring that have been tried in Bank- and GEF/Bank-financed forestry and biodiversity projects include:

- creation of new extension units for forestry and biodiversity conservation bureaus (Algeria, Niger) provides an institutional mechanism for decentralizing operations;
- set-up of subnational forestry and conservation committees to assist in project planning,

implementation, and evaluation (Zimbabwe, Mexico);

- organization of a national committee and regional subcommittees to assist in the formulation of national environmental action plans (Ethiopia, Thailand, Ghana, India);
- designation of conservation units in other government agencies, local governments, and semiprivate environmental and forest agencies (Ecuador, Brazil, the Philippines);
- formation of multisectoral management or advisory committees to institutionalize stakeholder consultation and participation in decisionmaking and management (Uganda, Thailand, Indonesia, Tanzania).

Notes

1. Some relevant Bank policies include the operational policies (OPs) or operational directives (ODs) on forestry (OP 4.36), wildlands (OP 11.02), indigenous peoples (OD 4.20), resettlement (OD 4.30), environmental action plans (OP, BP 4.02), involving NGOs in Bank-supported activities (OD 14.70), management of cultural property (OP 11.03), disclosure of operational information (OP, BP 17.50), and procedures for investment operations under the Global Environment Facility (OD 9.01).
2. See Bradley and McNamara (1993) for examples of issues papers in forestry. See also Cleaver and others (1992).

Box 7

Reforms in Procurement Procedures to Facilitate Stakeholder Participation in Bank-Financed Forestry and GEF/Bank-Financed Biodiversity Conservation Projects

Direct purchases by communities after prequalification by the forestry and environmental project field office allows local users to select and purchase forest inputs without having to go through a competitive bidding process (West Bengal I and II, Nepal Forestry I, Ethiopia Forestry).

Non-Bank donor funds enable forest communities to purchase materials directly; most non-Bank donors need not deal with governments to purchase inputs (Haiti Forestry, Niger Forestry II, India Andhra Pradesh).

Indirect procurement through intermediaries (NGOs, forestry firms) that have government service technical assistance contracts shifts responsibility for procurement from public agencies to NGOs, which are not bound to follow rigid procurement and accounting regulations (Niger Forestry II, Central African Republic Natural Resources Management, Philippines Smallholder Tree Farming and Forestry).

Bulk purchasing by intermediaries (NGOs, forestry firms) for several villages or subprojects provides economies of scale in processing time and acquisition and reduces unit costs of inputs and transportation (Haiti Forestry).

4. Facilitating Local Participation in Project Design, Implementation, and Evaluation

Local participation is effective when there is secure tenure and access to forest resources and when the benefits and responsibilities of forest management are shared among forest users. Socially acceptable and manageable forestry and conservation technologies and sufficient capacity to support local forest and conservation management are also important factors that affect effectiveness.

To ensure that these considerations are incorporated into project design and integrated into implementation and evaluation activities, tools for engaging local stakeholders are needed in a number of areas. These include participatory techniques for:

- gathering appropriate information about key stakeholders and social issues;
- creating a consensus to facilitate decisionmaking and participation of different stakeholder groups;
- building local capacity for management of large resources by diverse user groups;
- resolving conflicts over competing forest uses and users; and
- developing participatory monitoring and evaluation activities.

Gathering Appropriate Information

Conduct of Social Assessments

One way to find out how the project affects the livelihood and cultural practices of local people

is to conduct social assessments (SAs). The Bank's best practice paper (1994e, p. 2) defines SA as "the systematic investigation of the social processes and social factors that affect development impacts and results." Because forestry and conservation projects cover a range of environmental conditions and social and institutional circumstances, different forms of SAs may be needed. This depends on the objectives and repercussions of the project and how they relate to livelihoods, cultural practices, the environment, and society. A classification of these projects is provided in Box 8.

Results of SAs help determine

- who are the project's primary stakeholders (e.g., beneficiaries, affected people);
- how the project can better address needs of affected groups;
- ways stakeholders can participate in forestry and biodiversity conservation project management; and
- types of risk management strategies required. (Broad-based stakeholder participation is most critical during the conduct of SAs.)

In practice, the Bank and GEF assist governments in formulating terms of reference and identifying the international or national NGOs will do the SAs. Useful selection criteria include capacity to work with local groups (who may not speak the national language); experience in doing fieldwork using participatory data gathering and analysis techniques; and ability to translate findings into outputs relevant to the project.

Box 8

Classification of Social Assessment by Type of Project in Forestry and Biodiversity Conservation

Type 1: Forestry and conservation projects with potentially negative social repercussions, such as resettlement of populations inside core conservation zones, displacement of indigenous peoples, serious opposition from stakeholders, or other serious social risks. Formal SAs should be carried out.

Type 2: Forestry and conservation projects with social objectives such as improving the well-being of indigenous peoples and women; projects where success depends upon beneficiary participation, such as joint forest management or village-based conservation; or other significant social concerns such as environmental awareness to control encroachments into parks. Formal SAs are highly desirable.

Type 3: Forestry and conservation projects that indirectly impact local populations and where limited stakeholder involvement is needed (e.g., plantation forestry, commercial extractive reserves). No formal SAs are required, but consideration of possible social impact is desirable.

Type 4: Forestry and conservation projects with no significant social impact or risk, such as remote and underpopulated biodiversity sites. No formal SAs are required.

Source: Adapted from World Bank (1996).

Participatory Rural Appraisal

PRA data gathering techniques emphasize collection of multidisciplinary information across various levels and types of stakeholders (see Box 9). For example, key informant interviews and group meetings are often done among local groups such as forest farmers and women and intermediaries such as firms. Some of these techniques involve groups of people in data collection (social mapping, transects) and in longer-term field observations (community case studies, time lines). There is wide applicability of PRA techniques outside community forestry and conservation projects, including plantation forestry and commercial extractive reserve projects.

Beneficiary Assessment

Beneficiary assessment and other client feedback techniques (such as systematic client surveys and direct observations) are useful in identifying forestry policy reforms that may affect under-represented stakeholder groups (including indigenous peoples, landless households, and women). The units of analysis in beneficiary assessments are populations that are vulnerable

to change and Bank policies that are explicit about the need for specialized interventions (support for women's roles in forest conservation, recognition of tribal lands).

Gender Analysis

The key issues in forestry gender analysis are recognizing the dependence of women on forest products for income and livelihood; building upon local knowledge of management by women of trees and land; dealing with existing inequities in sharing and distributing forest resources; and involving women in identification, design, implementation, and monitoring and evaluation of forestry and conservation projects.

Gender analysis techniques are used to evaluate the following processes:

- impact of rapid forest depletion and zoning of protected areas on the livelihood of women;
- effects of changing family structures on the productivity of women (for instance, number of children and birth spacing; household formation);

Box 9
Participatory Rural Appraisal in Forestry Projects in India

Participatory rural appraisal techniques were extensively used by NGOs in India during the preparation of Bank-financed forestry projects in West Bengal II, Andhra Pradesh, and Maharashtra. Prior to data collection, training workshops were conducted by the NGOs to identify data and the participatory methods for collecting it.

The categories of information generally covered were:

- forest community profiles (population, history, social organization);
- national forestry land laws;
- spatial information, forest inventories, and classifications (e.g., forest land and other land uses);
- stakeholders or forest users; and
- perceived forestry project risks.

Participatory methods included the following: group meetings and public hearings; social mapping and transects; group interviews; community case studies; ranking, rating, and sorting; farmers' records; open-ended stories; semistructured interviews; and farmer-assisted land use surveys.

PRA results helped in the design of forest land use priorities; identification of forest uses and forest user concerns; identification of potential project risks, threats, and perceived problems; and development of appropriate tree technologies. In particular, the gender-based inventory of fields helped in zoning of areas based upon women's needs for fuelwood and food gathering.

Source: Society for the Protection of Wetlands Development (1993).

- changes in livelihood and income for women from new forest and conservation technologies; and
- impact on women when forestry and conservation project organizers fail to recognize their contributions or involve them in management (see Box 10).

Local Knowledge and Technology

Stakeholder participation in forestry and biodiversity protection has helped prevent indigenous knowledge from being lost. Since productive technologies for the varied forestry ecological conditions are not always available, investments in scientific research are enriched through local knowledge (see Box 11). Indigenous uses of medicinal plants and other NTFPs, for example, are important in developing forest management and conservation technologies that

gives users maximum variety and serve as potential sources of new products and diversified incomes.

Creating a Consensus

Many techniques have been used to build consensus and expand decisionmaking of Bank- and GEF/Bank-financed forestry and biodiversity conservation projects. These techniques involve conducting opinion surveys among project participants, encouraging decisionmaking through village or focus group meetings, and developing agreements among stakeholder groups using negotiations and contracts.

Consensus building techniques are appropriate when there is free expression of opinion, especially among disadvantaged groups, and when the decisionmaking process enables participants

Box 10
Women's Participation in Bank-Financed Forestry Projects

Uganda: women established tree nurseries. Together with assistance from trained forestry extension workers, women in the Bank-assisted Uganda Forestry/Firewood Project established tree nurseries within group-controlled lands. In addition, tree seedlings given to women by the forestry agency were planted around home lots and nearby wood lots.

Kenya: women participated in forest-sharing agreements. With the assistance of an international NGO (CARE), the Bank-financed Kenya Forestry Development Project solicited the help of women in devising an agreement between the government and local users for distributing agroforestry or intercrop benefits (since women controlled most village agroforestry lands). During project implementation, the crucial role of women in recording households that received harvest shares made them key players in resolving conflicts over forest benefits.

India: women as members of forest protection committees (FPCs). In the West Bengal II Project, the Bank worked with the state forestry agency and other NGOs to permit and encourage women as FPC members. This allowed women to fully participate in decisionmaking and receive a more equitable share of timber harvests. When women were given responsibilities in these committees, the project then gained wider support and spread rapidly to other villages.

Sources: FAO and SIDA (1991); Molnar and Schreiber (1988); World Bank (1987, 1990, 1992).

to fully consider alternatives (through, for example, information disclosure and transparency in forestry and conservation project management).

Opinion Surveys

Opinion surveys are especially useful in forestry and biodiversity conservation projects that affect large numbers of people in two or more villages. Often the affected populations belong to different ethnic or cultural groupings. This diversity of interests makes decisionmaking more complex. Opinion surveys focus on generating consensus about a key issue. Topics normally covered in such surveys include:

- representing the forestry and biodiversity conservation project decisionmaking process (Who will represent forest users? What is the selection process?);
- determining benefit flows (What forest products are allowed? How are benefits to be distributed across users?); and
- clarifying forestry and conservation manage-

ment responsibilities (tree planting and maintenance, protection of forest resources).

As shown in Box 12, the results of such surveys can be useful in defining management procedures, determining which tree species are preferred locally, and planting and conservation technologies.

Village or Focus Group Meetings

Village meetings, or focus group meetings with a smaller number of people, are useful in helping to reach consensus on various aspects of forestry and biodiversity conservation project management. Intermediary groups (such as NGOs and religious organizations) help facilitate such meetings. Role playing and other techniques used in group dynamics engage participants in dialogue and encourage consensus building. However, because of the remote locations of many Bank- and GEF/Bank-financed forestry and conservation projects, the meetings often conform to local realities. During preparation of the Bank-financed Ghana Forestry Project, for example, people walked several days just to

Box 11
Learning from Indigenous Practices to Increase Local Participation and Improve Forest Productivity

Using underexploited tree and crop species in Africa. Trees in agroforestry systems in Africa provide many other products and services, such as food, fiber, medicines, oils, and gums used by many indigenous groups (e.g., *Elaeis guineensis* for oil, wine, thatch, and mulch; *Moringa oleifera* as a source of edible flowers and leaves and fodder; *Xylopi aethiopica* as a tobacco substitute and fuel in most of Kenya and the Farlo regions in Senegal). The annual harvestable production from leaves and fruits is about 300 kg/ha in most Sahel areas and over 600 kg/ha in the Sudano-Sahel. Annual increments from the non-woody biomass of trees, shrubs, and palms is roughly equivalent to a daily per capita food intake of 450 to 1,800 kgs (Cook and Grut, 1989).

Crop-livestock-fallow rotations. In forestry projects financed by the Bank in Zimbabwe and Haiti, documentation of indigenous crop-grazing systems has encouraged rotating crop cultivation, grazing, and tree-shrub fallow. The rotation involves two or more subpopulations in the project site but often one piece of land. Because land is appropriated on the basis of kinship and ethnic affiliation, several families have userights to the land over a certain period of time. This multiple use arrangement encourages participation of other user groups.

Sources: Cook and Grut (1989); Nair (1990); World Bank (1985). See also Davis (1993, 1994).

attend. During implementation of this project, local leaders proposed rotating meetings from village to village. In the case of the Bank-financed Algeria Forestry Project, less frequent meetings were needed to accommodate seasonal movements of the nomadic population. Law and order problems required two Bank-financed forest projects in Nigeria and Bhutan to adopt centralized management and for the government to enforce forest user rules.

Building Local Capacity

Skill Mix Surveys

A basic requirement in local capacity building is to assess existing management skills. This may entail surveying local leaders and key subpopulations. NGOs assist in conducting these surveys and covering information on:

- number of potential participants in forestry and conservation training programs;
- demographic background of participants to ensure involvement of all sectors (indigenous peoples, women, landless households);

- management and leadership background and experiences; and
- community standing of potential forestry and biodiversity conservation project leaders and managers (such as social status).

Management Training

Most of Bank- and GEF/Bank-financed forestry and biodiversity conservation projects require training local leaders in project management. Such training involves development of monitoring and evaluation. NGOs are often contracted by governments to conduct management training. Useful goal-oriented programming approaches include Objectives-Oriented Project Planning or ZOPP and logical framework analysis or LogFRAME (see World Bank, 1994c).

Cross-Site Visits

One of the most effective tools for building local capacity and new attitudes is the study tour or visit to other forestry and biodiversity conservation projects within similar regions or project conditions. During these visits, stakeholder groups are able to meet with counterparts who have tried new methods of participatory manage-

Box 12

Opinion Surveys in the Design of the Philippines Smallholder Tree Farming and Forestry Project

The Bureau of Forest Development (BFD), in cooperation with a local university research group, conducted an opinion survey during the first year of implementation of the Bank-financed Philippines Smallholder Tree Farming and Forestry Project. A small sample of participating households was interviewed regarding: their preferences for tree species, their recommendations on where and when to plant tree seedlings, and who would represent their village in the project management committee and how the representatives would be selected.

Results of the survey helped project technicians select tree species based on commercial preferences (e.g., fuelwood, fruit trees). The survey results also helped decide the composition of the project management committee using village boundaries (rather than land area, which BFD officials initially suggested). People preferred elections by secret ballot to minimize conflicts among competing villages.

Source: Bureau of Forest Development (1979).

ment under similar conditions, and question them about issues they perceive as important.

Resource Mobilization

Special skills are often needed in organizing labor and generating capital and other resources for project activities, calling meetings and generating consensus, and resolving forest disputes. NGOs are helpful intermediaries for mobilizing resources through contacts with multilateral funding agencies and private firms.

Resolving Conflicts

Conflict management is important in areas where resource users' livelihood objectives compete with other objectives, such as biodiversity protection or sustainable forestry. Effective conflict management involves the following basic principles:

- focusing solutions on underlying interests of users, such as their livelihoods;
- addressing procedural as well as substantive conflicts over the use of resources;
- involving all affected stakeholders in resolving conflicts; and
- understanding the social structure and

power relationships that may cause the conflict, especially in terms of accessing forest resources.

Negotiations on Acceptable Land Uses and Boundaries

In some cases, resolving conflicts may entail changing boundaries and land uses. The zoning of forest lands for specific uses, such as watersheds, rehabilitation, or biodiversity protection prior to delineating project boundaries often causes conflict if the project fails to recognize existing land uses. The government's executing agency may jointly define the zones with village representatives, and an agreement is reached on project boundaries, tenure, and access rights. In exchange for complying with this agreement, participating households receive sustenance support and other social services.

The delineation of zones and benefits that accrue to cooperating communities are sometimes finalized through a series of negotiations among different stakeholders. For example, contracts between government, forest villages, and fuelwood collectors in the Burkina Faso and Madagascar forestry projects financed by the Bank specify which subgroups manage portions of watersheds and protected areas. In other cases, sites outside protected forests are re-zoned to accommodate multiple land uses (Czech Republic, Slovak Republic, Ukraine, Ecuador).

Several methods for reaching consensus and reducing disputes over boundaries are used during negotiations. Some examples from Bank- and GEF/Bank-financed forestry and conservation projects are given below.

Group Consultations and Village Meetings

Several meetings were held in the Bank financed forestry project in Nepal to ascertain which tree species were preferred by men and women, and who, among villagers, could be hired for tree planting and nursery maintenance. Group consultations and meetings were used to clarify responsibilities across villages and gender groups and minimize conflicts over who should be actively involved in project management.

Negotiation with Community Leaders

Formal agreements with officials in Bank-financed forestry projects in Cameroon and Ghana designated for harvesting tree bark, cane, and chewing sticks were effective in defining the scope of forest user rights. The written agreements facilitated distribution of forest project benefits across villages and user groups, especially among women.

Dispute Resolution Processes

Once a conflict occurs, all affected parties are brought into the resolution process. Such open negotiations provide a means for understanding and sorting out the sources of conflict. This gives conflicting parties a sense of ownership (or stewardship) over the outcome of the dispute resolution process.

The resolution of a dispute can break down for a variety of reasons. The diversity of the population (several villages and ethnic groups, competing forest users) may make resolution difficult. The parties to the conflict may have unequal power or status, or one party may be politically powerless, illiterate, or disenfranchised by the resolution process (unequal treatment of indigenous forest dwellers in legal arbitration over logging areas). Resolution may be hindered when the only option is to enforce legal sanctions (conflicts over recognition of forest land rights).

Participatory Monitoring and Evaluation (M&E)

There are existing guidelines for detecting changes in the biophysical and socioeconomic conditions of forestry and biodiversity conservation projects (see, for example, GEF and World Bank, 1993). Ways to make M&E more participatory include building periodic stakeholder feedback into monitoring project changes, organizing joint government and stakeholder group evaluations, and subcontracting M&E to intermediaries or local groups.

Process Documentation

It may be necessary to help governments document the progress of planned forestry and conservation-related activities. By recording the types of information disseminated throughout the project and the nature and frequency of stakeholder consultations and participation, a systematic learning approach is built into project monitoring and evaluation. Such documentation often contains descriptions of stakeholders' institutions, their roles and responsibilities, and project outcomes and effects.

Documentation may be in the form of written reports, videos or slides, or pictures and illustrations. PRA results such as social mapping exercises, transects, community case studies, and diagrams provide valuable input. With proper documentation, problems are detected during supervision, facilitating strategic planning and risk management.

Joint Monitoring and Evaluation

Some forestry and biodiversity conservation projects in Niger, India, and Malawi have organized joint government and stakeholder monitoring and evaluation groups. In general, the government measures the technical indicators (such as seedlings and tree plantation rates or financial management), while stakeholder groups are in charge of the social and participation aspects of forestry management. PRA techniques are sometimes used to gather new data that are compared with previously collected information to detect changes in forestry project performance.

Annex 1: World Bank-Financed Forestry Projects with Social and Participation Components, by Region

Region/Country	Project Name	Year	Loan/Credit (US\$ millions)
Africa			574.8
Niger	Forestry Technical Assistance	1978	4.5
Burundi	Forestry	1979	4.3
Mali	Afforestation I	1979	4.5
Rwanda	Integrated Forestry & Livestock	1980	34.3
Malawi	NRDP Wood Energy II	1980	21.0
Burkina Faso	Forestry	1980	14.5
Senegal	Forestry	1981	9.3
Niger	Forestry II	1982	10.1
Kenya	Forestry III	1982	37.5
Zimbabwe	Rural Afforestation	1983	7.3
Burundi	Forestry II	1985	12.8
Nigeria	Forestry II	1986	71.0
Malawi	Wood Energy II	1986	16.7
Ethiopia	Forestry	1986	45.0
Mali	Forestry II	1986	6.3
Uganda	Forestry/Firewood	1987	13.0
Rwanda	Forestry II	1987	14.1
Central African Rep.	Natural Resources Management	1990	19.9
Côte d'Ivoire	Forestry Sector	1990	13.8
Kenya	Forestry Development	1990	146.8
Zimbabwe	Forest Resources Management & Development	1990	19.9
Benin	Management of Natural Resources	1992	14.1
Mali	Natural Resource Management	1992	20.0

Region/Country	Project Name	Year	Loan/Credit (US\$ millions)
Asia			898.1
Philippines	Smallholder Treefarming & Forestry	1977	6.7
India	Uttar Pradesh Forestry Development	1979	23.0
India	Gujarat Community Forestry	1979	37.0
Bangladesh	Mangrove Forests	1980	11.0
Nepal	Forestry I	1980	17.0
India	West Bengal Social Forestry	1981	29.0
India	Haryana and J.K. Social Forestry	1982	33.0
Nepal	Forestry II	1983	18.0
India	Karnataka Social Forestry	1983	27.0
Bhutan	Forestry I	1984	5.5
India	Kerala Social Forestry	1984	31.8
Bangladesh	Forestry II	1985	28.0
India	National Social Forestry	1985	165.0
Bhutan	Forestry II	1988	1.1
Nepal	Hill Community Forestry	1989	30.5
Sri Lanka	Forestry Sector Development	1989	19.9
Indonesia	Second Forestry Institutions & Cons.	1990	20.0
Bangladesh	Forest Resources Management	1992	58.7
India	Maharashtra Forestry	1992	142.0
India	West Bengal Forestry	1992	39.0
Bhutan	Forestry III	1994	8.9
India	Andhra Pradesh Forestry	1994	89.0
India	Forestry Research Education	1994	57.0
EMENA			305.5
Tunisia	Forestry	1987	20.0
Morocco	Forestry III	1990	100.0
Algeria	Pilot Forestry & Watershed Management	1992	37.4
Tunisia	Second Forestry Development	1993	148.1
LAC			124.1
Haiti	Forestry	1982	4.0
Brazil	Minas Gerais Forestry	1987	48.5
Mexico	Forestry Development	1989	45.5
Haiti	Forestry & Environmental Protection	1992	26.1

Note: Classification of forestry projects based on project activities rather than on number of participants or percentage of total project costs allocated (due to unavailability of data). In general, for these projects, about 20 to 60 percent of project costs are spent on activities that involve stakeholders.

Source: Projects funded for 1979-89: World Bank (1991a).

Annex 2: Social and Participation Components of Selected Bank- and GEF/Bank-Financed Forestry and Biodiversity Conservation Projects, 1990-95

Country/ Year	Project	Amount (\$millions)	Social and Participation Components
Tunisia 1993	Second Forestry Project Development	69.0	Established village-based prairies, shrub and cactus plantations, and rehabilitation of existing pasture; carried out socioeconomic studies; and set up integrated forest pilot operations with NGOs.
Bangladesh 1992	Forest Resources Management Project	49.6	Used integrated environmental and socio-economic criteria in design of management strategies to be endorsed by government; developed pilot scheme for people's participation in forest development.
Bhutan 1994	Third Forestry Development Project	5.4	Adopted multiple use management of forests; social forestry component included financing of NTFPs and related livelihood; involved rural communities in managing forests and improving farm output in tree planting on private lands.
Indonesia 1990	Second Forestry Institutions and Conservation Project	20.0	Involved local groups in the development of plans and models for conservation and multi-sectoral sustainable use of mangrove resources and management of ten national parks.
Philippines 1994	Conservation of Priority Protected Areas Project	20.0	GEF-financed grant supported a new framework for partnership of government and NGOs in the management of ten nationally protected areas; three-fourths of grant funds administered by an NGO consortium; local involvement in development of management plans; resolution of conflicts at local level; provision of social funds for community livelihood projects.
Kenya 1990	Forestry Development Project	19.9	Promoted pilot projects on tree farming through extension services (including some NGOs) to smallholders and rural communities; integrated indigenous forest conservation and protection practices into pilot farming projects.

Country/ Year	Project	Amount (\$millions)	Social and Participation Components
Côte d'Ivoire 1990	Forestry Sector Project	80.0	Made use of private sector management of 500,000 hectares of gazetted forest lands under a long-term contract; supported private industry and local communities in preparation of a detailed land use and agricultural development plan for the buffer zones of one gazetted forest as a pilot project.
Zimbabwe 1990	Forest Resources Management and Development Project	14.5	Conducted rural afforestation in communal areas; developed pilot project for wildlife and forest grazing using participatory resource management; private forestry industry improved efficiency of wood processing.
Central African Republic 1990	Natural Resource Management Project	19.0	Developed pilot agroforestry and land management programs in the forest zone around Bangui to be implemented by local communities; promoted local participation in the protection of dense forest reserves and wildlife conservation.
Morocco 1990	Second Forestry Development Project	49.0	Integrated local uses of forests for domestic stock grazing with protection of watersheds; used low cost techniques and community participation in forest range management and small water catchment projects; provided village plantations covering 5,000 hectares of fruit trees.
Algeria 1992	Pilot Forestry and Watershed Management Project	25.0	Conducted participatory surveys of local resources and peoples' needs in identifying priorities; had negotiations between government and villages where government will provide social services and infrastructure while local villages will commit to natural resources management responsibilities; developed farm activities on private and collective lands; encouraged pilot reforestation operations using low cost techniques that also increased farmers' incomes.
Haiti 1992	Forestry and Environmental Protection Project	26.1	Provided long-term lease contracts between forest agency and farmers where farmers paid an annual lease fee and implemented agreed upon conservation and cultivation practices; supported agroforestry activities of farmers living in and near the Pine Forest Reserve, Pic Macaya, and La Visite national parks and buffer areas; supported tree planting of fruit and timber, contour conservation, soil conservation; distributed tree seedlings, trees in hedgerows, and credit to small peasant groups through subcontracting of NGOs who will design the implementation strategy in the Belle Anse area; government will sign agreements with NGOs that would specify their rights and obligations.

Participation in Forest Management and Conservation

Country/ Year	Project	Amount (\$millions)	Social and Participation Components
Ecuador 1994	Biodiversity Protection Project	6.7	Introduced legislative reforms that allowed public and private property within reserve areas and gave rights to private property owners to participate in resource management; developed regulations for community participation in the administration of protected areas and buffer zones; outreach activities focus on conflict resolution through supported consultations and public awareness; used regional coordinating committees to oversee implementation and conflict resolution; financed studies of indigenous practices; engaged in negotiations between government and local communities on management of natural resources.
Congo 1993	Wildlands Protection and Management Project	10.0	Developed protocol surveys of local populations; improved NGO capacity through training; created alternative economic activities for local populations; involved international NGOs in management of reserves in partnership with local villages.
Czech Rep. 1993	Biodiversity Protection Project	2.3	Conducted consultation and consensus building at local and regional levels on design of management plans for protected areas; funded small grants program for NGOs; developed public awareness and education programs and on-ground research stations in local communities.
Lao PDR 1992	Wildlife and Protected Areas Conservation Project	5.0	Mobilized communities in and around four protected areas to participate in planning and management of forest resources and buffer zones; US\$1.3 million allocated for village development activities; identified areas to be demarcated for timber, fuelwood and NTFPs under long-term agreements with the forestry service; organized a conservation trust fund from external sources and the Forest Management Fund to finance village livelihood projects.
Bolivia 1992	Biodiversity Conservation Project	4.5	Strengthened community participation in preparation of management plans in protected areas; organized consultation with villages, colonists, and businesspeople; encouraged participation of indigenous groups identified by the Bolivian Indigenous Institute and the Indigenous Indian Federation; established a trust fund of about US\$5 million for long-term financing of community livelihood and conservation projects.

Country/ Year	Project	Amount (\$millions)	Social and Participation Components
Poland 1992	Forest Biodiversity Protection Program	4.5	Promoted of ecological agriculture affecting some 450 small farmers in the Bialowieza Primeval Forest; introduced primary production of basic grains, forage crops, and potatoes and livestock improvement support schemes to increase farmers' incomes; provided cash incentives to farmers who shift from chemical to ecological agriculture; created the Bialowieza Primeval Forest Foundation to support long-term management of the area.
Algeria 1994	El Kala National Park and Wetlands Complex Management Project	9.2	Local Algerian social scientists conducted detailed socioeconomic studies to design participatory management approaches; attracted US\$100,000 to fund NGO participation, including active involvement of the University of Annaba, in coordinating participation of local groups in species inventories, studies, and adaptive research programs.
India 1994	Andhra Pradesh Forestry	89.0	Formed forest protection committees for joint forest management; allowed retention of 25 percent of incomes to villages from sales of forest products; organized multisectoral committee to handle conflicts over forest production distribution; encouraged joint village and state forestry agency monitoring and evaluation; conducted PRAs and Objectives-Oriented Project Planning workshops during project preparation, enabling participation of numerous stakeholder groups.
India 1992	West Bengal Forestry II	39.0	Supported joint forest management agreements between state forestry agency and villages in periphery over distribution of benefits from forestry products and collection of NTFPs; allowed retention of 35 percent of incomes from sales of sal poles to local villages; during project preparation local NGOs conducted PRAs and training of forestry officials and village leaders.
Mexico 1990	Forestry Development Project	45.5	Provided credit support to Amerindian communities, based upon recommendations of completed surveys carried out in Durango and Chihuahua; financed purchase of traditional logging equipment of small producers and road maintenance for use by <i>ejidos</i> and other small communities; encouraged institutional strengthening of National Amerindian Institute for local capacity building and assisted in credit applications of <i>ejidos</i> .

Annex 3: Selected International and Regional Forestry and Conservation Networks

International Forestry Networks

1. Forests, Trees and People Programme (FTPP) — International Rural Development Centre, Swedish University of Agricultural Sciences, Box 7005, S-750 07, Uppsala, Sweden; and Food and Agriculture Organization of the United Nations (FAO), Rome, Italy
Focuses on community forestry activities; network composed of individuals and institutions; administered cooperatively by International Rural Development Centre (IRDC); Swedish University of Agricultural Sciences; Community Forestry Unit, FAO; SILVA, France; and various regional program offices in Latin America, Asia, and Africa; publishes quarterly newsletter and monographs.
2. Rural Development Forestry Network (RDFN) — Overseas Development Institute, Regent's College, Regent's Park, Inner Circle, London NW1 4NS, England
More than 1,800 members worldwide are included in this network; publishes a quarterly newsletter, monographs on social forestry, and various other briefs; maintains an extensive library available via online services such as the Internet and other electronic gateways (more than 4,220 titles listed as of 1992).

Regional Forestry Networks

1. Agroforestry Information Service for the Pacific Region (AIS) — c/o NFTA, 1010 Holomua Road, Paia, Maui, Hawaii, 96779, U.S.A.

Regional network of about 300 members on agroforestry and trees and farms technologies.

2. African NGOs Environmental Network (ANEN) — P.O. Box 53844, Nairobi, Kenya
Includes agricultural and drylands; forestry network links agriculture with forestry studies.
3. Agricultural Information on Online Access — USDA, NAL Building, Beltsville, MD 20705, U.S.A.
4. Agroforestry Research Networks in Africa (AFRENA) — ICRAF, P.O. Box 30677, Nairobi, Kenya
Administered by the International Centre for Agroforestry; this network links agriculture and forestry research and outreach programs in Africa.
5. Asian Pacific Agroforestry Network (APAN) — Forest Research and Development Centre, P.O. Box 382, Bogor 16001, Indonesia
Focuses on agroforestry research, specifically on shifting cultivation systems.
6. Current Agricultural Research Information System (CARIS) — c/o FAO, via delle Terme di Caracalla, 00100, Rome, Italy
7. Centro Agronomico Tropical de Investigacion y Ensenanza (CATIE) — 7170 Turrialba, Turrialba, Costa Rica

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8. Center for Indigenous Knowledge for Agriculture and Rural Development (CIKARD) — Iowa State University, Ames, Iowa 50011 U.S.A.
 9. Center for International Forestry Research (CIFOR) — Jalan Gunung Batu 5, Bogor 16001, Indonesia
 10. European Tropical Forest Research Network (ETFRN) — c/o ATSAF, Hans Bockler Str. 5, DW-5300 Bonn 3, Germany
 11. Forestry/Fuelwood Research and Development Network (F/FRED) — Kasetsart University, Faculty of Forestry, P.O. Box 1038, Kasetsart Post Office, Bangkok 10903, Thailand
This network was initially funded by USAID; composed of over 1,000 members; publishes a quarterly newsletter, monographs on forestry, agroforestry, and fuelwood research.
 12. International Association for the Study of Common Property (IASCP) — Woodburn Hall 200, Indiana University, Bloomington, Indiana 47405, U.S.A. Composed of more than 4,000 subscribers to a quarterly newsletter and over 450 members from industrial and developing countries; sponsors biannual conferences on common property, tenure, and access topics.
 13. International Council for Research in Agroforestry (ICRAF) Global Study on Alternatives to Shifting Cultivation — P.O. Box 30677, Nairobi, Kenya
 14. International Centre for Integrated Mountain Development (ICIMOD) — GPO Box 3226, Kathmandu, Nepal
 15. Informacion y Documentacion Forestal para America Tropical (INFORMAT) — 7170 Turrialba, Turrialba, Costa Rica
 16. International Tropical Timber Organization (ITTO) — Sangyo Boeki Centre Bldg., 2 Yamshita-cho, Naka-tu, Yokohama, Japan
 17. International Society for Tropical Foresters (ISTF) — 5400 Grosvenor Lane, Bethesda, MD 20814, U.S.A.
 18. International Union for Forestry Research Organizations (IUFRO) — ASFRIS Programme, Federal Forest Research Station, Seckendorff-Gudent-Weg 8, A-1131, Wien, Austria
 19. Inter-Tribal Forestry Association of British Columbia — 201-515 Highway 97 South, Kelowna, British Columbia V1Z3J2, Canada
 20. Inter-Tribal Timber Council — 4370 N.E. Halsey St., Portland, Oregon, 97213, U.S.A. Association of nearly 100 American Indian tribes in the U.S.; holds annual National Indian Timber Symposium; provides technical and commercial support to forest-owning Indian tribes
 21. Oxford Forestry Institute — South Parks Rd., Oxford 3RB, England
 22. Regional Community Forestry Training Centre (RELOFTC) — Kasetsart University, Bangkok 106900 Thailand
 23. Red de Informacion Forestal para America Latina y el Caribe (RIFALC) — Universidad Nacional del Nordeste, Avda. las Heras 727-3500 Resistencia, Choco, Argentina
 24. Southeast Asia Sustainable Forest Management Network — Centre for Southeast Asia Studies, University of California, 2223 Fulton, #617, Berkeley, CA 94720, U.S.A.

References

- Banerjee, Ajit Kumar. 1989. *Shrubs in Tropical Forest Ecosystems: Examples from India*. Technical Paper No. 103. Washington, D.C.: The World Bank.
- Bradley, P.N., and K. McNamara. 1993. *Living with Trees: Policies for Forestry Management in Zimbabwe*. Technical Paper No. 210. Washington, D.C.: The World Bank.
- Bureau of Forest Development. 1979. *The Integrated Social Forestry Program of the Philippines*. Quezon City, Philippines: Department of Environment and Natural Resources.
- Cleaver, Kevin, and others, eds. 1992. *Conservation of West and Central African Rainforests*. Environment Paper No. 1. Washington, D.C.: The World Bank.
- Cook, C., and M. Grut. 1989. *Agroforestry in Sub-Saharan Africa: A Farmer's Perspective*. Technical Paper No. 112. Washington, D.C.: The World Bank.
- Davis, Shelton, ed. 1993. *Indigenous Views of Land and the Environment*. Discussion Paper No. 188. Washington, D.C.: The World Bank.
- _____. 1994. *The Social Challenge of Biodiversity Conservation*. World Bank-Global Environment Facility Working Paper No. 1. Washington, D.C.: The World Bank and GEF.
- FAO (Food and Agriculture Organization of the United Nations) and SIDA (Swedish International Development Authority). 1991. *Restoring the Balance: Women and Forest Resources*. Rome.
- GEF (Global Environment Facility) and The World Bank. 1993. *Guidelines for Monitoring and Evaluation of Biodiversity Projects*. Washington, D.C.
- _____. 1994. *Incorporating Social Assessment and Participation Into Biodiversity Conservation Projects*. Washington, D.C.: The World Bank and GEF.
- Molnar, Augusta, and Gotz Schreiber. 1988. *Women and Forestry: Operational Issues*. Technical Paper No. 428. Washington, D.C.: The World Bank.
- Nair, P.K.R. 1990. *The Prospects of Agroforestry in the Tropics*. Technical Paper No. 131. Washington, D.C.: The World Bank.
- World Bank. 1985. *The Fuelwood Crisis in Tropical West Africa*. Washington, D.C.
- _____. 1986. "Ethiopia Forestry." Washington, D.C.
- _____. 1987. "Uganda Forestry/Firewood." Washington, D. C.
- _____. 1989. "Nepal Hill Community Forestry.", Washington, D.C.
- _____. 1990. "Kenya Forestry Development." Washington, D.C.
- _____. 1991a. *Forestry: The World Bank's Experience*. Washington, D.C.: Operations Evaluation Department.

_____. 1991b. *The Forest Sector*. A World Bank Policy Paper. Washington, D.C.

_____. 1992. "West Bengal Forestry II." Washington, D.C.

_____. 1994a. *A Strategy for the Forest Sector in Sub-Saharan Africa*. Washington, D.C.: Africa Region Technical Department.

_____. 1994b. *Environmental Assessment Sourcebook*. Washington, D.C.: Environment Department.

_____. 1996. *The World Bank Participation Sourcebook*. Washington, D.C.: Environmentally Sustainable Development.

_____. 1994d. *Review of Implementation of the Forest Sector Policy*. Washington, D.C.

_____. 1994e. *Social Assessment: Incorporating Participation and Social Analysis into the Bank's Operational Work*. Washington, D.C. Environment Department.

_____. 1995. "Social and Participation Issues in Biodiversity Conservation Projects: A Review of GEF/Bank-Financed Pilot Phase Projects." Washington, D.C.: Environment Department. Draft.