

**Proposal for Review**

<b>Project Title:</b>	<b>India Ecodevelopment Project</b>
<b>GEF Focal Area:</b>	Biodiversity
<b>Country Eligibility:</b>	Convention Ratified February 18, 1994
<b>Total Project Cost:</b>	US\$74 million
<b>GEF Financing:</b>	US\$20 million
<b>Government Cofinancing:</b>	US\$13 million
<b>Other Cofinancing:</b>	IBRD US\$36 million, Local People US\$5 million
<b>Associated Project:</b>	India Ecodevelopment Project
<b>GEF Implementing Agency</b>	World Bank
<b>Local Counterpart Agency</b>	Ministry of Environment and Forestry (MOEF)
<b>Estimated Starting Date</b>	April 1996
<b>Project Duration</b>	5 years
<b>GEF Preparation Costs</b>	UNDP PRIF of US\$213,000

## INDIA: ECODEVELOPMENT PROJECT

### Country Background and Government Conservation Strategy

1. **Rich but Threatened Biodiversity.** India is one of the twelve "megadiversity" countries in the world that collectively account for 60-70% of the world's biodiversity. Its ten biogeographic zones represent a broad range of ecosystems. India has 6% of the world's flowering plant species, 14% of the world's birds and 81,000 identified species of animals. There are over 45,000 identified plant species and one-third of its 15,000 flowering plants are found only in India. Some 14% of its 1,228 bird species, 32% of its 446 reptile species, and 62% of its 204 amphibians are unique to India. However, India's rich biodiversity is increasingly endangered, due to high population density, widespread poverty and rapid population growth.
2. **Biodiversity Conservation Strategy.** India's strategy for biodiversity conservation reflects extensive analysis and significant, ongoing commitment. India's Environmental Action Plan (EAP), published in 1993 lists "conservation of and sustainable utilization of biodiversity in selected ecosystems" as one of the top seven priorities for future action. The National Wildlife Action Plan (1983) identified broad goals of:
  - (a) establishing a representative network of protected areas;
  - (b) developing appropriate management systems for protected areas, with due regard for the needs of local people and ensuring their support and involvement;
  - (c) protecting biodiversity within multiple-use areas; and
  - (d) extending conservation efforts beyond protected areas.
3. **Protected Areas System.** During the past twenty five years, state governments, with national assistance, have developed an extensive protected area network backed with strong Forest Department enforcement. From only 10 parks and 127 sanctuaries in 1970, the number of officially designated protected areas (PAs) had grown to 75 parks and 421 sanctuaries by 1993. These areas now cover some 14 million hectares (i.e., 4.3% of the total land area). While some have few or no human inhabitants, others have small communities with significant human populations in the aggregate. Village economies in the peripheries of these protected areas are based on long-established sedentary agricultural systems.
4. **Protected Area Management.** There is a long history of communities, especially tribal groups, inhabiting or using forests that are subsequently designated as protected areas. These local people have always been involved (usually without government recognition or sanction) in managing the forest and wildlife. Increasing government protection and legal control have often curtailed local communities' management roles and incentives for sustainable resource use. In recent years the Government has recognized that enforcement alone is not sufficient and that there is a need to increase local people's involvement in protected area management.

5. **Community Participation in Forest Management.** The initial government effort to increase community participation was focused not on protected areas, but rather on forests officially designated for local or commercial harvest. This effort, called Joint Forest Management (JFM), shares products, responsibilities, control, and decision-making authority over forest lands between forest departments and local user groups. Contracts specify the distribution of authority, responsibility, and benefits. Initiated in the 1970s, early success led to expansion of JFM programs throughout India. Several now receive support through Bank-funded state forestry projects. The Government is now beginning to address the special issues regarding participatory management of areas reserved for biodiversity protection.

6. **Ecodevelopment.** Recognizing the historic, current, and potential role of local communities, and in response to pressures on protected areas, national and state Governments are developing an "ecodevelopment" conservation strategy. It aims to conserve biodiversity by addressing both *the impact of local people on the protected areas* and *the impact of the protected areas on local people*. Ecodevelopment thus has two main thrusts: (a) improvement of PA management, and (b) involvement of local people. It improves the capacity of PA management to effectively conserve biodiversity, involves local people in PA planning and protection, develops community incentives for conservation, and supports sustainable alternatives to harmful use of resources. It supports collaboration between the state forest departments and local communities in and around ecologically valuable areas. It addresses the welfare and behavior of local people, and integrates these concerns into management of protected areas. It also builds private sector stakeholder support for conservation among NGOs, nature tour operators, and the general public.

7. **Potential Scope of the Ecodevelopment Approach.** Should it prove feasible, ecodevelopment potentially might benefit 100-200 of India's protected areas. As an initial step, the Government is seeking support for an experimental demonstration and capacity-building project that would address seven globally significant protected areas and prepare additional sites. Such a project would build on and integrate existing forestry experience, and would be large enough to establish the feasibility of ecodevelopment and provide for expansion in the long term. This proposed national project would have the potential to address multi-state ecodevelopment issues and management processes, and to establish a basis for programmatic financing. Proceeding now with a seven-site ecodevelopment project is justified by the extent and urgency of human pressures on protected areas and the comparative failure of traditional "enforcement style" management. However, incorporating full-scale ecodevelopment of more sites at this time would not be appropriate, given the complexity of issues, lack of implementation experience, and amount of participatory preparation required.

#### **Project Objectives**

8. The proposed project would conserve biodiversity by implementing the ecodevelopment strategy in and around seven protected areas (PAs) that contain globally significant biodiversity populations and are representative of India's varied ecosystems. The specific objectives would be to:

- (a) improve the capacity of PA management to conserve biodiversity, increase opportunities for local participation in PA management activities and decisions and reduce negative impacts of PAs on local people;

- (b) reduce negative impacts of local people on biodiversity and gain support of local people for conservation;
- (c) develop better understanding of the approach and more effective and extensive support for PA ecodevelopment;
- (d) prepare other future biodiversity projects that are high on India's list of conservation priorities.

### Project Description

9. The proposed project would be implemented over a five-year period from April 1996 through March 2001. The components correspond to the objectives listed above and comprise:

- (a) *Improved PA Management* (18% of the costs), with emphasis on achieving more effective conservation, increasing consultation and collaboration with local people and on reducing negative impacts of PAs by increasing employment of local people and by controlling damage by wildlife outside PAs. Funding would be provided for:
  - (i) managing ecosystems within the PA;
  - (ii) managing human enclaves;
  - (iii) improving and implementing PA management plans;
  - (iv) incorporating PA concerns into regional planning and regulation; and
  - (v) upgrading PA amenities for field staff.
- (b) *Village Ecodevelopment* (60% of the costs, including contribution of local people) would reduce negative interactions of local people on biodiversity and increase support of local people for conservation by:
  - (i) conducting participatory impact assessment of PA and local people interactions; using participatory microplanning to develop reciprocal agreements that address negative interactions of the PA and local people; identifying alternative livelihood opportunities; analyzing the feasibility of the proposed programs; and strengthening capacity of implementing institutions (e.g. village groups, park personnel, NGOs, etc.) to carry out impact assessment, microplanning, feasibility analysis, and implementation;
  - (ii) facilitating the implementation of the microplans and reciprocal agreements; and
  - (iii) implementing agreed programs which develop alternative livelihoods and resource uses that reduce negative impacts on biodiversity in and around the PAs, to be financed by a "village ecodevelopment fund" and to be directly associated with the reciprocal agreements<sup>1</sup>.

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<sup>1</sup> On the basis of PRA surveys in sample communities in and around the PAs, the project preparation teams have identified an indicative list of possible ecodevelopment investments. These investments can be grouped into the following categories: biomass substitution (e.g. alternative fuels), biomass generation and forestry, ecotourism, agriculture including watershed management, small irrigation and livestock, agro-processing, and artisanry. These

- (c) *Research, Education, and Institution-building* (15% of the costs) that develops more effective capacity and extensive support for PA ecodevelopment by:
- (i) improving understanding of issues and solutions relevant to PA management and interactions between PAs and people by :
    - a. ecological research, including monitoring, on ecosystem and species population dynamics, human impact within PAs, topics relevant to the concerns of local people (e.g. ways to control depredation by wildlife, benefits such as watershed protection that PA ecosystems provide local people), and impacts of landscapes (e.g. fires, floods);
    - b. research, including monitoring, on ethnobiology and indigenous resource management systems, cultural heritage, participatory processes and other socioeconomic concerns;
    - c. policy and management studies (e.g. ecotourism development strategies, financial sustainability and legislative frameworks); and
    - d. capacity building and communication programs to facilitate experimental learning and demonstration, increase compatibility of approaches and disseminate findings;
  - (ii) promoting public support for conservation through environmental education and awareness campaigns; and
  - (iii) integration of experience and development of an institutional framework for future expanded support for ecodevelopment including preparation of a project proposal for a Second Ecodevelopment Project.
- (d) *Preparation of other Priority Biodiversity Projects* (3% of the costs);
- (i) Freshwater Wetlands Project;
  - (ii) Coastal Biodiversity Project;
  - (iii) Biodiversity Information Project; and
  - (iv) Ex-situ Conservation Project.
- (e) *Project Management* (4% of the costs).

10. **Project Areas.** The seven PAs in the project comprise Buxa, West Bengal; Gir, Gujarat; Nagarhole, Karnataka; Palamau, Bihar; Pench, Madhya Pradesh; Periyar, Kerala; and Ranthambhore, Rajasthan. The seven target areas include the gazetted and proposed parks and sanctuaries as well as periphery land within a 2-10-km radius (the extent of herding and other impact factors). Most of the village ecodevelopment investments would take place in the periphery area. In consultation with NGOs and state governments, MOEF selected these PAs from a list of areas where the threats to biodiversity stem largely from local rural dependencies. Selection criteria comprised global biodiversity importance, biogeographic representation and likelihood of success. The success factor took into account the extent of human pressures, PA management capacity, existing infrastructure (which accounts for five of the seven sites being tiger reserves),

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investment ideas will required additional site-specific review to judge whether they meet eligibility criteria. Not all investments would necessarily be adopted; others may be identified during more detailed planning.

accessibility, state and national government support, and state government responsiveness to community and NGO involvement in forest management. The Bank has excluded one proposed site, Similipal in Orissa, due to issues involving ongoing population relocation activities. Further information on the ecological and demographic features of the seven project areas can be obtained from the Bank's Public Information Center (Fax # (202) 522-1500).

#### **Rationale for GEF Financing**

11. **Urgent Global Priority.** The project meets GEF eligibility criteria by addressing urgent global biodiversity conservation needs. The project would conserve biodiversity in seven critical protected areas in a "megadiversity" country. Five of the seven sites have been recognized as globally significant through reviews and programs sponsored by United Nations agencies. One of the seven areas, Gir, has the world's only population of Asian lions. The other six project sites support vital populations of tigers, one of the world's most endangered carnivores. The Government is using the tiger as a symbol of national heritage in order to protect a wide range of ecosystems and the other species which depend on them. In combination, these sites give good biogeographic and habitat coverage (e.g., dry deciduous open forests, semi-evergreen forests, moist deciduous open forests, and wet evergreen forests). The project would conserve ecosystems in danger of fragmentation and degradation. The level of threats to biodiversity in the seven sites is high and requires a substantial effort on an urgent basis. The project, combined with the country's demonstrated commitment to conservation, should help to counteract these threats on a sustainable basis.

12. **Innovative Integrating of Conservation and Development.** The project would address an important GEF concern by developing an innovative means of linking conservation and development. The project would strengthen the involvement of local and indigenous people in conservation and sustainable resource management. The objective, content, and methodology of the project's collaboration between government officials and local communities, and the active role of NGOs and researchers would establish valuable precedents. The GEF-financed participatory project preparation already provides a valuable model for other countries that face the challenging issues associated with the interaction of people and protected areas. The project itself would develop this participatory approach through experiment-based learning and establish a replicable model and institutional framework for conservation support in other sites.

#### **Sustainability and Participation**

13. Preparation for the proposed project has emphasized client ownership, local participation and public consultation. MOEF prepared the project with the assistance of professional institutes, NGOs and state forestry departments, and financing from the UNDP/GEF Preinvestment Facility. Bank staff and foreign consultants provided limited periodic comments and advice. The preparation applied rapid rural appraisal techniques and indicative planning, based on sample views of local people, to biodiversity issues in an innovative way. Indian NGOs with a professional institute as national coordinator, two professional ecological/wildlife institutes, four specialists as national consultants, and twelve state-level workshops, and seven national consultation meetings. Substantial additional capacity has been created through the preparation process alone.

14. **Project Sustainability.** By enabling forest departments to share biodiversity conservation responsibilities with local communities, the project will improve the PAs' chances of long-term

survival. Site-specific participatory microplanning, development of incentives, empowerment of local communities, and successful conflict resolution are designed to achieve sustainability. Local contributions to and ownership of village ecodevelopment investments will also contribute. Sustainability will also depend on the design of administrative arrangements, and on access to future, post-project financing. The use of permanent organizational structures, the preclusion of external financing for government staff salaries, and a clear process for defining technical assistance and training requirements will contribute to sustainability. Efforts to increase public support for PAs, to provide tangible measures of project benefits, and to explore the potential of endowment financing, tourism and other sources of conservation revenue will increase prospects for more adequate long-term financing from a variety of sources.

### **Lessons Learned and Technical Review**

15. **Lessons from integrated conservation and development programs (ICDP),** although limited, are important. Initial experience in conservation projects has highlighted the importance of ensuring that economic investments outside the protected areas are directly related to conservation objectives and of maintaining project size within realistic, achievable limits. The extensive project preparation workshops involving local people, government officials at all levels, local and national NGOs and researchers, and donors, and plans for further project orientation workshops will help India to avoid the problems experienced in other countries associated with a lack of understanding or consensus of the relatively new concept of ICDP.

16. **Lessons Learned from Forestry Projects.** Joint forest management (JFM), currently being supported under recent state forestry projects, provides examples of successful participatory resource management, as well as models for contractual agreements between government entities and local communities. JFM experience provides a rich store of successful activities: (a) applying site-specific participatory microplanning methodology, (b) organizing relatively small and homogeneous villages and hamlets; (c) ensuring participation of disadvantaged groups, (d) developing guidelines for composition and skills of microplanning and implementation support teams, (e) defining contractual agreements between state forest departments and local communities, and (f) using cost and benefit sharing arrangements. Experience from Indian social forestry projects highlights the need to carefully assess incentives for beneficiaries (e.g., preferences for timber over lower-value fuelwood species, negative impacts of timber transport and price policies, increased commitment and success on private rather than public land).

17. **Lessons Learned from Multi-state Projects.** Multi-state projects in India have been more successful when disbursing funds to states in response to past performance and to work plans meeting clearly specified criteria, and when state governments have had a significant financial stake in the project. At the national level, the central coordinating unit needs to have a clear identity and mandate, designated full-time staff, and adequately delegated financial and administrative powers.

18. **Technical Review.** The project design meets Bank requirements for environmental and social review, including careful consideration of aspects involving indigenous people, women, and other disadvantaged groups, as well as people living within the PAs. Copies of the environmental and social data sheets and a description of project strategy for people in the PAs can be obtained from the Bank's Public Information Center (Fax # 202-522-1500). Independent Technical Reviews of the project were obtained in December, 1994 from two very experienced biodiversity

conservation specialists - Ms. Amy Vedder of the Wildlife Conservation Society (STAP member) and Mr. Thomas Mathew of the World Wildlife Fund. They are both supportive of the participative, community-based approach to conservation that the project will develop and test. On their advice, the project description was modified to clarify the PA management component and the links between community ecodevelopment and regional planning. A summary of Ms. Vedder's review is attached.

**Project Financing and Budget**

19. **Cost.** Current cost estimates are tentative and subject to revision during appraisal. Total costs are currently estimated at US\$74 million (Rs. 2640 million) in current prices.

20. **Financing.** It is proposed that an IDA credit would provide US\$36 million (Rs. 1285 million), a Global Environment Trust grant would cover US\$20 million (Rs. 713 million), the national and state governments would finance US\$13 million (Rs 464 million), and the local people would finance a notional US\$5 million (Rs 178 million), mainly through labor contributions. The IDA and GEF financing would be allocated on a pro-rata basis to all components except for the preparation of other biodiversity projects (paragraph 9 d above), which would be financed solely by IDA. The table below summarizes the project components by financiers.

**Preliminary Project Financing Plan (US\$ million)**

	GEF	IDA	State Govts & GOI	Local People	Total
Improved PA Management	2	3	8	0	13
Village Ecodevelopment.	14	23	3	5	45
Research, Env. Educ. & Future Inst. Building	3	6	2	0	11
Prep. of Other Biodiversity Projects	0	2	0	0	2
Project Management	1	2	0	0	3
<b>Total</b>	<b>20</b>	<b>36</b>	<b>13</b>	<b>5</b>	<b>74</b>

IDA has also provided a US\$2 million (Rs. 64 million) Project Preparation Facility advance to finance completion of project preparation and project startup activities planned for FY95/96.

20. **Relation of Cost Estimates to Annual Budgets.** Cost estimates indicate the overall size of the project and amount of required financing but do not provide an approved "blueprint" for specific expenditures at each site. In the course of the project, managers at each site would allocate specific expenditures according to an annual work plan and budget, which would be subject to a formal review process to ensure consistency with project objectives. These annual budgets would specify the location and unit size of the "village ecodevelopment funds". These funds would then be allocated for specific activities as agreed with village groups through participatory microplanning and feasibility analysis, in conjunction with reciprocal agreements that promote conservation.

**Incremental Costs**

21. Without the project, although India's extensive funding for traditional park management would continue, baseline ecodevelopment funding would be limited to small-scale NGO efforts, a national government program which has only nominal funding (currently US\$2.2 million annually for all of India), and initiatives by individual states. Even if it is assumed that, in the absence of a GEF project, the national and state government financing of US\$13 million and local community financing of US\$5 million earmarked for this project would be added to the current baseline ecodevelopment funding levels, these efforts would not provide the critical mass of financing required for a meaningful national pilot program. This funding gap has arisen because the challenges of biodiversity conservation in India are growing and currently outpacing available revenue. One of the most important challenges is the increasing pressure on protected areas that requires new, initially more costly, participatory approaches to conservation. With widespread poverty causing many competing demands for scarce public funds, national and state governments can not currently provide sufficient funding to meet the burgeoning conservation agenda. A larger scale of funding is therefore needed to address urgent threats to biodiversity, to ensure coverage of

globally significant sites, to test the ecodevelopment concept in a representative range of climatic, habitat, and socioeconomic environments and to develop a framework for expanded future support. The total cost of this first major ecodevelopment project is US\$74 million. Baseline funding that India can contribute to the project totals US\$18 million. The incremental cost is therefore US\$56 million. However, the Government of India realizes that, in view of the scale of external funding required, it cannot expect to receive a GEF grant sufficient to cover the entire incremental cost. It is so strongly committed to the objectives of the project that it is willing to borrow up to US\$36 million of IDA resources to cover 64% of the incremental cost. A GEF grant of US\$20 million is therefore requested to cover the remaining 36% of the incremental cost.

### Issues, Actions and Risks

22. **External Risks.** The project has significant external risks. The pressures of population growth, poverty, and commercial interests may undermine project efforts, at least in some of the PAs. It is not possible to fully address these risks within the project design. The project should proceed nevertheless, because of the importance of conserving biodiversity, and the critical role of local people in conservation. Its flexible design will be adapted to respond to the risk factors as and when they arise.

23. **Internal Risks.** Internal risks and areas of uncertainty associated with the implementation of the project include:

- (a) state government commitment to local participatory decision-making;
- (b) ability of PA authorities to withstand pressures exerted by resource users from other government agencies and the private sector;
- (c) trust of local communities, disadvantaged groups, and NGOs;
- (d) feasibility and effectiveness of village ecodevelopment investments and associated obligations;
- (e) institutional and technical constraints in research and training;
- (f) adequacy and sustainability of counterpart financing; and
- (g) adequacy of management support.

24. **Measures to Address Internal Risks.** Allocating project financing annually according to a review of work plans and progress reports and avoiding an up-front "blueprint" approach would encourage sustained state government commitment to participation. Strengthening the capacity of PA authorities to incorporate PA concerns into regional planning and regulation would help them withstand pressures from other resource users. Provision for a participatory planning process, careful and comprehensive monitoring of social considerations, and important roles for NGOs, would facilitate a gradual increase in trust. The requirement for community cost-sharing (which would provide local judgment on feasibility), the use of specialist reviews, and experimental learning through the dynamic planning, monitoring and adjustment process should facilitate the feasibility and effectiveness of village ecodevelopment. Agreement on procedures to develop realistic strategic work plans, sound provisions for oversight, and pragmatic contracting arrangements would help ensure appropriate use of existing and future research and training capacity. Including full budgets and financing plans in the annual work plans would help ensure

adequate counterpart financing. The specification of organizational responsibilities, structures, staffing, and contracting arrangements, and procedures to select appropriate training programs would help to ensure adequate management support.

25. **Financial Risks.** The risk that the project will not be financially sustainable has been minimized by a variety of actions. First, the participatory process of designing the project and the intensive management approach built into it will maximize the probability of success and support for its replication. Second, it will not provide external finance for Government staff. Third, the project includes the preparation of a follow-on ecocodevelopment activity that will help to mobilize future funding. Finally, the project will evaluate alternative supplementary financing mechanisms for conservation, including an endowment fund or funds and higher ecotourism revenues, and will recommend steps to implement the most promising financial options.

### **Institutional Framework and Project Implementation**

26. **Management.** Project management would use and build upon existing Forest Department, inter-agency, NGO, and community organizational structures, modifying them where necessary to ensure autonomy, flexibility, and accountability. State governments, through their PA authorities, would be responsible for project execution. For many project activities, the PA authorities would develop partnerships with or delegate to NGOs and village community groups. PA committees or societies would coordinate the work of PA authorities, NGOs, and village community groups. The project would also involve existing district coordination committees and regional and national training and research institutions, as necessary. At the national level, there will be strong coordination and facilitation in order to encourage mutual learning, address bottlenecks, and provide overall project integration. As at the state-level, NGOs and professional institutes would play major roles in national-level project management. At each level, detailed organizational responsibilities and structures will be specified.

27. **Staffing and Implementation Contracts.** Detailed staffing and contract implementing arrangements (including contracting of NGOs, village groups, researchers, and trainers) will address issues of career development, staff continuity, and technical specialization that affect staff quality and effectiveness. In the staffing plans, the state governments would document that planned internal transfers and the assignment of project responsibilities to existing staff would not adversely affect the adequacy of staffing of other ongoing, non-project conservation activities. In order to support sustainability, the project would not include external financing for government staff.

28. **Participatory Microplanning.** The project will involve a dynamic, ongoing, micro-level planning process which is concurrent to project implementation. Teams consisting of PA staff and local NGO staff (including women) would meet with communities in and around the PAs to assess and resolve negative impacts of community and PA interactions. These teams would use specially focused participatory rural appraisal techniques to facilitate detailed village-level planning of a village ecocodevelopment program. These teams would take special care to ensure that women, tribal groups, and other disadvantaged people participate in the planning process and benefit from the agreed program. The teams would help villagers to consider:

- (a) negative impacts of the protected area on villages and of the villages on the PAs, and measures to mitigate these impacts;

- (b) village-level institutional structures and processes, existing and required;
- (c) finance, training, research, local community contributions, and other inputs required, and reciprocal contractual obligations; and
- (d) initial feasibility analyses covering technical, financial, social, and environmental considerations, including applicability of traditional resource management systems.

Specialist groups, comprising staff of NGOs, specialized government agency staff, ecologists and the private sector, would provide additional advice on feasibility and design considerations.

29. **Eligibility Criteria for Village Ecodevelopment Investments.** To be eligible for support, the village ecodevelopment investments would need to:

- (a) *conserve biodiversity* by reducing negative and increasing positive interactions between people and PAs, either directly, or indirectly by creating sufficient incentives for a consensus that commits local people to specific, measurable actions that improve conservation;
- (b) *improve the socioeconomic condition of populations currently dependent on the PA*, especially tribals, women, and other disadvantaged people;
- (c) *be incremental*, i.e., alternative sources of funding and support are not available;
- (d) *be technically feasible*, e.g., inputs and technical advice are adequate; physical conditions are suitable;
- (e) *be financially feasible*, e.g., market linkages are adequate, cash flow requirements are viable, financial returns are sufficient to compensate for PA resources foregone, returns compare favorably with alternative investment options;
- (f) *be socially and institutionally feasible*, e.g., associated activities are culturally acceptable, local institutional capacity is adequate to organize forest protection, distribute benefits from common resources, provide physical maintenance, keep accounts, etc.; and
- (g) *be environmentally sustainable*, e.g., adverse environmental impact of exotic species, agrochemicals, construction activity can be ameliorated or avoided.

30. **Monitoring and Communication.** Project monitoring of biological, social, financial, and other factors would be integral to project management; the feedback and accountability would assist in problem-solving and adjustment. The adaptive management approach would quickly incorporate lessons learned from monitoring feedback. It would provide information on village and PA authority compliance with the local site-specific ecodevelopment agreements. Monitoring would include semi-annual progress reports that would provide the tangible evidence of project benefits needed to sustain budgetary and political support. In addition, the regular reporting channel to the GOI, external financing agencies, and project stakeholders would: (a) provide information on project implementation status and impacts, (b) demonstrate the effectiveness of project management and decision-making procedures, and (c) identify issues which require GOI or Bank intervention.

31. **Evaluation and Dissemination.** The project would also build in independent evaluation and mechanisms for effective dissemination. Independent specialists would monitor project progress and also evaluate the long-term impact of project activities, beginning by designing studies and collecting baseline information on environmental and social factors. Dissemination, including the use of computer networks, would enable the project to share monitoring, evaluation, and other research findings among the seven sites and with external groups. All progress and evaluation reports would be made public.

**ANNEX A: SUMMARY OF THE TECHNICAL REVIEW****INDIA: ECODEVELOPMENT PROJECT**

1. The choice of India and its protected areas is appropriate, due to its high degree of biological diversity, species richness, and endemism, combined with a high degree of endangerment. Given the great human pressure on this diversity, and level of poverty surrounding these reserves, it is also appropriate that an integrated, comprehensive program be designed to ensure the conservation of biological diversity by addressing both the direct problems of protection as well as unsustainable resource use in bordering areas. Policies established by the Government of India appear to provide a suitable context for the implementation of the described program and preparation of the project has included significant participation by various stakeholders as well as technical experts.

2. The project is designed to place emphasis on the local people -- seen as both the current threat to conservation and the necessary stewards of natural resources. It provides for their increased participation in conservation planning and management, and for incentives for more sound resource use. However, the other side of the equation is not fully described in the project. There must be strong, informed and capable parties to represent conservation interests. Hence improving PA management will be an essential step in the process. Improvement of management plans and implementing systems should be linked to ecological research and monitoring in order to assure ecological integrity and protection of key and endangered species, and provide timely feedback on the effectiveness of management.

3. Project assistance for development of alternative economic options could provide increased income which could in fact fuel further natural resource depletion. In order to avoid this pitfall, the project must ensure that: (1) all ecodevelopment activities are compatible with conservation -- including maintaining ecological integrity of systems and species; (2) ecodevelopment activities address both PA resource substitution and, where necessary and feasible, income substitution; and (3) availability of assistance for development of alternative economic options is clearly contingent on conservation compliance.

4. The establishment of partnerships between local and state stakeholders in conservation of PAs, and development of a process for planning and implementation of conservation should lead to sustainability of the systems described in the project. What is not clear, and should be specified more fully, is how the process will become financially sustainable.

**ACTIONS TAKEN TO REFLECT THE REVIEWER'S COMMENTS**

5. The description of the PA management component has been strengthened and the component specified in greater detail. It will include assistance to develop management plans for the PAs themselves, for ecosystems and for enclaves, and for incorporating PA concerns into regional planning and regulation. Research support will be provided to PA management. Applied research, including monitoring, will address the relationships between protection and development and the status of endangered species.

6. Eligibility criteria have now been outlined for selecting village ecodevelopment activities that: (i) require compliance with sound conservation practice; and (ii) encourage substitution of resources and incomes from sources outside the PA. Ecodevelopment investments will be too small to have significant "magnet" effect and these effects will be closely monitored. Several financial sustainability initiatives will be pursued, including endowments, increased eco-tourism revenue and income generation through ecodevelopment. Successful implementation will encourage replication.