



## CHAPTER 9

# Applying Forests Policy OP 4.36

**O**perational Policy (OP) 4.36 applies to all World Bank investment operations that potentially have an impact on forests, regardless of whether they are specific forest sector investments. It also encourages the incorporation of forest issues in Country Assistance Strategies (CASs), and addresses cross-sectoral impacts on forests. The policy provides for conservation of critical natural habitats and prohibits World Bank financing of any commercial harvesting or plantation development in critical natural habitats. It also allows for proactive investment support to improve forest management outside critical forest areas, with explicit safeguards to ensure that such World Bank-financed operations comply with independent certification standards acceptable to the World Bank, or operations with an agreed upon, time-bound action plan to establish compliance with these standards.

### OBJECTIVE OF THE FORESTS POLICY

The objective of OP 4.36 is to assist clients to harness the potential of forests to reduce poverty in a sustainable manner, to effectively integrate forests into sustainable economic development, and to protect the vital local and global environmental services and values of forests. Where forest restoration and plantation development are necessary to meet these objectives, the World Bank assists clients with forest restoration activities that maintain or enhance biodiversity and ecosystem functionality. The World Bank assists clients with the establishment of environmentally appropri-

ate, socially beneficial, and economically viable forest plantations to help meet growing demands for forest goods and services.

#### Specifically

- The World Bank uses environmental assessments, poverty assessments, social analyses, public expenditure reviews, and other economic and sector work to identify the economic, environmental, and social significance of forests in borrowing countries.
- The World Bank integrates strategies into its CASs to address any potential significant impacts of the CAS on forests.
- The World Bank does *not* finance projects that would involve significant conversion or degradation of critical forest areas or other natural habitats.
- The World Bank does *not* finance projects that contravene applicable international environmental laws.
- The World Bank does *not* finance plantations that involve any conversion or degradation of critical natural habitats, including adjacent or downstream critical natural habitats.
- The World Bank *only* finances commercial harvesting operations or the purchase of logging equipment in areas that it has determined are not critical forests or related critical natural habitats.
- The World Bank *only* finances industrial-scale commercial harvesting operations in areas outside critical forest areas, where such operations are either certified as meeting standards of responsible forest management under

an independent forest certification system acceptable to the World Bank, or adhere to a time-bound, phased action plan acceptable to the World Bank for achieving certification to such standards.

- In areas outside of critical forest areas, the World Bank may finance harvesting operations by small-scale landholders, local communities under community forest management, or entities under joint forest management. Such financing can be provided where these operations have either achieved a standard of forest management developed with the meaningful participation of affected local communities that is consistent with the principles and criteria of responsible forest management outlined in paragraph 10 of OP 4.36, or adhere to a time-bound action plan to achieve such a standard that has been developed with the meaningful participation of affected local communities and acceptable to the World Bank. All such operations must be monitored by the client, with the meaningful participation of local people who are affected.
- The World Bank uses environmental assessment to address the impact of all World Bank–financed investment projects on forests and the rights and welfare of local communities.
- The World Bank ensures that World Bank–financed investment projects involving the management of forests incorporate measures to strengthen the fiscal, legal, and institutional framework in the borrowing country to meet defined economic, environmental, and social objectives that address, among other issues, the respective roles and legal rights of the government, the private sector, and local people.
- The World Bank ensures that World Bank–financed investment projects involving the management of forests give preference to small-scale, community-level management approaches where they best harness the potential to reduce poverty in a sustainable manner.
- The World Bank ensures that the design of World Bank–financed investment projects that use forest resources evaluate the prospects for the development of new markets and marketing arrangements for nontimber forest products and related goods and services, taking into account the full range of goods and environmental services derived from well-managed forests.

**TRIGGERS.** The policy is triggered whenever any World Bank–financed investment project (i) has the potential to have impacts on the health and quality of forests or the rights and welfare of people and their level of dependence upon or interaction with forests or (ii) aims to bring about

changes in the management, protection, or utilization of natural forests or plantations.

**MECHANISMS FOR ACHIEVING POLICY OBJECTIVES.** As noted above, the World Bank’s objectives in forests are to assist clients to harness the potential of forests to reduce poverty, integrate forests into sustainable economic development, and protect vital local or global environmental services and values of forests. Mechanisms to achieve these objectives are described in the OP, and the World Bank procedures document, and include

- use of appropriate economic, environmental, and social assessments to identify the economic and environmental significance of forests and any activities involved in the World Bank–financed investment that may adversely affect the well-being of forests and the people who depend on them;
- assessment of the potential for activities proposed in a CAS that would significantly impact forests, and incorporation of strategies to address these impacts;
- use of information required from the client on policy, legal, and institutional frameworks in sector or project design to address priority poverty, social, and environmental issues needed to meet the economic, environmental, and social objectives of World Bank–financed investment projects;
- use in project design of assessments of the adequacy of land-use allocations for the management, conservation, and sustainable development of forests, including identification of any additional allocations needed to protect critical forest areas;
- use of clear standards of forest management certification to guide any investment support for harvesting operations, including time-bound action plans to achieve certification of acceptable standards of forest management; and
- use of market assessments to determine the full range of goods and services available from well-managed forests to enhance returns from forest management and give preference to small-scale, community-level management approaches where they best harness the potential of forests to reduce poverty in a sustainable manner.

**CONSULTATION AND DISCLOSURE REQUIREMENTS (WORLD BANK POLICY ON DISCLOSURE OF INFORMATION).** The World Bank requires clients to identify and consult the groups in forest areas likely to be affected by World Bank–financed investment projects in and beyond the forest sector.

The disclosure requirements set out in the Environmental Assessment (EA) Policy (OP 4.01) apply to all projects affecting forests. Aside from the required EA documentation, there is no freestanding document that is automatically required for all projects affecting forests. However, many forest-related projects will generate freestanding reports (such as Forest Management Plans), which should be made publicly available as a matter of good practice. Experience has shown that transparent decision-making processes are important for good forest governance and good development outcomes, and full disclosure of forest-related information should be encouraged wherever feasible. Additional requirements for consultations apply if the World Bank's Indigenous Peoples' or Involuntary Resettlement policies apply.

### MAIN REQUIREMENTS OF THE FORESTS POLICY

OP 4.36 requires that all relevant types of projects must ensure that they avoid causing significant, unmitigated harm to natural forests or other natural habitats. These “do no harm” requirements can be summarized as follows (see the text of each policy for the full details):

**AVOIDING SIGNIFICANT DAMAGE TO CRITICAL FORESTS AND OTHER CRITICAL NATURAL HABITATS.** OP 4.36, paragraph 5 prohibits World Bank support for projects that would involve the *significant conversion or degradation of critical forests* or other types of *critical natural habitats* (see the definitions section that follows).

**MINIMIZING AND MITIGATING DAMAGE TO OTHER (NON-CRITICAL) FORESTS AND OTHER NATURAL HABITATS.** For proposed projects that would adversely affect *noncritical* forests and other natural habitats, the World Bank's Forests Policy has more flexible (but nonetheless rigorous) standards of compliance. Where feasible, the conversion (loss) or degradation of any forests and other natural habitats should be avoided through careful project siting and design. There is a strong presumption against any significant conversion or degradation of noncritical natural forests. However, the World Bank may still support a project that would lead to significant conversion or degradation of noncritical forests or other noncritical natural habitats if (i) there are no feasible alternatives for achieving a project's key objectives; (ii) comprehensive analysis demonstrates that the overall benefits from the project substantially outweigh the environmental costs; and (iii) the project includes mitigation measures acceptable to the World Bank. These mitigation measures must be technically justified and should

include, where appropriate, the establishment or strengthening of ecologically similar protected areas (see OP 4.04, paragraph 5; OP 4.04, annex A, item [e]; and OP 4.36, paragraph 5 for the full legal language).

**FOREST PLANTATIONS.** With respect to forest plantations, OP 4.36 (paragraph 7) specifies the following:

- The World Bank does not finance forest plantations that involve *any* conversion or degradation (whether “significant” or not) of critical natural habitats. Such conversion would typically take place when a native forest or natural grassland is replaced as part of plantation establishment. Under OP 4.36, all World Bank-supported forestry plantations must be sited away from critical natural habitats.
- In the case of noncritical natural habitats, the World Bank gives preference (as with other types of projects) to siting forest plantations on lands that no longer contain natural habitats, provided that these lands were not converted in anticipation of the World Bank-supported project.
- World Bank-supported forest plantation projects need to prevent and mitigate threats to natural habitats and biodiversity, including the potential spread of invasive species (such as the *Pinus* species in the natural grasslands of southern South America).

**HARVESTING OF NATURAL FORESTS.** With respect to the harvesting of natural forests, the Forests Policy:

- Prohibits World Bank financing for commercial or community-based harvesting in any areas containing critical forests or related critical natural habitats (OP 4.36, paragraph 8), with the exception that community-based harvesting (defined in OP 4.36, annex A, items [d] and [e]) may take place within multiple-use Managed Resource Protected Areas (Category VI in the standardized World Conservation Union [IUCN] international classification scheme for different types of protected areas), where such harvesting is an integral part of the management plan for the area.
- Requires that industrial-scale commercial forest harvesting can receive World Bank financing only if it is either (i) certified under an independent forest certification system acceptable to the World Bank as meeting standards of good forest management or (ii) adhering to a time-bound action plan acceptable to the World Bank for achieving certification of such standards. (These standards of good forest management are specified in OP 4.36, paragraphs 10–11.)

- In the case of forest harvesting by small-scale landholders or local communities (by themselves or under joint forest management arrangements), formal certification is not required for World Bank financing. However, these producers, who are generally small scale, must either (i) achieve standards of forest management consistent with the criteria outlined in OP 4.36, paragraph 10; or (ii) adhere to a time-bound action plan (developed with the meaningful participation of affected local communities and acceptable to the World Bank) to achieve these standards.

**SMALL-SCALE LANDHOLDERS AND LOCAL COMMUNITIES.** The forests policy does not require formal certification of the forest management practices of small-scale landholders and local communities, largely because of the typically high transaction costs for these small-scale producers to obtain such certification.

### **WHEN IS THE FORESTS POLICY TRIGGERED?**

Strictly speaking, both policies (OP 4.36 and Natural Habitats OP 4.04) apply to any projects that affect forests or other natural habitats, whether positively or negatively. As explicitly stated in OP 4.36 (paragraph 3), the Forests Policy applies to all investment projects that (i) may have some impact on the health and quality of forests; (ii) may affect the rights and well-being of forest-dependent people; or (iii) seek to bring about changes in the management, protection, or use of natural forests or plantations. Although the emphasis is on the “do no harm” safeguard provisions, OP 4.36 also promotes “doing good” by pursuing opportunities for the conservation and sustainable use of forests and other natural habitats within World Bank–supported projects, analytical work, and policy dialogue.

Within the World Bank, the triggering of a particular safeguard policy is often understood to mean either (i) the need for due diligence to verify whether adverse impacts are expected, to ensure compliance with the policy’s specific requirements; or (ii) the need for designing and implementing specific measures to prevent or mitigate adverse impacts. Under these rather narrow interpretations, both OP 4.36 and OP 4.04 would be triggered by those projects that have the potential to convert or degrade forests or other natural habitats, but not by those projects that are strictly conservation oriented and have no significant adverse environmental impacts (except that forestry projects always trigger OP 4.36).

In several World Bank project documents (including the Project Appraisal Document [PAD], Project Information

Document [PID], and Integrated Safeguards Data Sheet [ISDS]), it is necessary to indicate whether a proposed investment project triggers OP 4.36 or OP 4.04. In this regard, it is *recommended* as good practice to take a broad (and literal) interpretation of the full text of these policy statements, and thus to indicate that the project does trigger these policies if it would affect forests or other natural habitats in any way, positively or negatively. However, at a minimum, it is *required* to indicate that a project triggers (i) OP 4.36 if it is either a forestry project of any kind, or a nonforestry project with the potential for significant loss or degradation of any natural forests or related natural habitats; and (ii) OP 4.04 if it has the potential for significant loss or degradation of any natural habitats (including natural forests). For this particular reporting requirement, the potential to cause significant loss or degradation of forests or other natural habitats should be assessed in the (at least theoretical) absence of any planned project-specific screening or other measures that would serve to prevent or mitigate these adverse impacts.

### **ENVIRONMENTAL CLASSIFICATION OF PROJECTS INVOLVING FORESTS**

Under the EA policy, all World Bank–supported investment projects are classified as Environmental Category A, (requiring a full environmental impact assessment); Category B (requiring a more limited environmental analysis); Category C (requiring no environmental analysis after the initial screening); or Category FI (involving on-lending through financial intermediaries). The Environmental Assessment OP 4.01 (paragraph 8) provides the generic criteria for environmental classification that should always be followed. The 1998 Good Practices Note (OP 4.01, annex B) suggests that Category A is normally the best classification for “forestry production projects,” while Category B is generally most appropriate for watershed management or rehabilitation, protected areas, and biodiversity conservation. OP 4.36, paragraph 3, specifies that “a project with the potential for conversion or degradation of natural forests or other natural habitats that is likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented is classified as Category A; projects otherwise involving forests or other natural habitats are classified as Category B, C, or FI, depending on the type, location, sensitivity, and scale of the project and the nature and magnitude of its environmental impacts.” The Natural Habitats Policy (OP 4.04, paragraph 2) provides a similar (but not quite identical) approach: “[i]f, as part of the environmen-

tal assessment process, environmental screening indicates the potential for significant conversion or degradation of critical or other natural habitats, the project is classified as Category A; projects otherwise involving natural forests are classified as Category A or B, depending on the degree of their ecological impacts.”

Guidelines for the environmental classification of projects that involve forests include the following<sup>1</sup>:

- *Category A* is the appropriate category for (i) nonforestry projects of any type with the potential to cause (directly or indirectly) the significant conversion or degradation of natural forests or adjacent natural habitats (such as new roads through forests, large dams, mining, oil and gas, large-scale irrigation or new land settlement, other large-scale civil works in forested areas, and industries dependent upon natural forests for raw materials); (ii) forest plantation projects that would lead to the significant conversion or degradation of noncritical natural habitats; and (iii) commercial forest harvesting that (because of intensive or high-impact management practices) would lead to significant ecological modification (with reduced native species diversity) of natural forests.
- *Category B* is the appropriate category for (i) natural forest management (including forest harvesting) that does not lead to significant ecological modification or degradation; (ii) forestry plantations that would not adversely affect natural habitats; (iii) most other types of natural resource management projects, including watershed management and protected area establishment or strengthening; and (iv) many types of nonforestry projects with some potential for adverse environmental impacts, but no significant loss or degradation of forests or other natural habitats.
- *Category C* is appropriate for some types of conservation-oriented projects with no civil works and no evident adverse environmental impacts, such as (i) environmental service payments to landowners to maintain their existing natural forest cover; or (ii) the establishment of conservation trust funds for the recurrent costs of protected area management.
- *Category FI* is appropriate for certain projects in which financial intermediaries would invest in subprojects, some of which might involve forests.

#### **GUIDELINES ON IMPLEMENTING OP 4.36**

**PREPARATION REQUIREMENTS.** The task team leader and client ensure that

- Terms of Reference (TOR) are reviewed and agreed upon for any social, environmental, and economic assessments required in OP/BP 4.36 and other relevant World Bank OPs/BPs;
- economic, environmental, and social analyses are undertaken to identify the economic, environmental, and social significance of forests and any activities involved in proposed CASs or World Bank–financed investments that may adversely affect the well-being of forests and the people who depend on them;
- inventories are undertaken at a spatial scale that is ecologically, socially, and culturally appropriate for the forest area in which the project or investment program is located to identify critical forest areas and assess the adequacy of land allocations to protect these areas;
- the linkages between any proposed forest sector activities and the poverty reduction, macroeconomic, and conservation objectives of the World Bank’s country assistance program are clear;
- there is evaluation of the potential for developing markets for the full range of forest goods and services, giving preference to small-scale, community-level management approaches that best harness the use of forests for poverty reduction in a sustainable manner; and
- local people, communities, and the private sector are meaningfully involved in defining activities to be undertaken in the management, conservation, and sustainable utilization of natural forests or plantations.

**APPRAISAL REQUIREMENTS.** The task team reviews project preparation and any environmental or project management or monitoring plans to ensure that

- all necessary social, economic, and environmental studies are satisfactorily completed;
- government commitment is secured for any measures that may be required to strengthen the fiscal, legal, and institutional frameworks needed to meet the project’s economic, environmental, and social objectives;
- adequate land allocations have been made for the management, conservation, and sustainable development of forests, including any additional allocations needed for the protection of critical forest areas or other critical natural habitats;
- procedures are in place to ensure that any harvesting operations or plantation development supported by World Bank financing are restricted to areas outside critical forest areas or other critical natural habitats;
- the certification systems or community-based forest management monitoring systems used to assess whether forest

harvesting supported by World Bank–financed investment projects meet appropriate standards of forest management and use conform with the standards for these systems (as defined in paragraphs 10 and 11 of OP 4.36);

- projects with time-bound action plans to improve forest management include clearly defined performance benchmarks and time frames for achieving appropriate forest management standards (in accord with OP 4.36, paragraphs 9–12), and that any time-bound action plans and their associated performance benchmarks are included in the PAD and made available to the public; and
- PADs include clear performance indicators that will enable the contribution of the project to the poverty reduction, macroeconomic, and conservation objectives of the World Bank’s country assistance program to be assessed.

**SUPERVISION REQUIREMENTS.** The task team ensures that during project implementation

- monitoring and evaluation procedures are informed by the meaningful participation of locally affected communities and other groups interested in forest areas affected by World Bank–financed investment projects;
- the integrity of the boundaries of any critical forest areas or other critical natural habitats in or near areas affected by World Bank–financed investment projects is continuously monitored;
- the protection of the rights of access and use of forest areas by Indigenous Peoples and other local communities is monitored in accord with the requirements of OP 4.12 Involuntary Resettlement and OP 4.10 Indigenous Peoples, and that any necessary corrective actions are taken in accord with these policies;
- project performance is monitored against the indicators for the contribution of the project to the poverty reduction, macroeconomic, and conservation objectives of the World Bank’s country assistance program defined in the PAD; and that
- the client specifically makes available to the public the results of all forest management assessments carried out under the independent certification systems and related time-bound action plans referred to in paragraphs 9–12 of OP 4.36.

## DEFINITIONS

**FORESTS AND NATURAL HABITATS.** OP 4.36, annex A, defines “forests” rather broadly to include areas of at least 1 hectare, at any successional stage of tree growth, with tree crown

cover of normally at least 10 percent and trees at least 2 meters tall (at maturity). This definition thus includes natural (primary or secondary) forests, as well as forestry plantations of native or nonnative species. The definition also takes into account intended land uses (not just actual tree cover, or the lack thereof) by (i) including areas dedicated to forest production, protection, multiple uses, or conservation (whether formally recognized or not) and (ii) excluding areas where other land uses not dependent on tree cover predominate, such as agriculture, grazing, or settlements.

OP 4.04, annex A, defines “natural habitats” as land and water areas where (i) the ecosystem is composed largely of native plant and animal species and (ii) human activity has not fundamentally altered the area’s primary ecological functions. Natural habitats thus include natural forests of all types, as well as the full range of other kinds of natural terrestrial, freshwater, and marine ecosystems. Natural habitats often are not “pristine” but have been modified by human activities, such as logging, collection of nontimber forest products, hunting, fishing, or livestock grazing (on natural rangelands). However, areas that still maintain a majority of their original native plant and animal species should be regarded as natural habitats, notwithstanding some (light or moderate) degree of human modification.

In accordance with these definitions (as well as those in normal professional usage outside the World Bank), natural forests are a type of natural habitat. Other types of natural ecosystems (such as shrub lands, native grasslands, nonwooded wetlands, beaches, and coral reefs) are natural habitats, but not forests. Conversely, forestry plantations of nonnative species are forests, but not natural habitats.

**CRITICAL FORESTS AND CRITICAL NATURAL HABITATS.** OP 4.36, annex A, defines “critical forest areas” as the forest areas that qualify as “critical natural habitats” under the Natural Habitats OP 4.04. In summary, the Natural Habitats Policy defines “critical natural habitats” as those natural habitats that are either (i) legally protected or officially proposed for protection; or (ii) unprotected but of known high conservation value. In practical terms, critical natural habitats (including critical forests) can be regarded as relatively natural areas that are either legally protected or really should be, because of their conservation significance. In more specific and official terms, critical natural habitats comprise the following types of areas (see OP 4.04, annex A, for the full World Bank policy text):

**EXISTING AND PROPOSED PROTECTED AREAS.** Critical natural habitats include (i) existing protected areas that meet the

standard IUCN criteria for Categories I–VI; (ii) areas officially proposed by governments as protected areas; (iii) areas recognized (before the proposed project) as protected by traditional local communities (such as sacred groves); and (iv) sites that maintain conditions vital for the viability of these protected areas.

**UNPROTECTED AREAS OF HIGH CONSERVATION VALUE.** Critical natural habitats include areas currently lacking status as existing or proposed protected areas, provided that they are recognized by authoritative sources as (i) areas with known high suitability for biodiversity conservation or (ii) sites that are critical for one or more rare, vulnerable, migratory, or endangered species. Critical natural habitats typically appear on lists prepared by conservation experts outside (and sometimes within) the World Bank. This helps to distinguish the genuinely critical areas from the noncritical ones. A critical natural habitat site may appear on a list that existed before the preparation of the project proposed for World Bank support. Alternatively, such a list might be developed during project preparation, as part of the environmental assessment process (discussed below). In other words, a site could be evaluated and classified as a critical natural habitat for the first time during World Bank preparation of a proposed project.

**SIGNIFICANCE OF FOREST CONVERSION AND DEGRADATION.** For the Forests Policy, “significant conversion” and “degradation” are defined in OP 4.04, annex A, paragraph 1 (c)–(d). (OP 4.36 cross-references OP 4.04 for this purpose.) This definition states that “*significant conversion* is the elimination or severe diminution of the integrity of a critical or other natural habitat caused by a major, long-term change in land or water use. Significant conversion may include, for example, land clearing; replacement of natural vegetation (e.g., by crops or tree plantations); permanent flooding (e.g., by a reservoir); drainage, dredging, filling, or channelization of wetlands; or surface mining. In both terrestrial and aquatic systems, conversion of natural habitats can occur as the result of severe pollution.” In simple terms, conversion is essentially the loss of an area of natural habitat; determining the significance of a conversion may be more complex (see below).

OP 4.04 defines degradation as the “modification of a critical or other natural habitat that substantially reduces the habitat’s ability to maintain viable populations of its native species.” In this context, degradation is an environmental safeguards concept, rather than an economic one. Some land management or silvicultural treatments may be regarded as improvements from an economic perspective,

but as degradation from an ecological standpoint. For example, the systematic removal of dead or dying trees, or species of low economic value, might be considered a management improvement by providing more space to the trees of higher economic value; however, it could reduce the forest’s biodiversity and remove the habitat of birds and other wildlife that depend upon snags. Further complexity is involved in choosing between the different wild species that benefit from different types of forest management interventions. While many species of conservation or other management interest depend upon primary or old-growth forests, some can survive only in logged, burned, or otherwise disturbed areas (such as young secondary forest, or grassy clearings). Good judgment is needed in choosing the appropriate, site-specific forest management techniques to optimize between economic, social, and a variety of different environmental objectives. The project team should seek to ensure that the management objectives for a forested area are explicit, transparent, and thoroughly discussed with the full range of interested stakeholders.

When is the scale of the proposed conversion or degradation of an area of forest (or other natural habitat) large enough to qualify as significant? Neither OP 4.36 nor 4.04 provide numerical threshold figures; there is thus some case-by-case flexibility, provided that decisions are well-justified from a technical and scientific standpoint. When evaluating the significance of a proposed conversion or degradation of forests or other natural habitats, it is important to take into account the cumulative effects of (i) multiple sub-projects under the same project; (ii) World Bank–financed repeater projects; and (iii) concurrent projects financed by other sources. It is also necessary to consider the area of each specific forest (or other natural habitat) type to be affected, in relative terms and (for still very extensive ecosystems) in absolute terms as well. In relative terms, an informal rule of thumb, used at times in the World Bank, is to consider the area of conversion or degradation to be significant if it exceeds 1 percent of the remaining area of any specific natural habitat type within the same country. One percent also happens to be the threshold for requiring natural habitat conservation offset measures in the European Union’s Habitats Directive, Article 6(4).

In absolute terms, the substantively very similar Wildlands OPN 11.02 that preceded OP 4.04 (and was in effect 1987–95) suggested 10,000 hectares as a threshold figure, above which the conversion or degradation should be considered significant, even for a very extensive ecosystem type within the same country (where the converted or degraded area would be well under 1 percent of the remaining area).

However, some of the World Bank's environmental and biodiversity specialists now suggest a lower figure, such as 5,000 hectares. Although they provide no official threshold figure, both the Forests and Natural Habitats policies require the World Bank and clients to apply a precautionary approach (OP 4.36, footnote 4 and OP 4.04, paragraph 1). Thus, in borderline situations under scientific uncertainty, the proposed conversion or degradation should be considered significant, and the relevant safeguard measures applied (project redesign or inclusion of specific mitigation measures, as discussed above). The decision needs to be justified and documented in a scientifically credible manner (typically within the PAD and EA report).

It is important to remember that the significant conversion or degradation of forests or other natural habitats can occur as a result of both (i) the direct impacts of a project (such as the civil works "footprint"); and (ii) the indirect impacts of project-induced human activities. As stated in OP 4.04, annex A, paragraph 1(c), "Conversion can result directly from the action of a project or through an indirect mechanism (e.g., through induced settlement along a road)." The induced impacts of a project frequently account for more forest loss or degradation than the direct ones.

**SMALL-SCALE LANDHOLDERS AND LOCAL COMMUNITIES.** OP 4.36, footnote 13, notes that "small-scale is determined by the national context of a given country and is generally relative to the average size of household forest landholdings. In some situations, small-scale landholders may control less than a hectare of forests; in others they may control 50 hectares or more." Organized communities may own or otherwise control much larger tracts of forest (for example, up to several thousand hectares for some forest communities in the mountains of Mexico). However, forestry by local communities can normally be distinguished from industrial-scale commercial forestry operations by some combination of (i) community land tenure; (ii) long-term residence in the forest area; (iii) traditional forms of social organization; (iv) dependence upon nontimber forest products (not just cash from the sale of timber); (v) low levels of capitalization; (vi) relative poverty, or other relevant characteristics.

### **GUIDANCE ON DEVELOPMENT OF TERMS OF REFERENCE RELATED TO OP 4.36**

OP 4.36 requires that appropriate analyses be undertaken to identify the social, economic, and environmental significance of forests and any activities that may affect the well-being of forests and the people who depend on them. To

meet those requirements, several analytical studies may be necessary. This section provides guidance on what should be included in the terms of reference (TOR) for conducting assessments necessary under OP 4.36.

In developing the TOR, it is important to consult other World Bank policies that are triggered or relevant, including OP 4.04 Natural Habitats, OP 4.09 Pest Management, OP 4.10 Indigenous Peoples (see chapter 12, Applying OP 4.10 on Indigenous Peoples), OP 4.11 Physical Cultural Resources, OP 4.12 Involuntary Resettlement, and Policy on Disclosure of Information.

Consultation and communication with stakeholders are essential elements for the development and implementation of forest-related projects. Indeed, under OP 4.01, EAs require public consultations for review of draft plans by stakeholder groups, and if Indigenous Peoples are affected (whether positively or negatively), OP 4.10 requires a process of free, prior, and informed consultation with affected Indigenous Peoples communities leading to their broad support to the project. The information in chapter 10, Consultation and Communications in Forest Sector Activities, about stakeholder consultation can help to shape all of the analyses discussed in this section on TOR. The communication elements discussed in that chapter can assist in disseminating analysis results, as well as generating local interest in and commitment to the project.

A TOR must have certain sections, including a summary and background section, and a scope of work section. The scope of work will be different for each project and will reflect the characteristics of the project. Likewise, the personnel requirements and the balance of national and international consultants will be unique. This section provides an indicative list of items for consideration in TORs for OP 4.36. A project would not necessarily require all the items described here, nor is the list intended to be exhaustive. The emphasis on specific activities in a TOR will depend on the objective of the project, site context, prior work done, and other project-specific factors.

Depending on the nature of the project and analyses required, the necessary analyses can be done independently or jointly. For simplicity, the key elements of each type of analysis are presented as distinct sections below. If questions should arise, please refer to OP 4.36.

**SUMMARY AND BACKGROUND.** This section should provide an executive summary of the project, including a description of: the rationale for the project; the broad objectives and scope of the project; an overview, including a summary of the project and a brief discussion of timing; and the proj-

ect management responsibilities and protocols. Additionally, this section sets the broad context for the project and provides justification for the goals and scope of the project and the development approach to be taken.

**POTENTIAL COMPONENTS.** This section provides a list of possible elements of the three main types of analyses: (i) a Social Assessment (which also includes assessment of institutional issues), (ii) an Economic and Financial Analysis, and (iii) an Environmental Assessment.

## **SOCIAL ASSESSMENT**

The objective of the Social Assessment (SA) is to examine various social and institutional factors influencing the livelihood of all forest-dependent social groups, including Indigenous Peoples, women and youth, and other vulnerable groups. As mentioned in OP 4.36. paragraph 14, this information should “address, among other issues, the respective roles and legal rights of the government, the private sector, and local people.”

The stakeholder and socioeconomic analysis associated with an SA should assess likely positive or adverse impacts on stakeholders, including head loaders, cultivators, people dependent on grazing lands, wage laborers, seasonal migrants, women-supported households, and other forest-dependent people. It should also recommend ways that stakeholders can benefit from the project inputs. (For further information on consultation and stakeholder analysis, please see chapter 10, Consultation and Communication in Forest Sector Activities.) The institutional analysis should ensure that key actors in the project have the necessary capacity, commitment, and incentives to implement and sustain the operation, and that the operation will have a positive impact on the country’s public institutions.

The consultant should focus on the following key components for this analysis:

### **STAKEHOLDER ANALYSIS**

- Identify and describe key characteristics, and describe the relationships among stakeholders. Assess formal and informal, codified and uncoded, and socially shared relationships.
- Assess the stake or interest in the project for each stakeholder group. This may include an assessment of potential support or opposition, openness to change, and potential benefit from the project.
- Understand the underlying political economy by identifying and examining the relevant civil society organiza-

tions and groups, as well as private sector actors, and NGOs. What are their agendas, constituencies, and links with other institutions?

### **SOCIOECONOMIC ANALYSIS**

- Examine people’s relationships to the forest from a spiritual and social standpoint.
- Examine people’s degree of economic dependence on the forest. Assess practices such as shifting cultivation, the sustainability of these practices, and livelihood alternatives for the affected forest-dependent communities.
- Examine how dependence upon forests creates conflicts at intra- and inter-community levels.
- Examine village-level land-use patterns, tenure, and customary rights of private and common properties, and issues of indebtedness and land mortgage.
- Document and analyze needs, opportunities, and constraints for marginalized, discriminated against, and most vulnerable groups and individuals (Indigenous Peoples and women, for instance). Assess how to minimize risk and enhance benefits for these groups and individuals.
- Explore how encroachments affect the study area with attention to socioeconomic status, traditional tenurial rights, and other issues.
- Explore public attitudes toward conservation and the environment, willingness to participate in resource management activities, perceptions of local people of legal and illegal forest-related activities, remedial measures, and mechanisms for resolving potential conflicts.
- Identify ways to enhance access of forest-dependent persons (especially marginalized and vulnerable groups) to forest resources and broader economic opportunities.
- Develop and incorporate specific indicators related to social impacts on marginalized and vulnerable groups into monitoring and evaluation mechanisms.
- Provide guidance, if adverse impacts on vulnerable groups or individuals are unavoidable, in accordance with the World Bank’s safeguard policies, in particular OP 4.10 (Indigenous Peoples) and OP 4.12 (Involuntary Resettlement).

**INSTITUTIONAL ANALYSIS** (should be undertaken at national, regional, and local levels)

- Evaluate institutions for their organizational structures, capacities, track records, rules, budgets, interlinkages, and levels of participation.
- Examine the relationship between government forestry institutions and local governments and local people.

- Examine the formal and informal local-level institutions and their characteristics, specifically principles of recruitment, inclusion, stratification, authority structure, and links to other institutions.
- Conduct a legal analysis of issues related to encroachments on forestland, and regularization of title, with a view to resolving tenure disputes and resource access within the existing policy framework of the relevant forest-related legislation.
- Identify appropriate measures for transparent decision-making process, fund flow mechanisms, and dissemination of information, and increased downward accountability of implementing agencies. Suggest modifications to existing institutional arrangements to facilitate good governance by providing voice, transparency, and free flow of information.
- Where relevant, assess forest-related contracts, including identifying those with whom communities enter into contract, and for what purpose. Assess performance, social dynamics, decision-making processes, transparency, and sustainability of forest protection.
- Address issues of empowerment and voice with attention to potential for leadership by marginalized and vulnerable groups, including women and indigenous groups.
- Develop and incorporate specific indicators related to marginalized and vulnerable groups into monitoring and evaluation mechanisms.

POTENTIAL METHODOLOGIES (see box 9.1 for an example of a Social Assessment methodology)

- consultations with key stakeholders (for example, through workshops, focus groups, interviews)
- in-depth interviews
- focus groups
- rapid rural appraisals and other participatory rural appraisal methods
- review of secondary data sources
- stakeholder analysis
- gender analysis
- training needs assessment or human resources development needs assessment

POTENTIAL OUTPUTS

- *Participation strategy* identifies stakeholders who must be included in the process, links these stakeholders with the activities, defines how and when the stakeholders will be involved, specifies the methods for working with these stakeholders, and details the communication tools used to successfully promote stakeholder participation (see box 9.2).
- *Participation framework* describes the approach and process used to consult with different stakeholder groups. It explicitly includes measures to involve vulnerable people affected by the project in decision making, in receiving a share of benefits, and associated monitoring (see box 9.3).
- *Stakeholder consultation workshops* will enable stakeholders to provide information and opinions regarding issues of concerns in the assessment. The workshops use approaches and tools to elicit stakeholder inputs.
- *Social impact report* details the main social issues and interventions and assesses likely positive and negative impacts, as well as mitigation measures (see box 9.4).
- *Poverty impact assessment* analyzes the distributional impact of policy reforms on the well-being or welfare of different stakeholder groups, with particular focus on the poor and vulnerable.
- *Process framework* for access restrictions to legally designated parks or protected areas. According to World Bank established practices (OP 4.12), the borrower prepares a Process Framework describing the participatory process by which affected communities will participate in designing the project or project component, determination of restrictions, eligibility criteria, mitigation measures to assist them maintain or improve their livelihoods, and conflict resolution mechanisms. The framework is publicly disclosed and transmitted to the World Bank for review before project approval.
- *Indigenous Peoples plans*. When Indigenous Peoples are affected, whether positively or negatively, OP 4.10 requires the development, in consultation with affected communities, of a plan to address adverse impacts and provide culturally appropriate benefits (see chapter 12).
- *Assessment of vulnerability and social risk*.
- *Operation manual* provides guidelines for the design of surveys, methods of facilitating stakeholder participation, conflict resolution techniques, collaboration with technical specialists, and so forth.
- *Communications strategy* with other groups and within the program, to ensure public and political support, to initiate the planning of the project, and to initiate and pave the way for a potential long-term program.
- *Policy, legal, and administrative framework* discusses the policy, legal, and administrative framework within which the project is carried out.
- *Training or human resources development plan*.
- *Legal analysis*.

### CRITERIA FOR SAMPLING IN A SURVEY

- social composition, with particular attention to caste and tribe subgroup dimensions
- degree of homogeneity and heterogeneity along other dimensions, such as known conflict and tension, and the like
- degree of legitimacy of tribal leaders versus other patterns of leadership
- poverty criteria, such as assets, land ownership, landlessness
- status of tenurial rights to forest lands, encroachments, and so forth
- geographic isolation, proximity to roads and markets, and other location dimensions
- presence of government departments other than the forest department, and availability of development schemes and basic services
- presence of NGOs or other organizations
- integration or coordination with other formal committees
- human development indicators, such as female literacy and maternal mortality rates
- vulnerability and risk, coping strategies, migration, and the like
- level of indebtedness and coping strategies

**MAPPING PROJECT.** Create social maps by charting name, clan, tribe, village, degree of legitimacy or conflict among other tribal and caste groups.

**CLUSTERS MATRIX ANALYSIS** using the following potential criteria:

- social homogeneity or heterogeneity
- degree of social capital
- patterns of leadership and degree of legitimacy;
- forest cover and degree of degradation
- market- and nonmarket-oriented approach

**STAKEHOLDER IDENTIFICATION.** The following outlines some ideas to effectively identify those stakeholders that should be involved:

*Source:* World Bank 2005a.

- assess the different groups overseeing, operating, or depending on the forests
- identify those groups that are central to the process, impact forest resources, or benefit from resources in forests
- consult with persons working in nonnatural resources-related fields that could contribute useful information or know of affected stakeholders (for example, health care worker or teachers) who could contribute to the process
- include stakeholder representatives from the various governmental, nongovernmental, religious, private sector, and other interest groups. The stakeholders invited should also represent the different levels of interest (national or ministerial, as well as local) and the different activities planned in forests or influenced by forest activities
- given priorities and trends, decide which stakeholders are essential to addressing forest priorities and making decisions

### PARTICIPATORY RURAL APPRAISAL METHODS

- participatory mapping and modeling of resource maps of forests for water, soils, trees, pastures
- local histories of people's accounts of the past; ecological histories; histories of cropping patterns; changes in trends of population, migration, fuels used, and causes of these
- seasonal diagramming of rainfall; labor in agriculture, crops and harvests, food and fuel availability, marketing patterns; gender perceptions of labor, crops and harvests, food and fuel availability, marketing patterns
- livelihood analysis relating to seasonality, crises and coping, credit and debt
- matrix ranking for people identifying their priorities and options for action
- Venn diagramming for conflict identification and resolution.

All of the above may be selectively used in social and institutional assessments.

### Box 9.2 Participation Strategy

To make the task manageable for a public participation strategy, it is important to (i) identify the relevant stakeholders (for example, distinguish between those stakeholders who are directly affected or benefit from the process, and those who are indirectly affected); (ii) quickly assess the political economy to ensure that the voices of commonly marginalized groups are heard and the feasibility of collaboration among various stakeholder groups is understood; and (iii) use tools for integrating the various viewpoints that underpin the initiative (for example, ranking tools; GIS to overlay the different social, institutional, and biophysical layers; or others such as those listed below).

Involving the stakeholders will require strategies equally as enterprising as those used to identify them. Some considerations for engaging different stakeholders include

- the type of interaction (for example, individual or group meetings and location);

*Source:* World Bank 2005b.

- accommodation of the stakeholders' time constraints (and if key stakeholders are unable to attend meetings, considering keeping them informed through personal communication);
- the manner by which information will be exchanged;
- the purpose of such stakeholder communication (information sharing, data gathering, decision making, and so forth);
- coordination between the landscape planning team and stakeholder groups to ensure viewpoints are conveyed and received accurately;
- sharing of concepts and well-defined terminology with the stakeholder groups to minimize confusion in the planning process;
- use of an appropriate language and mode of communication; and
- ensuring all actors have an accurate picture of the process and their roles in it.

### Box 9.3 Participation Framework

Based on the stakeholder analysis, a participation framework with specific systems and procedures will be developed, which will describe the approach and process used to consult with different stakeholder groups to incorporate their views into project design and implementation, and to communicate with them about the project. The framework should identify ways and procedures in which the marginalized and the less vocal groups and individuals can best participate in the process of group formation and micro-plan development. A detailed communications strategy should also be developed for the project, largely based on the stakeholder analysis. The consultation process should be ongoing throughout the project's life; key stakeholders should continue to be consulted and involved. See note 1.4, Indigenous Peoples and Forests, and chapter 12, Applying OP 4.10 on Indigenous Peoples, for particular issues concerning Indigenous Peoples.

*Source:* World Bank 2005b.

### Box 9.4 Social Impact Report

- Identify the main social issues related to the reforms supported by the project and, specifically, by the set of interventions envisaged under each of the components.
- Assess the project's likely positive and negative impacts—in quantitative terms to the extent possible—on key stakeholders, particularly the poor and most vulnerable social groups that depend on forest resources.
- Identify mitigation measures and any residual negative impacts that cannot be mitigated.
- Assess the key (formal and informal) institutions in the forestry sector that will be involved in the delivery of the mitigation measures, evaluate their respective roles, capacity, and training needs.
- Spell out the mechanisms for participation of all affected stakeholder groups in design, implementation, and monitoring of the social aspects of the reform and the project's implementation. The report will also formulate recommendations, taking into consideration the possibilities of participation of project beneficiaries in the monitoring and evaluation process.

*Source:* World Bank 2005b.

## Box 9.5 Process Framework for Involuntary Access Restrictions

The World Bank Policy on Involuntary Resettlement (OP 4.12) is triggered when World Bank–assisted investment projects cause the involuntary restriction of access to legally designated parks and protected areas. For purposes of this policy, involuntary restrictions of access cover restrictions on the use of resources imposed on people living outside the park or protected area, or on those who continue living inside the park or protected area during and after project implementation. In such projects, the nature of the restrictions, as well as the type of measures necessary to mitigate adverse impacts, is determined with the participation of the displaced persons during the design and implementation of the project.

Given the potential impact of project activities that could result in the involuntary restriction of access to resources and livelihood for inhabitants of some of the areas covered by the project, a “Process Framework” (PF) is a condition of project appraisal. Usually a consultant or other entity is contracted to assist the government in preparing this document.

The draft PF is to be endorsed by the government and transmitted to the World Bank for review before project appraisal. The final PF must be made available in the borrowing country at a place accessible to, and in a form, manner, and language understandable to, the displaced or affected people and local NGOs. Important aspects of preparing the PF document are (i) the awareness of the national government of the risk of impact on the livelihoods of certain population groups and (ii) agreement with the national government on how to address these risks.

The process framework describes the participatory process by which

- specific components of the project will be prepared and implemented;
- the criteria for eligibility will be determined;
- measures to assist the displaced persons in their efforts to improve their livelihoods, or at least to restore them in real terms while maintaining the sustainability of the park or protected area, will be identified; and
- potential conflicts involving displaced persons will be resolved.

The PF describe the site and impact areas and the activities that are likely to restrict access to forest

resources and thereby affect the livelihoods of some population groups. These may, for instance, include measures to curtail illegal logging, poaching, and hunting; fishing; restrictions on collecting other forest products, such as herbal plants and mushrooms; or using forest areas for grazing or farming. The PF will, to the extent possible, estimate the magnitude of the impact caused by the particular activity, including, for example, in the case of illegal logging, issues such as what is considered illegal logging by the law; what is the actual interpretation of this law by local officials; what is the enforcement record of their current interpretation; what are the chances for an effective elimination of illegal logging across the country; what would a clampdown on illegal logging really mean; what is the magnitude of the impact from the stakeholders’ point of view; who does illegal logging; are there any regional disparities, ethnic patterns, and so forth; for what purpose do they do illegal logging (cooking, heating, subsistence, commercial); is it a seasonal or regular activity; what is the degree of dependence on the acquired wood (financial or in kind); what are other sources of income and how sustainable are they; what is the likely coping mechanism by those affected in the case of a successful or semi-successful clampdown on illegal logging; is a potential successful clampdown on illegal logging likely to force those affected to move to other areas, and if so, which areas; what other changes in regard to livelihood and behavior are likely to be triggered by government efforts to curtail illegal logging; and other pertinent issues.

Given the nature and magnitude of the impact, the PF can also suggest the likely mitigation measures that will be put into place, and the implementation process. But the thrust of the PF is the description of the participatory process by which these decisions will be made rather than the decisions themselves. The action and mitigation plans—their integration and coordination with other project components—are an iterative process and will evolve through the project. The PF also includes a description of the arrangements for implementation and monitoring the process and records of interagency and consultation meetings, including consultations with affected people on their views.

It would be useful to keep in mind that the review of the PF at the World Bank is based on five key criteria:

*(Box continues on the following page.)*

## Box 9.5 Process Framework for Involuntary Access Restrictions (continued)

- Policy
  - agreement on basic principles, entitlement framework, criteria, and so forth
  - formal endorsement by the government
- Analysis and documentation
  - census, surveys as required
  - analysis of social groups, with special emphasis on risk and vulnerability
- Meaningful consultation and disclosure
  - documentation of consultation processes and implications for project design and implementation mechanisms
- public disclosure of relevant information in local languages
- Action and mitigation plans
  - budget provision and clear responsibilities
  - supervision, monitoring, and evaluation mechanisms established
- Institutional capacity and commitment
  - evidence plans are realistic, can be implemented
  - responsible institutions and agencies identified

Sources: World Bank 2005b.

**QUALIFICATIONS OF CONSULTANTS FOR SOCIAL ASSESSMENT.** The consultant or team of consultants should have the following qualifications:

- practical experience in designing and implementing participatory natural resource management projects, in assessing and addressing interests of vulnerable people, and an ability to manage interdisciplinary teams
- detailed local knowledge of social issues related to natural resource management, including usage of forest and agriculture resources and community practices involving natural resources
- familiarity with the legal framework for usufruct rights and access
- experience with local forest or forest-related social issues
- operational experience in social survey methods
- ability to engage with local people and keep an open mind to new approaches
- ability to speak local languages

Additional qualifications might include the following:

- extensive experience in microenterprise development; familiarity with microfinance and revolving fund options, marketing issues, and regulatory climate
- experience with assessing structure, capacity, and interlinkages of national and community-level organizations
- knowledge of national and local institutions
- extensive experience in community development and participatory planning

- operational experience in analysis and design of communication activities and dissemination materials
- extensive professional background in human resources development, including experience with training needs assessment, building analytical and problem-solving skills, and participative and interactive approaches to training

### **Economic and financial analysis**

This analysis should examine the various economic and financial factors affecting a forest-related project to enhance the economic efficiency of the project and address distributional questions. An economic analysis compares economic and social benefits to the economy as a whole. The financial analysis compares revenue and expenses, like operations and maintenance costs.

It is important to understand the economic value of forests that are affected by the project. In addition to forest products and services, this valuation should include non-market uses of forests, such as environmental services, social uses, and subsistence uses.

In particular, the consultant should focus on the following key components for this analysis:

### **ECONOMIC IMPORTANCE**

- evaluate direct use of forests arising from consumptive and nonconsumptive uses: timber, fruits, nuts, mushrooms, medicinal plants, forage, hunting and fishing, tourism and recreation, genetic resources, and educational uses

- evaluate indirect use of forests: watershed and soil protection, wind breaks, climate control, and nutrient cycling
- evaluate options values, including future direct and indirect uses
- evaluate off-site and on-site economic effects; also evaluate private costs and benefits versus social costs and benefits, with attention to market failures, policy-induced distortions, and externalities
- evaluate nontimber values like health, carbon sequestration, and alternative livelihood strategies
- assess the incremental or additional costs associated with transforming a project with national benefits into one with global environmental benefits, for Global Environment Facility projects

#### FINANCIAL ANALYSIS

- evaluate the financial viability of investments like reforestation, microenterprises, and so forth; also evaluate risk and market access

#### Box 9.6 Cost-Benefit Analysis

A detailed cost-benefit analysis will be undertaken during project preparation, taking into account the issues of economic importance and financial analysis and using quantitative models. Incremental costs and benefits of project investments will be examined in detail, and economic and financial rates of return calculated. Cost-effectiveness analysis will be conducted on alternative plantation and protection techniques. The analysis will also include the preparation of indicative economic and financial models for participatory management of forests by locals, including analysis of alternative land uses. The economists will also undertake sensitivity analysis on key risks and discuss implications for project design.

The quantified cost-benefit analysis will be supplemented by an analysis of other environmental benefits not as readily conducive to financial quantification (for example, biodiversity, climatic changes), which, where appropriate, will take into account physical measurements and least-cost analysis of any associated marginal costs of interventions specific to those benefits.

Source: World Bank 2003a.

- conduct a financial analysis from the perspectives of various stakeholders
- undertake a cost-benefit analysis (see box 9.6)
- base decisions, to the extent possible, on a total economic valuation of forest resources, that is, an estimate of the value of all economic benefits that a society derives from its forests (see box 9.7)

#### POTENTIAL METHODOLOGY

- review of primary and secondary data sources
- rapid Rural Appraisal
- interviews, including stakeholder interviews, questionnaires, village-based surveys for livelihood analysis (including wealth ranking, group interviews, process analysis)
- Cost-benefit analysis
- Market analysis (see box 9.8)
- Contingent valuation
- Quantitative measures, including TEV, internal rate of return, net present value

#### Box 9.7 Total Economic Valuation

TOTAL ECONOMIC VALUATION (TEV) is a method used to identify and estimate the value of all economic benefits that a society derives from its forests. As such, TEV extends well beyond the scope of financial analyses of forest values that concentrate almost exclusively on timber, to account for the great variety of other products and services provided by a forest system. The TEV of a forest is the sum its use and nonuse values. Use values are, in turn, divided into direct, indirect, and option values; while nonuse values include bequest and existence values. Examples of the various use values include

- Direct uses—timber, fruits, nuts, mushrooms, medicinal plants, forage, hunting and fishing, tourism and recreation, genetic resources, and educational uses
- Indirect uses—watershed and soil protection, wind breaks, climate control, and nutrient cycling
- Option—future direct and indirect uses

Source: World Bank 2003a.

### Box 9.8 Market Analysis

A market analysis will include a preliminary assessment of current and potential market conditions for forest and rangeland products and the associated policy reform ramifications. This will include such issues as the dynamics of fuelwood demand, taking into consideration access to coal and gas, processing facilities, and trade issues, including those related to World Trade Organization entry and the potential impacts of Dutch disease.

Source: World Bank 2003a.

POTENTIAL PRODUCTS. The economic and financial analysis could include the following elements:

- *Cost estimate.* A realistic, reliable estimate of all costs for proposed forestry investments (see box 9.9).
- *Cost-benefit analysis.* An examination of incremental costs and benefits of project investments. Calculates economic and financial rates of return. Includes indicative economic and financial models for participatory management of forests by locals, analysis of alternative land uses, and undertakes sensitivity analysis on key risks. It should be supplemented by analysis of less quantifiable environmental benefits (for example, biodiversity, climatic changes).
- *Market analysis.* An assessment of current and potential market conditions for forest and rangeland products and the associated policy reform ramifications.
- *Local public goods assessment.* An assessment of environmental services and potential payment arrangements, which may include special adjustments to ensure inclusion of women and vulnerable groups, and reward good performance.
- *Incentive framework.* A description of arrangements and policy incentives to ensure ongoing economic decision making (see box 9.10).
- *Poverty impact analysis.* An analysis of the project impact on poverty (opportunity, empowerment, and security) that addresses household income, stakeholder groups, loss of access to forest resources, and seasonal vulnerability (see box 9.11).
- *Economic monitoring.* An estimate of with- and without-project scenarios that provides the basis for full baseline

measurements and subsequent monitoring of project and control results (see box 9.12).

- *Fiscal impact analysis.* Includes an assessment of the fiscal impacts of the project—both expenditure and revenue aspects—within the context of a public expenditure and revenue review of the whole forestry sector (see box 9.13).

### Box 9.9 Cost Estimates

The consultant firm will assemble all cost estimates into appropriate software, such as Costab, and prepare overall project cost estimates, including updates as the project design evolves, in collaboration with client counterparts and World Bank staff and other preparation consultants. The national consultants may need to learn Costab through the built-in self-tutorial and advice from World Bank staff, and establish an appropriate structure and parameters for assembly of cost estimates.

Source: World Bank 2003a.

### Box 9.10 Incentive Framework

Because many of the technical and expenditure choices will need to be made within a site-specific context, the project will need to build in arrangements and policy incentives to ensure economic decision making on an ongoing basis. For example, in the participatory forest management pilots that involve economic benefits to local communities, local selection of site-specific investments could be made within a fixed budget constraint, with initial investment funds and subsequent revenue channeled through community-managed accounts. The investments could also be made subject to a requirement that beneficiaries contribute their own resources, at least in the form of labor. For these sorts of investments, detailed formal cost-benefit analysis of each investment would be prohibitively expensive at the local level. Instead, working with the community involvement consultant, an approach will be developed whereby a budget constraint, fund management, and contribution requirement would foster cost-benefit analysis and marginal utility maximizing decisions on an intuitive basis.

Source: Mott 2003.

### Box 9.11 Poverty Impact Analysis

The economic analysis will also include a special focus on the impact of the project on poverty, considering opportunity, empowerment, and security. This would include analysis of the size and timing of impacts (both benefits and costs) on household income, and variations in impacts on different social groups (women-headed households, unemployed, herders, and so forth). Special attention would be paid to any impacts resulting from loss of access to forest resources. The models would also reflect the impact on seasonal and other factors of vulnerability, and assess the likely asset transfer as a factor in empowerment and in improving livelihoods. Potential project impacts on both winners and losers will be quantified to the extent feasible.

*Source:* Mott 2003.

### Box 9.13 Fiscal Impact Analysis

The fiscal impact analysis will include an assessment of the fiscal impacts of the project—both its expenditure and revenue aspects—within the context of a public expenditure and revenue review of the whole forestry sector. Links with government wide cross-sectoral fiscal analyses and reforms would be considered. The financial analysis would also include an assessment of the financial sustainability of the project interventions, taking into account the proposed institutional (policy and organizational) framework and arrangements, including plans for the postproject period. Opportunities for cost recovery, revolving funds including postharvest reinvestment arrangements, role realignment, and other mechanisms that would facilitate self-financing would be identified.

*Source:* Mott 2003.

### Box 9.12 Economic Monitoring

Projectwide indicative estimates of with- and without-project scenarios will be made, building on preliminary assessments based on initial surveys and secondary data. These estimates would provide the basis for full baseline measurements and subsequent monitoring of actual results in the project areas and carefully selected control areas at project start-up, midterm, and closing. Preparation work will include the design of this monitoring agenda.

*Source:* Mott 2003.

- experience in analysis of forestry or tree crop cost-benefit analysis, poverty impact analysis, market analysis, financial expenditure trend analysis, project cost estimation
- proven track record in effective teamwork
- experience in data collection and analysis, ability to access local data sources, and ability to work as part of a team
- ability to speak local languages
- ability to work closely with local economists to build local capacity for economic and financial analysis, and develop a program for training
- knowledge and experience with capacity-building activities in economic analysis, forest product marketing, incentive frameworks, fiscal management, market opportunities, appropriate involvement of local people and the private sector, as well as an understanding of the resources, incentives, and accountability needed for decentralization of forest management

**QUALIFICATIONS OF CONSULTANTS FOR ECONOMIC AND FINANCIAL ANALYSIS.** The consultant or team of consultants should have the following qualifications:

- extensive operational experience with skills in cost-benefit analysis modeling, environmental economics, non-market valuation techniques, participatory rural appraisal, policy analysis, and reform

#### **Environmental assessment**

The EA (under OP 4.01) is the World Bank's officially recognized system for determining what areas constitute critical forests or natural habitats. An EA should examine the positive and negative environmental impacts of the project; compare these with feasible alternatives (including a

“no-project” option); and recommend measures to prevent, minimize, mitigate, or compensate for adverse impacts, and to improve the environmental conditions and impact management performance. The EA should focus special attention on developing guidelines and procedures for identifying and measuring conservation and sustainable-use objectives.

The document should be prepared according to World Bank guidelines, as set out in OP 4.01 (see World Bank, Environmental Assessment Sourcebook).

This information is not intended to supersede EA guidelines presented elsewhere, but instead to supplement those guidelines with information specific to forest-related projects.

In particular, the assessment could examine the following key components:

- *Assess the key environmental concerns in the forestry sector.* The assessment should focus on key environmental concerns in the forest sector that are relevant to the proposed project.
- *Identify and describe critical forests or critical natural habitats.* (See the section of this chapter titled Identifying Critical Forests and Critical Natural Habitats through Environmental Assessment). Describe ecosystem type(s), species of conservation concern, natural or cultural features, existing or proposed legal protection, threats, and other information relevant to decision making.
- *Assess critical ecosystems and recommend a program for their conservation and management.* This might also include supporting community-driven conservation initiatives, integrating conservation components into participatory forest management and forest development, and supporting participatory biodiversity monitoring.
- *Develop quantitative indicators and a baseline for monitoring changes.* This is to monitor changes in the natural environment (both positive and negative) that may result from project activities. Define a methodology for data collection and assessment (see box 9.14).
- *Assess threats to cultural heritage* (archaeological, religious, and cultural properties and resources). Evaluate the potential to improve protection of such resources, and monitoring and screening methods to be implemented in project areas.
- *Assess the impact of the project on the natural environment.* Evaluated impacts might include the benefits to soil and water regimes, species conservation and diversity, and ecological stability. From a negative perspective, the EA should evaluate the potential impacts of project

interventions on the physical and biological environments. In addition, the EA should include an analysis and understanding of the issues related to wildlife habitats and populations in the project areas, and the implications of shifting populations of wild animals on tribal communities and their access to forestry resources.

- *Review legal, administrative, and institutional frameworks* relevant to the proposed project.
- *Involve communities in planning, implementing, and assessing the results and impacts of the project.* Stakeholders (including people affected by the project, NGOs, and other relevant groups) should be incorporated throughout the project, both in planning and implementation.
- *Strengthen capacity at local, entity, and state levels for biodiversity conservation and sustainable management practices.* The project could finance professional development, management training, ranger training, business planning, and forest management planning at the ecosystem level, and capacity building for national ministries.
- *Where relevant, identify, establish, or expand sustainably managed protected areas (PA).* For all PAs, the project should establish a biodiversity monitoring system at the site, entity, and state levels.
- *Improve local benefits originating from protected areas.* Involve and provide incentives (possibly through small grants) for stakeholders living in and around PAs to ensure long-term sustainability through the development of alternative, environmentally sensitive income-generation based on sustainable resource use that would bring economic benefits to local people.

#### Box 9.14 Quantitative Analysis and Baseline Monitoring

Tools to develop quantitative indicators and a baseline for monitoring changes in the natural environment (both positive and negative) that may result from project activities and define a methodology for data collection and assessment should be implemented. Elements of the natural environment that should be taken into consideration include: flora and fauna, natural habitats and ecosystems (including animal habitats), wetlands, soils, minerals, water resources, and hydrological patterns.

Source: World Bank, Environmental Assessment Sourcebook and Updates.

## POTENTIAL METHODOLOGY

- *Impact analysis.* Assesses potential positive and negative impacts of the proposed study. Impacts might involve changes to soil and water regimes, species conservation and diversity, and ecological stability (see box 9.15).
- *Field visits.*
- *Background information from other publications and electronic databases.* Documents provide lists, brief descriptions, and map locations for critical natural habitat sites.
- *Consultation with experts.* Consult experts knowledgeable about the locations and significance of critical forests and other critical natural habitats within a country or a proposed project area.
- *Stakeholder workshops.* Hold workshops to solicit stakeholder input and provide opportunities to incorporate local knowledge. Inclusion of all stakeholder groups promotes transparency, builds coalitions, and ensures inclusion of vulnerable groups, such as Indigenous Peoples.
- *Public consultations.* Conduct two public consultations as required by the World Bank for a Category B Environmental Assessment to review the draft environmental management plan (EMP) document to the satisfaction of affected local groups and NGOs.

## POTENTIAL PRODUCTS

- *Environmental Management Framework (EMF).* Serves as a tool to identify and manage potential environmental concerns; also provides practical operational procedures and guidelines for environmental screening, for assessment and approval of subprojects or investments, and for the management of any potential impacts (see box 9.15).
- *EMP.* Details site-specific plans for mitigation, monitoring, capacity development, and implementation (as outlined in annex C to OP 4.01) (see box 9.16).
- *Review of baseline conditions.* Describes the physical, biological, and socioeconomic environment, including information on climate, human environment, health, environmentally sensitive areas, critical natural habitats, and vegetation.
- *Assessment of environmental impact and proposed mitigation and enhancement measure guidelines.* Assesses positive and negative environmental impacts of proposed project. Provides information and identifies processes for monitoring and evaluation to maximize the project's intended environmental benefits. The guidelines should encompass tangible natural resource benefits, environmental services, and ecological functions, as well as insti-

tutional and capacity development, particularly at the village or microplanning level (see box 9.17).

- *Monitoring and evaluation plan.* Provides realistic procedures for participatory monitoring involving the communities in assessing the results and impacts of the project.
- *Stakeholder workshops.* Hold workshops to discuss findings and implications with community members and other interested stakeholders, including government officials.
- *Policy, legal, and administrative framework.* Reviews or describes the relevant national, regional, provincial, communal, or World Bank safeguard policies that pertain to environmental reviews and impact assessments.

Please note that some projects combine the environmental and social analyses and produce an Environmental and Social Management Framework (ESMF) (see box 9.18).

### Box 9.15 Environmental Management Framework

The EMF should provide practical recommendations and guidance on minimizing and mitigating any potential environmental impacts of project-related interventions, and measures for enhancement and improvement of environmental conditions in the project area. The EMF will include guidelines for identifying conservation and sustainable-use objectives, incorporating them into the microplanning process, maximizing the intended environmental benefits of the project as a whole, and providing information and procedures for monitoring and evaluating the implementation of environmental actions and their impacts. The EMF will specifically include (i) criteria and procedures for screening of project investments on the basis of their potential environmental impacts and benefits; (ii) a list of negative activities (those that will not be financed under any circumstance) for the proposed project, and ecologically sensitive areas where project investments should not be implemented; (iii) draft technical guidelines that incorporate environmental concerns for each of the major potential types of project investments; (iv) proposed institutional arrangements for environmental oversight, review, and management at different levels; (v) proposed arrangements for independent monitoring, audit, and consultation in the implementation of the EMF; and (vi) identification of specific capacity-building and training objectives for implementation of the EMF.

Source: World Bank 2005a.

### Box 9.16 Environmental Management Plan

Develop an environmental management and monitoring plan for project implementation that addresses all key environmental quality indicators and includes institutional roles, responsibilities, capacities, and training requirements, in accordance with annex C to OP 4.01. The EMP should include mitigation measures, institutional strengthening, training, and monitoring, as follows:

- *Mitigation of environmental impacts.* Recommend feasible and cost-effective measures to prevent or reduce significant negative impacts to acceptable levels. Estimate the impacts and costs of those measures. Consider compensation to affected parties for impacts that cannot be mitigated. The plan should include proposed work programs, budget estimates, schedules, staffing, and training requirements, and other necessary support services to implement the mitigating measures.
- *Institutional strengthening and training.* Identification

Source: World Bank 2003b.

of institutional needs to implement EA recommendations. Recommend any additional support that should be provided to the PA management institutions, the project implementation units, the relevant ministries, and others, to strengthen or expand them so that the management and monitoring plans in the EA can be implemented. The institutional needs should be presented separately for the two entities.

- *Monitoring.* Prepare detailed arrangements for monitoring implementation of mitigating measures and the impacts of the project during construction and operation. Include in the plan an estimate of capital and operating costs, and a description of other inputs (such as training and institutional strengthening) needed to carry it out.

It should be noted that the EMP must be incorporated by reference in the legal agreement for the project. As a result, the EMP must be clear and coherent to support any efforts to determine compliance with the EMP.

### Box 9.17 Assessment of Environmental Impacts and Proposed Mitigation Measures

Determine the potential positive and negative environmental and social impacts of the project with respect to the proposed PAs, including already defined and proposed expansions. (Description of any social impacts should be based on the results of the Social Assessment.) These impacts should include any future development of the villages and settlements within each PA, as well as impacts from construction of any PA infrastructure (visitor centers, headquarters facilities, latrines, and the like), rehabilitation of access roads and hiking trails, and changes in land use or vegetative cover. Propose an environmental screening process for activities to be financed by the small grants program during project implementation.

Source: World Bank 2003b.

QUALIFICATIONS OF THE CONSULTANT FOR THE ENVIRONMENTAL ASSESSMENT. The consultant or team of consultants should have the following qualifications:

- extensive experience in the environmental field, preferably at the international level, and in the preparation of environmental management plans according to international standards
- practical experience in biological surveys and assessment in the country in question or a similar country
- proven ability to write clear and concise reports
- field experience in environmental assessment in the country in question or a similar country
- extensive experience in the management of forest pests
- basic understanding of cost-benefit analyses
- ability to speak local languages

### IDENTIFYING CRITICAL FORESTS AND CRITICAL NATURAL HABITATS THROUGH ENVIRONMENTAL ASSESSMENT

The World Bank's officially recognized system for interpreting the definitions above and determining what areas con-

## Box 9.18 Environmental and Social Management Framework

The consultant is expected to develop an environmental and social management framework (ESMF) that establishes methodologies for environmental and social impact assessment within the project preparation, approval, and implementation processes, including the preparation of an environmental mitigation plan and a resettlement action plan. Specific activities include the following:

- Providing the description of the environmental and social characteristics of the PA and description of the biophysical and socioeconomic environment. Identifying links between different types of livelihood and sustainable environment management in the PA.
  - Outlining the provisions under national legislation, policies, and regulations regarding the environmental and social impacts that are relevant to the characteristics of the PA. Assessing the consistencies of these with the standards and procedures of the World Bank regarding environmental and social safeguard policies.
  - Designing and clearly outlining methodology for preparation, approval, and execution of subprojects. The consultant is expected to provide information for project preparation from design process to approval.
  - Assessing and documenting the implementation capacity of collaborating institutions at the local, regional, and national levels; proposing ways of strengthening the capacity to manage and provide training; and providing an estimate of the costs for implementing the environmental and social control plan.
  - Developing an elaborate ESMF, which would include recommending feasible measures for preventing or reducing impacts, such as a resettlement action plan and other mitigation measures as identified during the ESMF.
- Developing a resettlement action plan that establishes
    - potential impacts of the project on people and properties;
    - regulatory and institutional context for land tenure;
    - evaluation of assets and rate of compensation;
    - complaint system management;
    - identification, assistance, and provisions to be included in the resettlement plan for vulnerable groups;
    - consultation and diffusion of information, describing the consultation framework for preparation of the resettlement plan and the framework for its diffusion to stakeholders;
    - responsibilities for implementation; specifically
  - Describing the institutional setting for the implementation of the resettlement plan.
  - Proposing the composition and tasks of a joint committee for liaison between the affected communities and local structures in charge of implementation of the resettlement plan.
  - Designing a clear communications strategy for information dissemination to all stakeholders.
  - Developing a participatory monitoring and evaluation plan for the implementation of the proposed mitigation measures. The plan should clearly indicate
    - the link between the impacts identified in the ESMF report, the indicators for measuring these impacts, data collection methods, and the time plan for monitoring and evaluating these impacts; and
    - institutional responsibilities for monitoring indirect and direct impacts, as well as responsibilities for supervision, the frequency of monitoring and reporting mechanisms, and the budget for the monitoring and evaluation plan.

Source: World Bank 2006.

stitute critical forests or other critical natural habitats is the EA process under OP 4.01. The EA report required of all Category A, B, and FI projects should be used to identify any critical natural habitats within the proposed project's area of influence. It is thus essential for the EA TOR to direct the EA study team to identify those forests and other natural habitats within the proposed project area that should qualify as

critical natural habitats, in accordance with the above-mentioned criteria of OP 4.04 and 4.36. For any areas that appear to qualify as critical forests or other critical natural habitats, the EA report should indicate

- the official and common names for the site;
- ecosystem types;

- map location(s);
- approximate surface area;
- size of the proposed project-affected area, relative to the same ecosystem type(s) within the same country;
- species of conservation concern or special management interest known (or suspected) to occur, and (if known) their estimated populations (in absolute terms and relative to the rest of the country or world);
- special concentrations of migratory or other species;
- other natural or cultural features of special interest;
- land ownership;
- existing or proposed legal protection (if any);
- on-the-ground protection and management (if any);
- who controls and influences land- and water-use decisions;
- types and intensity of current or recent human uses;
- existing and potential future threats to the natural habitats; and
- other information relevant to decision making.

In the course of project preparation (before appraisal), the World Bank interprets and evaluates the findings of the EA report—along with any supplementary sources of relevant information—and determines which project areas (if any) indeed qualify as critical forests or other critical natural habitats, in terms of applying the safeguards requirements of the Forests and Natural Habitats policies. In cases where the World Bank’s judgment differs from the recommendations of the EA report, the former overrides. It is thus important that this decision be made with inputs from technically qualified World Bank staff and other specialists (as needed), in a manner that is credible and convincing from a scientific standpoint.

COMPLEMENTARY MEANS OF IDENTIFYING CRITICAL FORESTS AND CRITICAL NATURAL HABITATS. Although the EA process is the official, World Bank–endorsed mechanism for identifying critical forests and other critical natural habitats, there are complementary sources of information that project teams (World Bank staff as well as their government or NGO counterparts) should use. These additional sources of information are important (i) for preliminary assessment of the presence, nature, and extent of critical forests and other critical natural habitats before the EA report is available; (ii) to help verify the validity and completeness of the EA report with respect to this issue; and (iii) to provide, as needed, supplementary information useful for decision making regarding project design. Broadly speaking, these complementary information sources comprise

experts to be consulted, and useful publications and electronic databases. This type of complementary information should be backed up by up-to-date, project-specific field studies (as needed) during the EA process.

EXPERTS TO BE CONSULTED. As part of the EA process, and also to obtain independent verification, it is essential to consult experts knowledgeable about the locations and significance of critical forests and other critical natural habitats within a country or a proposed project area. The types of experts who should normally be consulted include the following:

- *Regional Safeguards Unit within the World Bank* should be a useful first point of contact for advice about the possible presence and significance of critical forests and other critical natural habitats within a proposed project area.
- *Government agencies* (at the national or subnational level) responsible for protected areas, natural resource management, or the environment in general, which usually have up-to-date lists of existing and officially proposed protected areas. Some also have authoritative information on unprotected areas of high conservation value.
- *Conservation NGOs* (national or international), which often have high-quality information about critical forests and other natural habitats. They are frequently also project stakeholders and sometimes partners.
- *Expert individuals* with specialized knowledge about sites of interest, who can often be found in universities and research institutions, at the national or international level.
- *Public consultation*, which is primarily a vehicle to ensure stakeholder participation in the decision-making process, but can provide information about critical natural habitats not obtained from other sources. For example, the World Bank first learned that the site proposed for a solid waste landfill on the Caribbean island of Grenada was the habitat of the critically endangered Grenada dove (*Leptotila wellsi*) as the result of a public consultation held in 1994, even though the initial EA report for the Organization of Eastern Caribbean States (OECS) Solid Waste Management Project failed to mention this issue.

USEFUL PUBLICATIONS AND ELECTRONIC DATABASES. A variety of documents and Web sites provide lists, brief descriptions, and map locations for critical natural habitat sites—including many outside existing protected areas—in a large

number of countries. These information sources should be regarded as useful “first approximations” of the locations and characteristics of many, though not all, critical natural habitats. Geographic sites that do not appear on any of these lists might still qualify as critical forests or other critical natural habitats, based on the above-mentioned criteria and the World Bank’s review of the EA report and other relevant information during project preparation. The following is a partial list of some useful publications and electronic databases (see the Selected Readings list for this chapter for full bibliographic information).

#### WORLD BANK PUBLICATIONS

- *Ecologically Sensitive Sites in Africa* (World Bank 1993);
- *Protected Areas Systems Review of the Indo-Malayan Realm* (with maps showing existing and proposed protected areas in East and South Asian countries; MacKinnon 1997);
- *Critical Natural Habitats in Latin America and the Caribbean* (World Bank n.d.); and
- for marine critical natural habitats proposed for protection, *A Global Representative System of Marine Protected Areas* (four volumes covering the world’s oceans and seas; Kelleher, Bleakley, and Wells 1995).

*Important Bird Areas.* Important Bird Areas (IBAs) are sites that are of global significance for bird conservation, particularly of threatened species. They can be regarded as a very significant subset of critical natural habitats, because sites important for bird conservation tend also to be important for the conservation of other biodiversity as well—although not all critical natural habitats also qualify as IBAs. BirdLife International and its national partner organizations have recently published a number of books (as hard copies and sometimes also as compact discs) that list and briefly describe all the currently known IBAs at a national and regional level, including, among others,

- *Áreas Importantes para Aves en Panamá* (Panama Audubon Society 2003);
- *Áreas Importantes para la Conservación de las Aves en Argentina* (Aves Argentinas 2005);
- *Áreas Importantes para la Conservación de las Aves en México* (CIPAMEX 2000);
- *Important Bird Areas in Africa and Associated Islands: Priority Sites for Conservation* (Fishpool and Evans 2001);
- *Important Bird Areas in Europe: Priority Sites for Conservation* (Heath and Evans 2000);

- *Important Bird Areas of the Tropical Andes*, covers Venezuela, Colombia, Ecuador, Peru, and Bolivia (Boyla and Estrada 2005);
- *Important Bird Areas in Zambia* (Leonard 2005); and
- *Key Sites for Conservation in Cambodia* (2003).

The list of IBAs by country can also be accessed electronically via [www.birdlife.org](http://www.birdlife.org).

*Alliance for Zero Extinction Sites.* The Alliance for Zero Extinction (AZE) is an alliance of international NGOs, including the World Wildlife Fund, Conservation International, The Nature Conservancy, Wildlife Conservation Society, BirdLife International, American Bird Conservancy, and numerous national-level conservation NGOs. AZE sites are discrete areas where most or all of the population of a critically endangered or endangered animal or plant species occurs (all or part of the year). As such, AZE sites are among the most critical of endangered natural habitats (including forests). Around 700 AZE sites worldwide have been identified; they are listed by country at [www.zeroextinction.org](http://www.zeroextinction.org). A link to Google Earth became operational in October 2006, which enables users to view the site in reasonable detail on their computers.

*Wetlands and Marine Habitats Directories.* Wetlands that are likely to qualify as critical natural habitats (including wooded freshwater swamps and mangroves that would qualify as critical forests) are listed and described in several published wetlands directories, including the following

- *Directory of African Wetlands* (Hughes and Hughes 1992);
- *Directory of Asian Wetlands* (Scott 1989); and
- *Directory of Neotropical Wetlands*, covers Latin America and the Caribbean (Scott and Carbonell 1986).

Those wetlands that have been designated as Wetlands of International Importance under the Ramsar Wetlands Convention are listed and mapped in the *Ramsar Sites Directory and Overview* (Wetlands International 2005), available online at [www.wetlands.org](http://www.wetlands.org).

Marine coral reefs (most of which would qualify as critical natural habitats) are covered in *Coral Reefs of the World* (Wells 1988).

*National-Level Directories and Databases.* Some countries have published lists and descriptions of their critical natural habitats, or broadly comparable areas. A good example is

the detailed *Biodiversidade Brasileira* book published by Brazil's Environment Ministry (2002).

*High Conservation Value Forests*. Note 3.1, Mainstreaming Conservation Considerations into Productive Landscapes, discusses the (optional) planning methodology for designating High Conservation Value Forests (HCVFs). According to the HCVF Toolkit (available online at [www.hcvf.org](http://www.hcvf.org)), HCVFs are those forests considered to be “of outstanding significance or critical importance,” according to six High Conservation Value (HCV) criteria. Three of these six criteria (HCV 1, 3, and 6) correspond very closely to the above-mentioned OP 4.36 criteria for critical forests. Thus, forests designated as HCVFs under the HCVF methodology are likely to also qualify as critical forests under the Forests Policy. Moreover, if their selection as HCVFs was made according to HCV criteria 1, 3, or 6, then they would almost certainly qualify as critical forests under OP 4.36. As noted in Note 3.1, while many HCVFs are likely to be placed under strict protection, some HCVFs may be subject to limited timber harvesting or other direct resource uses—so long as the particular HCVs that are characteristic of those forests would be maintained or enhanced, and not degraded or lost. This is consistent with OPs 4.36 and 4.04, which do not prohibit natural resource utilization within critical forests or other critical natural habitats—only their conversion or degradation (as defined above).

## PROTECTING FORESTS THROUGH CONSERVATION OFFSETS

The Forests and Natural Habitats policies require, under some circumstances, the establishment or strengthening of ecologically similar protected areas to compensate for, or “offset,” the project-related conversion or degradation of noncritical forests and other natural habitats. Conservation offsets can be a valuable tool to leverage the funds from infrastructure or other large-scale development projects (that convert noncritical forests or other natural habitats) to achieve “win-win” outcomes that represent net gains from a conservation standpoint. Compensatory protected areas provide an opportunity to turn a negative project feature (natural habitat loss) into something environmentally positive (new or strengthened protected areas). In response to this requirement of the Forests and Natural Habitats policies, some important forested areas are being effectively conserved—whereas, without the project, they would have remained unprotected and vulnerable to loss or damage from other, often imminent, threats. Through the prudent

application of conservation offsets, many potentially controversial development projects can yield significant net environmental benefits and even turn some, though not all, NGO project opponents into supporters.

One recent example of a large-scale conservation offset supported by the World Bank is the extensive and biologically valuable Nakai-Nam Theun National Protected Area in the Lao People's Democratic Republic, which is receiving much needed on-the-ground support for its protection and management as an offset for the inundation of a much smaller, and generally less ecologically valuable, forested area by the Nam Theun II hydroelectric dam. The protected area was set up after the World Bank worked with the government to develop a law that established a national protected areas system and included the Nakai-Nam Theun National Protected Area by reference through government decree.

When protected areas are established or strengthened to compensate for the loss or degradation of noncritical forests or other natural habitats, the funding for these compensatory areas should come from the same project causing the conversion or degradation. The Global Environment Facility (GEF) does not fund activities intended to mitigate or compensate for the environmental damage from IBRD- or IDA-supported projects. However, the GEF will support biodiversity-related or other qualified environmental enhancement activities (including protected areas), if these clearly go above and beyond the project mitigation required by national laws and World Bank safeguards policies.

Under the Forests and Natural Habitats policies, compensatory protected areas should be ecologically similar to, and ideally no smaller than, the forest or other natural habitat area that is converted or degraded under the overall project. However, it is acceptable (and desirable) to conserve as an offset an area that is ecologically somewhat different, if it is of greater conservation value. For example, under Brazil's Ceara Integrated Water Resources Management Project, the flooding of some relatively common dry forest with water supply reservoirs was compensated for with support for improved conservation of several moist forest areas (of higher conservation priority) in the Sierra de Baturite and Chapada da Araripe.

See box 9.19 for an indicative list of the main steps involved in creating new protected areas (regardless of whether they serve as conservation offsets). Among the basic issues to consider in the establishment or strengthening of protected areas as conservation offsets are the following:

- *Fundamentals of protected area components*. If they are to be more than empty promises, components involving compensatory protected areas (or virtually any other

environmental mitigation measures) all need, before appraisal, (i) an implementation schedule; (ii) a clear division of institutional responsibilities; (iii) an itemized budget; (iv) an identified source of funds, for investment as well as recurrent costs; and (v) the legal framework to support the establishment and protected status of the area.

- *Interinstitutional coordination.* In most infrastructure projects with natural habitats components, the institution in charge of protected areas is different from the executing agency for the main civil works. The protected

areas component should be implemented as soon as possible in relation to the main civil works, to ensure that (i) the conservation area is fully implemented within the life of the project and (ii) the main civil works do not damage (directly or indirectly) the conservation area before key protection and management measures are in place.

- *Multiple uses of protected areas.* Most protected areas allow various kinds of direct human uses. Different categories of protected areas allow different types of non-consumptive, and sometimes consumptive, uses of natural resources.<sup>2</sup> Protected areas should typically have a

### Box 9.19 Typical Procedures for Establishing New Protected Areas

#### Phase I: Verifying the Feasibility of Establishing a Protected Area

1. *Documenting the conservation value.* This ecological evaluation (or similarly named) report should verify that the proposed protected area is (i) of high conservation value for biodiversity or other environmental criteria (fishery habitat, flood protection, or the like); and (ii) if a conservation offset area, ecologically similar to, or of even greater conservation value than, the area that would be lost or degraded under the overall project.
2. *Documenting land tenure, use, and occupation.* This land tenure and socioeconomic report should indicate (i) who owns all the land comprising the potential protected area, (ii) who has any concessions or use rights, and (iii) who is currently occupying or using the land (even if they lack legal rights).

#### Phase II: Choosing the Boundaries and Management Category of the Protected Area

3. The two reports produced during Phase I determines whether a protected area is feasible. If the protected area is feasible, the ecological evaluation and land tenure and socioeconomic reports are used to decide, in consultation with local residents, conservation NGOs, and other key stakeholders, (i) the precise boundaries (shown on a map) and (ii) the official management category of the new protected area.

#### Phase III: Legal Establishment of the Protected Area

4. A decree (executive order) or law is approved to establish the new protected area. The decree or law

Source: Edec 2006.

- a. A law may be preferred because in many countries, while a law may take more time and expense to prepare, it may also be more difficult to reverse than a decree.

should specify the precise boundaries and official management category of the protected area.

#### Phase IV: On-the-Ground Implementation of the Protected Area

5. *Physical demarcation.* The protected area boundaries are marked in the field, using signs, concrete monuments, cleared paths, or fences (as appropriate).
6. *Basic infrastructure and equipment.* Much of this should be provided during the first year of protected area implementation and itemized in the first Annual Operating Plan (AOP), which should be finalized before the first year.
7. *Protected area staff.* The needed personnel (including government employees, contracted local people, NGO staff, volunteers, and other) should be specified in each year's AOP, as well as in the management plan.
8. *Management plan.* Normally, the terms of reference for producing the management plan should be prepared before the first year, and the plan itself should be prepared during the first year (with ample stakeholder consultation) and implemented in subsequent years. The management plan should ideally be viewed as a living document, subject to revision from time to time.
9. *Recurrent cost funding.* The commitment of a government agency or NGO to provide long-term funding for the recurrent costs of protected area management (mostly salaries and fuel) should be secured at the earliest possible date.

management plan—prepared in a participatory manner with all major stakeholders—that specifies which activities are allowed, in which zones.

- *Land tenure.* In general, new protected areas are easiest to establish on public (state-owned) lands. Under the right conditions, protected areas can also be established on communally owned indigenous lands, or on large individual landholdings (with legal safeguards to ensure long-term management and recognition of Indigenous Peoples and other community rights). The World Bank Financing OP 6.00 (approved in April 2004) authorizes the use of IBRD and IDA funds for land acquisition for a wide range of project purposes, including protected area establishment and consolidation. For details, see the “Guidance Note on World Bank Financing of Land Acquisition for Protected Areas,” an internal World Bank document available from the Operations Policy and Country Services intranet site <http://opcs.worldbank.org/eligibility/1guide.html>.
- *Social safeguards.* World Bank–supported protected areas need to be established and strengthened in a manner consistent with the Indigenous Peoples OP 4.10 and the Involuntary Resettlement OP 4.12 (see chapters 8 and 12 for a brief summary of their requirements).

## NOTES

1. The environmental classification of any investment project should be justified and explained in the ISDS and PAD.
2. The World Conservation Network (IUCN) protected area categories are a standardized classification system for similar types of protected areas that may have very different names in different countries. For example, a “forest reserve” in one country may mean an area of strict preservation (Category I), while in another it might mean a production forest suitable for commercial logging (Category VI). The IUCN categories relevant to the Natural Habitats OP 4.04 and Forests OP 4.36 are as follows: I: Strict Nature Reserve/Wilderness Area (protected area managed for science or wilderness protection); II: National Park (protected area managed mainly for ecosystem protection and recreation); III: Natural Monument (protected area managed mainly for conservation of specific natural features); IV: Habitat/Species Management Area (protected area managed mainly for conservation through management intervention); V: Protected Landscape/Seascape (protected area managed mainly for landscape/seascape conservation and recreation); and VI: Managed Resource Protected Area (protected area managed mainly for the sustainable use of natural ecosystems).

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